CHAPTER 3

PROJECT LOGIC AND THEORY OF CHANGE

Designing Evidence-Based Pathways to Sustainable Change

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Learning Objectives

By the end of this chapter, participants will be able to:

- Explain project logic
- Define and interpret logic models
- Describe the purpose of a Theory of Change
- Identify long-term change, domains and preconditions
- Develop pathways of change
- Identify and assess assumptions
- Recognize “killer assumptions”
- Apply backward mapping
- Develop a Theory of Change diagram and narrative
- Use the Theory of Change as a living management tool

What is Project Logic?

Project logic explains how project activities are expected to produce outputs, outcomes and long-term change.

It answers:

- What problem are we addressing?
- What change do we want to achieve?
- What must happen before that change is possible?
- What will the project do?
- Why should the proposed activities work?
- What assumptions must hold?

Why Project Logic Matters

Clear project logic helps teams:

- Design relevant interventions
- Clarify expected results
- Identify critical assumptions
- Select appropriate indicators
- Communicate the project strategy
- Coordinate with partners
- Manage risks
- Learn and adapt
- Evaluate whether the intervention worked

What is a Logic Model?

A logic model is:
A systematic and visual presentation of how a project is expected to work.

A logic model summarizes:

- The desired change
- The pathway to change
- Project interventions
- Assumptions
- Results
- Measurement priorities

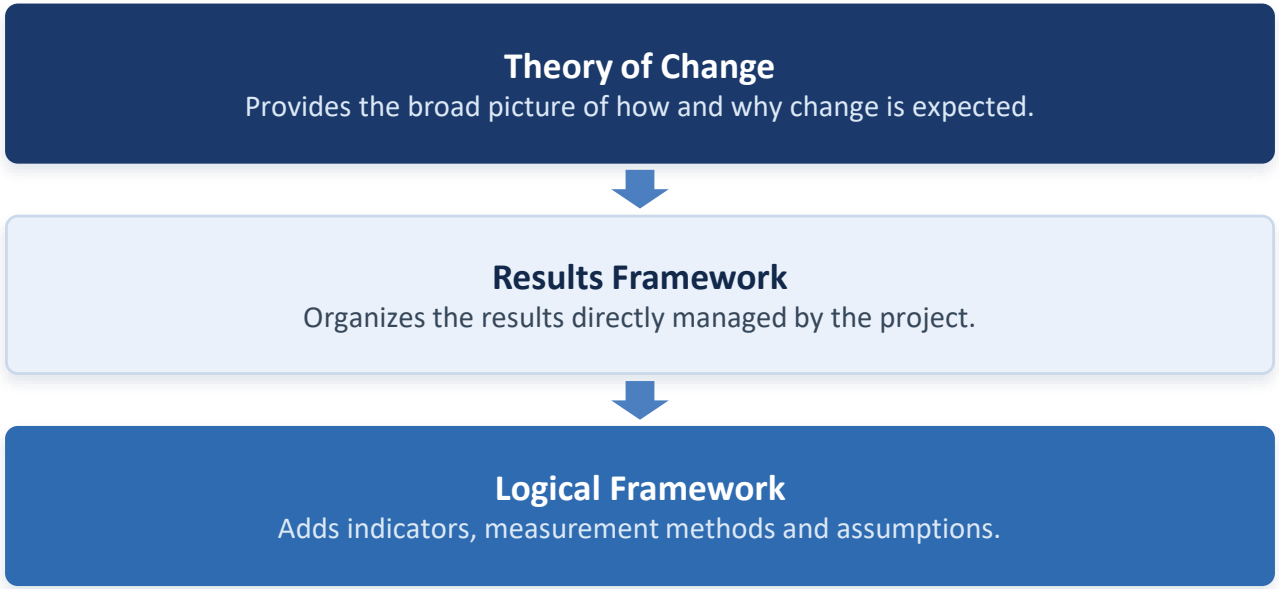
Main Project Logic Models

Three common logic models are:

1. Theory of Change
2. Results Framework
3. Logical Framework

They are related but serve different purposes.

