SAMBODHI

Impact Strategizing for Climate Action

A Guide for Practitioners

Foreword

Climate action today demands more than ambition, it calls for clarity of purpose, agility in strategy, and evidence of impact. As the climate discourse shifts from advocacy to implementation, organizations working at the intersection of mitigation, adaptation, and equity are faced with a critical challenge: how to ensure that interventions are not only well-intentioned but also effective, scalable, and rooted in real-world learning.

Designed for practitioners, funders, and decision-makers planning to embed Results-Based Management (RBM) principles into their climate work, this handbook arrives at an opportune moment. More than just a technical manual, this guidebook walks the reader through the complete journey of impact strategizing, from Theory of Change (ToC) to Learning Loops, grounding each concept in relatable illustrations that reflect the complexity and nuance of real-world settings.

Importantly, it also invites us to pause and reflect. Reflection is not a luxury in the development sector, rather, it is essential to ensure that the efforts that we make translate into sustained, positive change. The handbook does a commendable job of integrating practical tools with critical inquiry, enabling users to move beyond compliance-driven reporting to adaptive learning and strategic decision-making.

I congratulate the authors for creating a resource that is both accessible and rigorous. It will undoubtedly support monitoring, evaluation, and learning (MEL) and strategy teams in becoming more confident and deliberate about how they approach change.

I hope that this guidebook will strengthen the capacity of climate actors to not only measure success but also to learn from it, adapt to it, and build on it.

Moutushi Sengupta
Founder & CEO
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Acknowledgements

This handbook is the outcome of a sustained collaborative effort to strengthen capacities for results-based thinking in the climate and development space.

We are grateful to our partners, mentors and impact enthusiasts who shared with us climate action learnings and its implications, making this handbook a collection of most valued practices.

We would like to thank our colleagues at Sambodhi, namely Atish Padhy, Shubham Pathak, and Jithin Jose for their insightful peer reviews, which not only sharpened the structure and clarity of the final content but also encouraged us to think critically about its practical applications.

We would also like to extend our sincere gratitude to Ramanshu Ganguly, whose perspicacity and constructive feedback substantially enhanced the usability and relevance of this handbook for practitioners across diverse contexts.

Finally, we deeply value the perspectives shared by stakeholders and partners. Their reflections, drawn from on-the-ground realities, were instrumental in refining and strengthening the content, and ensuring that it resonates with both practitioners and learners, while remaining anchored in real-world challenges and opportunities.

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About Sambodhi

With 20+ years of experience and expertise, Sambodhi leverages a wide range of data and evidence tools, including implementation research, impact evaluation, and machine learning to create high-impact knowledge, build capacities, and support sustainable growth. Sambodhi specializes in designing and implementing monitoring systems with learning as its core. Based on the principles of adaptive management, in its approach, it strives to unpack and appreciate the complexities of context, the diversity of stakeholders, and the non-linearity of impact pathways.

This handbook is the result of a collaborative effort, with equal contributions from all four authors.

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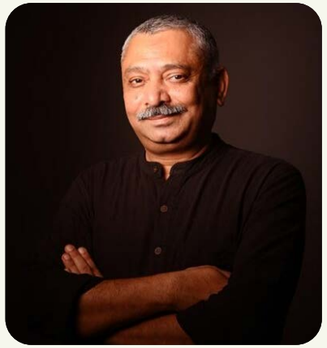

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Recommended Citation

Impact Strategizing for Climate Action: A Guide for Practitioners (2025). Energy Environment and Climate Change Practice. Sambodhi Research and Communications Private Limited.

Reader's Note

This handbook is designed as a practical companion for program teams, evaluators, and decision-makers working on climate-focused development interventions. It covers both the "why" and the "how" of impact strategy, offering a mix of conceptual grounding, tools, and real-life case studies.

While we encourage you to go through the entire handbook, you may choose not to read it from cover to cover. Use the Contents to jump to what's most relevant and refer to the Bibliography and Glossary at the end, for deeper dives and terminology. If you're:

New to Results-Based Management (RBM)

Start with Chapter 2 to understand the key concepts and terminology.

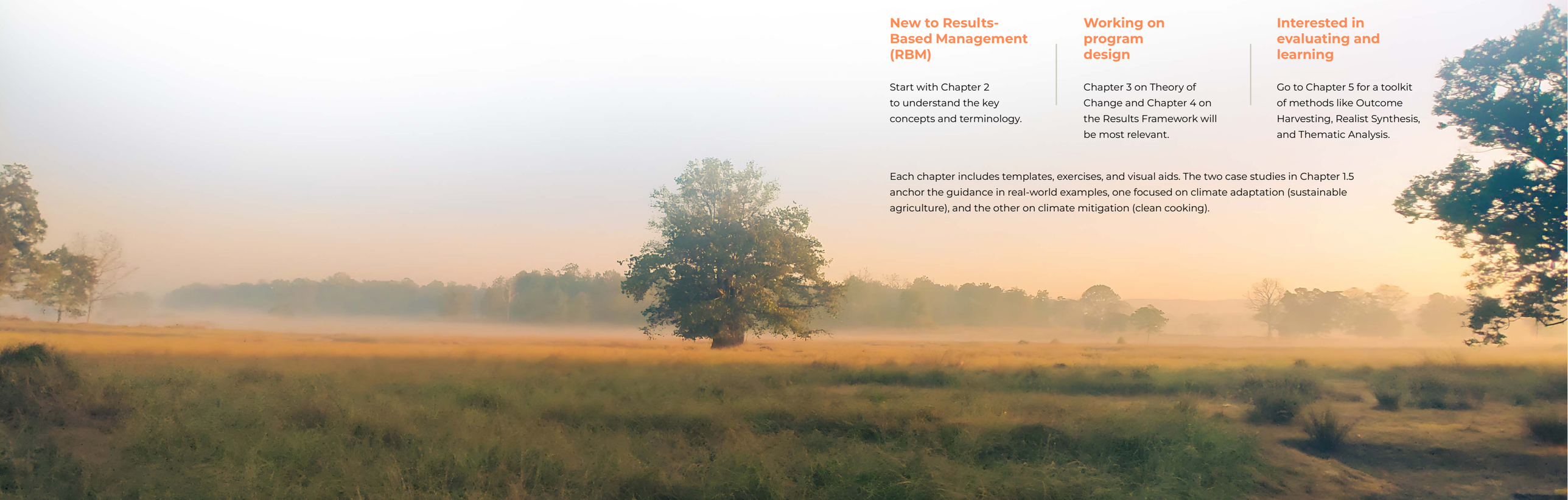
Working on program design

Chapter 3 on Theory of Change and Chapter 4 on the Results Framework will be most relevant.

Interested in evaluating and learning

Go to Chapter 5 for a toolkit of methods like Outcome Harvesting, Realist Synthesis, and Thematic Analysis.

Each chapter includes templates, exercises, and visual aids. The two case studies in Chapter 1.5 anchor the guidance in real-world examples, one focused on climate adaptation (sustainable agriculture), and the other on climate mitigation (clean cooking).



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List of Acronyms

ATS
Agricultural Training School

BCC
Behavior Change Communication

CMO
Context–Mechanism–Outcome

GHG
Green House Gases

HH
Household

HAP
Household Air Pollution

IPA
Innovations for Poverty Action

IDI
In-depth Interview

KII
Key Informant Interview

LARC
Local Adaptation and Resilience Committee

MERL
Monitoring, Evaluation, Research and Learning

MSC
Most Significant Change

M&E
Monitoring and Evaluation

MEL
Monitoring Evaluation Learning

MIS
Management Information System

OEM
Original Equipment Manufacturers (OEM)

OECD
Organisation for Economic Co-operation and Development

PFI
Prakriti Flame Initiative (Case Study 2)

PCG
Producer Collective Group

PMF
Performance Measurement Framework

PMU
Project Management Unit

RBM
Results-based Management

RF
Results Framework

SACRI
Sustainable Agriculture and Climate Resilience Initiative (Case Study 1)

SC
Significant Change

ToC
Theory of Change

ToT
Targeted and Contextual Transfer of Technology Solutions

UNAIDS
Joint United Nations Programme on HIV/AIDS

UN
United Nations

VRAPS
Village Resilience Action Plans

WEAI
Women's Empowerment in Agriculture Index

HAP
Household Air Pollution

SHG
Self Help Group

1. Introduction

1.1 Understanding Climate Change and Its Impacts

Climate change, driven primarily by the unchecked burning of fossil fuels since the Industrial Revolution, is now the defining challenge of our time. The large-scale use of coal, oil, and natural gas has powered remarkable industrial and technological progress, but at the cost of releasing massive quantities of greenhouse gases (GHGs) like carbon dioxide, methane, and nitrous oxide into the atmosphere. These emissions trap heat and have caused global average temperatures to rise significantly, crossing 1.3°C above pre-industrial levels[1] . If current trends continue, global temperatures are expected to rise by over 3°C by 2100[2]. Such warming is already triggering catastrophic consequences: heatwaves in Delhi have breached 52.3°C[3], while glacial melt, flash floods, erratic monsoons, and shifting agricultural zones are becoming more frequent and severe[4].

The impacts of climate change are deeply interconnected, affecting health, food systems, urban resilience, coastal safety, and economic productivity. Rising humidity and extreme weather events such as cyclones and droughts are now more intense and widespread[5]. Melting polar ice and rising sea levels threaten India's coastal cities, while the Himalayan region faces accelerated glacier retreat and increased flood risks. Agriculture, the backbone of rural livelihoods, is under pressure due to crop failures, rising input costs, and weather unpredictability[6]. Without urgent mitigation and adaptation efforts, India faces a future of deep vulnerability. Reducing GHG emissions through systemic shifts in energy, transport, and land use, while strengthening climate resilience is not just an environmental imperative, but a socioeconomic necessity.

1.2 The Challenge of Driving Change in a Resource-Constrained Context

As established above, addressing and responding to challenges caused by climate change is not only critical, but also extremely complex. These are long-term issues that need to be tackled with limited funding, time and institutional capacity. Most interventions rely on government or philanthropic support, which does not come without accountability and expectations of desired results. Whether these interventions focus on mitigation, adaptation or loss and damage, efforts must go beyond short-term results to meaningful and lasting long-term outcomes. Under these circumstances, it becomes imperative that planning processes are strategic, implementation is adaptive in nature and learning is continuous so that resources that are limited are utilized efficiently, effectively and responsibly.

1.3 Purpose of This Guide

In response to these challenges, this handbook has been developed as a practical resource to help climate practitioners plan, deliver, and assess their work more strategically. It recognizes the growing need for clarity on how interventions are designed, how change is expected to unfold, and how impact is monitored and demonstrated over time.
The purpose of this handbook is to provide a guide which is simple and practical for funders and implementers working across the climate space to manage and assess their interventions more precisely. This handbook keeps Results-based Management (RBM) at its core, including how to: (i) define change pathways, (ii) ensure activities are in line with outcomes, and (iii) embed a continuous learning mechanism.

This handbook stresses on the importance of integrating MEL into day-to-day decision making while strategizing the implementation of the intervention. For this, it consciously does not use jargon or prescriptive language.

1.4 How to Use This Resource

This handbook has been developed in a very practical way to help practitioners think more clearly and strategically. It is structured to provide step-by-step guidance throughout the complete cycle of an intervention, right from its inception, planning, designing, implementation and assessments/reflections.

If you are referring to this handbook for a new intervention, we especially encourage you to use it from start to finish. However, this can be equally useful if you are using it to rethink an existing program or also analyze another intervention. This can help to assess the strategic position or enable discussions on intended results and pathways.

Throughout the handbook, you will find real-world case examples that illustrate how the tools and frameworks of impact strategizing apply across different types of interventions and contexts. These include a case on climate-smart agriculture (an adaptation intervention) and another on clean cooking (a mitigation initiative) which have been elaborated on in the next section. You are encouraged to reflect on these examples, adapt them to your own setting, or use them as prompts to develop your own Theory of Change (ToC) and Results Framework (RF).

Importantly, we do not present a rigid formula. Impact strategizing is both a structured process and a creative, adaptive one. There is no single “right” way to do it. Instead, we offer a set of guiding tools grounded in RBM that you can shape to fit your priorities, capacities, and constraints. Your experience, judgement, and local insight are critical to making this work meaningful.

Finally, while this handbook can certainly be read individually, it is best when it is used collaboratively by teams, implementing partners, or cross-functional groups working on a real-world problem. The tools will be the most powerful when they are applied, tested, and refined in practice. We encourage you to engage with it actively: sketch things out, discuss assumptions, challenge each other’s thinking, and most importantly, make it your own.

1.5 Case studies

Case studies offer practical insights into how tools are applied in real-world contexts. This handbook features two case studies that will be used throughout to illustrate key concepts such as the logic model, ToC, and RF.

Case Study 1 on Adaptation: Sustainable Agriculture and Climate Resilience Initiative (SACRI) in Aridasha region

In the semi-arid districts of Aridasha, farming communities face recurring water scarcity, declining soil fertility, and uncertain market linkages, leaving smallholders vulnerable to climate shocks. Women farmers, who contribute significantly to agricultural labor, often face additional barriers in access to resources, technology, and decision-making. To address these systemic challenges, a multi-pronged program was initiated to strengthen climate resilience through participatory watershed planning, on-farm technology transfer, institutional strengthening of Producer Collective Groups (PCGs), and active inclusion of women farmers.

Project Approach: The initiative is anchored in four strategies. First, participatory watershed planning empowers communities to design and implement Village Resilience Action Plans (VRAPs) through Local Adaptation and Resilience Committees (LARCs). These efforts focus on improving water availability via micro-irrigation systems, farm ponds, and rejuvenation of local water bodies.

Second, on-farm transfer of climate-resilient technologies supports farmers in adopting improved crop varieties, integrated nutrient management, and climate-smart post-harvest practices. Demonstrations conducted through Agricultural Training Schools (ATS) promote the use of climate-smart equipment and advisory tools. These practices directly enhance soil health and water efficiency, while reducing dependence on chemical inputs.

Third, the program strengthens and augments PCGs by improving governance, linking them with finance, and expanding forward

and backward market connections. Access to digital technologies enables PCGs to provide crop health advisories, price discovery services, and digital payment systems. This strengthens their role in ensuring better price realization and increased revenue for members.

Finally, the program prioritizes the inclusion of women farmers, targeting their enrolment across all strategies. By engaging women in training, decision-making, and collective activities, the initiative enhances their leadership and ensures equitable benefits.

Outcomes and Impact: The program has already resulted in increased water availability for agriculture, along with widespread adoption of climate-resilient crops, climate-smart practices, and advisory tools. Farmers are benefiting from improved soil health, better access to markets and finance, and enhanced governance of PCGs. These immediate outcomes are translating into increased production, improved productivity per acre, and higher quality produce with reduced chemical usage.

As PCGs gain strength, members are securing better prices, leading to higher revenues and increased farmer incomes. Women farmers, actively engaged in all program components, are reporting higher incomes and greater resilience. In the long term, the initiative contributes to building climate-resilient agriculture systems, while advancing gender equity by strengthening the role of women in climate adaptation and sustainable farming.

Case Study 2 on Mitigation: Prakriti Flame Initiative (PFI) - Advancing Clean Cooking in Rural Suryapur

Households (HHs) in rural and peri-urban India continue to rely heavily on firewood, dung, and other traditional fuels for cooking. This dependence not only exposes women and children to high levels of household air pollution (HAP) but also perpetuates drudgery through time spent in fuel collection. To address these challenges, a program was designed to improve access to clean cooking solutions while strengthening supply chains, building awareness, and enabling behavioral change.

Project Approach: The program rests on three core strategies with a strong gender lens. First, it provides access to reliable and affordable clean cooking technologies including biomass stoves, LPG kits, and electric induction cooking devices. Along with distribution, HHs are supported with financing and subsidies to make these technologies affordable.

Second, the program promotes training and behavior change communication (BCC). Over 540 women, who were trained as “Flame Champions”, conducted more than 3,600 cooking demonstrations and safety workshops. Awareness campaigns leveraging folk media, radio, wall paintings, and school-level integration further reinforced the health, time, and safety benefits of clean fuel use.

Third, the program focuses on institutional strengthening of supply partners and original equipment manufacturers (OEMs) to ensure reliable after-sales services. This includes developing sustainable supply chains, local-level partnerships, and a digital Clean Cooking Monitoring Dashboard for real-time tracking of adoption and impact.

Outcomes and Impact: These strategies have yielded important immediate outcomes. HHs have increased adoption of clean fuel technologies, reduced firewood collection, and reduced manual drudgery for women. Enhanced knowledge, attitudes, and beliefs

around clean cooking have further reinforced behavior change. Supply chains have become more reliable, ensuring timely delivery of refills and servicing.

As a result, HHs are now shifting to sustained clean cooking practices. The use of cleaner fuels has reduced exposure to HAP, leading to improved respiratory health for women and their families. Women are experiencing increased time savings and reduced drudgery, allowing for greater participation in other economic or HH activities.

Over a long term, the program is generating three key impacts. Climate benefits are visible through reduced GHG emissions. Health benefits emerge from better respiratory outcomes. Gender benefits are realized as women gain leadership roles in clean energy transitions, and thereby, strengthen their agency and resilience.

2. Appreciating Foundations of Results-Based Management

2.1 The Intervention Lifecycle

Before we discuss the stages of an intervention lifecycle, let's understand how an "intervention" is defined. For this handbook, an intervention is defined as any deliberate effort, which could be a project, program, partnership or policy designed to bring about a specific result or change. This characteristic of an intervention necessitates the need for a results-based approach.

2.1.1 Intervention Goal

A goal is a broad statement of the intended outcome. In other words, it refers to the larger, long-term ecosystem level changes that a project helps contribute to. For example, in the case of climate-resilient agriculturee, the goal is to enhance the resilience and income of smallholder farming systems through sustainable, climate-smart agricultural practices. In the clean cooking initiative, the goal is to reduce household air pollution HAP and climate emissions by enabling widespread adoption of clean, safe, and accessible cooking solutions.

2.1.2 Intervention Objective

The objective of an intervention is a specific statement of the target condition; it often mirrors the core problem the intervention seeks to address. For example, in the climate-resilient agriculture intervention, the objective is to enable smallholder farmers to adopt practices that improve productivity and resilience to climate variability. In the clean cooking initiative, the objective is to reduce reliance on traditional biomass and promote sustained use of clean cooking technologies.

Putting it simply, an objective is supposed to be definite, specific and precise. There can ideally be only one objective, and not multiple, therefore there is no plural.

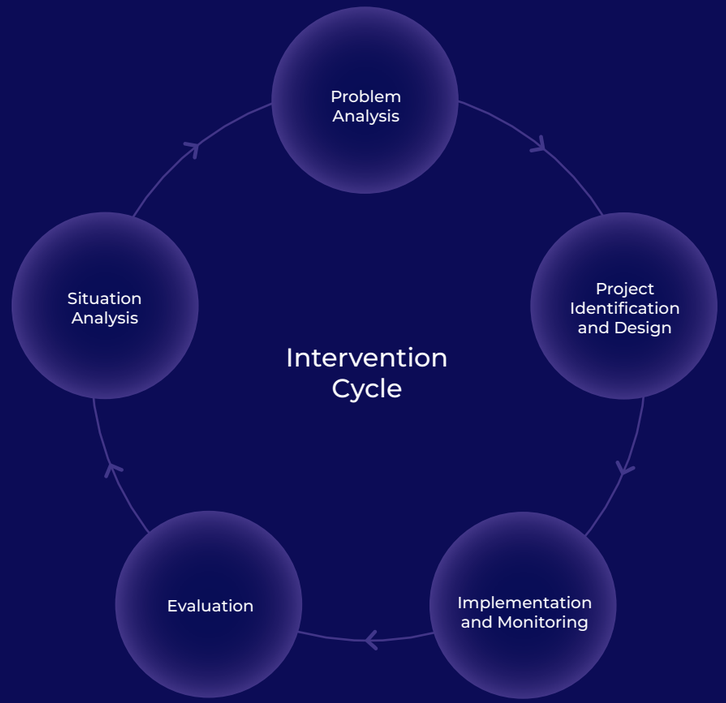


Figure 1: Key Stages of an Intervention Cycles

2.1.3 Intervention Cycle

Every intervention bears a resemblance to the circle of life, which is marked by birth and death. Thus, every intervention follows a distinct operational cycle, which commences with its inception and concludes with its closure. Comprehending the intervention cycle is pivotal for enhancing the design and strategy, planning, and execution of work, especially when viewed through the lens of monitoring and evaluation (M&E).

Situation Analysis
Situation Analysis is about understanding the context or what the existing situation or condition is. It involves trying to assess the ground situation from a holistic perspective, and to identify what is 'wrong' with the given context. For example, in the climate-resilient agriculture case, it highlighted the farmers' vulnerability to droughts, erratic rainfall, and declining soil productivity; in the clean cooking intervention, the situation analysis revealed high dependence on biomass fuels, leading to health and environmental risks.

Problem Analysis
The problem tree analysis offers a structured framework for identifying the problem and visually mapping the interconnected causes and effects that contribute to the current situation. Employing the metaphor of a tree, this method involves a systematic separation of the root causes and resulting effects, which are akin to the branches, all stemming from a central issue represented by the trunk (represented in figure 4). This has been elaborated in the ToC section.

Intervention Identification and Design
The problem tree analysis is used to first identify the intervention objective, which is followed by an in-depth intervention design. At this stage, the key objective is set, strategies are made, stakeholders are identified, activities are planned, and resources are allocated. This stage, particularly, looks at planning for M&E, as the success of implementation hinges on the quality of project planning.

The agricultural sector in the Aridasha region faces significant challenges due to climate change and resource depletion, particularly in the drought-prone regions. The intervention aims to address these root causes by improving access to climate-smart farming practices, enhancing water-use efficiency through irrigation systems, and strengthening value chains for resilient crops. Additionally, strengthening and augmentation of PCGs for aggregation and better price realization for them.

