

Beyond the Activity

A Practical Guide to Circles of Causality in NGO Project Management

Understanding feedback loops, unintended effects and sustainable outcomes

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For project managers, programme officers, MEAL practitioners, proposal writers and development consultants

This guide helps teams understand how project activities interact with households, communities, services, markets and organisational decisions. It explains how to draw and question causal loop diagrams, recognise support gaps and turn feedback into practical management action.

The central message is simple: completing an activity is only one part of understanding the change it may help create.

About this guide

This is a practitioner guide, combining established systems-thinking ideas with an anonymised field reflection supplied by the author and original hypothetical NGO teaching cases. The practical worksheets and diagrams are learning tools; they are not validated models of particular communities.

The guide develops three skills: distinguishing a sequence of events from a feedback loop; examining how project results influence the conditions that produced them; and selecting proportionate responses that teams can monitor and revise.

Use it during proposal development, inception, quarterly reviews, evaluation and planning for sustainability. Beginners can read Chapters 1–3 first. Experienced teams can begin with a familiar sector case and complete the worksheets in Chapter 7.

The education-project story is based only on the author's account. No independent investigation or causal evaluation is represented. Identifying details are omitted. The original textbook pages mentioned in earlier discussions were not available for verification when this edition was prepared; no passage or figure from them is reproduced or treated as a reviewed source.

This is not a GBV case-management manual. Its safeguarding discussion concerns project preparedness and points readers to specialist guidance. Teams should use current organisational procedures and locally verified support arrangements.

Prepared with AI assistance for drafting and layout. Sources are listed for checking and further learning. This edition has not undergone independent specialist peer review.

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The guide uses numbered source references, such as [1], alongside material directly attributed to external authors. The NGO cases, numeric examples, review thresholds and worksheets are original illustrations unless explicitly identified otherwise.

Diagram conventions: an arrow represents a proposed causal influence; + means a change tends to move the next variable in the same direction, all else equal; – means the opposite direction. R marks reinforcing feedback. B marks balancing feedback. A delay label shows that an effect takes time.

All sector diagrams are hypotheses for discussion. Their arrows should be tested against local knowledge and evidence before they inform major decisions.

How to use the guide

Choose one recurring problem that your team can describe clearly. Examples include declining facility use, repeated report corrections, falling volunteer participation or seasonal price changes. A problem that has changed over several months is usually more useful than a single isolated incident.

Begin with what happened. Identify when the pattern started, who experienced it and what reliable information is available. Then list possible explanations. Avoid beginning with a preferred solution such as “we need more training.” That statement may conceal the problem rather than define it.

Read a relevant case, sketch a small loop and discuss each arrow with people who understand different parts of the situation. Ask which links are observed, which are plausible but untested and which are disputed. A modest diagram with five defensible variables is more useful than an impressive map that nobody can explain.

Select one feasible change and one signal that would show whether it helps. Assign a person to follow up and agree on a review date. Revisit the map if the pattern differs from your expectations.

The process can fit within an ordinary project review. It does not require a separate reporting system. Use the worksheets to record decisions, not to collect unnecessary personal information.

Reflection: Think of an activity that your team completed successfully but whose intended outcome remained weak. What happened afterwards? What conditions made the outcome difficult to sustain? Keep that example in mind as you read.

Chapter 1 Understanding the wider system

Why activities are only the beginning

An NGO builds a facility, provides materials, trains volunteers or organises a discussion. Each activity enters an existing system. People already have routines, relationships, responsibilities, constraints and ways of making decisions. The project influences those conditions, and those conditions influence the project.

For an education project, classroom supplies may matter alongside household workload, transport, safety, teacher availability and parents' confidence in the school. These factors can also influence one another. More reliable teaching may increase attendance. Greater attendance may strengthen parents' support, which may help the school remain reliable.

Systems thinking directs attention to those relationships over time. It is especially useful when an apparently sensible activity produces a disappointing result or when a recurring problem survives several attempts to solve it.

This perspective complements the logical framework. A logframe helps clarify intended results and commitments. A causal loop diagram helps examine why those results might grow, weaken or become constrained. Neither tool automatically establishes causation.