Progression of Logic Models



Comparing the Three Models

Model	Main Purpose
Theory of Change	Explains how and why change should happen
Results Framework	Organizes the hierarchy of project results
Logframe	Connects objectives, indicators, measurement and assumptions

No single model replaces the others — each provides a different level of detail.

What is a Theory of Change?

A Theory of Change is:
A comprehensive and visual description of how and why a desired change is expected to happen.

It identifies:

- Long-term change
- Domains of change
- Preconditions
- Pathways of change
- Interventions
- Assumptions
- External contributions
- Supporting evidence

Why Develop a Theory of Change?

A Theory of Change helps teams:

- Understand the full change process
- Make assumptions visible
- Identify gaps in project design
- Recognize external actors and contributions
- Improve coordination
- Select meaningful indicators
- Support evaluation
- Promote participation
- Strengthen adaptive management

Theory of Change Questions

A strong Theory of Change answers:

1. What long-term change do we seek?
2. Who should experience the change?
3. What conditions must exist first?
4. How are these conditions connected?
5. What interventions will support them?
6. Who else must contribute?
7. What assumptions must hold?
8. What evidence supports the proposed pathways?

Begin with a Situation Analysis

Before developing a Theory of Change, examine:

- The main problem
- Immediate and root causes
- Existing assets and capacities
- Stakeholder interests
- Gender and inclusion issues
- Political and institutional context
- Risks and opportunities
- Existing evidence
- Other actors and interventions

The Problem Tree and Theory of Change

A Problem Tree Identifies

- The core problem
- Causes
- Root causes
- Effects

The ToC Converts These Into

- Desired changes
- Preconditions
- Results
- Intervention pathways

Negative problem statements can be transformed into positive change statements.

Example of Problem-to-Change Conversion

Problem	Desired Change
Communities have limited access to safe drinking water.	Communities have sustainable access to safe drinking water.

Supporting Changes

- Water systems are functional
- Management committees are capable
- Households practise safe water handling
- Authorities provide technical support

What is Long-Term Change?

> *Long-term change is the lasting improvement that the intervention aims to support.*

Examples:

- Improved livelihoods
- Reduced maternal mortality
- Increased resilience
- Improved learning outcomes
- Reduced waterborne disease
- Improved protection and well-being

The long-term change is normally placed at the top of the Theory of Change.

Characteristics of a Good Long-Term Change Statement

A good statement should:

- Identify who will benefit
- Describe the desired condition
- Focus on significant and lasting change
- Be realistic for the context
- Avoid describing activities
- Be clearly understood
- Align with stakeholder priorities

Avoid wording such as “conduct training” or “distribute materials” — these are activities, not long-term changes.

Long-Term Change Example

Weak Statement

“Provide WASH services to displaced households.”

Stronger Statement

“Internally displaced households experience improved health and reduced incidence of waterborne disease.”

The stronger statement describes the intended change for people rather than what the project will deliver.

Domains of Change

> *Domains of change are broad strategic areas that directly contribute to the long-term change.*

Long-term change: Improved livelihoods and well-being among displaced households.

- Improved income
- Improved nutrition
- Reduced disease
- Improved protection

A Theory of Change may contain several domains managed by different organizations or actors.

What are Preconditions?

> *Preconditions are the changes or conditions that must exist before higher-level change can occur.*

Examples:

- Communities have access to water
- Water committees function effectively
- Hygiene knowledge improves
- Households adopt safe practices
- Government provides maintenance support

Preconditions are intended changes within the pathway; assumptions are external conditions expected to hold.

Levels of Preconditions

Preconditions may involve changes in:

- Knowledge
- Skills
- Attitudes
- Behaviour
- Access
- Service quality
- Institutional capacity
- Systems
- Policies
- Community norms
- Resource availability

Include behavioural, institutional and systemic changes — not only service-delivery outputs.

Outputs versus Preconditions

Output

A direct deliverable produced by project activities.

Example:
Community volunteers trained.

Precondition or Outcome

A change that occurs because outputs are used.