Intervention Implementation
Planned activities come to life at the implementation stage, when resources are mobilized and tasks are executed, according to the intervention design. It involves the execution of activities as outlined in the project design, ensuring that all planned tasks are carried out efficiently and effectively. During this phase, teams mobilize resources, coordinate with stakeholders, and carry out activities, according to the established timelines and work plans.

Monitoring plays a critical role throughout implementation, as it helps track progress, identify potential bottlenecks, and ensure alignment with intervention objectives. This monitoring includes tracking the achievement of milestones, managing budgets, and continuously assessing risks to prevent issues from derailing progress. It is also essential to maintain regular communication with stakeholders to keep everyone informed and engaged, adapting strategies as needed to address any challenges that may arise.

Effective implementation not only focuses on executing activities but also emphasizes adaptive management, being responsive to changes and modifying plans as new information becomes available. By doing so, discrepancies between planning and execution are minimized, which ultimately increases the likelihood of achieving the desired outcomes, and ensuring the project remains on course.

Evaluation

Evaluation helps assess whether the intended objectives have been achieved and if the situation has improved. For instance, in the above example, where the project aims to enhance climate resilience in Aridasha's agricultural sector, the baseline assessment would examine pre-intervention estimates on existing farming practices, adoption of climate-smart practices, availability of water conservation infrastructure, and PCG strengthening and other key outcomes and impact indicators for farmers. Monitoring helps ascertain progress throughout the project cycle, such as the number of farmers mobilized, the number of farmers adopting micro-irrigation systems or the implementation of participatory watershed plans. At the end of the project, the evaluation would assess the outcomes, such as increased water-use efficiency, enhanced crop productivity, and improved livelihoods. The baseline evaluation provides a foundation for understanding the pre-project scenario, while the end-of-project evaluation measures the success or level change of key outcome indicators like value chain strengthening and institutional development, ensuring the project achieves its intended impact. The first assessment is known as a baseline evaluation, while the final assessment is an end-of-project evaluation.

Strategizing for impact and understanding the intervention cycle are foundational steps to ensure that interventions are well-designed, effectively implemented, and evaluated for their contribution to broader goals. However, to truly maximize the value of these efforts, a shift from conventional methods towards Results-Based Management (RBM) is essential. RBM helps align each phase of the intervention cycle, from planning to evaluation, with the desired impact, emphasizing the importance of outcomes rather than merely focusing on strategies and inputs. By incorporating RBM, organizations can ensure that all activities contribute directly to meaningful results, creating a framework that turns strategy into measurable impact, which effectively demonstrates progress towards achieving the intended goals.

2.2 What is Results-Based Management?

There are two main approaches to handling an intervention. The first focuses on activities, inputs, and resources, ensuring compliance by adhering to rules and procedures, this is called **project management.** The second

approach, known as performance management or **Results-Based Management (RBM)**, centers on achieving the project's objectives by aligning all activities towards the desired outcomes.
In RBM, the emphasis shifts from "What are we doing?" to "What have we achieved?" Instead of asking, "How many farmers were trained in climate-smart agriculture?", we ask, "Has there been an increase in adoption of climate-smart farming practices, crop yields, and overall income for the farmers?". Similarly, in the clean cooking intervention, rather than asking, "How many stoves were distributed?" we ask, "Have HHs reduced their use of traditional fuels, and has indoor air quality and women's health improved as a result?"

> *A 'result' in RBM is a describable or measurable development change resulting from a cause-and- effect relationship.*

RBM, therefore, is a performance-based management approach that emphasizes achieving specific results in planning, implementation, and M&E. RBM focuses on directing project strategies towards achieving impact, outcomes, and outputs (products or services) by aligning inputs and activities accordingly. RBM clearly defines the results the project aims to achieve and then plans the activities and strategies to deliver those results.

2.3 Why and Why Not RBM?

Results-Based Management (RBM) is not a rigid formula but a guiding tool, its value lies in how thoughtfully it is applied. When used well, RBM helps align actions with outcomes, fosters accountability, and encourages learning. Ultimately, **how you use it determines its impact**. The figure below lists a few advantages and disadvantages of using RBM.

Advantages

Clarity of Purpose
Focuses on what should be achieved.

Accountability
Makes it easier to report progress.

Efficient Planning
Aligns resources with priorities.

Learning & Adaptation
Encourages continuous improvement.

Stakeholder Engagement
Supports inclusive and relevant design

Disadvantages

Over-Rigidity
Can limit flexibility and innovation.

Hard-to-Measure Change
Not all results fit into numbers.

Data-Intensive
Requires time and resources to track.

Short-Term Focus
May prioritize what's easy to measure.

Process Overlooked
Participation may take a backseat.

Results-Based Management (RBM) provides a structured approach for achieving measurable outcomes by aligning all activities with the desired results. A key tool within RBM is the Results Chain, or logic model, which visualizes how specific activities lead to outputs, outcomes, and ultimately the intended impact. By illustrating the 'if-then' relationships, the Results Chain helps translate the strategic objectives defined by RBM into a clear sequence of actions and expected changes. This ensures that every input and activity is aligned toward producing meaningful results, emphasizing the causal pathway from implementation to broader impact.

2.4 Tools of RBM

2.4.1 Logic Model: Logic of a logic model

The logic model is based on the principle of causality. It highlights that a project should not be seen as just a collection of activities, but as a process aimed at achieving a meaningful outcome. For example, in the **climate-smart agriculture intervention**, the activity of training farmers on crop diversification is not just about completing training sessions, it is meant to contribute to improved adoption of climate-smart agriculture (CSA) practices, higher yields, and enhanced income. Similarly, in a clean cooking initiative, distributing improved cookstoves is not the end goal; it is part of a broader effort to reduce HAP, improve women's health, and lower carbon emissions.

The logic model follows an **"If → Then"** structure, which reflects a clear cause-and-effect relationship. To create a sound logic model or results chain, it is essential to establish a sequence where each step logically leads to the next through a causal link.

Table 1: Logical Model

Input	Activity	Output	Outcome	Impact	
What we invest?	What we do and whom we reach?	How we improve the situation?		What we want to change at societal-level/ macro-level?	→ The logic! → The guiding question!

The logic model plays an essential role in establishing causal connections, and a logic chain is generally linear in nature. When this logic is applied to a ToC, it allows for more flexibility and better captures the complexity of real-world change. The logic model serves as the backbone for developing a ToC. In a ToC, we also use more nuanced terms, as shown in the table below:

Table 2: Logic Chain Terminology

Logic Chain Terminology	is called what in	Theory of Change Terminology
Activity	→	Strategy
Output	→	Immediate Outcomes
Outcome	→	Intermediate Outcomes
Impact	→	Long-term Outcomes

Using logic model to develop a theory of change has been explained in the next section.

*The Results Chain outlines the logical flow from activities to impact, showing the sequence needed to achieve project goals. However, **to fully capture the complexity of achieving social change, a more comprehensive approach is often needed**. This is where the Theory of Change (ToC) comes in. A Theory of Change builds on the logic of the Results Chain by not only illustrating the causal pathways but also detailing the underlying assumptions, context, and preconditions necessary for success. By providing a broader strategic backbone, the ToC offers a deeper narrative that links project activities with long-term impact, guiding the entire process from planning through to evaluation.*

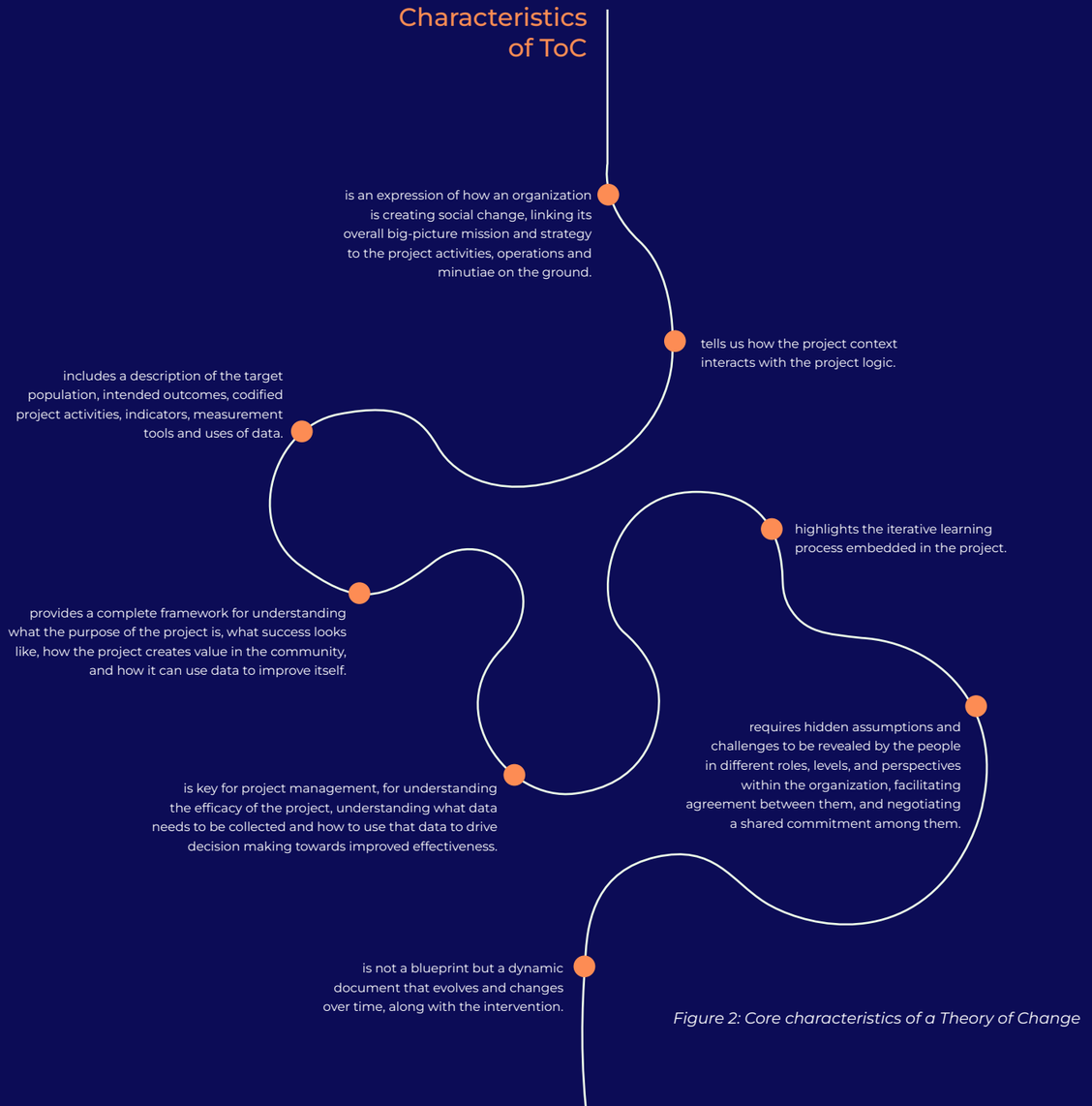


Figure 2: Core characteristics of a Theory of Change

3. Designing Impact Strategies: Theory of Change (ToC)

3.1 What is the importance of a well-developed ToC?

A ToC serves as the strategic backbone of an organization, and any project for which it is being developed, giving a road map for transforming their vision into tangible activities. It directs the articulation of project milestones, defines the road ahead and creates impact pathways to accomplish overarching goals, and incorporates critical monitoring and assessment principles. It enhances organizational decision-making processes, directing resource allocation and strategy changes.

3.2 What is the purpose of a ToC?

A ToC serves as an essential strategy for the M&E of a project. It operates as a guiding framework, illuminating the pathways through which a project intends to realize its vision and achieve impact. This comprehensive approach provides a roadmap that delineates the strategic steps a project will take to influence outcomes and deliver meaningful results. A ToC is instrumental in identifying the critical assumptions underpinning the project, and assessing potential risks to successful implementation.

Construction of a robust ToC, one that is firmly rooted in theoretical foundations and embraced across the organization, demands a dedicated investment of time and resources. This process involves multiple steps and necessitates active participation at all levels of the project. Ultimately, a well-crafted ToC becomes an invaluable tool, aligning the project's objectives with a coherent strategy and facilitating effective M&E practices. The characteristicsof a ToC are shown in figure 2.

3.3 What are the Elements of a ToC?

The key elements of a ToC are context, preconditions, assumptions, and outcomes.

Context: The context outlines the project's underlying rationale and objectives. It outlines the intended contribution, specifies target stakeholders, and provides the objective rationale.

Preconditions: Preconditions denote the conditions that must be established for the project to progress logically from one stage to the next. When traced backwards from the long-term goal, preconditions represent the initial changes necessary to achieve that goal. All outcomes, except the long-term outcome, are considered preconditions. They are termed as such

because they are prerequisites that must be met for the subsequent outcome in the pathway to be realized. They serve as precursors that must be accomplished before the next outcome in the pathway can be attained.

Assumptions: Assumptions are conditions or resources that project stakeholders believe are necessary for the project's success and are already presumed to exist. Unlike preconditions, assumptions do not need to be established; they are considered in place from the outset. When identifying assumptions, it's crucial to consider the various conditions on which the project's success depends. While some assumptions may be explicit, others may be implicit and require external facilitators to uncover. Regardless, assumptions play a critical role as inaccuracies can significantly impact the project's functioning.

> *Assumptions are an optimistic way of looking at necessary conditions for the project's success, whereas Risks are a pessimistic way of viewing conditions, which can potentially lead to the failure of the project.*

Outcomes: Outcomes represent the resulting changes that the project aims to achieve. These changes may occur over varying timelines and are categorized temporally.

> *Earlier, ToCs included outputs, but contemporary practice omits them, as outputs are simply completed activities. Instead, activities should be linked directly to immediate, intermediate, and long-term outcomes.*

A well-articulated ToC helps us in identifying the roadmap of change, clarifying its assumptions and claims, and making explicit the chain of causality from inputs to outputs to outcome and finally impact. In doing so, it helps us capture the multiple layers of changes, by finding out the interconnectedness of how inputs, outputs, outcome and impact are related in a comprehensive logic of change.

3.4 What are Some ToC Pitfalls and their Solutions?

A ToC often suggests a linear progression of activities, outputs, outcomes, and impact. However, the path to change may not unfold in a straightforward manner.

Solution
Embrace flexibility in the ToC, recognizing the need for adaptability and openness to non-linear pathways for effective impact.

Assumptions are dynamic, and overlooking their evolution can lead to misalignments with project conditions.

Solution
Regularly revisit your ToC, and incorporate updated assumptions and risks. This ensures that your strategies remain relevant and adaptive to the changing project landscape.

A common mistake in ToC development is treating assumptions as an afterthought or listing them superficially.

Solution
Rigorously assess the validity of assumptions and risks. This enhances the robustness of your ToC, reducing the risk of project failure.

Getting confused with the various terminologies

Solution
Keeping in mind variability in ToC terminology. Often, ToC is interchangeably called Logic model and Results chain.

3.5 Creating a ToC

Creating a ToC requires following the roadmap below:

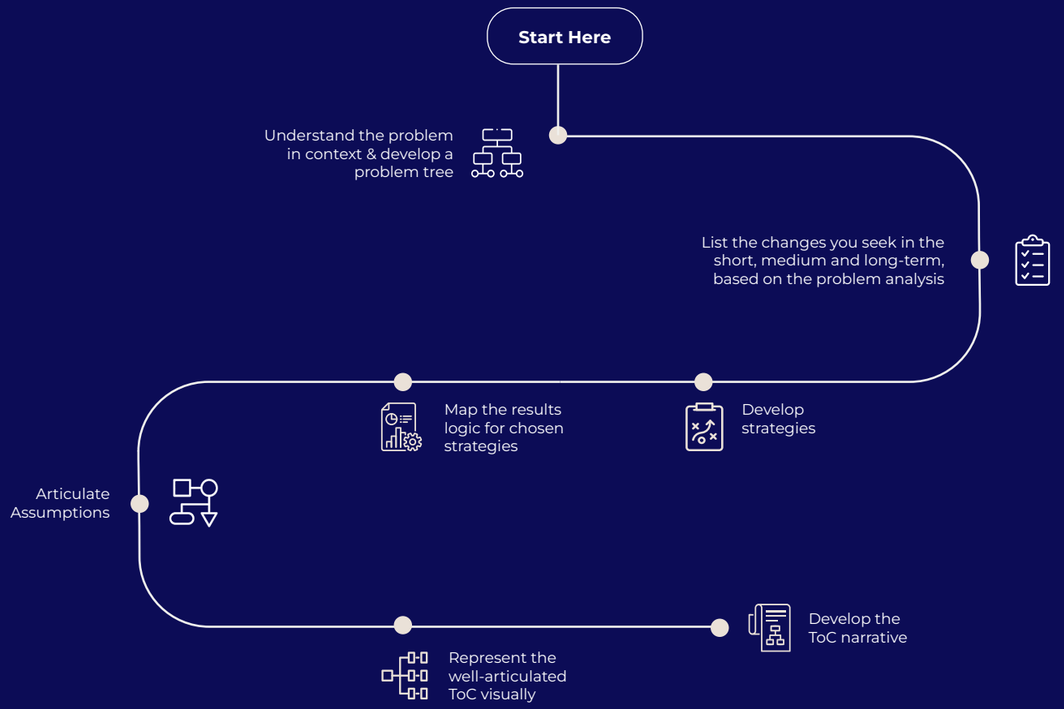


Figure 3: Steps for developing a Theory of Change

Some questions to consider when assessing ToCs

- Is the ToC based on an analysis of the problem, context, stakeholders, and situation, including gender inequality and social exclusion?
- Is the ToC clear and easy to understand? Does it respond to the analysis of the context, the problem being addressed, and the changes needed? Is it clear what changes are required and how the project proposes to make these changes (i.e., does the narrative highlight and describe the overall logic, and the key hypotheses the project is based on? Is there a clear rationale behind the proposed interventions and why are these the best ones to achieve the intended outcomes?)?
- Does it adequately consider the main enablers and barriers to the success of the project? Does it adequately consider the role of external actors/factors?
- Are the causal pathways clear and plausible, including intermediate changes, and are there any missing links? Are there any gaps in logic? Doe the ToC involve risk-taking?
- Are assumptions about the causal links and about the context made explicit? Are the assumptions realistic?

3.6 Steps to Develop a Theory of Change

This section explains the process of developing a ToC step-by-step with the help of two case studies detailed in section 1.5.

Step 1: Understand the Problem in Context & Develop a Problem Tree

Begin by diagnosing the issue the intervention seeks to address. Ask: (i) What is the core problem? (ii) What are its root causes and contributing factors? (iii) Who is the most affected, and in what ways?

This step requires a holistic understanding of the context, including the socio-economic, institutional, and environmental dimensions. Identify the key stakeholders - both those experiencing the problem and those with influence over it.

To structure this analysis, develop a Problem Tree: start by identifying the central problem; trace root causes downward and effects upward; the visual mapping will help clarify where the intervention can realistically act and what types of change are needed.

Let's take the example of **Case 1: climate-resilient agriculture to combat the challenges of climate change in Aridasha region**. The identified problem is the vulnerability of smallholder farmers to climate variability, leading to low productivity, unsustainable water use, and soil degradation. Developing a Problem Tree Analysis involves identifying root causes. These may include limited adoption or unawareness of climate-smart practices, inadequate water conservation infrastructure, and insufficient knowledge of sustainable farming practices.

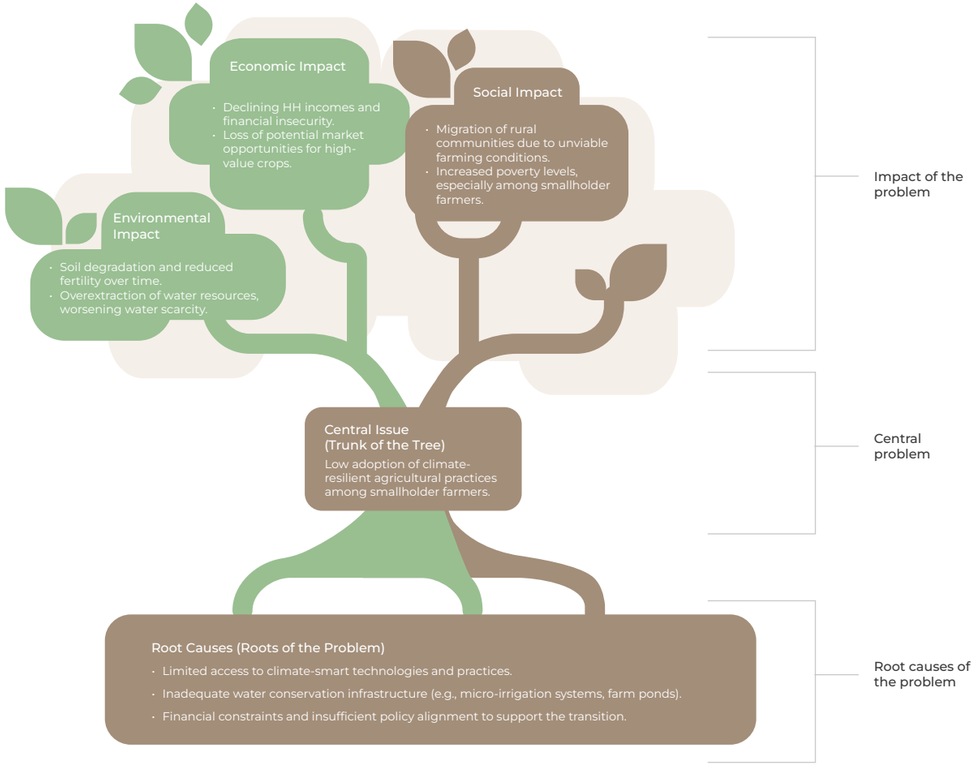


Figure 4: Problem Tree for Case 1: Sustainable Agriculture and Climate Resilience Initiative (SACRI) in Aridasha region

Similarly, taking the example of **Case 2, which is promoting clean cooking solutions in rural Suryapur**. The identified problem is the continued reliance of rural HHs on traditional biomass fuels for cooking, leading to high levels of HAP, adverse health impacts, particularly among women and children, and environmental degradation. A Problem Tree analysis highlights several root causes: the high cost and limited affordability of clean fuels like liquified petroleum gas (LPG), inconsistent availability and access in remote areas, and cultural preferences for traditional cooking methods. Additional challenges include limited awareness about the health and environmental benefits of clean cooking, weak last-mile distribution networks, and the absence of sustained behavior change efforts.