The practical question is: “How might the changes we encourage alter the conditions on which future results depend?”

For example, training volunteers increases knowledge immediately. Whether knowledge supports long-term service delivery also depends on supervision, time, resources and motivation. If better performance earns community recognition, recognition may encourage volunteers to continue practising. If responsibilities expand faster than support, the opposite pattern may emerge.

A chain an unintended effect and a loop

These three ideas are related, but they answer different questions.

Idea	What it describes	NGO illustration
Causal chain	A proposed sequence of influences	Training improves knowledge; knowledge supports better practice
Unintended effect	A change outside the original expectation	A new service creates demand for assistance the project cannot provide
Feedback loop	A pathway returns to influence an earlier variable	Better practice builds confidence; confidence encourages more practice

An unintended effect can be beneficial, harmful, mixed or uncertain. “Unintended” describes what the team anticipated; it is not a judgement about the affected person's decision or wellbeing.

To identify a loop, start with one variable and follow the arrows. Can you return to the same variable through a defensible causal pathway? If the pathway stops at an outcome, you have a chain. If it returns only because you have drawn an unsupported arrow, you have not established a useful loop.

Suppose attendance increases after supplies are distributed. That sequence alone does not prove the supplies caused the increase. Transport may have improved or a seasonal barrier may have ended. If better attendance increases teacher motivation and more consistent teaching further increases attendance, a feedback hypothesis becomes possible. Each relationship still requires examination.

Practice: Write a three-step chain from your own project. Then ask what consequence could plausibly influence the first variable again. If you cannot identify one, keep it as a chain.

Events patterns structures and assumptions

When a problem emerges, teams often focus on the event: a broken pump, a missed meeting or an incomplete report. To understand it more fully, examine four levels.

The event is what happened at a particular time. The pattern is how similar events develop across time. The structure is the arrangement of resources, incentives, rules, responsibilities and information that helps produce the pattern. Assumptions are beliefs that shape how people interpret that arrangement.

Consider repeated late donor reports. The event is this month's delay. The pattern may be six months of late submissions. The structure may include unclear responsibilities, simultaneous deadlines and delayed access to evidence. An assumption may be that reporting can always be completed after field work, without protected staff time.

Changing a deadline may solve one event. Changing the evidence workflow may alter the pattern. Questioning whether reporting is a shared programme responsibility may lead to a more substantial organisational change.

Use this distinction without turning every problem into an elaborate analysis. Sometimes a spare part or a clear instruction is sufficient. Systems thinking helps determine when recurring problems suggest something more persistent.

Discussion questions: What has repeated? What arrangement makes repetition likely? Whose perspective is missing? What belief have we accepted without checking?

A learning habit from Donella Meadows is worth keeping nearby: “Stay humble. Stay a learner.” [3] In a project review, that means being willing to change an explanation when people or evidence challenge it.

Boundaries power and time

A map cannot include everything. Define its boundary around the management question. For a handwashing project, include water supply, maintenance, use and responsibilities. Include school schedules or household labour if these materially affect the question. Leave distant factors outside the first map while recording important external influences.

The boundary is a judgement, not a statement that excluded people do not matter. Ask who benefits from the chosen boundary and whose burden becomes invisible. A village committee's success may look different to a woman who contributes unpaid work or an older person who cannot reach the meeting location.

Also define the time horizon. Training effects may appear quickly; trust, service reliability and market responses may change over months. A project that closes after three months may miss an effect that becomes visible after the next season.

Consider the difference between control, influence and external conditions. A team can usually control its activity design and staff preparation. It may influence partnership arrangements or community decisions. It cannot command household choices, rainfall or every market response. Map these distinctions to avoid giving the team unrealistic responsibility.

For sensitive issues, recognise that power can shape both behaviour and the information the project receives. Public meetings may produce agreement while private concerns remain unheard. Use suitable, safe ways to include different perspectives; participation should not require people to expose personal experiences.

Practical output: a one-sentence question, a list of included actors, a time horizon and a record of important exclusions.