Example:
Community volunteers consistently promote safe hygiene practices.

This distinction prevents assuming that delivering an output automatically creates an outcome.

What is Backward Mapping?

> *Backward mapping starts with the long-term change and asks: What must be true immediately before this change can occur?*

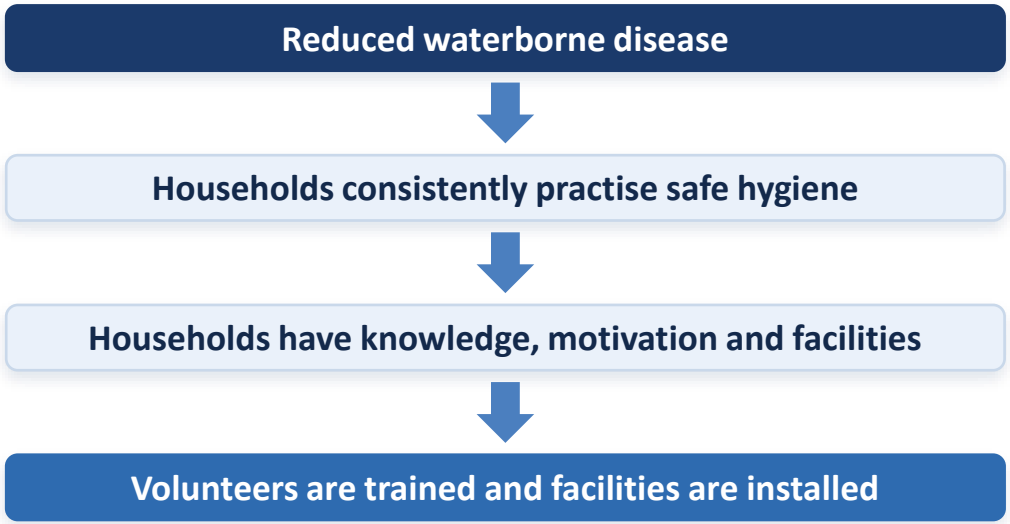
The process continues backward until reaching conditions that can be influenced through project interventions.

Backward mapping keeps the design focused on results rather than beginning with preferred activities.

Backward Mapping Process

1. Define the long-term change
2. Identify major domains of change
3. Ask what must happen before each domain is achieved
4. Continue identifying earlier preconditions
5. Connect related preconditions
6. Identify interventions
7. Test assumptions and evidence

Example of Backward Mapping



What must happen first?

Before that?

Before that?

The logic should remain plausible at every connection.

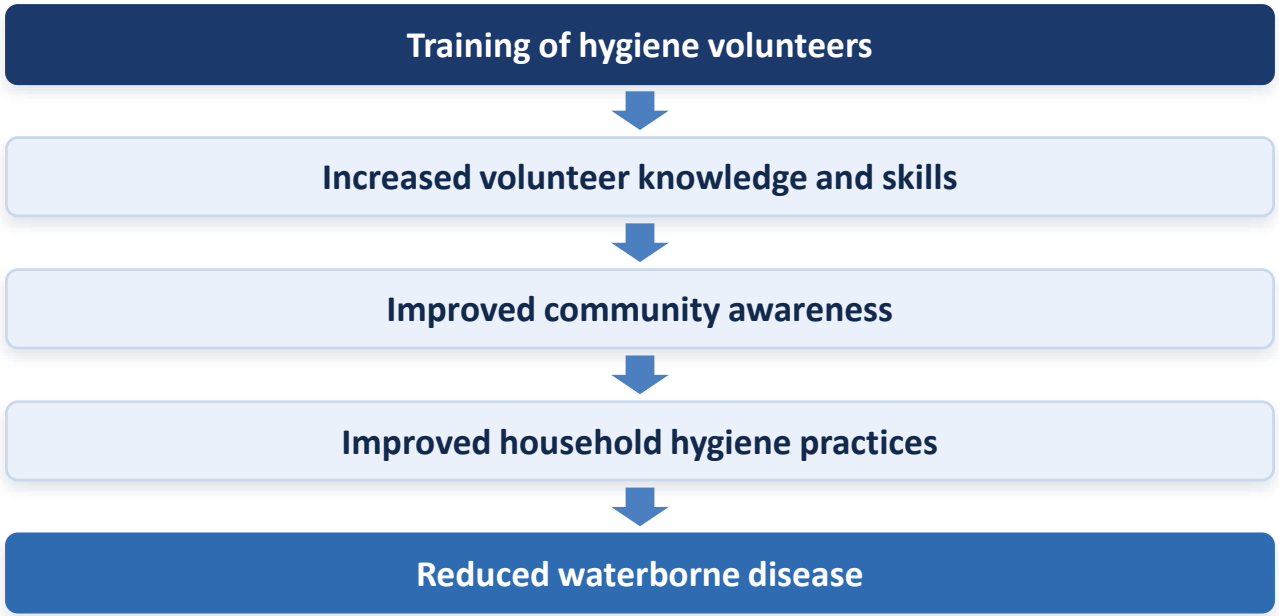
What is a Pathway of Change?