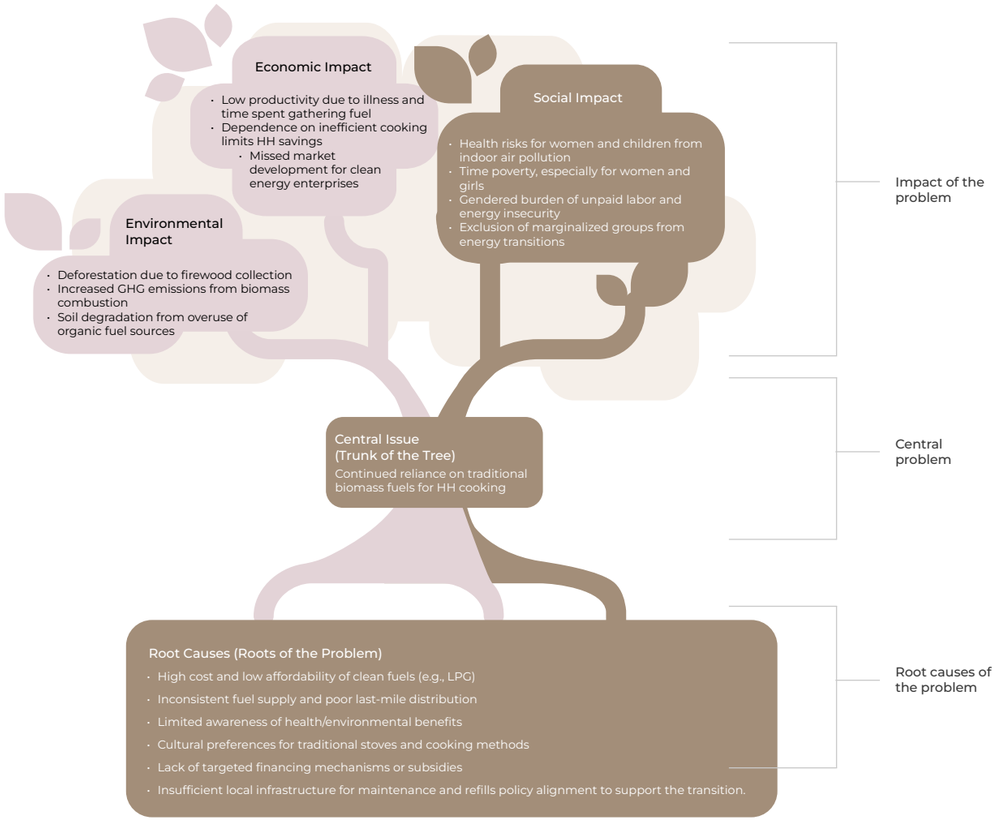


Figure 5: Probelm Tree for Case 2: Advancing Clean Cooking in Rural Suryapur

Step 2: List changes you seek in the long run

Once you have a clear understanding of the core problem and its underlying causes through the problem tree, the next step is to identify the long-term changes you want to bring about in your desired outcomes or impacts. This stage shifts the focus from what's wrong to what success would look like.

Think of this as flipping the problem tree into a vision of transformation. If the problem is smallholder farmers' vulnerability to climate variability and declining productivity, the long-term change might be for "farming communities to adopt climate-resilient practices that ensure sustainable livelihoods and ecological balance". Or if the problem is high HAP due to biomass cooking, the long-term change might be for "HHs to consistently use clean, safe cooking solutions that improve respiratory health and reduce emissions". These changes should be aspirational yet realistic, rooted in the context, and directly address the core issues and root causes mapped earlier.

This step sets the foundation for the rest of the ToC. It provides a clear destination that all strategies and activities will work towards. It also allows you to establish direction, define priorities, and anchor accountability: whether the change you seek is improved women's agency, increased resilience to climate shocks, or sustainable access to services. Be specific about who will benefit and what will improve, so these long-term outcomes can be meaningfully tracked and communicated later.

Step 3: Develop Strategies

With the long-term changes clearly articulated, Step 3 involves identifying the most effective strategies to achieve them. This step is about bridging the gap between the current situation (as captured in the problem tree) and the desired future state.

Begin by thinking backwards from your outcomes: What needs to happen for these changes to be possible? Consider the multiple pathways that could address the core problems. These could range from policy advocacy and system-level reforms to community-based programs, training and capacity-building, infrastructure development, or introducing new technologies.

Choose the most suitable strategies: Critically assess each potential strategy based on your organization's strengths, stakeholder capacities, available resources, and contextual realities. Some strategies may be high-impact but resource-intensive; others may be more scalable or community-led. The key is to choose a balanced, context-sensitive mix that is feasible, sustainable, and aligned with local ownership.

Once you have chosen the strategies, break them down further:

- What are the concrete activities you will undertake?
- Who is responsible for conducting them?
- Who will benefit, and how?
- What are the short- and medium-term changes these activities are expected to trigger?

This step lays the groundwork for mapping the logical pathway of change in the next phase. Well-defined strategies ensure that your ToC is not just aspirational, but actionable and grounded.

Step 4: Map the logic for chosen strategies

As we discussed in the previous section, the logic model acts like a backbone for making a ToC. Once the strategies are finalized (Step 3), it is essential to break them down into actionable and measurable elements. Establishing this clarity ensures that the ToC is not just a conceptual framework, but a practical tool that connects day-to-day actions with long-term goals. Begin by answering key questions for each strategy:

- What **strategies** will be adopted for the intervention?
- What will be the **immediate outcomes** (tangible results) after implementing those strategies?
- What **intermediate outcomes** should emerge (medium- and long-term)?
- What is the intended **long-term outcome**?

> Use a logic chain to map the logical flow from:
>
> *Strategy → Immediate Outcomes → Intermediate Outcomes → Long-term Outcomes*

This helps visualize how the planned efforts are expected to lead to long-term change. The logic should follow an **"if-then"** structure, that is to say, if certain activities are implemented, then specific outputs will be produced, which, in turn, will lead to outcomes and ultimately contribute to the desired impact.

While the results chain offers a linear pathway, this is also the stage where we begin to transition from a linear logic model to a more holistic, lateral ToC. Real-world change is rarely linear. A lateral ToCoC allows for multiple pathways, feedback loops, and interconnected results. When this approach is used, the complexity of systems change is reflected more accurately.

It is recommended to build the logic in reverse:

- Start by identifying the long-term impact you aim to achieve
- Determine the outcomes necessary to reach that impact
- Identify the outputs or immediate results required to produce those outcomes
- Then, map out the activities and strategies that will generate those outputs.

Using the If-Then Logic for making the ToC: Case 1

Strategies

Water conservation through micro-irrigation system installation, construction of farm ponds, bunding and rejuvenation of old water-resource structures

Immediate Outcomes

Increased availability of water for agriculture with adoption of Village Resilience Action Plans (VRAPs) through Local Adaptation and Resilience Committee (LARCs)

Intermediate Outcomes

- Increased production (quantity of crops)
- Increased farmer's income

Long-term Outcomes

Climate-Resilient Agricultural Systems: Robust systems are in place to ensure efficient water management, soil health, and improved farm productivity, making agriculture climate resilient

Using the If-Then Logic for making the ToC: Case 2

Strategies

Providing access to reliable and affordable energy. Illustrative activities include-

- Distribution of clean fuel technologies
  - Biomass stoves
  - LPG kits
  - Electric induction cooking devices
- Access to finance or subsidy for procurement of clean fuel technology solutions

Immediate Outcomes

Increased adoption of clean fuel technology across all categories of HHs:

- Adoption of biomass stoves
- Adoption of LPG stoves
- Adoption of electric induction devices

Increased usage of cleaner primary fuel for cooking across all categories of HHs

Intermediate Outcomes

Sustained usage of clean cooking as the primary cooking method

Long-term Outcomes

Reduction in GHG emissions from traditional fuel cooking

Step 5: Articulate Assumptions

When creating a ToC, it is essential to articulate the assumptions or implicit presumptions that underlie the different levels of changes forming the results chain. This is pivotal because the robustness of any ToC is contingent upon its assumptions. Therefore, it becomes imperative to explicitly state the enabling preconditions or prerequisites that must be met for the delivery of results and attainment of the desired outcomes. Documenting assumptions aids in elucidating the rationale behind the workings of the results chain, shedding light on the factors, and actors influencing causality.

List down assumptions for **Case 1: SACRI intervention** on climate smart agriculture

Assumptions

A1: Community participation is continued

A2: Targeted and contextual transfer of technology/solutions

A3: _____

A4: _____

A5: _____

A6: _____

A7: _____

A8: _____

A9: _____

List down assumptions for **Case 2: PFI intervention** on clean cooking

Assumptions

A1: Targeted needs assessment and categorization of HHs

A2: Increased willingness to switch from traditional fuel to clean fuel

A3: _____

A4: _____

A5: _____

A6: _____

A7: _____

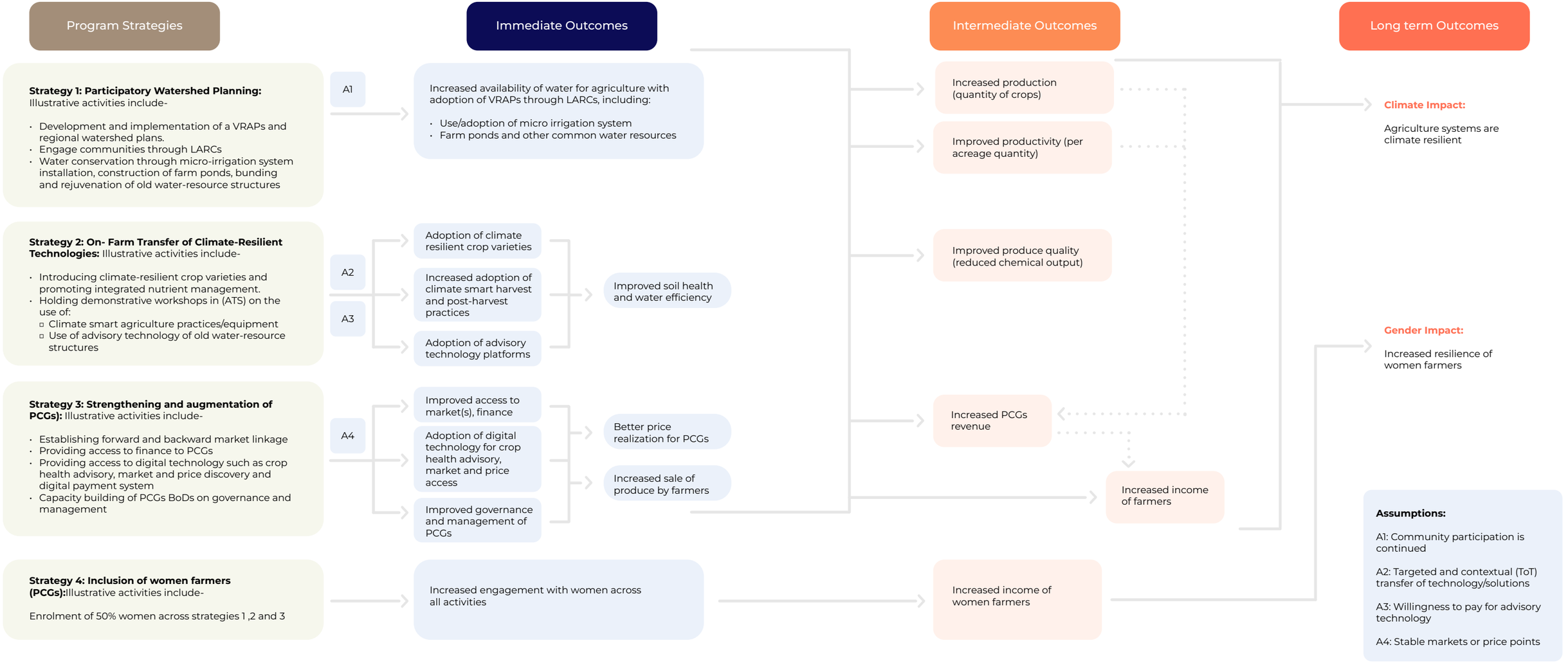
A8: _____

A9: _____

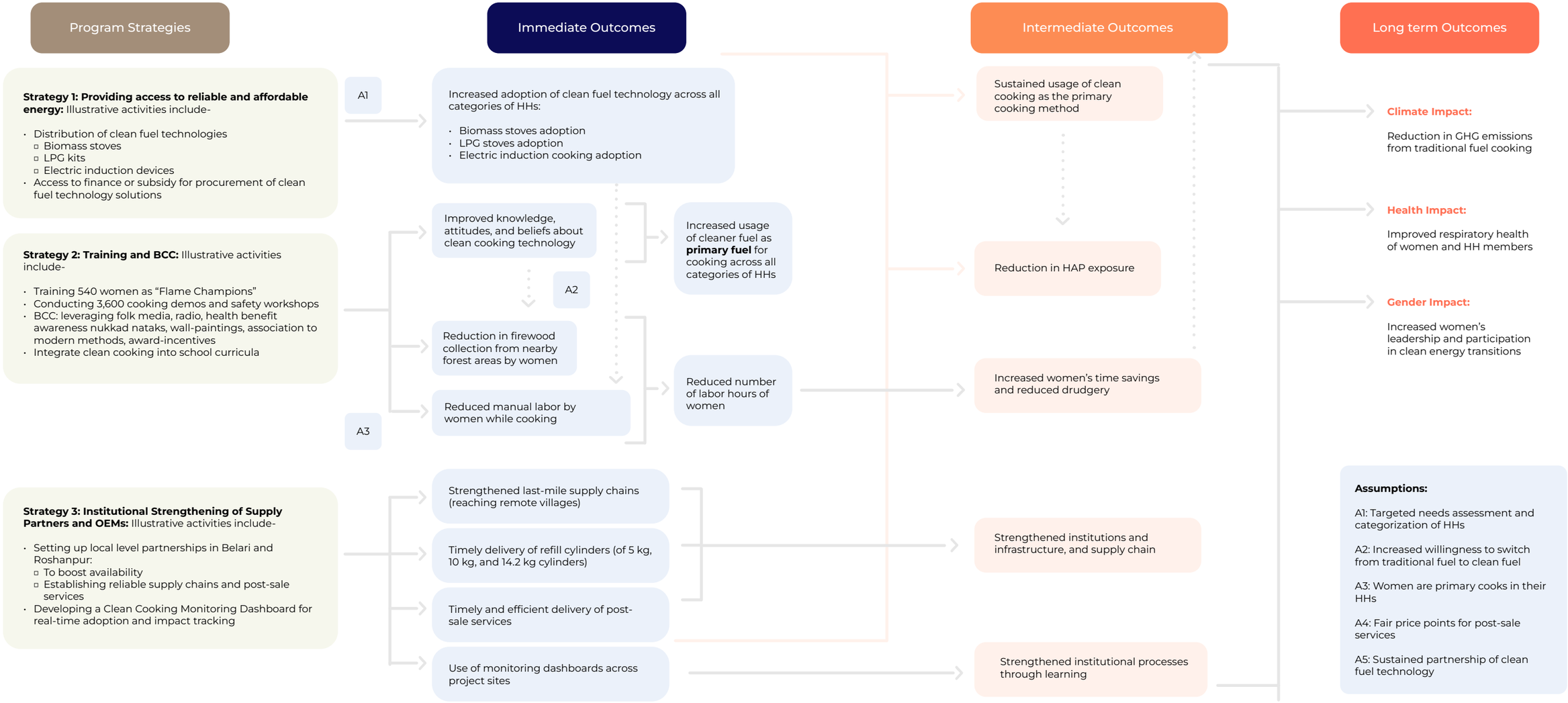
Step 6: Visualize the Theory of Change

In addition to the narrative, create a visual representation of the ToC as per the template shared, to illustrate the flow of logic from activities to outcomes to impact. This diagram can be laid out either horizontally or vertically, using boxes and arrows to show the causal pathways and the sequence of change. The visual should be clear, easy to follow, and aligned with the accompanying narrative. A well-designed ToC graphic is a powerful communication tool, it makes the intervention's logic accessible and actionable for diverse audiences, and serves as a reference point throughout design, implementation, and M&E.

Theory of Change (ToC) for Case 1: Sustainable Agriculture and Climate Resilience Initiative (SACRI) in Aridasha region



Theory of Change (ToC) for Case 2: Advancing Clean Cooking in Suryapur



Step 7: Develop the Narrative

Once the structure of your ToC is in place, it is important to accompany it with a clear and concise narrative explanation. This narrative should describe the logic behind the change pathway, outlining how and why specific outcomes are expected to result from activities. It should also explain the rationale for the strategies chosen, making explicit any assumptions, contextual factors, or dependencies that influence the pathway. A well-developed narrative allows a wide range of stakeholders including implementers, funders, partners, and community members to understand the story behind the intervention, the reasoning behind its design, and the expected pathway to change.

Let us put together a narrative for ToC Case 1: Climate-Resilient Agriculture in Aridasha (SACRI)

The ToC illustrates how program strategies work in sequence to strengthen agricultural resilience while advancing gender equity.

The process begins with **participatory watershed planning**, where LARCs implement VRAPs. Micro-irrigation, farm ponds, and other common water resources increase water availability for agriculture. This directly contributes to higher production volumes and improved productivity per acre, laying the foundation for climate-resilient farming.

At the same time, the **transfer of climate-resilient technologies** ensures that farmers adopt improved crop varieties, climate-smart post-harvest practices, and advisory technologies. These practices improve soil health and water efficiency, while also enhancing the quality of produce by reducing chemical use. Together, they lead to better yields, higher efficiency, and greater sustainability of agricultural systems.

The program also strengthens **PCGs** by improving their governance, expanding access to finance, and enabling forward and backward market linkages. With digital tools, PCGs can deliver services such as crop health advisories, price discovery, and digital payments. These inputs improve farmers' access to markets, enhance price realization, and boost the volume of produce sold. Over time, stronger PCGs generate higher revenues, which translate into increased farmer incomes.

A **cross-cutting focus on women's inclusion** ensures at least 50% enrollment across strategies. Women's participation in watershed planning, technology adoption, and PCGs leads to increased engagement, higher incomes, and enhanced resilience. As women assume leadership roles in collective platforms, they gain decision-making power and strengthen their agency within HHs and communities.

In the long term, these pathways culminate in two outcomes that reinforce each other. At the system level, agriculture becomes more climate-resilient through improved water, soil, and production systems. At the social level, women farmers experience increased economic resilience and leadership in local institutions. Together, these outcomes deliver climate impact and gender impact, ensuring a more sustainable and inclusive agricultural future.

Similarly, a narrative for ToC Case 2: Clean Cooking Initiative in Rural Suryapur (PFI)

The ToC demonstrates how strategies to expand clean cooking access create health, gender, and climate benefits. The first pathway begins with the distribution of clean fuel technologies such as biomass stoves, LPG kits, and electric induction devices, combined with subsidies and financing to ensure affordability. This increases adoption of clean cooking solutions and reduces dependence on traditional biomass. As HHs transition to cleaner fuels, exposure to HAP declines, leading to improved respiratory health outcomes. Women, in particular, benefit through reduced drudgery from fuelwood collection and cooking.

The second pathway is anchored in training and BCC. Women trained as "Flame Champions" and community demonstrations foster improved knowledge, attitudes, and practices around clean cooking. By raising awareness through local media and schools, the program strengthens social acceptance of clean technologies. This results in increased willingness to shift to cleaner fuels and sustained use of improved stoves and devices.

The third pathway focuses on institutional strengthening of supply chains and OEMs. Establishing local partnerships and ensuring reliable post-sale services enhance supply chain performance. With monitoring systems in place, timely delivery of refills and servicing reduces barriers to continued usage. This institutional strengthening guarantees that HHs can sustain their adoption of clean fuels in the long run.