Chapter 2 Reading and drawing causal loops

Variables and signed arrows

Use variables that can increase or decrease: facility reliability, attendance, workload, response time or trust. Avoid names such as “successful project” or “poor community attitude,” which combine judgement with unclear measurement.

Read each arrow as a specific causal claim. “Maintenance effort → reliability” proposes that changing maintenance effort influences reliability. Explain the mechanism and state the conditions under which it should hold.

The + sign means that, all else equal, an increase in the first variable tends to increase the second relative to what it otherwise would have been. A decrease tends to decrease it. A – sign means an increase tends to decrease the second, and a decrease tends to increase it. Signs do not mean good and bad. These conventions follow standard causal-loop practice. [1]

Link	Sign	Explanation in this example
Repair effort to unresolved faults	–	Successful repairs reduce remaining faults
Unresolved faults to service downtime	+	More faults tend to increase downtime
Downtime to facility use	–	More downtime tends to discourage use

An arrow is not a claim that the first variable is the only cause. For example, rainfall may improve water availability while a damaged pipe reduces it. Keeping other influences explicit prevents a simple link from becoming an exaggerated explanation.

If a relationship can operate in opposing ways, separate the pathways. A higher fee may finance maintenance while reducing affordability. Do not hide both effects inside an arrow labelled “+/-.”

Reinforcing feedback

A reinforcing loop amplifies a change. It can support improvement or accelerate decline. Its label describes the feedback structure rather than its desirability.

In this hypothetical WASH case, reliable facilities encourage use. Greater use may build appreciation and willingness to maintain them. More maintenance then strengthens reliability.

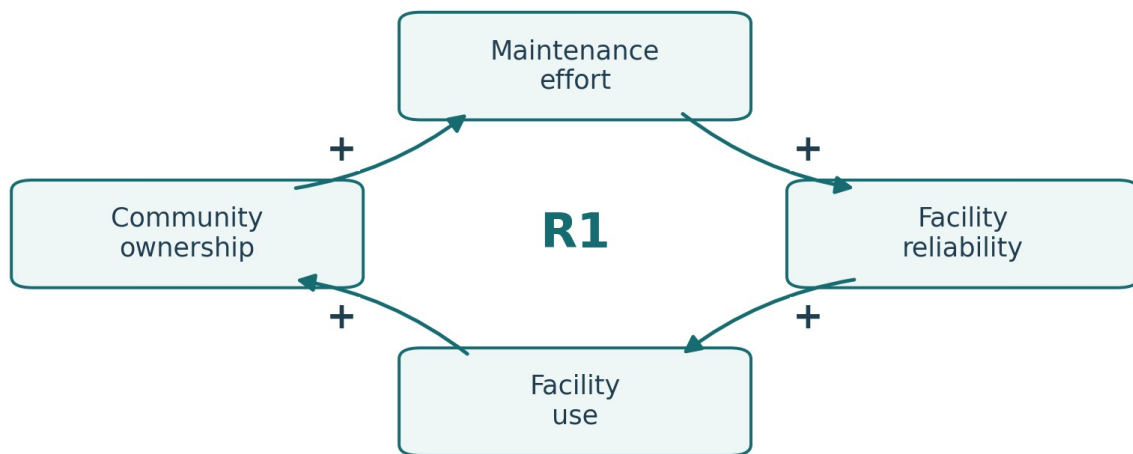


Figure 1. R1 Facility use and upkeep. All links are positive. Ownership means willingness and ability to take responsibility, not simply attendance at a committee meeting.

Follow a small increase in maintenance around the loop. Reliability rises; use rises; ownership strengthens; maintenance rises further. A decrease can also travel around the same loop, producing a downward pattern.

The map is conditional. Greater use can also accelerate wear. Ownership may not translate into maintenance if people lack money, tools or spare parts. These limits should be added when they materially affect the management question.

A sensible intervention might combine clear responsibilities, accessible repair support and a realistic financing arrangement. More awareness alone may leave the weakest link untouched.