A pathway of change shows:
How preconditions are connected, the order in which change is expected, and how lower-level results contribute to higher-level results.

Most projects have several pathways leading to one long-term change.

Pathways may interact and do not always operate in a perfectly linear manner.

Example Pathway



Multiple Pathways

Reduced disease may require several connected pathways:

Behaviour Pathway	Infrastructure Pathway	Governance Pathway
Knowledge	Water systems	Local oversight
↓	↓	↓
Practice	Safe access	Maintenance
↓	↓	↓
Reduced exposure	Reduced exposure	Sustainable services

A strong Theory of Change recognizes that complex problems normally require several connected pathways.

Connections Across Pathways

> *A precondition may contribute to several pathways.*

Example: Strong community committees may support —

- Water-system maintenance
- Hygiene campaigns
- Feedback mechanisms
- Community ownership

Cross-pathway connections show where coordination is required.

Linear versus Non-Linear Change

Change is not always linear. Possible realities include:

- Feedback loops
- Delays
- Repeated learning
- Resistance
- External shocks
- Unintended results
- Different pathways for different groups

The visual model should simplify complexity without pretending that change is automatic.

Project Interventions

> *Interventions are the actions taken to support preconditions.*

Examples:

- Training
- Infrastructure development
- Community mobilization
- Policy engagement
- Cash assistance
- Technical support
- Behaviour-change communication

Activities should be chosen only after the intended pathway has been defined.

Who Contributes to Change?

The Theory of Change may include contributions from:

- Project teams
- Communities
- Government
- Local organizations
- Donors
- Private-sector actors
- Other implementing partners
- Households and individuals

Long-term change is rarely created by a single project.

Sphere of Control and Influence

Sphere of Control	Sphere of Influence	Sphere of Concern
Activities and outputs directly managed by the project.	Behavioural and institutional changes the project can influence.	Long-term changes to which the project contributes.

This distinction helps avoid unrealistic claims of attribution.

What is an Assumption?

An assumption is:
A condition outside the direct control of project management that must hold for progress toward the long-term change.

Examples:

- Government support continues
- Communities remain willing to participate
- Security allows access
- Markets remain functional
- Partners fulfil commitments

Assumptions provide a reality check for the project logic.

Assumptions versus Preconditions

Preconditions	Assumptions
Intended changes in the pathway	External conditions expected to hold
Often influenced by the project	Usually outside direct control
Measured as project results	Monitored as risks or contextual factors

A functioning water committee may be a precondition if the project builds it; government stability may be an assumption.

Testing Assumptions

For every critical assumption, ask:

- What evidence supports it?
- How likely is it to hold?
- What happens if it fails?
- Can the project influence it?
- Should it be monitored?
- Is redesign required?

Assumptions should not be copied mechanically from previous proposals.

Assumption Decision Rules

Almost Certain to Hold	Likely, but Uncertain	Unlikely to Hold
It may not need to appear in the Theory of Change.	Include and monitor it.	Redesign the intervention.