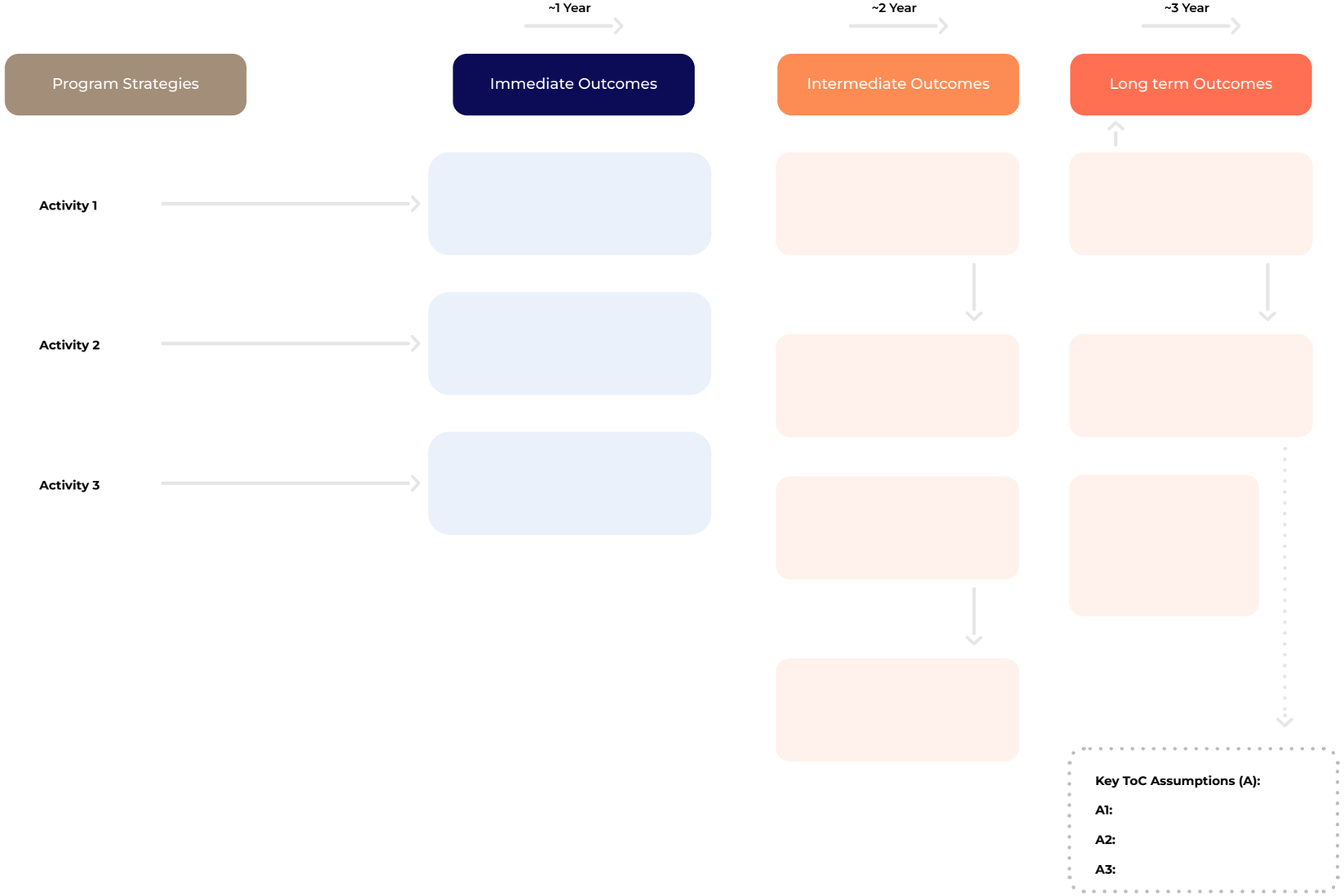
Together, these pathways converge into intermediate outcomes: HHs shift to using clean cooking as their primary method, air pollution exposure reduces, and women gain more time and energy for productive activities. Strengthened institutions ensure supply systems remain reliable and sustainable.

Ultimately, these outcomes translate into three long-term impacts. Climate benefits emerge from reduced emissions, health benefits from improved respiratory conditions, and gender benefits from increased women's participation and leadership in clean energy transitions. In this way, the program creates a holistic model, linking technology access, behavior change, and institutional support to drive lasting transformation.

3.7 Template for ToC

Here is a template that you can utilize for making your own ToC. Remember, a ToC has no fixed template, you can create it horizontally or vertically using varying terminologies.

Context:


~1 Year
~2 Year
~3 Year
Program Strategies
Immediate Outcomes
Intermediate Outcomes
Long term Outcomes
Activity 1
Activity 2
Activity 3
Key ToC Assumptions (A):
A1:
A2:
A3:

4. Impact Managing Framework: The Results Framework

4.1 Translating ToC into a Results Framework

Creating a ToC provides a conceptual map outlining the process of change within a project. To effectively track and measure the changes described in the ToC, including project outputs, outcomes, and impacts, we need a Results Framework (RF) or Performance Measurement Framework (PMF). This framework is essential for monitoring and evaluating the project's performance, ensuring that we achieve our objectives and outcomes. We are consciously using the term 'monitor' as RF is a tool of concurrent M&E where we also 'monitor' the outcome and the objective. Once the ToC is in place, translating it into an RF is crucial for several reasons. The RF helps us manage outcomes by continuously providing evidence of the project's performance. It follows the causal logic of "if-then" conditions, like the ToC, ensuring that each step logically leads to the next.

When developing an RF, it is important to recognize the **hierarchy of results:**

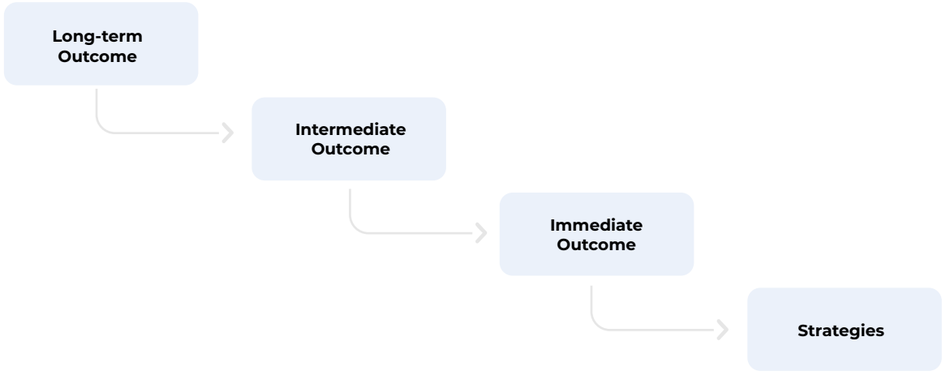


Figure 6: Hierarchy of results for developing a Results Framework

This hierarchy ensures that all aspects of the project are aligned and contribute to the overall goals.

The core principles of an RF include:

Assess Achievements (what we did/ achieved) 01

The RF allows us to evaluate what has been accomplished by tracking specific indicators and measuring progress against set targets. This helps in identifying areas of success and those needing improvement.

Guide Project Planning and Implementation 02

The RF serves as a comprehensive guide for planning and executing the project. It helps in defining clearstrategies, outputs, outcomes, and impacts, ensuring that all project components are systematically addressed and aligned with the overall goals.

Enhance Communication 03

The RF acts as a communication tool among stakeholders, ensuring that everyone is on the same page regarding project objectives, progress, and outcomes. It helps in maintaining transparency and fostering collaboration among team members, funders, and other relevant stakeholders.

Foundation for M&E 04

The RF provides a structured basis for ongoing M&E efforts. It ensures continuous improvement and accountability by systematically tracking performance, identifying challenges, and enabling timely adjustments to strategies and activities.

By translating the ToC into an RF, we create a dynamic tool that not only tracks progress but also guides project planning, enhances communication, and lays the foundation for robust M&E. This approach ensures that our project remains focused, effective, and adaptable to changing circumstances.

4.2 Why Do We Need an RF When We have a ToC?

The RF is essential even when we have a ToC because it clearly defines indicators for each expected result, helping to establish clear measurement criteria. The RF translates the conceptual map of the ToC into a practical tool for tracking and assessing project performance. It ensures that outcomes are measurable and provides a structured approach to monitor progress, define responsibilities, outline assessment methodologies, and continuously track progress or deviations from set targets.

Elements of a Results Framework: 3Ws + 1H: What, When, How, Who

Expected Results (W1): WHAT
What are we measuring?
This clearly articulates the specific outcomes or impacts that the ToC aims to achieve, ensuring they are well-defined and logically linked within a causal framework. Each expected result must have at least one indicator to

monitor and evaluate progress, ensuring that these indicators align with the results and provide clear criteria for measurement.

Periodicity (W2): WHEN
When is it to be measured?
This determines how frequently or at what stage each result will be measured (e.g., monthly, quarterly, annually) to enable consistent tracking of progress and timely evaluation of the intervention's effectiveness.

Source of Data (H1): HOW
How will the data be collected?
This specifies the methods and sources, such as surveys, interviews, or administrative records, from which data will be gathered to ensure that the data collection process is reliable and consistent.

Responsibility (W3): WHO
Who is responsible?
This identifies the individuals or teams responsible for collecting data to ensure clear accountability and effective management of the data collection process.

Baseline Value/Condition: Documents the initial value or condition of each expected result before the intervention begins to provide a benchmark for comparison and to measure changes and improvements over time.

Target: Sets targets for each expected result, to guide efforts, focus resources, and track progress towards achieving the overall goals. Targets can also be set as year-wise targets to provide a clearer roadmap for tracking progress over time.

4.3 Understanding Indicators

What is an Indicator?

An indicator is a unit of information that is:

- **Measured over time:** Indicators are tracked at various intervals to observe changes.
- **Depicts change:** The main purpose of an indicator is to show how a certain condition or situation is evolving.
- **Used to monitor conditions under observation:** Indicators are used to monitor specific conditions or areas of interest.

Characteristics of a Good Indicator

A good indicator should be SMART which stands for the following:

Figure 7: SMART - Characteristics of a Good Indicator

Each word has a strong meaning attached to it which means the following:

Table 3: Defining SMART indicators

Specific	Indicators should be clearly defined and focus on specific areas of interest.
Measurable	Indicators should be quantifiable and provide clear benchmarks for measuring progress.
Achievable	Indicators should be realistic and attainable within the given context and resources.
Relevant	Indicators should be aligned with the goals and objectives of the intervention being monitored and evaluated.
Time-bound	Indicators should have a clearly defined time period within which to achieve the desired results.

Additionally, indicators should be:

- Precise - Precision ensures consistency and reliability in measurement, making comparisons meaningful across different times and contexts.
- Neutral Value - It should be defined without any positive or negative value attached. Being value-neutral allows the indicator to objectively reflect changes without bias, ensuring that the data collected is impartial and accurate.

These characteristics ensure that indicators are effective tools for M&E, providing clear, measurable, precise, and unbiased information about the conditions under observation.

Self-paced Exercise:

Identify whether the following indicators are good or bad ones?

Table 4: List of draft indicators

Sl. No.	Indicator	Is it a good indicator? (Yes/No)	Reasons	Improved Version
1	% of farmers trained in climate-resilient agriculture			
2	Number of clean cookstoves distributed to h HHs			
3	Number of awareness campaigns conducted in villages			
4	Farmers report improved access to irrigation			
5	% increase in women's participation in cooking fuel decisions			
6	Improved ecosystem health			
7	% of HHs experiencing fewer respiratory issues			
8	Number of farmer-producer groups formed			
9	% reduction in time women spend collecting fuelwood			
10	Adoption of diversified cropping systems among smallholder farmers			
11	Number of self help groups (SHGs) linked to clean energy credit systems			
12	% of farmlands under micro-irrigation systems			
13	Positive changes in community perception toward clean cooking			
14	Number of policies integrated to support resilient agriculture			
15	Stakeholders' report increased trust in "Flame Champions"			
16	Increased farmer income due to climate-smart practices			

Here is our understanding

Table 5: List of refined indicators

Sl. No.	Indicator	Type of indicators	Is it a good indicator? (Yes/No)	Reasons	Improved Version
1	% of farmers trained in climate-resilient agriculture	Quantitative	No	Training alone does not indicate adoption or change	% of farmers adopting climate-resilient practices after training
2	Number of clean cooking stoves distributed to HHs	Quantitative	No	Distribution does not guarantee usage	% of HHs regularly using clean cooking stoves
3	Number of awareness campaigns conducted in villages	Quantitative	Yes	Directly measures outreach efforts	Not Applicable
4	Farmers report improved access to irrigation	Qualitative	Yes	Captures user experience of infrastructure improvements	Not Applicable
5	% increase in women's participation in cooking fuel decisions	Quantitative	Yes	Specific, measurable, and relevant to gender empowerment	Not Applicable
6	Improved ecosystem health	Qualitative	No	Too vague and not measurable	% improvement in vegetation cover or soil health index
7	% of HHs experiencing fewer respiratory issues	Quantitative	Yes	Outcome-level health indicator tied to intervention goals	Not Applicable
8	Number of farmer-producer groups formed	Quantitative	No	Formation doesn't reflect effectiveness or sustainability	Number of farmer-producer groups actively trading and sustaining operations
9	% reduction in time women spend collecting fuelwood	Quantitative	Yes	Clear, measurable, and reflects time-saving benefit	Not Applicable
10	Adoption of diversified cropping systems among smallholder farmers	Qualitative	Yes	Reflects behavioral and systems change	Not Applicable
11	Number of SHGs linked to clean energy credit systems	Quantitative	No	Doesn't reflect uptake or effectiveness of credit	% of SHG members accessing and repaying clean energy loans
12	% of farmlands under micro-irrigation systems	Quantitative	Yes	Precise and linked to improved water use efficiency	Not Applicable
13	Positive changes in community perception toward clean cooking	Qualitative	No	Too subjective unless operationalized	% of community members reporting preference for clean cooking after usage
14	Number of policies integrated to support resilient agriculture	Quantitative	Yes	Specific and aligned with institutional outcomes	Not Applicable
15	Stakeholders report increased trust in "Flame Champions"	Qualitative	Yes	Captures community-level trust in last-mile actors	Not Applicable
16	Increased farmer income due to climate-smart practices	Quantitative	No	Income changes may be influenced by external factors	% of farmers attributing income increase to specific climate-smart practices

4.4 Template for developing a Results Framework:

Expected Results (What)	Indicators	Periodicity (When)	Source of Data (How)	Responsibility of Data (Who)	Baseline Value	Target 1 (Y1)	Target 2 (Y2)
Long-term Outcome							
Intermediate Outcome							
Immediate outcome							
Strategies							

4.5 Steps to develop a Results Framework

Following the same Case Studies on adaption and mitigation

Step 1

Populate the Expected Results Column

For developing an RF, the first step is to fill in the expected results column. This involves transferring the strategies, immediate and intermediate outcomes defined in the (ToC) into the corresponding columns in the RF at the assigned levels. By explicitly stating them in the RF, we ensure clarity and responsibility for their achievement.

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Agriculture systems are climate resilient							
Gender Impact: Increased resilience of women farmers							
Intermediate Outcome							
Increased production (quantity of crops)							
Improved productivity (per acreage quantity)							
Improved produce quality (reduced chemical output)							
Increased PCG's revenue							
Increased income of farmers							
Increased income of women farmers							

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Immediate Outcomes							
Increased availability of water for agriculture with adoption of VRAPs through LARCs, including- · Use/adoption of micro irrigation system · Farm ponds and other common water resources							
Adoption of climate resilient crop varieties							
Increased adoption of climate smart harvest and post-harvest practices							
Adoption of advisory technology							
Improved soil health and water efficiency							
Improved access to market(s), finance							
Adoption of digital technology for crop health advisory, market and price							
Improved governance and management of PCGs							
Better price realization for PCGs							
Increased sale of produce by farmers							
Increased engagement of women across all activities							

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategies							
Strategy 1: Participatory Watershed Planning: Illustrative activities include: • Development and implementation of VRAPs and regional watershed plans • Engage communities through LARCs • Water conservation through micro-irrigation system installation, construction of farm ponds, bunding and rejuvenation of old water-resource structures							
Strategy 2: Onfarm Transfer of Climate-Resilient Technologies. Illustrative activities include: • Introduce climate-resilient crop varieties and promote integrated nutrient management • Demonstrative workshops held with ATS on use of ▫ Climate smart agriculture practices/equipment ▫ Use of advisory technology							
Strategy 3: Strengthening and augmentation of PCGs. Illustrative activities include: • Establishing forward and backward market linkage • Providing access to finance to PCGs • Providing access to digital technology, such as crop health advisory, market and price discovery and digital payment system • Capacity building of PCGs BoDs on governance and management							
Strategy 4: Inclusion of women farmers (PCGs). Illustrative activities include: • Enrolment of 50% women across strategies 1, 2 and 3							

Similarly, step 1 for Case Study 2 on clean cooking is as follows:

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Reduction in GHG emissions from traditional fuel cooking							
Health Impact: Improved respiratory health of women and HH members							
Gender Impact: Increased women's leadership and participation in clean energy transitions							
Intermediate Outcome							
Sustained usage of clean cooking as the primary cooking method							
Reduction in HAP exposure							
Increased women's time savings and reduced drudgery							
Strengthened institutions and infrastructure, and supply chain							
Strengthened institutional processes through learning							
Increased income of women farmers							
Immediate Outcomes							
Increased adoption of clean fuel technology across all categories of HHs: • Adoption of biomass stoves • Adoption of LPG stoves • Adoption of electric induction devices							

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Improved knowledge, attitudes, and beliefs around clean cooking technology							
Reduction in firewood collection from nearby forest areas by women							
Reduced manual labor by women while cooking							
Increased usage of cleaner fuel as primary fuel for cooking across all categories of HHs							
Reduced number of labor hours of women							
Strengthened last-mile supply chains (reaching remote villages)							
Timely delivery of refill cylinders (of 5 kg, 10 kg, and 14.2 kg cylinders)							
Timely and efficient delivery of post-sale services							
Use of monitoring dashboards across project sites							
Strategies							

Strategy 1: Providing access to reliable and affordable energy. Illustrative activities include:
• Distribution of clean fuel technologies
  ▫ Biomass stoves
  ▫ LPG kits
  ▫ Electric induction devices
• Access to finance or subsidy for procurement of clean fuel technology solutions							

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategy 2: Training and BCC: Illustrative activities include: · Train 540 women as “Flame Champions” · Conduct 3,600 cooking demos and safety workshops · BCCs: leveraging folk media, radio, health benefit awareness nukkad nataks, wall-paintings, association with modern methods, award-incentives · Integrate clean cooking into school curricula.							
Strategy 3: Institutional Strengthening of Supply Partners and OEMs. iIllustrative activities include: · E·Setting up local level partnerships in Belari and Roshanpur: ▫ To boost availability ▫ To establish reliable supply chains and post-sale services · To develop a Clean Cooking Monitoring (is is Mapping?) Dashboard for real-time adoption and impact tracking							

Step 2

Develop indicators for expected results

We aim to measure changes in each condition as a result of our project. To do this, we need indicators that tell us if the condition has changed or if the desired condition has been achieved. Developing suitable indicators is a challenging task in any RF. As units of information, indicators are value-neutral and can only serve as proxies or approximations.

To effectively measure the expected results, we need indicator-based information that best depicts the change sought. For each level of result, there should be at least one indicator. One should keep in mind that first, understanding the nature of the indicator is of essence, whether it is quantitative, qualitative or descriptive, only then one should proceed to develop a SMART indicator.

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Agriculture systems are climate resilient	· % reduction in yield loss during climate stress years · Average number of climate-resilient practices adopted per HH · Average score of agricultural composite resilience index score						
Gender Impact: Increased resilience of women farmers	· Proportion of women reporting improved decision-making in farm and HH matters · Change in Women Empowerment in Agriculture Index (WEAI) score · -% of women adopting climate-smart practices						
Intermediate Outcome							
Increased Production (quantity of crops)	· Average production volume per HH (kg) · Area under multi-season cropping · % of HHs reporting reduced crop failure						
Improved Productivity (per acreage quantity)	· Average yield per hectare for major crops · % increase in productivity compared to baseline · Crop intensity index						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Improved produce quality (reduced chemical output)	· % of farmers adopting organic/eco-friendly inputs · % of produce passing quality standards for markets						
Increased PCGs revenue	· Annual turnover of PCGs (INR) · Proportion of PCGs reporting profit						
Increased income of farmers	· Average annual income of farmers (₹) · % of farmers reporting increased crop price · % of farmers reporting multiple market options for selling · % of farmers reporting reduction in expenses						
Intermediate Outcome							
Increased availability of water for agriculture with adoption of VRAPs through LARCs, including: · Use/adoption of micro irrigation system · Farm ponds and other common water resources	· % of farmers adopting micro-irrigation · % of farms ponds in usable condition during dry season · Number of water structures managed by LARCs						
Adoption of climate resilient crop varieties	· % of farmers adopting at least one improved crop variety · Area under resilient crops (ha) · % reporting ease of access to seed varieties						
Increased adoption of climate smart harvest and post-harvest practices	· % of farmers adopting improved storage methods · % reduction in post-harvest loss · Number of demo units established						
Adoption of advisory technology	· % of farmers accessing advisories digitally · Frequency of advisory use (per month) · Proportion of farmers changing practices based on advisories						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Improved soil health and water efficiency	· Soil organic carbon levels · % reduction in chemical fertilizer use · Irrigation efficiency index						
Improved access to market(s), finance	· % of farmers accessing formal finance · % increase in farmer–buyer linkages through PCGs · % of farmers receiving digital payments						
Adoption of digital technology for crop health advisory, market and price	· % of PCGs using digital tools · Number of farmers transacting digitally · % of farmers accessing price information via mobile phones						
Improved governance and management of PCGs	· % of PCGs with improved governance practices · Frequency of board meetings · % of PCGs with financial transparency practices						
Better price realization for PCGs	· Avg. price received per kg of produce · Number of buyers engaged through PCGs · % of produce meeting quality grading standards						
Increased sale of produce by farmers	· % increase in volume of produce aggregated and sold via PCGs · % increase in farmer participation in collective sales						
Increased engagement of women across all activities	· % of activities with 50% women · Number of women in leadership positions · % of women reporting high engagement						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategies							
Strategy 1: Participatory Watershed Planning. Illustrative activities include: • Development and implementation of VRAPs and regional watershed plans • Engage communities through LARCs • Water conservation through micro-irrigation system installation, construction of farm ponds, bunding and rejuvenation of old water-resource structures	• % of VRAPs developed • % of community mobilized • Periodicity of community meetings held by LARCs • % of planned VRAPs implemented • % of planned irrigation systems installed • % of poor condition ponds/water structures initiated with rejuvenation work						
Strategy 2: On-farm Transfer of Climate-Resilient Technologies. Illustrative activities include: • Introduce climate-resilient crop varieties and promote integrated nutrient management • Demonstrative workshops held with (ATS on the use of: ▫ Climate smart agriculture practices/equipment ▫ Use of advisory technology	• % of farmers trained in climate-resilient practices • % of demo plots planned are established • % of farmers adopting improved nutrient management						
Strategy 3: Strengthening and augmentation of PCGs: Illustrative activitie include: • Establishing forward and backward market linkage • Providing access to finance to PCGs • Providing access to digital technology, such as crop health advisory, market and price discovery and digital payment system • Capacity building of PCGs BoDs on governance and management	• % of PCGs linked to formal markets • % of PCGs accessing finance • % of PCGs using digital tools • Capacity building for PCG • Fair election conduct for PCG BoD selection						
Strategy 4: Inclusion of women farmers (PCGs). Illustrative activities include: • Enrollment of 50% women across strategies 1, 2 and 3	• Proportion of women participants across strategies • % of PCGs with 50% women membership • % of leadership positions held by women in PCGs and LARCs						