Test the hypothesis by examining facility uptime, use at different times, repair records and how maintenance decisions are actually made. Ask non-users as well as committee members. Avoid assuming that a familiar-looking loop must explain this community.

Balancing feedback

A balancing loop counteracts a change. It can help a system move towards a target, respond to scarcity or resist a new direction. It does not necessarily achieve the intended target smoothly.

Consider a project with a backlog of unresolved maintenance requests. A larger backlog triggers more repair effort. Effective repairs reduce the backlog.

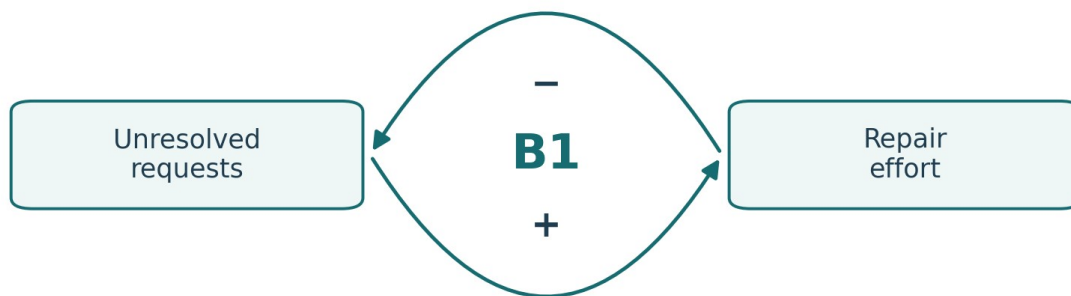


Figure 2. B1 Backlog correction. There is one negative link. The response aims to reduce unresolved requests; it works only if effort produces completed repairs.

Start with an increase in the backlog. It stimulates repair effort, which pushes the backlog down. The returning effect opposes the initial increase. The target can be recorded as an acceptable backlog or maximum response time, agreed with service users.

In practice, staffing and procurement may limit the response. If approvals take several weeks, effort increases slowly and the backlog can continue growing in the meantime. Teams may then overreact or make commitments they cannot meet.

Do not label a loop balancing because the story sounds balanced or because a diagram has a negative outcome. Trace the returning influence. As a cross-check, an odd number of negative links indicates B; an even number, including zero, indicates R, provided the signs are correct. [1]

Management question: Does the corrective action respond to the actual gap, and can it act within a useful period?

Delays and changing loop dominance

Some effects take time. A maintenance request may reach the manager today, funding may be approved next month and the repair may occur later. Draw “delay” on the relevant arrow and explain its likely duration or uncertainty. Delay notation is part of standard causal-loop practice. [2]

Delays matter because teams may judge an intervention too early, repeat it unnecessarily or mistake a late response for no response. They can also contribute to overshooting: action continues because its effects are not yet visible.

A hypothetical livelihoods project promotes vegetable production. Training and inputs increase planting, but harvest arrives months later. By then many growers may have expanded simultaneously. Supply rises, prices fall and growers reduce planting for the next season. Prices may later recover as supply contracts. This pattern is possible, not inevitable: wider markets, storage and buyer contracts can alter it.

Several loops can operate at once. Early in a WASH project, reliable service and growing ownership may reinforce use. Later, rising use may increase wear faster than repairs, constraining growth. The active constraint has changed, even though the original improvement loop still exists.

Before interpreting a trend, ask: Which response has not yet arrived? Which loop seems most influential now? What might become limiting if the current activity succeeds?

Record when a decision was made, when implementation began and when a measurable effect could reasonably appear. A delay estimate supports judgement; it does not replace monitoring.

A seven-step drawing method

1. Define the pattern. Use a concrete question such as “Why has facility use declined over the last six months?” Include the time period and affected group.
2. List a small set of variables. Choose quantities or conditions that can rise or fall. Five to seven variables are enough for an initial discussion.
3. Propose direct links. Explain how one variable affects another. If the mechanism requires an intermediate step, add it rather than relying on a vague arrow.
4. Assign signs. Ask what would happen if the first variable increased while other relevant influences remained unchanged. Separate opposing pathways.
5. Find a returning pathway. Trace the arrows back to the starting variable. Label an open pathway a chain, not a loop.
6. Check the loop and its timing. Trace a small increase around it to identify R or B. Mark important delays and record capacity constraints.
7. Challenge and use the map. Ask affected people and staff to question it. Distinguish evidence from assumptions. Select a response, a monitoring signal and a review date.