Assumptions should influence risk management, indicators and adaptive decisions.

Killer Assumptions

A killer assumption is a condition that:

- Is critical to project success
- Is unlikely to hold
- Could cause the entire intervention to fail

Example
The project assumes government will maintain water systems, but there is no funding or commitment.

A project should not proceed without redesigning the pathway or developing an alternative strategy.

Assumptions and Risk Management

Assumptions can be translated into risks.

Assumption	Risk	Response
Government maintains infrastructure.	Government fails to allocate maintenance resources.	Develop community maintenance capacity and contingency funding.

The Theory of Change should be connected to the project risk register.

Evidence-Based Theory of Change

Evidence may come from:

- Needs assessments
- Previous evaluations
- Research studies
- Local knowledge
- Sector standards
- Pilot projects
- Expert consultation
- Community experience
- Conceptual frameworks

The Theory of Change should not rely only on staff opinion.

Conceptual Frameworks

A conceptual framework is:
An evidence-based model that explains how an intervention may produce change.

Examples may include frameworks for:

- Nutrition
- Food security
- Behaviour change
- Child protection
- Health systems
- Resilience

Use existing frameworks where appropriate, but adapt them to the local context.

Critical Thinking Questions

For every pathway, ask:

- Why do we believe this relationship exists?
- What evidence supports it?
- What alternative explanations exist?
- Does this pathway work equally for all groups?
- What could prevent change?
- What unintended effects may occur?

These questions help teams reduce bias and avoid weak causal assumptions.

Common Prevailing Myths

Avoid assumptions such as:

- Access automatically leads to use
- Knowledge automatically leads to behaviour
- Training automatically builds capacity
- Activities automatically produce outcomes
- Participation automatically creates ownership
- Infrastructure automatically becomes sustainable

Ask participants for examples from their own experience where one of these assumptions failed.

Who Should Participate?

The Theory of Change process should involve:

- Project managers
- Technical specialists
- MEAL staff
- Field staff
- Community representatives
- Government
- Partners
- Donors, where appropriate
- Marginalized and affected groups

Different stakeholders bring different knowledge, experience and perspectives.

Benefits of Participation

Participation helps to:

- Improve contextual relevance
- Identify hidden assumptions
- Include different experiences
- Build ownership
- Strengthen partnerships
- Improve communication
- Identify realistic pathways
- Reduce blind spots

Participation should influence decisions, not merely validate a pre-designed model.

Theory of Change Workshop Process

A participatory workshop may include:

1. Review the situation analysis
2. Define long-term change
3. Identify domains
4. Conduct backward mapping
5. Build pathways
6. Identify assumptions
7. Review evidence
8. Assign stakeholder contributions
9. Validate the draft
10. Develop the narrative

Allow sufficient time for debate, revision and consensus-building.

Components of the Diagram

A Theory of Change diagram may display:

- Long-term change
- Domains of change
- Preconditions
- Pathways
- Interventions
- Assumptions
- External actors
- Connections across pathways

The diagram should be visually clear and supported by a written narrative.

The Theory of Change Narrative

The narrative should explain:

- The problem and context
- The intended long-term change
- The main pathways
- How each pathway works
- The project’s contribution
- External actors’ contributions
- Critical assumptions
- Supporting evidence
- Risks and uncertainties

The diagram alone may not fully explain complex relationships.

Good Design Principles

A useful Theory of Change should be:

- Clear
- Evidence-based
- Participatory
- Context-specific
- Logically connected
- Realistic
- Inclusive
- Testable
- Adaptable
- Simple enough to communicate

Avoid producing a diagram so complicated that stakeholders cannot understand or use it.

Theory of Change and MEAL

The Theory of Change informs:

- Evaluation questions
- Indicators
- Data sources
- Learning questions
- Assumption monitoring
- Risk management
- Contribution analysis
- Adaptive management

The Theory of Change is a foundation for the whole MEAL system.