Similarly, step 2 for Case Study 2 on clean cooking is as follows:

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Reduction in GHG emissions from traditional fuel cooking	• Amount of CO_2e metric tonnes reduced annually by switching from firewood burning • % of HHs fully transitioned to clean fuels • % of HHs partially transitioned to clean fuel • Kilograms reduction of daily biomass uses per HH	Annual	Program Monitoring GHG Emission Calculations HH Surveys	Evaluation Partner, Program Team, GHG expert	• 0 • 10% • 5% • 0 kg	• 5000 MT • 30% • 20% • 2 kg	• 10,000 MT • 50% • 30% • 4 kg
Health Impact: Improved respiratory health of women and HH members	• % of HHs achieving PM2.5 < WHO safe levels • % of HHs reporting reduction in respiratory tract diseases • % of women reporting reduction in respiratory tract diseases	Annual	Program Monitoring HH Surveys Health Check-up	Evaluation Partner, Program Team, Health Expert	• ~5% • 0% • 0%	• 20% • 15% • 20%	• 40% • 30% • 30%
Gender Impact: Increased women's leadership and participation in clean energy transitions	• % of women reporting increased HH decision making • % of "Flame Champions" who have trained other HHs	Annual	Program Monitoring Focus Group Discussions (FGDs)	Evaluation Partner, Program Team	• 5% • 0%	• 20% • 25%	• 35% • 50%
Intermediate Outcome							
Sustained usage of clean cooking as the primary cooking method	• % of HHs using clean fuel as primary fuel • % of HHs with zero biomass usage • % retention of clean stove after 2 years • % increase in average number of LPG refills in a year	Annual	Program Monitoring HH Surveys	Evaluation Partner, Program Team	• 10% • 5% • NA • 2	• 30% • 25% • 75% • 3	• 50% • 45% • 80% • 4
Reduction in HAP exposure	• Average HH PM 2.5 concentration • Average number of members per HH with coughing issue • Average number of HH members with breathing issues • % of kitchens meeting ventilation standards	Quarterly	Program Monitoring HH Survey Health Check-up	Evaluation Partner, Program Team, Health Experts	• >250 • 1.2 • 41% • 8%	• >200 • 1.0 • 30% • 25%	• >150 • 0.7 • 18% • 45%

Results Framework

Expected Results (What)	Indicators	Periodicity (When)	Source of Data (How)	Responsibility of Data (Who)	Baseline Value	Target 1 (Y1)	Target 2 (Y2)
Increased women's time savings and reduced drudgery	· % of HHs using clean fuel as primary fuel · % of HHs with zero biomass usage · % retention of clean stove after 2 years · % increase in average number of LPG refills in a year	Annual	Program Monitoring HH Surveys	Evaluation Partner, Program Team	· 5% · 0.5 · 3%	· 25% · 1.5 · 20%	· 45% · 2.5 · 35%
Strengthened institutions and infrastructure, and supply chain	· Number of local service centers established · % of centers with trained staff · % of villages reporting timely delivery of fuel/stove/ service from supply vendors	Bi-annual	Program Monitoring Market Survey	Evaluation Partner, Program Team	· 0 · 0% · 10%	· 8 · 60% · 40%	· 16 · 90% · 70%
Strengthened institutional processes through learning	· Number of monitoring dashboards used at partner level · Number of feedback loops integrated into program design	Quarterly	Dashboard MIS reports, Partner meetings	Evaluation Partner	· 0	Dashboard piloted in 2 sites	Dashboard scaled across all sites
Immediate Outcomes							
Increased adoption of clean fuel technology across all categories of HHs: · Adoption of biomass stoves · Adoption of LPG stoves · Adoption of electric induction devices	· % of participant HHs using clean cooking technologies disaggregated by type · Ratio of units (LPG, induction, biomass) in active use vs distributed · Average number of clean cooking refills (LPG/electric recharge) per HH/month	Quarterly	HH surveys, Monitoring Dashboard, Usage tracking, Vendor refill records	Implementation partner, Local field teams, "Flame Champions", Implementation partner, Local distributors, Program management information systems (MIS)	· 10% · 12% · 0.2	· 30% · 35% · 01.0	· 50% · 60% · 2.0
Improved knowledge, attitudes, and beliefs around clean cooking technology	· % of HHs willing to switch from firewood/dung to clean options · % of HHs demonstrating knowledge of benefits/safety · % women reporting positive perceptions of clean cooking · Reasons cited for resistance to switch · Change in cooking fuel preferences over time	Bi-annual	HH surveys, FGDs	M&E Team, Field Coordinators, PMU	· 18% · 0 · 0 · Cost, tradition, supply constraints · Baseline estbd. in 2023	· 35% · 50% · 50% · NA · +15 pts vs baseline	· 55% · 100% · 100% · NA · +25 pts vs baseline

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Reduction in firewood collection from nearby forest areas by women	· Estimated volume of firewood collected per month per HH · % of women and children involved in firewood collection · % forest-dependent HHs reporting reduced collection	Annually	HH surveys, FGDs, Time-use surveys, Key Informant Interviews (KIIs) with women, Community-level FGDs, Forest Dept reports	Field team, M&E, Program team, Forest Dept liaison	· 65 · 70% · 0%	· 45 · 50% · 25%	· 32 · 30% · 45%
Reduced manual labor by women while cooking	% of women reporting reduced strain/effort while cooking	Bi-Annual	HH surveys, FGDs	M&E Team	High effort	Reduced effort	Reduced effort
Increased usage of cleaner fuel as primary fuel for cooking across all categories of HHs	% of HHs reporting LPG/biomass improved/electric induction as main fuel	Bi-Annual	HH surveys, usage monitoring	M&E Team	0	40% HHs	70% HHs
Reduced number of labor hours of women	· Avg. cooking time reduced per day · Avg. wood collection time reduced per day	Bi-Annual	HH time-use surveys	M&E Team	3-4 hours/day	1 hr saved	1 hr saved
Strengthened last-mile supply chains (reaching remote villages)	· % of HHs reporting timely refill · Number of functioning local supply outlets (district avg.) · Average time taken for service/refill request fulfilment (days)	Monthly	HH surveys, feedback calls, Supply chain mapping, MIS data, CRM records, “Flame Champion” logbooks	“Flame Champions”, MIS, Distribution partners, Program Ops, Program team, Distributors	· 12% · 1 · 12	· 45% · 5 · 6	· 70% · 8 · 3
Timely delivery of refill cylinders (of 5 kg, 10 kg, and 14.2 kg cylinders)	% HHs receiving refills within 7 days of request	Monthly	HH surveys, Monitoring MIS	Supply Partner, M&E Team	0	60%	85%
Timely and efficient delivery of post-sale services	% service requests resolved within 10 days	Monthly	HH surveys, Monitoring MIS	Supply Partner, M&E Team	0	60%	85%
Use of monitoring dashboards across project sites	% of program staff actively using dashboards for data entry, monitoring and decision-making	Quarterly	Monitoring Dashboard analytics, Field team	M&E Team	0	100%	100%

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategies							
Strategy 1: Providing access to reliable and affordable energy. Illustrative activities include: · Distribution of clean fuel technologies ▫ Biomass stoves ▫ LPG kits ▫ Electric induction devices · Access to finance or subsidy for procurement of clean fuel technology solutions	· % of HHs that receive clean fuel technologies (biomass stoves, LPG kits, electric inductions devices) · % of HHs accessing subsidies/loans for clean fuel solutions · % of retail/service outlets established for clean cooking products	Monthly	Program Team	Program MIS, M&E Team	· 0 · 0 · 0	· 60% · 30% · 40%	· 100% · 50% · 80%
Strategy 2: Training and BCC: Illustrative activities include: · Train 540 women as “Flame Champions” · Conduct 3,600 cooking demos and safety workshops · BCCs: leveraging folk media, radio, health benefit awareness nukkad nataks, wall-paintings, association with modern methods, award-incentives · Integrate clean cooking into school curricula.	· Number of “Flame Champions” trained · Number of cooking demonstrations and safety workshops conducted · % of planned BCC campaigns through folk media, radio, wall paintings, school curriculum	Monthly	Program Team	Program MIS, M&E Team	· 0 · 0 · 0	· 300 · 1800 · 60%	· 540 · 3600 · 100%
Strategy 3: Institutional Strengthening of Supply Partners and OEMs. iIllustrative activities include: · E·Setting up local level partnerships in Belari and Roshanpur: ▫ To boost availability ▫ To establish reliable supply chains and post-sale services · To develop a Clean Cooking Monitoring (is is Mapping?) Dashboard for real-time adoption and impact tracking	· % of partnerships formed with local suppliers and OEMs · % of reliable supply chain nodes established (e.g., dealers, service centers) · Dashboard developed and updated monthly · % of key indicators tracked in real-time · Frequency of dashboard-based reviews	Monthly	Dashboard backend analytics, Review meeting logs	Program Team, M&E Team, PMU	· 0 · No · 0% · Not estbd.	· Bellari & Roshanpur · Yes · 60% · Monthly	· Bellari & Roshanpur · Yes · 90% · Monthly

Step 3

Assign Periodicity, Identify Sources, Assign Responsibility, Set Baseline Values and the Target

For each indicator, it is essential to decide the time over which it will be measured. The periodicity should be based on the expected visibility of change in the condition under observation. If change is expected within a short duration, periodicity could be more frequent, such as weekly, monthly, or quarterly. If change is expected over a longer duration, periodicity could be less frequent, such as half-yearly or annually.

After determining the periodicity, identify the source from where the indicator information will be drawn. It is important to pinpoint the exact source of this information to ensure accessibility and clarity. If there are multiple sources for obtaining the indicator information, mention all relevant sources.

Next, assign responsibility for gathering the indicator-based information to a specific member/team. This ensures that there is accountability and a clear point of contact for data collection.

Additionally, fill in the baseline value for each indicator if it exists. The baseline value helps in comparing the current state to the initial conditions/values at the start of the project.

Finally, set targets for each indicator to measure progress toward the overall goal. Targets can also be set year-wise, such as Year 1 target, Year 2 target, and Year 3 target. To make matters simple, the example below uses a single target column, although year-wise targets provide a clearer roadmap for tracking progress over time.

Some of the cells of the framework have been filled in for reference purposes. Now, go ahead and fill in the rest for each.

Results Framework

Expected Results (What)	Indicators	Periodicity (When)	Source of Data (How)	Responsibility of Data (Who)	Baseline Value	Target 1 (Y1)	Target 2 (Y2)
Long-term Outcome							
Climate Impact: Agriculture systems are climate resilient	· % reduction in yield loss during climate stress years · Average number of climate-resilient practices adopted per HH · Average score of agricultural composite resilience index score	Annual	HH Surveys	Program team, M&E team, Extension workers	· 0 · 0 · 0	· 20% · 2 · 5	· 30% · 5 · >8
Gender Impact: Increased resilience of women farmers	· Proportion of women reporting improved decision-making in farm and HH matters · Change in Women Empowerment in Agriculture Index (WEAI) score · -% of women adopting climate-smart practices						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Intermediate Outcome							
Increased Production (quantity of crops)	· Average production volume per HH (kg) · Area under multi-season cropping · % of HHs reporting reduced crop failure	Annual	HH Surveys, Farmer FGDs, crop-register records	Program team, M&E team, Agri-Extension Dept. workers	· 1,500 kg · 0 · 50%	· 1,900 kg · 0.5 acre · 35%	· ,400 kg · 1 acre · 15%
Improved Productivity (per acreage quantity)	· Average yield per hectare for major crops · % increase in productivity compared to baseline · Crop intensity index	Annual	HH Surveys, Farmer FGDs, crop-register records	Program team, M&E team, Agri-Extension Dept. workers	· 1.2 t/ha · 0% · NA	· 1.6 t/ha · 15% · Medium	· 2.0 t/ha · 30% · High
Improved produce quality (reduced chemical output)	· % of farmers adopting organic/eco-friendly inputs · % of produce passing quality standards for markets						
Increased PCGs revenue	· Annual turnover of PCGs (INR) · Proportion of PCGs reporting profit						
Increased income of farmers	· Average annual income of farmers (₹) · % of farmers reporting increased crop price · % of farmers reporting multiple market options for selling · % of farmers reporting reduction in expenses						
Increased income of women farmers	· Average annual income of women farmers · % of women accessing markets through PCGs						
Intermediate Outcome							
Increased availability of water for agriculture with adoption of VRAPs through LARCs, including: · Use/adoption of micro irrigation system · Farm ponds and other common water resources	· % of farmers adopting micro-irrigation · % of farms ponds in usable condition during dry season · Number of water structures managed by LARCs	Quarterly	Quarterly Farmer HH Surveys, LARC reports	Irrigation Dept., Field team	· 0 · 0 · 0	· 2.5 lakh · 50% · 138	· 4.2 lakh · 90% · 250

Results Framework

Expected Results (What)	Indicators	Periodicity (When)	Source of Data (How)	Responsibility of Data (Who)	Baseline Value	Target 1 (Y1)	Target 2 (Y2)
Adoption of climate resilient crop varieties	· % of farmers adopting at least one improved crop variety · Area under resilient crops (ha) · % reporting ease of access to seed varieties	Semi-annual	Farmer HH Surveys	M&E team, Program Team	· 0 · 0 · 0	· 60% · 0.5 acre · 100%	· 100% · 1 acre · 100%
Increased adoption of climate smart harvest and post-harvest practices	· % of farmers adopting improved storage methods · % reduction in post-harvest loss · Number of demo units established						
Adoption of advisory technology	· % of farmers accessing advisories digitally · Frequency of advisory use (per month) · Proportion of farmers changing practices based on advisories						
Improved soil health and water efficiency	· Soil organic carbon levels · % reduction in chemical fertilizer use · Irrigation efficiency index						
Improved access to market(s), finance	· % of farmers accessing formal finance · % increase in farmer–buyer linkages through PCGs · % of farmers receiving digital payments						
Adoption of digital technology for crop health advisory, market and price	· % of PCGs using digital tools · Number of farmers transacting digitally · % of farmers accessing price information via mobile phones						
Improved governance and management of PCGs	· % of PCGs with improved governance practices · Frequency of board meetings · % of PCGs with financial transparency practices						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Better price realization for PCGs	· Avg. price received per kg of produce · Number of buyers engaged through PCGs · % of produce meeting quality grading standards						
Increased sale of produce by farmers	· % increase in volume of produce aggregated and sold via PCGs · % increase in farmer participation in collective sales						
Increased engagement of women across all activities	· % of activities with 50% women · Number of women in leadership positions · % of women reporting high engagement						
Strategies							
Strategy 1: Participatory Watershed Planning. Illustrative activities include: · Development and implementation of VRAPs and regional watershed plans · Engage communities through LARCs · Water conservation through micro-irrigation system installation, construction of farm ponds, bunding and rejuvenation of old water-resource structures	· % of VRAPs developed · % of community mobilized · Periodicity of community meetings held by LARCs · % of planned VRAPs implemented · % of planned irrigation systems installed · % of poor condition ponds/water structures initiated with rejuvenation work	Quarterly	VRAP reports, LARC records, Observation visit Report	Program team, M&E team	· 0 · 0 · 0 · 0 · 0 · 0	· 100% · 100% · Monthly · 50% · 50% · 50%	· 100% · 100% · Weekly · 100% · 100% · 100%
Strategy 2: On-farm Transfer of Climate-Resilient Technologies. Illustrative activities include: · Introduce climate-resilient crop varieties and promote integrated nutrient management · Demonstrative workshops held with (ATS on the use of: ▫ Climate smart agriculture practices/equipment ▫ Use of advisory technology	· % of farmers trained in climate-resilient practices · % of demo plots planned are established · % of farmers adopting improved nutrient management						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategy 3: Strengthening and augmentation of PCGs: Illustrative activitie include: · Establishing forward and backward market linkage · Providing access to finance to PCGs · Providing access to digital technology, such as crop health advisory, market and price discovery and digital payment system · Capacity building of PCGs BoDs on governance and management	· % of PCGs linked to formal markets · % of PCGs accessing finance · % of PCGs using digital tools · Capacity building for PCG · Fair election conduct for PCG BoD selection						
Strategy 4: Inclusion of women farmers (PCGs). Illustrative activities include: · Enrollment of 50% women across strategies 1, 2 and 3	· Proportion of women participants across strategies · % of PCGs with 50% women membership · % of leadership positions held by women in PCGs and LARCs						

Similarly, step 2 for Case Study 2 on clean cooking is as follows:

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Reduction in GHG emissions from traditional fuel cooking	· Amount of CO_2e metric tonnes reduced annually by switching from firewood burning · % of HHs fully transitioned to clean fuels · % of HHs partially transitioned to clean fuel · Kilograms reduction of daily biomass uses per HH	Annual	Program Monitoring GHG Emission Calculations HH Surveys	Evaluation Partner, Program Team, GHG expert	· 0 · 10% · 5% · 0 kg	· 5000 MT · 30% · 20% · 2 kg	· 10,000 MT · 50% · 30% · 4 kg

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Health Impact: Improved respiratory health of women and HH members	· % of HHs achieving PM2.5 < WHO safe levels · % of HHs reporting reduction in respiratory tract diseases · % of women reporting reduction in respiratory tract diseases						
Gender Impact: Increased women's leadership and participation in clean energy transitions	· % of women reporting increased HH decision making · % of "Flame Champions" who have trained other HHs						
Intermediate Outcome							
Sustained usage of clean cooking as the primary cooking method	· % of HHs using clean fuel as primary fuel · % of HHs with zero biomass usage · % retention of clean stove after 2 years · % increase in average number of LPG refills in a year	Annual	Program Monitoring HH Surveys	Evaluation Partner, Program Team	· 10% · 5% · NA · 2	· 30% · 25% · 75% · 3	· 50% · 45% · 80% · 4
Reduction in HAP exposure	· Average HH PM 2.5 concentration · Average number of members per HH with coughing issue · Average number of HH members with breathing issues · % of kitchens meeting ventilation standards						
Increased women's time savings and reduced drudgery	· % of HHs using clean fuel as primary fuel · % of HHs with zero biomass usage · % retention of clean stove after 2 years · % increase in average number of LPG refills in a year						
Strengthened institutions and infrastructure, and supply chain	· Number of local service centers established · % of centers with trained staff · % of villages reporting timely delivery of fuel/stove/ service from supply vendors						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strengthened institutional processes through learning	· Number of monitoring dashboards used at partner level · Number of feedback loops integrated into program design						
Immediate Outcomes							
Increased adoption of clean fuel technology across all categories of HHs: · Adoption of biomass stoves · Adoption of LPG stoves · Adoption of electric induction devices	· % of participant HHs using clean cooking technologies disaggregated by type · Ratio of units (LPG, induction, biomass) in active use vs distributed · Average number of clean cooking refills (LPG/electric recharge) per HH/month	Quarterly	HH surveys, Monitoring Dashboard, Usage tracking, Vendor refill records	Implementation partner, Local field teams, “Flame Champions”, Implementation partner, Local distributors, Program management information systems (MIS)	· 10% · 12% · 0.2	· 30% · 35% · 01.0	· 50% · 60% · 2.0
Improved knowledge, attitudes, and beliefs around clean cooking technology	· % of HHs willing to switch from firewood/dung to clean options · % of HHs demonstrating knowledge of benefits/safety · % women reporting positive perceptions of clean cooking · Reasons cited for resistance to switch · Change in cooking fuel preferences over time						
Reduction in firewood collection from nearby forest areas by women	· Estimated volume of firewood collected per month per HH · % of women and children involved in firewood collection · % forest-dependent HHs reporting reduced collection						
Reduced manual labor by women while cooking	% of women reporting reduced strain/effort while cooking						
Increased usage of cleaner fuel as primary fuel for cooking across all categories of HHs	% of HHs reporting LPG/biomass improved/electric induction as main fuel						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Reduced number of labor hours of women	· Avg. cooking time reduced per day · Avg. wood collection time reduced per day						
Strengthened last-mile supply chains (reaching remote villages)	· % of HHs reporting timely refill · Number of functioning local supply outlets (district avg.) · Average time taken for service/refill request fulfilment (days)						
Timely delivery of refill cylinders (of 5 kg, 10 kg, and 14.2 kg cylinders)	% HHs receiving refills within 7 days of request						
Timely and efficient delivery of post-sale services	% service requests resolved within 10 days						
Use of monitoring dashboards across project sites	% of program staff actively using dashboards for data entry, monitoring and decision-making						
Strategies							
Strategy 1: Providing access to reliable and affordable energy. Illustrative activities include: · Distribution of clean fuel technologies ▫ Biomass stoves ▫ LPG kits ▫ Electric induction devices · Access to finance or subsidy for procurement of clean fuel technology solutions	· % of HHs that receive clean fuel technologies (biomass stoves, LPG kits, electric inductions devices) · % of HHs accessing subsidies/loans for clean fuel solutions · % of retail/service outlets established for clean cooking products	Monthly	Program Team	Program MIS, M&E Team	· 0 · 0 · 0	· 60% · 30% · 40%	· 100% · 50% · 80%
Strategy 2: Training and BCC: Illustrative activities include: · Train 540 women as “Flame Champions” · Conduct 3,600 cooking demos and safety workshops · BCCs: leveraging folk media, radio, health benefit awareness nukkad nataks, wall-paintings, association with modern methods, award-incentives · Integrate clean cooking into school curricula.	· Number of “Flame Champions” trained · Number of cooking demonstrations and safety workshops conducted · % of planned BCC campaigns through folk media, radio, wall paintings, school curriculum						