These steps are a practical workflow for this guide, informed by causal-loop conventions [1, 2] and case-based systems learning [5]. They are not a new academic theory.

Quality check: Can another person explain each arrow without your assistance? If not, simplify the map or improve the variable names. A loop diagram should make disagreement easier to discuss, not make an uncertain explanation appear authoritative.

Chapter 3 Learning from the education project

The field reflection

An education project aimed to improve opportunities for children. Alongside its education activities, it organised sessions for parents and other adults on gender equality, GBV awareness, shared household work and childcare responsibilities. The intended contribution was a more supportive home environment for children's education.

In the author's account, a woman subsequently challenged her husband's behaviour, which she understood as abusive. There was disagreement, and the marriage later ended in divorce. The project did not have its own specialised GBV case-management structure, and the author identified a gap in preparedness for concerns beyond the education activities.

The account does not establish that the awareness session caused the divorce. Existing abuse, personal history and other circumstances may have shaped events. Leaving an abusive relationship may be an exercise of agency and rights; divorce is not itself evidence of programme harm.

The management lesson concerns foreseeable support needs. A project may introduce important ideas while being insufficiently prepared for disclosures, requests for help or risks that become visible afterwards.

This is a reflection on an organisational gap, not an assessment of the woman's decision. It should not be used to discourage gender equality work or to make survivors responsible for protecting the project's reputation.

Discussion: What could the team reasonably have prepared before the sessions? Which support functions could be arranged through qualified partners? What information is necessary for learning, and what personal information should remain outside project reporting?

What the case does and does not show

The field account describes a sequence of events and a support gap. It does not document a closed feedback loop. For one to be established, consequences would need to influence an earlier variable, such as future participation, project responsiveness or community trust.

Evidence category	Appropriate statement
Author's reported experience	Sessions occurred; a relationship later ended; preparedness was inadequate in the author's assessment
Plausible interpretation	Awareness may have contributed to recognising or questioning existing behaviour
Unestablished claim	Awareness caused the divorce or harmed the woman
Feedback hypothesis	The quality of project responses may influence trust and future feedback

Consider a hypothetical extension. Staff respond appropriately to concerns, and people experience the project as respectful and dependable. That experience may strengthen trust. Greater trust may improve the quality of voluntary feedback. Better feedback may help the team refine its response arrangements, further improving response quality.

This is an R loop hypothesis. It should not be presented as something observed in the original case. It also has limits: more feedback does not automatically improve response quality unless someone reviews it, resources a response and follows through.

The strongest learning statement is: “Our complementary awareness activity interacted with household realities beyond the education objective. We needed clearer preparation and support arrangements. Any claim about longer-term feedback requires additional, safely collected evidence.”

This wording preserves the practical lesson without making a causal claim the account cannot support.

A possible learning loop

The following original diagram represents a project-management hypothesis, not the woman's personal circumstances.