Monitoring the Theory of Change

Teams should monitor:

- Whether outputs are used
- Whether preconditions occur
- Whether assumptions remain valid
- Whether pathways operate as expected
- Whether different groups experience different results
- Whether unintended outcomes appear

Monitoring should go beyond activity completion and test whether change is actually progressing.

Evaluating the Theory of Change

Evaluation can assess:

- Whether the expected pathways occurred
- Which pathways were strongest
- Why some results were not achieved
- What external factors influenced change
- Whether the project contributed to outcomes
- Whether assumptions were valid

A Theory of Change helps structure contribution-focused evaluations.

A Living Document

The Theory of Change should be reviewed:

- During annual reflection
- At midterm
- After major contextual changes
- Following evaluation findings
- When assumptions fail
- During project redesign
- At project closure

A Theory of Change should not remain unchanged when evidence shows that project logic is inaccurate.

Updating the Theory of Change

When revising the model:

- Record what changed
- Explain why it changed
- Document supporting evidence
- Update indicators and plans
- Communicate changes to stakeholders
- Obtain approvals where required
- Track whether the adaptation improves results

Documented revision demonstrates learning rather than poor planning.

Common Theory of Change Mistakes

Avoid:

- Starting with activities
- Confusing outputs with outcomes
- Ignoring external actors
- Using vague change statements
- Failing to identify assumptions
- Treating change as automatic
- Excluding stakeholders
- Using unsupported pathways
- Creating an overly complex diagram
- Treating the model as static

Ask participants to identify which mistake is most common in their organization.

Weak versus Strong Logic

Weak Logic

Training conducted

↓

Community health improved

Stronger Logic

Training conducted

↓

Workers gain skills

↓

Workers apply skills

↓

Service quality improves

↓

Households use services

↓

Health outcomes improve

The stronger pathway makes intermediate changes and assumptions visible.

Group Exercise Scenario

Project Problem

Children in remote communities have low school attendance.

Groups should identify:

- Long-term change
- Domains of change
- Preconditions
- Pathways
- Interventions
- External actors
- Assumptions

Divide participants into groups and provide cards or sticky notes.

Suggested Areas to Explore

Possible domains may include:

- Household support
- School quality
- Child protection
- Community attitudes
- Accessibility
- Government systems

Do not give participants the complete answer — use these areas only if groups need prompting.

Theory of Change Quality Checklist

Confirm that:

- ☑ Long-term change is clear
- ☑ Stakeholders are identified
- ☑ Preconditions describe actual change
- ☑ Pathways are logically connected
- ☑ Activities are not confused with outcomes
- ☑ Assumptions are explicit
- ☑ Evidence supports the logic
- ☑ External actors are included
- ☑ Inclusion is addressed
- ☑ The model can be monitored and evaluated

Groups should use this checklist to review another group's Theory of Change.

WRAP-UP

Chapter Summary

In this chapter, we learned that:

- Project logic explains how change is expected to happen.
- Logic models provide the foundation for MEAL.
- A Theory of Change defines long-term change, pathways and assumptions.
- Backward mapping identifies necessary preconditions.
- Complex change usually requires multiple pathways.
- Assumptions must be tested and monitored.
- Evidence and participation strengthen project logic.
- The Theory of Change should be reviewed and adapted.

WRAP-UP

Knowledge Check

1. What is project logic?
2. What is a Theory of Change?
3. What is the difference between a precondition and an assumption?
4. What is backward mapping?
5. What is a pathway of change?
6. What is a killer assumption?
7. Why should external actors appear in a Theory of Change?
8. Why is the Theory of Change considered a living document?

Use the questions for plenary discussion, group competition or an individual quiz.

WRAP-UP

Action Planning

Participants should identify:

- One project requiring a clearer Theory of Change
- One weak pathway in the project
- One hidden assumption
- Evidence required to test the assumption
- Stakeholders who should participate
- A date for reviewing or developing the model

Encourage participants to connect the exercise to a real project.

THANK YOU

Questions and Discussion

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A strong Theory of Change explains how change is expected to happen, why the pathway is credible and what must remain true for success.