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategy 3: Institutional Strengthening of Supply Partners and OEMs. illlustrative activities include: · E·Setting up local level partnerships in Belari and Roshanpur: ▫ To boost availability ▫ To establish reliable supply chains and post-sale services · To develop a Clean Cooking Monitoring (is is Mapping?) Dashboard for real-time adoption and impact tracking	· % of partnerships formed with local suppliers and OEMs · % of reliable supply chain nodes established (e.g., dealers, service centers) · Dashboard developed and updated monthly · % of key indicators tracked in real-time · Frequency of dashboard-based reviews						

Step 4

Representation of the Results Framework

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Agriculture systems are climate resilient	· % reduction in yield loss during climate stress years · Average number of climate-resilient practices adopted per HH · Average score of agricultural composite resilience index score	Annual	HH Surveys	Program team, M&E team, Extension workers	· 0 · 0 · 0	· 20% · 2 · 5	· 30% · 5 · >8
Gender Impact: Increased resilience of women farmers	· Proportion of women reporting improved decision-making in farm and HH matters · Change in Women Empowerment in Agriculture Index (WEAI) score · -% of women adopting climate-smart practices	Annual	WEAI surveys, FGDs, HH surveys	Program team, M&E team	· 0 · 0 · 0	· 30% · 0.3 · 20%	· 60% · 0.7 · 50%

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Intermediate Outcome							
Increased Production (quantity of crops)	· Average production volume per HH (kg) · Area under multi-season cropping · % of HHs reporting reduced crop failure	Annual	HH Surveys, Farmer FGDs, crop-register records	Program team, M&E team, Agri-Extension Dept. workers	· 1,500 kg · 0 · 50%	· 1,900 kg · 0.5 acre · 35%	· 2,400 kg · 1 acre · 15%
Improved Productivity (per acreage quantity)	· Average yield per hectare for major crops · % increase in productivity compared to baseline · Crop intensity index	Annual	HH Surveys, Farmer FGDs, crop-register records	Program team, M&E team, Agri-Extension Dept. workers	· 1.2 t/ha · 0% · NA	· 1.6 t/ha · 15% · Medium	· 2.0 t/ha · 30% · High
Improved produce quality (reduced chemical output)	· % of farmers adopting organic/eco-friendly inputs · % of produce passing quality standards for markets	Annual	HH Surveys, PCG records/reports	Program team, M&E team, PCG reps	· 0 · 0 · 0	· 25% · 30% · 50%	· 50% · 60% · 90%
Increased PCGs revenue	· Annual turnover of PCGs (INR) · Proportion of PCGs reporting profit	Annual	HH Surveys, PCG records/reports	Program team, M&E team, PCG reps	· 0 · 0	· ₹50 lakh · 20%	· ₹75 lakh · 40%
Increased income of farmers	· Average annual income of farmers (₹) · % of farmers reporting increased crop price · % of farmers reporting multiple market options for selling · % of farmers reporting reduction in expenses	Annual	HH income surveys, PCG sales records	Program team, M&E team, PCG reps	· ₹85k · 0 · 0 · 0	· ₹1 lakh · 20% · 30% · 30%	· ₹1.5 lakh · 40% · 100% · 50%
Increased income of women farmers	· Average annual income of women farmers · % of women accessing markets through PCGs	Annual	HH income surveys, PCG sales records	Program team, M&E team, PCG reps, Women FGDs	· 0 · 0	· ₹75k · 25%	· ₹1.5 lakh · 60%
Intermediate Outcome							
Increased availability of water for agriculture with adoption of VRAPs through LARCs, including: · Use/adoption of micro irrigation system · Farm ponds and other common water resources	· % of farmers adopting micro-irrigation · % of farms ponds in usable condition during dry season · Number of water structures managed by LARCs	Quarterly	Quarterly Farmer HH Surveys, LARC reports	Irrigation Dept., Field team	· 0 · 0 · 0	· 2.5 lakh · 50% · 138	· 4.2 lakh · 90% · 250

Results Framework

Expected Results (What)	Indicators	Periodicity (When)	Source of Data (How)	Responsibility of Data (Who)	Baseline Value	Target 1 (Y1)	Target 2 (Y2)
Adoption of climate resilient crop varieties	· % of farmers adopting at least one improved crop variety · Area under resilient crops (ha) · % reporting ease of access to seed varieties	Semi-annual	Farmer HH Surveys	M&E team, Program Team	· 0 · 0 · 0	· 60% · 0.5 acre · 100%	· 100% · 1 acre · 100%
Increased adoption of climate smart harvest and post-harvest practices	· % of farmers adopting improved storage methods · % reduction in post-harvest loss · Number of demo units established	Semi-annual	Farmer HH surveys	M&E team, Program Team, PCG reps	· 00 · 30% loss · 0	· 30% farmers · 20% loss · 100 units	· 60% farmers · 10% loss · 300 units
Adoption of advisory technology	· % of farmers accessing advisories digitally · Frequency of advisory use (per month) · Proportion of farmers changing practices based on advisories	Semi-annual	Farmer HH surveys, Advisory team reps	M&E team, Program Team	· 0 · 0 · 0	· 40% · 2 · 30%	· 80% · 4 · 60%
Improved soil health and water efficiency	· Soil organic carbon levels · % reduction in chemical fertilizer use · Irrigation efficiency index	Semi-annual	Soil test lap report, Farmer HH surveys	M&E team	· Low · 0 · NA	· Medium · 25% · Medium	· High · 50% · High
Improved access to market(s), finance	· % of farmers accessing formal finance · % increase in farmer–buyer linkages through PCGs · % of farmers receiving digital payments	Annual	PCG records, bank records, Farmer HH surveys	PCG leaders, M&E team	· 0 · 0 · 0	· 30% · 3 linkages · 30%	· 60% · 8 linkages · 70%
Adoption of digital technology for crop health advisory, market and price	· % of PCGs using digital tools · Number of farmers transacting digitally · % of farmers accessing price information via mobile phones	Quarterly	PCG records, Farmer HH surveys	PCG leaders, M&E team	· 0 · 0 · 0	· 50% · 10k · 40%	· 100% · 50k · 80%
Improved governance and management of PCGs	· % of PCGs with improved governance practices · Frequency of board meetings · % of PCGs with financial transparency practices	Quarterly	PCG records, Farmer HH surveys	PCG leaders, M&E team	· 0 · 0 · 0	· 40% · Quarterly · 25%	· 90% · Monthly · 75%

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Better price realization for PCGs	· Avg. price received per kg of produce · Number of buyers engaged through PCGs · % of produce meeting quality grading standards	Annual	PCG sales & quality reports	PCG reps, District M&E team	· ₹18/kg (staple) · ₹23/kg (horti) · 0 · 0%	· ₹28/kg · ₹50/kg · 20 buyers per PCG · 50%	· ₹32/kg · ₹63/kg · 50 buyers per PCG · 75%
Increased sale of produce by farmers	· % increase in volume of produce aggregated and sold via PCGs · % increase in farmer participation in collective sales	Annual	PCG records, Farmer HH surveys	PCG leaders, M&E team	· 0 · 0	· 30% · 50%	· 60% · 90%
Increased engagement of women across all activities	· % of activities with 50% women · Number of women in leadership positions · % of women reporting high engagement	Annual	PCG records, LARC reports, FGDs, Farmer HH surveys	PCG leaders, M&E team	· 0 · 0 · 0	· 100% · 20% · Medium	· 100% · 40% · High
Strategies							
Strategy 1: Participatory Watershed Planning. Illustrative activities include: · Development and implementation of VRAPs and regional watershed plans · Engage communities through LARCs · Water conservation through micro-irrigation system installation, construction of farm ponds, bunding and rejuvenation of old water-resource structures	· % of VRAPs developed · % of community mobilized · Periodicity of community meetings held by LARCs · % of planned VRAPs implemented · % of planned irrigation systems installed · % of poor condition ponds/water structures initiated with rejuvenation work	Quarterly	VRAP reports, LARC records, Observation visit Report	Program team, M&E team	· 0 · 0 · 0 · 0 · 0 · 0	· 100% · 100% · Monthly · 50% · 50% · 50%	· 100% · 100% · Weekly · 100% · 100% · 100%
Strategy 2: On-farm Transfer of Climate-Resilient Technologies. Illustrative activities include: · Introduce climate-resilient crop varieties and promote integrated nutrient management · Demonstrative workshops held with (ATS on the use of: ▫ Climate smart agriculture practices/equipment ▫ Use of advisory technology	· % of farmers trained in climate-resilient practices · % of demo plots planned are established · % of farmers adopting improved nutrient management	Quarterly	Training records, demo logs, PCG records	Agri-extension, ATS trainers, PCG leaders, M&E team	· 0 · 0 · 0	· 100% · 100% · 50%	· 100% · 100% · 100%

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strategy 3: Strengthening and augmentation of PCGs: Illustrative activitie include: · Establishing forward and backward market linkage · Providing access to finance to PCGs · Providing access to digital technology, such as crop health advisory, market and price discovery and digital payment system · Capacity building of PCGs BoDs on governance and management	· % of PCGs linked to formal markets · % of PCGs accessing finance · % of PCGs using digital tools · Capacity building for PCG · Fair election conduct for PCG BoD selection	Quarterly	PCG records, FGDs, Farmer HH surveys	PCG leaders, M&E team	· 0 · 0 · 0	· 50% · 50% · 50% · 100% · True	· 1100% · 100% · 100% · 100% · True
Strategy 4: Inclusion of women farmers (PCGs). Illustrative activities include: · Enrollment of 50% women across strategies 1, 2 and 3	· Proportion of women participants across strategies · % of PCGs with 50% women membership · % of leadership positions held by women in PCGs and LARCs	Quarterly	PCG records, FGDs, LARC Records	PCG leaders, M&E team	· 0 · 0 · 0	· 50% · 30% · 20%	· 50%+ · 50% · 40%

Similarly, step 1 for case study 2 on clean cooking is as follows:

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Long-term Outcome							
Climate Impact: Reduction in GHG emissions from traditional fuel cooking	· Amount of CO_2e metric tonnes reduced annually by switching from firewood burning · % of HHs fully transitioned to clean fuels · % of HHs partially transitioned to clean fuel · Kilograms reduction of daily biomass uses per HH	Annual	Program Monitoring GHG Emission Calculations HH Surveys	Evaluation Partner, Program Team, GHG expert	· 0 · 10% · 5% · 0 kg	· 5000 MT · 30% · 20% · 2 kg	· 10,000 MT · 50% · 30% · 4 kg
Health Impact: Improved respiratory health of women and HH members	· % of HHs achieving PM2.5 < WHO safe levels · % of HHs reporting reduction in respiratory tract diseases · % of women reporting reduction in respiratory tract diseases	Annual	Program Monitoring HH Surveys Health Check-up	Evaluation Partner, Program Team, Health Expert	· ~5% · 0% · 0%	· 20% · 15% · 20%	· 40% · 30% · 30%

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Gender Impact: Increased women's leadership and participation in clean energy transitions	· % of women reporting increased HH decision making · % of "Flame Champions" who have trained other HHs	Annual	Program Monitoring Focus Group Discussions (FGDs)	Evaluation Partner, Program Team	· 5% · 0%	· 20% · 25%	· 35% · 50%
Intermediate Outcome							
Sustained usage of clean cooking as the primary cooking method	· % of HHs using clean fuel as primary fuel · % of HHs with zero biomass usage · % retention of clean stove after 2 years · % increase in average number of LPG refills in a year	Annual	Program Monitoring HH Surveys	Evaluation Partner, Program Team	· 10% · 5% · NA · 2	· 30% · 25% · 75% · 3	· 50% · 45% · 80% · 4
Reduction in HAP exposure	· Average HH PM 2.5 concentration · Average number of members per HH with coughing issue · Average number of HH members with breathing issues · % of kitchens meeting ventilation standards	Quarterly	Program Monitoring HH Survey Health Check-up	Evaluation Partner, Program Team, Health Experts	· >250 · 1.2 · 41% · 8%	· >200 · 1.0 · 30% · 25%	· >150 · 0.7 · 18% · 45%
Increased women's time savings and reduced drudgery	· % of HHs using clean fuel as primary fuel · % of HHs with zero biomass usage · % retention of clean stove after 2 years · % increase in average number of LPG refills in a year	Annual	Program Monitoring HH Surveys	Evaluation Partner, Program Team	· 5% · 0.5 · 3%	· 25% · 1.5 · 20%	· 45% · 2.5 · 35%
Strengthened institutions and infrastructure, and supply chain	· Number of local service centers established · % of centers with trained staff · % of villages reporting timely delivery of fuel/stove/ service from supply vendors	Bi-annual	Program Monitoring Market Survey	Evaluation Partner, Program Team	· 0 · 0% · 10%	· 8 · 60% · 40%	· 16 · 90% · 70%
Strengthened institutional processes through learning	· Number of monitoring dashboards used at partner level · Number of feedback loops integrated into program design	Quarterly	Dashboard MIS reports, Partner meetings	Evaluation Partner	· 0	Dashboard piloted in 2 sites	Dashboard scaled across all sites

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Immediate Outcomes							
Increased adoption of clean fuel technology across all categories of HHs: · Adoption of biomass stoves · Adoption of LPG stoves · Adoption of electric induction devices	· % of participant HHs using clean cooking technologies disaggregated by type · Ratio of units (LPG, induction, biomass) in active use vs distributed · Average number of clean cooking refills (LPG/electric recharge) per HH/month	Quarterly	HH surveys, Monitoring Dashboard, Usage tracking, Vendor refill records	Implementation partner, Local field teams, "Flame Champions", Implementation partner, Local distributors, Program management information systems (MIS)	· 10% · 12% · 0.2	· 30% · 35% · 01.0	· 50% · 60% · 2.0
Improved knowledge, attitudes, and beliefs around clean cooking technology	· % of HHs willing to switch from firewood/dung to clean options · % of HHs demonstrating knowledge of benefits/safety · % women reporting positive perceptions of clean cooking · Reasons cited for resistance to switch · Change in cooking fuel preferences over time	Bi-annual	HH surveys, FGDs	M&E Team, Field Coordinators, PMU	· 18% · 0 · 0 · Cost, tradition, supply constraints · Baseline estbd. in 2023	· 35% · 50% · 50% · NA · +15 pts vs baseline	· 55% · 100% · 100% · NA · +25 pts vs baseline
Reduction in firewood collection from nearby forest areas by women	· Estimated volume of firewood collected per month per HH · % of women and children involved in firewood collection · % forest-dependent HHs reporting reduced collection	Annually	HH surveys, FGDs, Time-use surveys, Key Informant Interviews (KIIs) with women, Community-level FGDs, Forest Dept reports	Field team, M&E, Program team, Forest Dept liaison	· 65 · 70% · 0%	· 45 · 50% · 25%	· 32 · 30% · 45%
Reduced manual labor by women while cooking	% of women reporting reduced strain/effort while cooking	Bi-Annual	HH surveys, FGDs	M&E Team	High effort	Reduced effort	Reduced effort
Increased usage of cleaner fuel as primary fuel for cooking across all categories of HHs	% of HHs reporting LPG/biomass improved/electric induction as main fuel	Bi-Annual	HH surveys, usage monitoring	M&E Team	0	40% HHs	70% HHs
Reduced number of labor hours of women	· Avg. cooking time reduced per day · Avg. wood collection time reduced per day	Bi-Annual	HH time-use surveys	M&E Team	3-4 hours/day	1 hr saved	1 hr saved

Results Framework							
Expected Results (What)	**Indicators**	**Periodicity (When)**	**Source of Data (How)**	**Responsibility of Data (Who)**	**Baseline Value**	**Target 1 (Y1)**	**Target 2 (Y2)**
Strengthened last-mile supply chains (reaching remote villages)	· % of HHs reporting timely refill · Number of functioning local supply outlets (district avg.) · Average time taken for service/refill request fulfilment (days)	Monthly	HH surveys, feedback calls, Supply chain mapping, MIS data, CRM records, "Flame Champion" logbooks	"Flame Champions", MIS, Distribution partners, Program Ops, Program team, Distributors	· 12% · 1 · 12	· 45% · 5 · 6	· 70% · 8 · 3
Timely delivery of refill cylinders (of 5 kg, 10 kg, and 14.2 kg cylinders)	% HHs receiving refills within 7 days of request	Monthly	HH surveys, Monitoring MIS	Supply Partner, M&E Team	0	60%	85%
Timely and efficient delivery of post-sale services	% service requests resolved within 10 days	Monthly	HH surveys, Monitoring MIS	Supply Partner, M&E Team	0	60%	85%
Use of monitoring dashboards across project sites	% of program staff actively using dashboards for data entry, monitoring and decision-making	Quarterly	Monitoring Dashboard analytics, Field team	M&E Team	0	100%	100%
Strategies							
Strategy 1: Providing access to reliable and affordable energy. Illustrative activities include: · Distribution of clean fuel technologies ▫ Biomass stoves ▫ LPG kits ▫ Electric induction devices · Access to finance or subsidy for procurement of clean fuel technology solutions	· % of HHs that receive clean fuel technologies (biomass stoves, LPG kits, electric inductions devices) · % of HHs accessing subsidies/loans for clean fuel solutions · % of retail/service outlets established for clean cooking products	Monthly	Program Team	Program MIS, M&E Team	· 0 · 0 · 0	· 60% · 30% · 40%	· 100% · 50% · 80%
Strategy 2: Training and BCC: Illustrative activities include: · Train 540 women as "Flame Champions" · Conduct 3,600 cooking demos and safety workshops · BCCs: leveraging folk media, radio, health benefit awareness nukkad nataks, wall-paintings, association with modern methods, award-incentives · Integrate clean cooking into school curricula.	· Number of "Flame Champions" trained · Number of cooking demonstrations and safety workshops conducted · % of planned BCC campaigns through folk media, radio, wall paintings, school curriculum	Monthly	Program Team	Program MIS, M&E Team	· 0 · 0 · 0	· 300 · 1800 · 60%	· 540 · 3600 · 100%

Results Framework

Expected Results (What)	Indicators	Periodicity (When)	Source of Data (How)	Responsibility of Data (Who)	Baseline Value	Target 1 (Y1)	Target 2 (Y2)
Strategy 3: Institutional Strengthening of Supply Partners and OEMs. illlustrative activities include: · E·Setting up local level partnerships in Belari and Roshanpur: ▫ To boost availability ▫ To establish reliable supply chains and post-sale services · To develop a Clean Cooking Monitoring (is is Mapping?) Dashboard for real-time adoption and impact tracking	· % of partnerships formed with local suppliers and OEMs · % of reliable supply chain nodes established (e.g., dealers, service centers) · Dashboard developed and updated monthly · % of key indicators tracked in real-time · Frequency of dashboard-based reviews	Monthly	Dashboard backend analytics, Review meeting logs	Program Team, M&E Team, PMU	· 0 · No · 0% · Not estbd.	· Bellari & Roshanpur · Yes · 60% · Monthly	· Bellari & Roshanpur · Yes · 90% · Monthly

5. Measuring Success

5.1 Tools for impact strategizing

Traditional metrics may not fully capture the nuance of change. This section introduces approaches that complement standard frameworks.

5.1.1 Outcome harvesting

Outcome Harvesting is an evaluation approach used to identify and document outcomes or changes resulting from a program or intervention. Unlike traditional evaluation methods that focus on planned outcomes, Outcome Harvesting is particularly useful when outcomes are not clearly defined or predictable at the outset.

An important feature of Outcome Harvesting is how outcomes are defined – observable and unobservable changes, both planned and emergent, in an individual, group, community, organization, or institution, resulting, at least in part, from an intervention of interest.

The following terms describe the roles of people involved in an Outcome Harvest:

Change agent: An individual or group that influences an outcome and facilitates improvements within an organization. The change agent(s) not only implements the change but also evaluates the intervention initiated by them ensuring that it is aligned with the organization's goals.

Social actor: An individual, group, community, organization, or institution that changes because of a change agent's intervention.

Verifier: Individuals who have knowledge about the outcomes and can objectively review them.

Harvest user: Individuals who require the findings of an Outcome Harvest to make decisions or act. This relatively small group plays a key decision-making role in the iterative design process of the harvest and is distinct from larger groups of secondary users.

Harvester: A person responsible for managing the Outcome Harvest, often an evaluator (external or internal)[7].

> *...Using Outcome Harvesting, the evaluator or harvester gleans information from reports, personal interviews, and other sources to document how a given program or initiative has contributed to outcomes. These outcomes can be positive or negative, intended or unintended, but the connection between the initiative and the outcomes should be verifiable.*
>
> *- From the 2012 guide by Ricardo Wilson-Grau and Heather Britt*

For example, in **Case study 1**, as SACRI progressed beyond its immediate outcomes of increased water availability and improved soil health, an unplanned but significant change (SC) was observed: women-led LARCs began to independently scale climate-smart practices across watershed boundaries, creating inter-village networks that enhanced both agricultural productivity and women's economic empowerment. This shift was not a direct result of prescribed activities but emerged organically through women's collective action and knowledge sharing. Similarly, in **Case Study 2**, while the Prakriti Flame Initiative achieved its immediate outcomes of increased clean fuel adoption and improved knowledge around clean cooking technology, an unexpected intermediate outcome emerged: community-based "Clean Cooking Learning Circles" began forming organically, where "Flame Champions" evolved into local entrepreneurs, who not only promoted clean cooking but also established micro-enterprises for stove maintenance, fuel supply, and cooking training services. This created sustainable local ecosystems that went beyond technology adoption to generate lasting economic and health impacts.