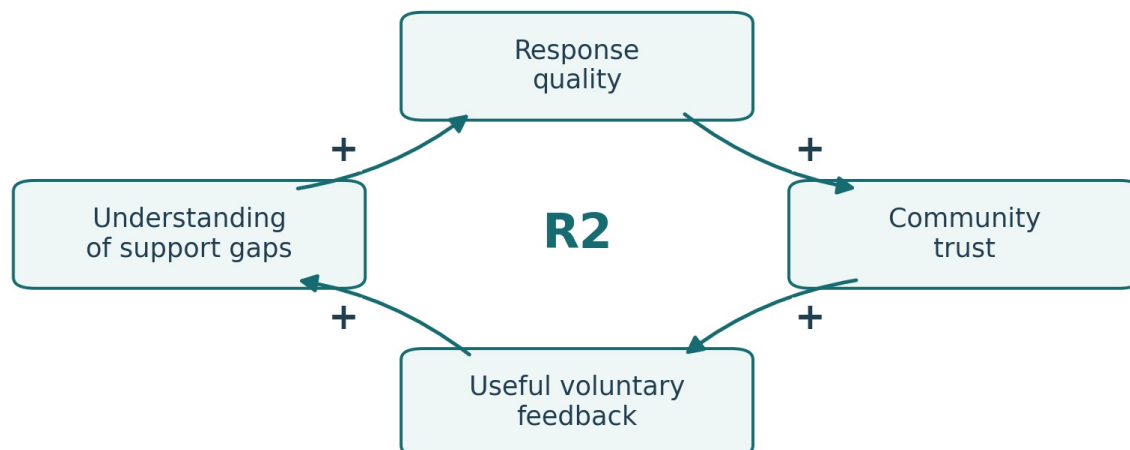


Figure 3. R2 Responsive learning. The final link assumes that the team has authority and resources to act on what it learns.

Improved response quality may increase trust. Trust may encourage useful, voluntary feedback. Feedback may improve understanding of support gaps. Acting on that understanding can improve response quality. The loop can fail if people do not have safe ways to speak, if staff cannot act or if feedback is collected without follow-up.

The team should monitor service responsiveness and whether concerns receive appropriate attention, rather than attempting to track private relationships to validate the loop. General feedback can address whether sessions were clear, respectful and connected to useful information.

Avoid treating the volume of sensitive disclosures as a performance target. An increase may reflect greater trust, more accessible channels, changing risks or several influences together. A decrease may reflect improvement, silence or barriers. Counts alone cannot distinguish these explanations.

Project review question: “What have we learned about our preparedness, and what have we changed?” This creates a useful management focus while keeping survivor support separate from routine programme monitoring.

The loop also illustrates an important condition for sustainability: feedback must reach a decision-maker who can respond. Listening without a route to action does not close the management cycle.

Preparing for sensitive awareness activities

Before sessions, work with qualified GBV personnel where available to review risks, staff roles and locally accessible support. Verify service information and safe referral arrangements; do not assume that a provider listed earlier still operates. Provide a discreet way to ask for information and avoid inviting public disclosures.

For an unsolicited disclosure, trained staff should listen respectfully, avoid probing or investigating, explain available options and confidentiality limits, and respect informed choices. Non-specialists should not mediate abuse or promise services they cannot provide. Where specialist services are absent, use the GBV Pocket Guide with context-specific specialist advice wherever possible. Child safeguarding and applicable reporting duties require particular care. [6, 7]

The project does not necessarily need to become a specialist GBV provider. It does need a realistic plan for its own responsibilities: preparation, safe communication, appropriate support boundaries and follow-up on organisational gaps.

Design session content around equitable responsibilities and rights without asking participants to confront partners or share private experiences. Review delivery methods and scheduling with different groups so attendance does not impose avoidable burdens.

For the systems review, keep the focus on arrangements: who prepares staff, who verifies information, who reviews emerging programme concerns and who decides whether activities need adaptation. Do not use a participatory loop-mapping exercise to gather survivor case histories.

Learning prompt: Which demands could successful awareness create? Where would participants obtain reliable information? What would staff do if someone asked for help immediately after the session?

Chapter 4 Cases across NGO sectors

WASH when use increases wear

Hypothetical case. A village handwashing facility attracts more users after reliable water supply is restored. Greater use builds appreciation and maintenance support. At the same time, taps wear out faster. The volunteer caretaker cannot obtain replacements promptly, so downtime increases.

Two loops operate together. The improvement loop is maintenance → reliability → use → ownership → maintenance, with positive links throughout. The constraint loop is use → wear → downtime → use; the first two links are positive and the final link is negative. The second loop is balancing because increasing use creates a condition that pushes use down.

The apparent contradiction is useful. Use can strengthen support while also increasing the physical burden on the service. A manager who considers only the first loop may interpret every breakdown as weak ownership. A manager who considers both asks whether maintenance capacity has grown with demand.