Table 6: Roles of people involved in an Outcome Harvest

Roles	Examples for Case Study 1: SACRI	Examples for Case Study 2: PFI
Change Agent	Women-led LARCs that spontaneously formed inter-village networks to share climate-resilient agricultural practices, moving beyond individual PCG boundaries to create watershed-level adaptation strategies.	Trained "Flame Champions" spontaneously evolved beyond their initial role to become local clean energy entrepreneurs, establishing community-based learning circles and micro-enterprises around clean cooking technologies and services.
Social Actor	Farming HHs across multiple villages, that observed improved crop yields and water efficiency from these networked practices, leading to widespread adoption of integrated watershed management approaches and increased participation in women-led agricultural initiatives.	HHs and community members not only adopted clean cooking technologies but also became active participants in local clean energy economies, creating demand for maintenance services, training, and sustainable fuel supply chains.
Verifier	Block-level agriculture officers and watershed development specialists who documented enhanced water conservation outcomes, improved agricultural productivity across village clusters, and increased women's leadership in agricultural decision-making processes.	Village-level health workers, local institution representatives, and supply chain partners observed and documented sustained clean cooking adoption, reduced HAP, and the emergence of viable local clean energy enterprises.
Harvest User	State Agriculture Department and National Watershed Mission used this evidence to integrate women-led participatory watershed planning into scaling strategies for climate-resilient agriculture programs across the region.	Program managers, local government energy departments, and clean energy sector stakeholders used this evidence to design more comprehensive approaches that integrate technology distribution with local entrepreneurship development and institutional capacity building.
Harvester	External MEL team identified and validated these emergent cross-village networks and their contributions to both agricultural resilience and women's economic empowerment for wider learning and program adaptation.	Internal M&E team of PFI ttracked and documented these unexpected entrepreneurial outcomes and community-led institutional developments to inform program scaling and sustainability strategies.

Overall, Outcome Harvesting is valuable for capturing the nuanced and sometimes unexpected changes that occur in complex development programs or interventions. It helps to provide a holistic view of impact by focusing on real changes and their significance to stakeholders.

5.1.2 Most Significant Change

The Most Significant Change (MSC) technique, developed by Rick Davis, is a participatory method used in both monitoring and evaluation. It captures the nuances of change through storytelling. All stakeholders first collaborate to decide the criteria for recording change, then collect these stories, and finally analyze them.

MSC serves as a monitoring tool throughout the project cycle, providing feedback to program managers on the direction of the program. Additionally, it aids evaluation by offering insights into whether the project is progressing toward its long-term goals and assessing the program's effectiveness.

The process involves collecting SC stories from the grassroots level. These stories are then shortlisted by a panel of designated stakeholders or the project team. Representatives gather to read these SC stories aloud and discuss their value.

When Should MSC Be Used?

Understanding when to use MSC is crucial. Its effectiveness or suitability depends on the program's context, objectives, and implementation strategy. MSC is ideal for programs that:

- are complex and have multiple outcomes
- aim at creating behavioral and social change
- struggle with conventional monitoring systems.

MSC is particularly suited for monitoring because it focuses on deriving learnings to improve the program, rather than solely ensuring accountability.

Steps for MSC

1. **Getting Started:** Seeding Interest: Identify and establish champions who will act as facilitators and catalysts to engage others and facilitate the process. Introduce the MSC technique to key people and groups, convincing them of its usefulness and ease of implementation.

2. **Establishing the Domains of Change:** Identify the broad categories (domains) in which SC stories will be collected and reported.

3. **Defining the Reporting Period:** Determine the period or frequency for collecting and reporting these stories. This can range from a fortnight to a year, with quarterly reporting being the most common.

4. **Collecting Stories of Change:** The champion or facilitator asks the group a simple, open-ended question such a.: "Think of the most significant change you've seen because of this project. What happened? Why was it significant?" These prompts help participants reflect deeply and capture both tangible and intangible aspects of change.

5. **Reviewing the Stories within the Organizational Hierarchy:** Review and shortlist the most significant stories collected from the pool. Document the criteria, process, and people involved in this selection process.

6. **Providing Stakeholders** with Regular Feedback: Keep stakeholders informed about the review process and its outcomes.

7. **Verifying the Authenticity of Stories if Necessary:** Verify the details of some of the stories to ensure their authenticity to add credibility to the findings.

8. **Quantification:** Though MSC focuses on qualitative changes, there are methods for quantifying the impact:
   i. At the individual story level, the number of people involved, money spent or saved, etc.
   ii. Frequency of instances where a specific type of change was observed.
   iii. Counting the occurrences of specific types of change across all SC stories.

10. **Conducting Secondary Analysis of the Stories:** Perform additional analysis such as secondary analysis and meta-monitoring. This step, though not mandatory, can enhance the rigor of the MSC process.
    i. Secondary Analysis: Classify and analyze SC stories.
    ii. Meta-Monitoring: Analyse SC stories based on study attributes, including the number of stories per reporting period, authors, patterns, and actions taken, based on the stories.

11. **Revising the MSC Process:** Revise the MSC process for subsequent rounds based on feedback and learnings. Adjustments can be made to any step, from story collection to analysis and feedback, with the aim of improving the MSC process after each implementation round.

For example, **in case 1, SACRI**, the MSC technique could be applied by women leaders of PCGs and LARCs as MSC champions. These leaders would facilitate story collection, within domains like: watershed-level water conservation, climate-resilient agricultural practices, women's economic empowerment through PCGs, and community-led adaptation innovations. During quarterly review cycles aligned with VRAP assessments, stories from women farmers, such as how participatory watershed planning led to improved soil health and water efficiency, or how women-led climate-smart agriculture practices inspired cross-village knowledge sharing networks would be gathered. These stories would be shortlisted by regional teams in collaboration with ATS and verified through

community meetings with PCG members and watershed committees. Over time, patterns, such as increased women's leadership in agricultural decision-making, enhanced climate resilience at village level, and strengthened market linkages through collective action would emerge, offering both qualitative insights and quantitative indicators, like improved productivity per acreage, increased PCG revenue, and enhanced farmer income.

Similarly, **in case 2 PFI, trained "Flame Champions"** could lead MSC efforts by gathering stories across domains of sustained clean fuel adoption, women's time and economic empowerment, community-led clean energy entrepreneurship, and institutional partnerships for supply chain development. Compelling stories might highlight how a "Flame Champion" evolved into a local clean energy entrepreneur, establishing maintenance services and training other women, or how Clean Cooking Learning Circles led to reduced HAP, and new income opportunities. These stories would be reviewed collaboratively by local institution partners, supply chain stakeholders, and program teams, then featured in community learning platforms and BCC materials. The stories would be periodically analyzed to refine institutional strengthening approaches and entrepreneurship development strategies. As MSC cycles were repeated, the process would evolve to capture sustained partnership development, local innovation in clean cooking solutions, and emerging narratives around women's leadership in clean energy transitions, incorporating feedback from the most remote communities and strengthening the program's adaptive management approach.

5.1.3 Small Wins approach

The Small Wins approach focuses on incremental progress and achievements that may not be part of the official workplan but are crucial for building momentum and addressing complex problems. A few characteristics include:

- **Domino Effect:** Small Wins can create a domino effect, where minor successes build towards larger changes. This approach helps in maintaining momentum and addressing complex issues in manageable steps.

- **Theory of Wicked Problems:** Small Wins are particularly useful in addressing wicked problems, and complex, multifaceted issues that cannot be solved with straightforward solutions. The approach acknowledges that progress often comes in small, iterative steps.

- **Not in the Workplan:** These wins may not be planned or anticipated but are valuable for understanding the broader impact and progress of the intervention.

Progress and Shades of Change

Indicators vs Narrative: Indicators provide a linear and often dry measure of progress, focusing on whether pre-defined targets are met. In contrast, MSC, Outcome Harvesting, and Small Wins offer a richer, narrative-based understanding of change, capturing the complexities and nuances that indicators might miss.
Shades of Change: These methods help identify and understand various dimensions and impacts of change,

including unintended consequences, shifts in stakeholder perceptions, and incremental progress that may not be evident through standard indicators.

In both SACRI and PFI initiatives, the Small Wins approach tracks progress beyond official workplans. In **case 1, SACRI**, while focusing on participatory watershed planning and climate-resilient technologies, a Small Win emerged when women PCG members independently began inter-village knowledge exchanges on micro-irrigation techniques, strengthening collective governance beyond planned activities. Similarly, in **case 2 PFI, "Flame Champions"** spontaneously formed local clean energy micro-enterprises, providing stove maintenance services while building sustainable supply chains. These unplanned innovations addressed institutional challenges and cultural resistance, creating domino effects that enhanced both technical adoption and women's economic empowerment across communities.

5.1.4 Contribution Analysis

Contribution Analysis is a valuable approach for evaluating complex interventions or programs where multiple factors may influence outcomes. It helps assess the extent to which a specific intervention contributed to observed changes, rather than trying to prove direct causation[8].

This method is particularly useful in situations where traditional experimental designs are not feasible or appropriate. It allows evaluators to build a credible performance story, linking activities to outcomes through a chain of logical arguments supported by evidence.

By using Contribution Analysis, organizations can:

- Gain a more nuanced understanding of how their interventions interact with other factors in the environment
- Identify which aspects of their program are most effective and why
- Improve program design and implementation based on evidence
- Demonstrate accountability to stakeholders by showing how their efforts contribute to desired outcomes
- Learn from both successes and failures to refine their ToCs.

The flexibility of Contribution Analysis in terms of timing (during, at the end, or after an intervention) makes it adaptable to various evaluation needs and contexts. However, the emphasis on allowing enough time for SC underscores the importance of considering long-term impacts and the complex nature of social change processes. It is normally only used in a project or program once **enough time has elapsed for SC to occur**.

Principles of Contribution Analysis

Table 7: Principles of Contribution Analysis

Principle	Description
Define the intervention's role in bringing changes rather than providing conclusive proof – Not an attribution story.	Contribution analysis focuses on understanding the role an intervention plays in bringing about change, without claiming definitive proof of causation. It seeks to illustrate how and why the intervention contributed to observed outcomes.
Contribution analysis should not be used to answer questions, such as "Did the project/program cause the outcome?"	This approach is not intended to directly answer causality questions. Instead, it helps in understanding the contribution of the intervention within a broader context of multiple influencing factors.
It reduces uncertainty about the influence or contribution of an intervention.	By systematically analysing evidence and developing a plausible contribution story, contribution analysis reduces uncertainty about the intervention's influence on outcomes, providing a more nuanced understanding of its impact.

Steps of Contribution Analysis

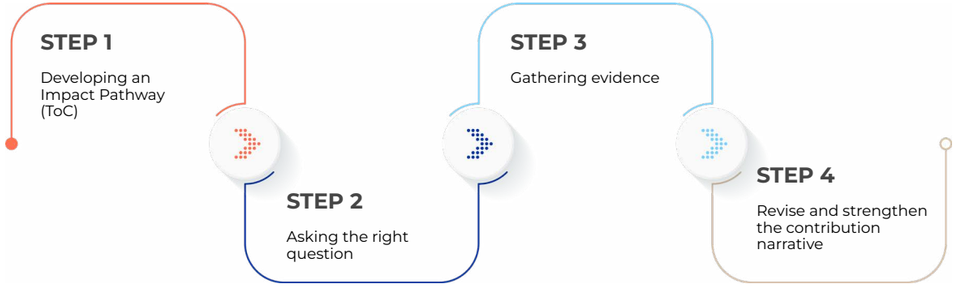


Figure 8: Steps for Contribution Analysis

STEP 1:

Developing an Impact Pathway (ToC)

To develop or review the program logic/results chain, start by describing how the intervention is supposed to work, ensuring that each step, from activities to outcomes, is clearly mapped out. Next, articulate the causal links between results, detailing the underlying assumptions about how change will occur and identifying the potential risks that could disrupt these links. Identify the main external factors that might influence the observed outcomes, considering both positive and negative influences. Determine the contested elements of the ToC by acknowledging different perspectives on how it works and incorporating them into the analysis. Ensure that the ToC shows a plausible association between the intervention's activities and the desired outcomes, backed by evidence and logical reasoning.

STEP 2:

Asking the Right Questions

Begin by setting out the attribution problem to be addressed, clearly defining what you aim to determine about the intervention's impact. Frame questions in terms of contribution rather than direct causation, asking whether it is reasonable to conclude that the intervention contributed to the observed changes. Determine the required level of confidence based on the evaluation's intended use and users' needs, balancing rigor with practical considerations. Explore the nature and extent of the intervention's expected contribution to specific changes, identifying which results the intervention is expected to directly and indirectly influence. Assess the plausibility of the expected contribution, in relation to the intervention's size and the complexity of the issue, ensuring that expectations are realistic and well-founded.

STEP 3:

Gathering Evidence

Start by reviewing existing evidence on the ToC, including information from performance measures and evaluations about activities and results. Examine evidence on causal links between results, and the assumptions about conditions for these links, as well as evidence about other influencing factors and their potential contributions. Identify gaps in the existing evidence and areas where additional data is needed to strengthen the evaluation. Conduct primary data collection as necessary, using methods such as interviews, focus groups, surveys, and case studies to gather qualitative and quantitative data. Analyze variations in implementation over time and across locations, and conduct detailed evaluations of specific program components where data is weak. Finally, synthesize evidence from research and evaluations to build a comprehensive understanding of the program's impact.

STEP 4:

Revise and Strengthen Contribution Narrative

Assemble an initial contribution story based on the gathered evidence, explaining how the intervention contributed to observed changes. Critically assess the strength of causal links in the story, identifying any weak or ambiguous connections. Engage with stakeholders to identify areas of agreement and disagreement, exploring differing views and building consensus where possible. Determine the overall credibility of the contribution story by considering the quality of the evidence, the validity of the causal links, and stakeholder agreement. Revise the ToC, if needed, based on new evidence, updating the logic model, assumptions, and causal links. Build a more substantive and credible story by incorporating additional evidence and addressing any weaknesses. Iteratively, review and strengthen the contribution story until it is sufficiently developed, ensuring that the final narrative has a reasoned ToC, it confirms implementation of activities, is supported by evidence on observed results, and accounts for other influencing factors. Use the contribution analysis to support organizational learning and strategy improvement, leveraging insights to refine future program design and implementation.

Illustrating with examples. Contribution Analysis is especially relevant to **Case Study 1**, SACRI, given its integrated approach combining participatory watershed planning (VRAPs), climate-resilient technologies, PCGs, and women inclusion strategies. The initiative introduced water conservation through micro-irrigation and farm ponds, climate-smart crop varieties, market linkage strengthening, and digital advisory services. However, observed changes such as increased agricultural productivity, improved water efficiency, and enhanced women's leadership cannot be solely attributed to SACRI. Other parallel government schemes, rainfall patterns, existing community institutions, and market dynamics could also influence results. Contribution Analysis would help SACRI build a credible narrative around its integrated ToC: for instance, how participatory watershed planning, combined with women-led PCGs, plausibly contributed to both climate resilience and gender empowerment outcomes. The method can explore contested links like whether strengthened market access through collective action led to increased farmer income, and whether women's engagement across all strategies genuinely enhanced long-term agricultural sustainability.

Similarly, in **Case Study 2**, PFI's outcomes like sustained clean cooking adoption, reduced HAP, and women's economic empowerment result from multiple interconnected strategies, including clean fuel technology distribution, "Flame Champions" training, institutional partnerships, and supply chain strengthening. Direct attribution to single interventions is impossible. Through Contribution Analysis, PFI can assess how its combination of access provision, BCC, and institutional strengthening contributed to sustained adoption outcomes. For example, if clean cooking sustained as the primary cooking method in remote areas, was it due to effective "Flame Champions" training, strengthened local partnerships, improved supply chains, or integrated monitoring systems? PFI can use this analysis to understand how institutional strengthening enhanced technology adoption, identify which combination of strategies worked best for different contexts, and advocate for scaling integrated approaches that address both technical and social dimensions of clean energy transitions.

Limitations of the Techniques

Participatory Techniques: All methods are participatory and rely heavily on facilitation. Effective implementation requires engaging with stakeholders and guiding discussions, which can be resource intensive.

Small Group Techniques: These techniques, especially the first three, often work best in small group settings, which may limit their applicability to larger-scale evaluations.

Temporality: What is considered significant can change over time. The perception of significance can evolve, meaning that today's critical insights might not hold the same value in the future.

Contextual Errors: For contribution analysis, one of the major limitations is accounting for contextual factors and managing time lags between interventions and their effects.

5.1.5 Realist synthesis – understanding what works, for whom, in what contexts, and why.

What is Realist Synthesis?

Realist synthesis is a theory-based method for reviewing evidence in an explanatory, rather than a judgmental manner. It involves examining evidence through various lenses to identify the underlying causal mechanisms that drive outcomes. The core of realist synthesis is to answer three essential questions:

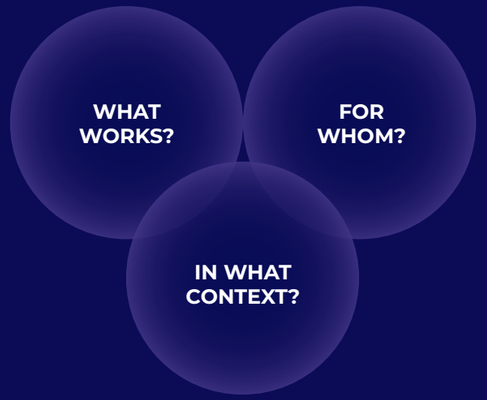


Figure 9: Core of Realist Synthesis - Three essential questions

By focusing on these questions, realist synthesis aims to understand not just whether an intervention works, but how, why, and under what circumstances it works. It pushes towards unpacking the black box of why a program worked or failed in varying contexts and settings. This approach provides a deeper insight into the complexities and nuances of evidence rather than looking at everything in a strict and idealistic approach[9].

Context, Mechanism & Outcomes

The core philosophy of the realist approach is that programs are dynamic and influenced by unobservable factors such as cultural norms, educational background, and more. Realist evaluation centers around three key concepts: context, mechanisms, and outcomes. The evaluator creates a Context-Mechanism-Outcome (CMO) hypothesis, which means they develop an idea about which factors will work in different situations and what results can be expected when they do.

Let's do a fun exercise!

Gather a small group of 5-6 people, out of which one person can volunteer to become the facilitator. The facilitator asks each participant three key questions, noting down the responses on a whiteboard:

1. Where did you come from?
2. How did you get there?
3. Who are you now?

At the end of the exercise, everyone can see varying contexts (where did you come from?), mechanisms (how did you get there?) and outcomes (who are you now?). This simple exercise lays out clearly that context is of significance because it changes the process or mechanism. Mechanisms matter because they generate the outcome. Therefore, it is essential to thoroughly investigate both context and mechanism along with the intervention and outcome.

Source: Siobhan Connolly

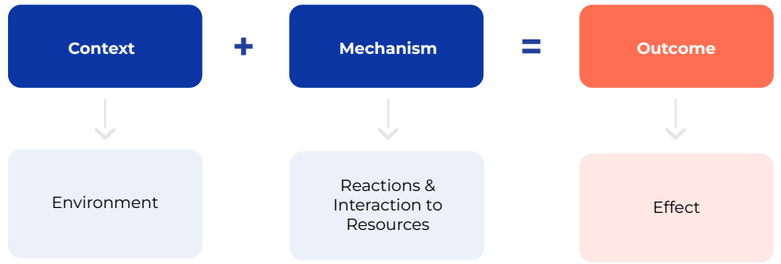


Figure 10: A Simplified Schemata of CMO Configurations

Why do we need Realist Evaluation?

When there are multiple contexts and mechanisms to reach an outcome, a realist approach comes in handy. This method is particularly suited for:

1. **Heterogeneity in Results/Outcomes:** Recognizing that outcomes can vary significantly depending on the context in which interventions are implemented. Realist evaluation allows for a nuanced understanding of why and how these variations occur, rather than expecting uniform results across all settings. For example, how does a development intervention work with a tribal population vs a non-tribal population?

2. **Unpacking Mechanism Black Boxes:** In many cases, the inner workings of interventions, i.e., how they produce the desired outcomes are not clear-cut and can seem like 'black boxes'. Realist synthesis delves into these mechanisms, uncovering the underlying causal processes and shedding light on the specific conditions under which the interventions are effective.

3. **Establishing Credibility of Results Chain:** Unlike traditional evaluations that focus solely on establishing whether an intervention works or not, realist evaluation aims to establish the credibility of the results chain. This involves tracing how interventions interact with different contexts to generate outcomes, thereby, providing a more robust understanding of the intervention's impact. The intervention consists of a chain of non-linear steps or processes. At each stage, the intervention could work as expected or 'misfire' and behave differently. For example, multi-stakeholder or multi-geography interventions.

4. **Purposiveness:** Realist evaluation is purposeful in its approach. It purposely investigates one prospect or explores specific aspects within complex systems. By doing so, it reveals meaningful insights about what works, for whom, and under what circumstances.

What does Realist approach contain?

1. Define the Scope of Synthesis
   - Identify the Questions: Start by pinpointing the specific questions that the synthesis aims to address.
   - Clarify the Purpose: Clearly articulate the objectives and goals of the synthesis.
   - Find Program Theories: Identify and outline the theories that underpin the programs being evaluated.

2. Search and Appraise the Evidence
   - Define Search Methodology: Establish a clear and systematic methodology for searching the relevant evidence and literature.
   - Assess the Relevance of the Findings: Evaluate the relevance of findings from other research sources to ensure they align with the synthesis goals.

3. Extract and Synthesize Findings
   - Compare and Contrast Findings: Compare the findings and analyze them to identify patterns and get insights.
   - Involve Commissioners/Decision Makers: Engage stakeholders, such as commissioners and decision-makers, and involve them in reviewing and interpreting the findings.
   - Refine Program Theories: Based on the synthesis of the findings, refine and adjust the initial program theories to align with the evidence and better reflect it.