Response: estimate likely demand, agree on upkeep responsibilities, identify replacement supplies and budget for routine repair. Check accessibility and affordability before introducing charges. A financing mechanism that keeps taps working while excluding poorer households requires redesign.

Evidence: uptime, users at different periods, failure types, days to repair, availability of parts and voluntary user feedback. Avoid using committee membership as the sole measure of ownership.

Discussion: What would happen if use doubled next month? Which part of the service would become limiting first? Who would carry the additional work, and have they agreed to it?

Livelihoods when harvest grows faster than demand

Hypothetical case. A project supports many growers to produce the same vegetable. Yields improve, but harvests arrive together in a relatively small local market. Prices fall, reducing the incentive to plant the same crop in the next season.

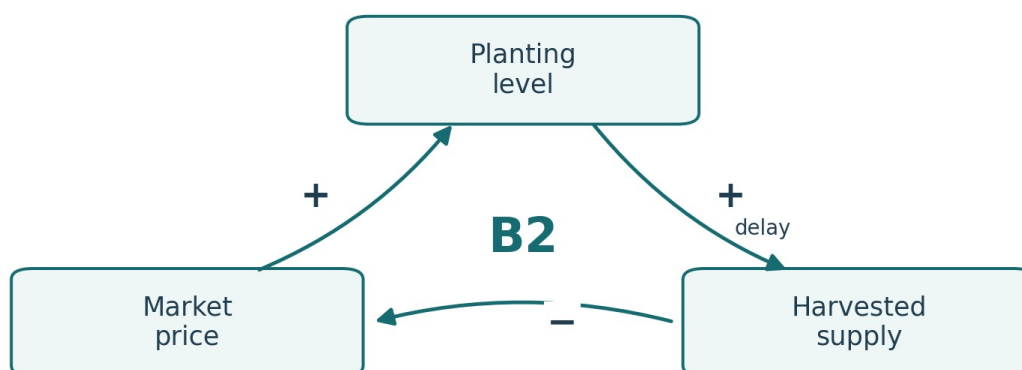


Figure 4. B2 Seasonal supply response. The delay runs from planting decisions to harvested supply. The negative supply-to-price link assumes a market in which local supply materially affects price.

With demand and outside supply held reasonably stable, more planting produces more supply; more supply lowers price; lower price weakens planting incentives. This counteracts the original expansion. Weather, trader behaviour and other markets may change the pattern.

Illustrative arithmetic: a farmer sells 500 kg at 1,000 MMK per kg, receiving 500,000 MMK in gross revenue. After expansion, 700 kg sold at 600 MMK produces 420,000 MMK. These invented figures show that more volume can mean less revenue. Profit also depends on costs; the example does not estimate local market prices or earnings.

Response: assess demand before expanding, explore crop diversity, stagger production where feasible and verify buyer requirements. Storage or transport is useful only if its costs and market benefits justify it.

Evidence: planted area, harvested volume, prices by grade, unsold produce, production and transport costs, and net returns. Measure livelihoods through income and risk, not yield alone.

DRR when preparedness depends on confidence

Hypothetical case. A village forms a disaster-preparedness group and conducts a practical drill. Participants learn responsibilities and identify weaknesses in the evacuation plan. The team fixes those weaknesses before the next exercise. Greater confidence encourages continued participation, improving preparedness further.

The reinforcing hypothesis is participation → practical preparedness → confidence in the arrangements → participation, with positive links under suitable conditions. Attendance alone does not create preparedness; participants need useful practice, accessible information and resources.

Another influence can weaken the loop. A long period without a disaster may reduce perceived urgency. Repeated meetings without practical value may also discourage people. The project should not rely on fear to sustain involvement or assume that a committee remains functional because it exists on paper.

Response: choose manageable duties, test communication channels, review routes and support needs, and practise with people who face mobility or communication barriers. Agree on a realistic review schedule rather than overloading volunteers with activities.