Source: Pawson, Ray & Greenhalgh, Trisha & Harvey, Gill & Walshe, Kieran. (2004). Realist Synthesis: An Introduction. RMP Methods Paper 2/2004.

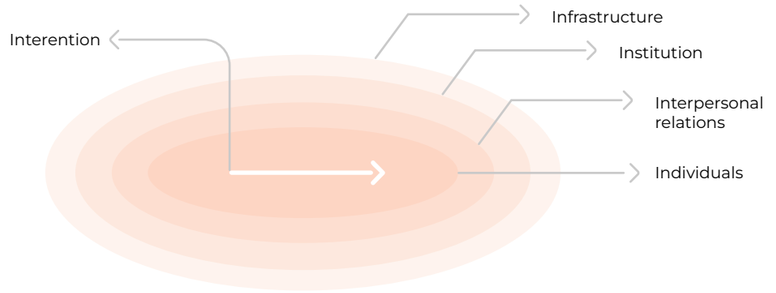


Figure 11: Schematic representation of the intervention as the product of its context

Strengths of Realist Approach:

1. Pluralistic and Flexible: The realist approach is not a rigid method or formula but a logic of inquiry that is inherently pluralistic and flexible. It embraces various forms of evidence, including:
   - Qualitative and quantitative data
   - Formative (on going) and summative (final) evaluations
   - Prospective (forward-looking) and retrospective (backward-looking) studies.

2. Explanatory Focus: It seeks to explain rather than judge. The aim is to understand how and why interventions work (or don't work) in different contexts, rather than merely assessing their effectiveness.

3. Learning-Oriented: The approach focuses on learning from the evidence rather than controlling the variables. It values the lessons learned from different contexts and mechanisms to build a deeper understanding.

4. Stakeholder Engagement: It is a strategy by which to identify and analyze the requirements of the stakeholders, keeping in mind their perspectives, and collaborating with them for better outcomes. .

Caveats of Realist Approach:

1. **Non-Standardizable and Non-Reproducible:** Realist syntheses cannot be easily standardized or reproduced. Each synthesis is unique, tailored to the specific context and questions it addresses.

2. **Complex Answers:** It does not provide easy or straightforward answers. The approach requires deep analysis and consideration of multiple factors and perspectives.
3. **Sustained Thinking and Imagination:** Tracking the initial map of program theories and understanding the complexities involved requires sustained intellectual effort and creativity.
4. **Judgment and Experience:** Effective application of the realist approach demands significant judgment and experience. Evaluators must be skilled in interpreting complex data and synthesizing diverse sources of evidence.

Realist Synthesis is particularly valuable for unpacking complex, multi-layered interventions in SACRI (sustainable agriculture and climate resilience) and PFI (clean cooking energy transitions). Both initiatives span different geographies, actors, and delivery strategies, making them ideal for exploring CMO patterns aligned with their ToCs.

Table 8: Context, Mechanism and Outcome in the two case studies

What works, for whom, in what context and why	Examples for Case Study 1: SACRI	Examples for Case Study 2: PFI
Context	Water-scarce agricultural areas with fragmented landholding, weak market linkages, but knowledge of existing women's collective institutions and traditional watershed management.	Remote villages where women face time poverty because of drudgery of traditional cooking methods, limited access to clean energy, weak supply chains, although community learning traditions and existing institutional partnerships are strong.
Mechanism	Participatory watershed planning through VRAPs combined with women-led PCGs created integrated water-agriculture-market systems. Climate-resilient technologies (micro-irrigation, climate-smart crops) became locally adapted through ATS, while digital advisory services provided real-time support for decision-making.	BCC through trained "Flame Champions", combined with institutional strengthening of local partnerships created sustainable clean energy ecosystems. Clean fuel technology access (biomass stoves, LPG stoves, electric induction device) became viable through supply chain development, while monitoring systems ensured sustained adoption and quality services.
Outcome	Enhanced climate resilience at the village level through improved water efficiency and agricultural productivity. Increased women's economic empowerment via PCG leadership and market access, leading to strengthened collective governance and sustained agricultural innovation networks across watersheds.	Sustained clean cooking adoption as primary cooking method, reduced HAP and improved health outcomes. Women's leadership in clean energy transitions through entrepreneurship development, creating viable local clean energy economies and strengthened institutional partnerships for long-term sustainability.

5.2.1 Learning loops

One of the critical objectives of Impact Strategy is to derive insights for course correction and to recommend changes for project or program replication and scale-up, called as "learning". In practice, where various partners and stakeholders contribute to the project goal, it is essential that these learnings are shared not only among

intervention teams but also with funders and other relevant stakeholders. This ensures that the lessons learned can be built upon, adapted, and/or replicated in other settings.

Single Loop learning is a way of learning, that asks, **"Are we doing this right?"** It is a simple method that focuses on improving processes and doing things right.

Double Loop learning is a way of learning, that asks, **"Are we doing this the right way?"** It is not as simple as single loop learning as it focuses on a more complicated ask of "re-invention". The focus shifts to understanding and addressing the underlying causes of problems. It's about identifying what went wrong and why, and then taking action to resolve these issues.

Triple Loop learning is a way of learning that asks, **"Are we doing the right thing?"** It focuses on the most complex part of any project or program learning by examining the organizational culture, its values and beliefs and re-defines it to take it toward "transformational change". When we ask, "Are we doing the right thing?" we are essentially checking if the processes/mechanisms are right, if the team is right, if the context, risk and assumptions are right, if the timeline was right, if the management cadence was right, if the indicators were right and if other project requirements were right. One should look at all these areas of enquiry and then decide to RE-VISE or RE-ORGANIZE or RE-INVENT[10].

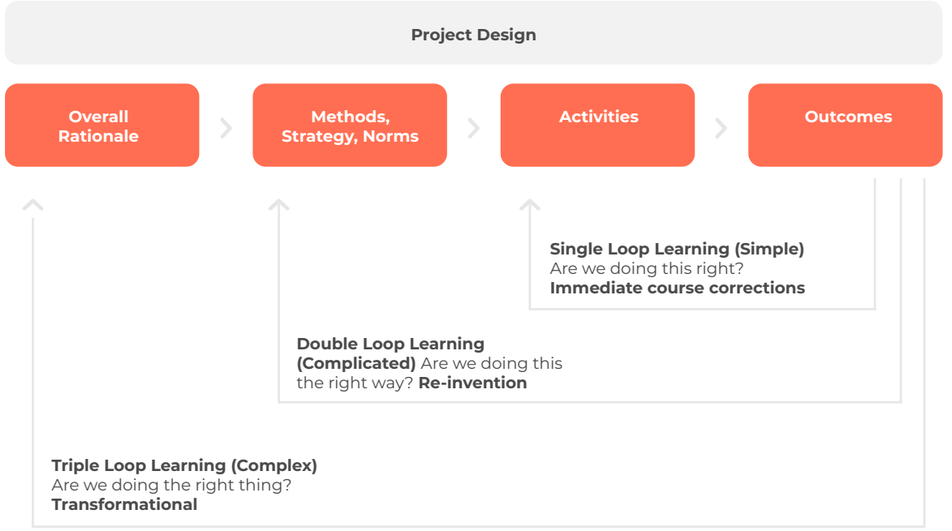


Figure 12: Learning loops embedded within project design and outcomes[11]

Brenda Zimmerman categorizes problems as Simple, Complicated, or Complex, which underscores why single-loop learning may be adequate for simple projects, while more complex challenges often demand double or triple-loop learning to effectively relearn, rethink, and reinvent our strategies.

Source: Tamarack Community

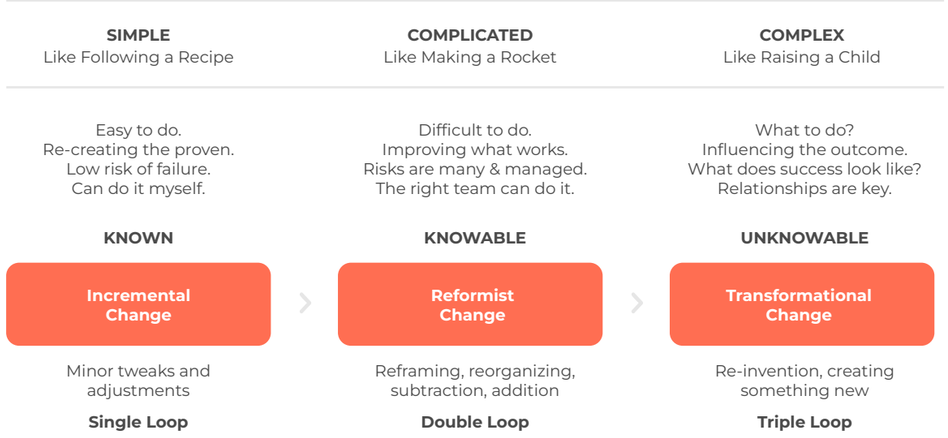


Figure 13: Types of problems and corresponding learning loops for driving change

In both case studies, SACRI and PFI, learning was not confined to the end of the project, it was embedded throughout the implementation. For instance, **SACRI's** decentralized structure enabled local adaptation committees, through Participatory Watershed Planning and Producer Collective Groups, to share on-ground experiences. This led to mid-course corrections such as shifting from single-season crops to more diversified, climate-resilient crop varieties, which is an example of double-loop learning. Similarly, in **PFI**, the piloting of flexible subsidies for LPG stove adoption and the focus on timely delivery of refill cylinders responded to real-time feedback from women users, reflecting single-loop learning in action. The program also learned from the challenges of timely delivery of refill cylinders and efficient post-sale services, to adjust its strategic direction accordingly. In both cases, reflection on uptake patterns, equity gaps, and institutional bottlenecks allowed stakeholders to revisit not just delivery mechanisms but also strategic directions, moving toward triple loop learning that questioned whether they were indeed doing the right thing in the right way.

5.3 Synthesizing Learnings

5.3.1 Triangulation

Triangulation is a method used to validate and deepen the understanding of outcomes by corroborating multiple sources of data or evidence. It involves, metaphorically, "knocking on different doors" to explore various reasons behind the findings. By cross-verifying information from different sources, triangulation helps uncover multiple factors influencing the results, leading to a more comprehensive and reliable analysis[12].

Why do we use triangulation? It:

1. Validates Findings: By cross-verifying data from multiple sources, triangulation ensures that conclusions are more reliable and accurate.
2. Provides a Comprehensive Understanding: It offers a deeper and more nuanced view of the outcomes by looking at them from different angles and perspectives.
3. Minimizes Bias: Using multiple sources of evidence helps reduce bias and errors, resulting in more balanced and objective conclusions.
4. Reveals Intertwined Insights: Triangulation uncovers insights that neither quantitative nor qualitative data alone could provide, intertwining these approaches to reveal more complex and comprehensive findings.

What are the different kinds of triangulation?

Norman Denzin identified four kinds of triangulation[13]:

1. **Method Triangulation:** This involves using multiple methods of data collection for research to reduce the biases and deficiencies inherent in any single method. The strengths of one method can compensate for the weaknesses of another. For example, KIIs provide deep, open-ended insights, while quantitative surveys offer aggregated values and generalizable findings. Various combinations of data collection methods, such as FGDs, KIIs, in-depth interviews (IDIs), and surveys can be used to achieve a more comprehensive understanding.

2. **Theory Triangulation:** This approach uses multiple theories or frameworks in a study to provide different perspectives and address various questions. It helps in identifying distinct perspectives, issues, and reasoning. For example, a study could be conducted from both feminist and sustainability theory viewpoints, offering a richer analysis of the subject.

3. **Data Source Triangulation:** This involves using a variety of data sources, both primary and secondary. It compensates for the weaknesses of one data source by using another and helps to obtain data that might not be

available from a single source. For example, while secondary data might not provide information on the number of women using open defecation systems, it could offer data on the number of private and public toilets in the region.

4. **Investigator Triangulation:** This method uses more than one investigator or researcher in a study to minimize bias. For instance, a study on condom or birth control usage could have both female and male investigators interviewing rural women and men, respectively. Similarly, assessing children's knowledge capacity by having them recite a poem could involve two investigators to capture nuances in accent, language, and correctness, which might be missed if only one investigator was employed.

5.3.2 Thematic analysis

Deciphering insights from qualitative data requires skill, patience, and an open mind. Unlike deriving findings and inferences from quantitative data, where its either black or white, qualitative data requires identifying and magnifying a diverse spectrum of areas, such as gray, blue, yellow, and pink, to ferret out the reasons, patterns and hidden factors behind results.

Thematic analysis helps in systematically analyzing data to reveal recurring themes, while it also helps in understanding underlying patterns and in generating rich, in-depth interpretations. It is predominantly a qualitative technique, rarely used for quantitative findings. It is widely used for its flexibility and effectiveness in extracting meaningful insights from qualitative data[14].

In both the **SACRI** and **PFI** case studies, large volumes of qualitative data were generated through participatory activities such as community meetings, women's self help group (SHG) dialogues, training feedback, and demonstration workshops. Applying thematic analysis to these narratives allowed project teams to uncover recurring themes such as climate resilience through collective water governance, empowerment via women-led energy transition, and barriers to clean technology adoption. For example, in **SACRI**, recurring references to trust in local committees and preference for traditional crops emerged as key themes influencing adoption. Similarly, in **PFI**, women's stories repeatedly highlighted themes of **reduction in firewood collection from nearby forests** and **reduced manual labor while cooking**, as well as **reduction in HAP exposure** as significant motivators for clean cooking adoption. Thematic analysis also revealed **increased women's leadership and participation in the clean energy transition** as a key outcome. These thematic insights helped refine project messaging and shaped course correction during implementation.

Source: NN Group

Thematic analysis steps

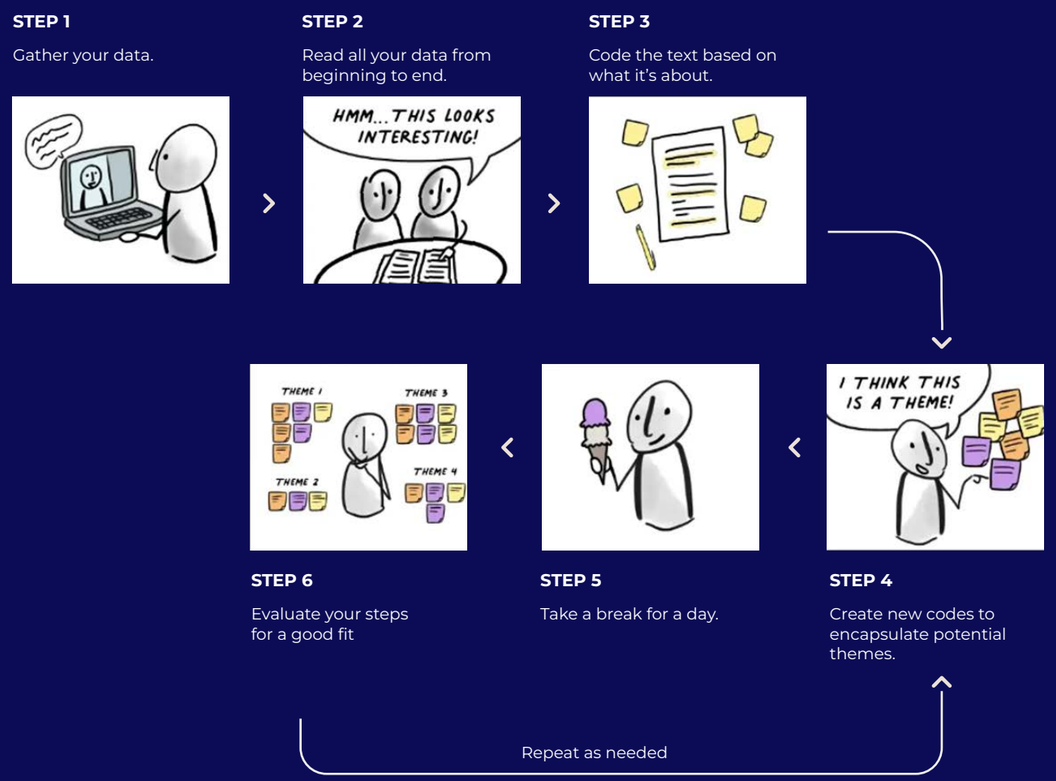


Figure 14: Steps for Doing a Thematic Analysis

6. Notes

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8. Glossary

Assumptions
Conditions or resources that project stakeholders believe are necessary for the project's success and are already presumed to exist.

Baseline Assessment
Examination of pre-intervention estimates and key indicators to provide a foundation for understanding the pre-project scenario.

Change Agent
An individual or group that influences an outcome and facilitates improvements within an organization. The change agent not only implements the change but also evaluates the intervention initiated by them, ensuring that it is aligned with the organization's goals.

Context
The project's underlying rationale and objectives, outlining the intended contribution, specifying target stakeholders, and providing the objective rationale.

Context-Mechanism-Outcome (CMO)
A configuration to explore how interventions operate. The evaluation should not only indicate whether an intervention works or not but also highlight which factors will work, how they will work, in what context and for whom.

Contribution Analysis
An approach for evaluating complex interventions, where multiple factors may influence outcomes. Contribution Analysis helps assess the extent to which a specific intervention has contributed to observed changes.

Data Source Triangulation
Using a variety of primary and secondary data sources, including that time, space and person to corroborate findings, compensate for weaknesses in the data and obtain valid and reliable information.

Domains of Change
Broad categories in which significant change stories will be collected and reported.

Double Loop Learning
A way of learning that asks, "Are we doing this the right way?" It challenges the system, and and addresses the underlying causes of problems.

Evaluation
Assessment of whether the intended objectives have been achieved and if the situation has improved.

Expected Results
What is being measured - specific outcomes or impacts that the ToC aims to achieve.

Impact Pathways
The structured flow from inputs to outputs, outcomes, and impacts used to articulate how change is expected to occur.

Indicator
A unit of information measured over time to depict change in conditions under observation.

Intervention
Any deliberate effort, whether it is a project, program, partnership or policy designed to bring about a specific result or change.

Intervention Cycle
The distinct operational cycle that every intervention follows, commencing with its inception and concluding with its closure.

Intervention Goal
A broad statement of the intended outcome referring to the larger, long-term ecosystem level changes that a project helps contribute to.

Intervention Identification and Design
The process of first identifying the intervention objective from problem analysis, followed by an in-depth intervention design, including setting objectives, making strategies, identifying stakeholders, planning activities, and allocating resources.

Intervention Implementation
The phase where the planned change is facilitated by mobilizing resources to execute the tasks according to the intervention design.

Intervention Objective
A specific statement of the target condition which often mirrors the core problem of the organization. The intervention uses definite, specific, and structured activities to bring about the improvement the organization wishes to achieve.

Investigator Triangulation
Using more than one investigator or researcher in a study to minimize bias and capture different perspectives.

Logic Model
A model based on the principle of causality that highlights a project as a process aimed at achieving meaningful outcomes, following an “If → Then” structure reflecting clear cause-and-effect relationships.

Monitoring
The process that helps track progress, identify potential bottlenecks, and ensure alignment with intervention objectives throughout implementation.

Method Triangulation
Using multiple methods of data collection to reduce biases and deficiencies inherent in any single method.

Most Significant Change (MSC)
A participatory method used in M&E that captures the nuances of change through storytelling, where stakeholders collaborate to decide criteria for recording change.

Outcomes
The resulting changes that the project aims to achieve, occurring over varying timelines and categorized temporally.

Outcome Harvesting
An evaluation approach used to identify and document outcomes or changes resulting from a program, which is particularly useful when outcomes are not clearly defined or predictable at the outset.

Performance Measurement Framework (PMF)
Another term for Results Framework (RF), used for monitoring and evaluating project performance.

Periodicity
When to measure - determining how frequently or at what stage each result will be measured.

Preconditions
Conditions or pre-requisites that must be established for the project to progress logically from one stage to the next to achieve the long-term goal.

Problem Analysis
Identifying the problem using structured frameworks like the problem tree analysis to visually map the interconnected causes and effects.

Problem Tree Analysis
A structured framework for visually mapping the interconnected causes and effects that contribute to the current situation using the metaphor of a tree where the roots are the causes and the branches are the resulting effects.

Realist Synthesis
A theory-based method for reviewing evidence in an explanatory manner, examining evidence through various lenses to identify underlying causal mechanisms that drive outcomes.

Responsibility
Who is responsible - identifying individuals or teams responsible for collecting data.

Results Framework (RF)
A framework essential for monitoring and evaluating project performance, translating the conceptual map of the ToC into a practical tool for tracking and assessing performance.

Results-Based Management (RBM)
A performance-based management approach that emphasizes achieving specific results in planning, implementation, M&E by focusing on directing project strategies towards achieving impact, outcomes, and outputs.

Single Loop Learning
A way of learning that asks, “Are we doing this right?”, focusing on improving processes, and doing things correctly.

Situation Analysis
Understanding the existing situation or condition from a holistic perspective to identify what is ‘wrong’ with the given context.

Small Wins Approach
An approach focusing on incremental progress and achievements that may not be part of the official workplan but are crucial for building momentum and addressing complex problems.

Source of Data
How data will be collected - specifying the methods and sources from which data will be gathered.
Target: Set goals for each expected result to guide efforts, focus resources, and track progress towards achieving overall goals.

Thematic Analysis
A systematic method for analysing qualitative data to reveal recurring themes and understand underlying patterns, generating rich, in-depth interpretations.

Theory of Change (ToC)
The strategic backbone that serves as a road map for transforming vision into tangible activities, directing the articulation of project milestones and creating impact pathways to accomplish overarching goals.

Triangulation
A method used to validate and deepen the understanding of outcomes by corroborating multiple sources of data or evidence to ensure more reliable and comprehensive analysis.

Triple Loop Learning
A way of learning that asks, “Are we doing the right thing?”, while focusing on transformational change and comprehensive review of all project elements.

SAMBODHI