Evidence: whether warning messages reach intended groups, whether roles are understood, whether routes and gathering points remain usable, and whether drill findings lead to action. A plan should be reviewed when conditions change, not only when an annual calendar says so.

Discussion: Which parts can the group sustain after the project ends? What happens if a key volunteer leaves? What evidence would distinguish a functioning preparedness arrangement from a completed training activity?

Community health when outreach exceeds capacity

Hypothetical case. Health outreach improves awareness and increases attendance at a community service. Initially, greater use builds familiarity and trust. Later, demand exceeds staffing capacity. Waiting times rise, people become dissatisfied and some stop attending.

The constraint loop is attendance → demand relative to capacity → waiting time → attendance. The first two links are positive; the last is negative. It is a balancing response that may limit service use below the project's desired level.

This is an operational teaching case, not clinical advice. The appropriate service model depends on qualified personnel, population needs and local conditions. Increased waiting time does not explain all changes in attendance: transport, cost, privacy and service quality can also matter.

Response: coordinate outreach with providers, assess capacity before promotion and explain service availability accurately. Appointment arrangements or different operating hours may help if users can access them. Any increase in responsibility should come with suitable resources and supervision.

Evidence: arrivals by day, actual service capacity, waiting time, people who leave without receiving service, staff workload and anonymous feedback about access. Examine who drops out; averages can conceal barriers affecting particular groups.

Discussion: If the awareness activity works very well, can the service meet the resulting demand? How will the project avoid shifting the burden onto frontline staff or people seeking assistance?

Success in outreach creates a coordination requirement. The relevant outcome is accessible, appropriate service, not simply the number reached with a message.

Reporting when pressure creates more rework

Hypothetical case. Staff face overlapping field and reporting deadlines. They submit hurried drafts with missing evidence. Reviewers return them for correction. Rework consumes time, increasing pressure and making the next drafts more hurried.

The reinforcing hypothesis is time pressure → drafting haste → errors → rework → time pressure. Positive links describe an escalating problem. The map concerns the workflow, not a judgement that staff are careless.

A quick correction may be necessary to meet a deadline. If reviewers repeatedly rewrite reports without improving the evidence process, however, the underlying pattern can persist. Some staff may become increasingly dependent on last-minute editing.

Response: protect time for evidence compilation, clarify responsibilities, stagger internal deadlines and review a small sample early. Use short coaching on recurring errors. Avoid adding a lengthy checklist that creates more workload than it prevents.

Evidence: correction rounds, recurring error types, missing supporting records, time spent on revisions and the timing of information from field teams. A reduction in review comments does not prove better quality if the reviewer has become too busy to check carefully.

Discussion: Where does information first become delayed or unclear? Which decision would prevent the same error next month? Does the review process return useful learning to the people who prepare the evidence?

A strong management response closes the learning cycle: identify the recurring issue, change the workflow and check whether later reports improve. Editing alone completes the current document; learning helps improve the next one.

Chapter 5 Finding practical intervention points

Intervene in the relationship that matters

An intervention point is a place where a team can alter an influential part of the system. A potentially high-leverage change affects the pattern more substantially than a small adjustment elsewhere. Meadows' leverage-points work directs attention beyond numbers to information, rules, goals and underlying assumptions. [4]

For the original WASH case, an extra awareness session may have limited value if unreliable water is the main barrier. A clear repair responsibility and a dependable parts arrangement may alter the relationship between faults and downtime. For reporting, an early evidence review may prevent repeated corrections more effectively than extending the final deadline.

Do not assume that a small intervention will always produce a large effect. Its value depends on the local structure, other constraints and how people respond. A proposed change may be influential but outside the team's authority or too burdensome to sustain.

Compare options against five questions: Which loop or link could change? What evidence supports that expectation? Who has authority to act? Who bears the cost or risk? How will we know whether the change helps?

Select a feasible action that improves the intended outcome without ignoring distributional effects. In a maintenance system, shifting responsibility to volunteers may reduce the NGO's costs while increasing unpaid work. That is a cost transfer, not necessarily an improvement in the whole system.

Practical output: one priority action, its mechanism, its owner, its resources, its expected delay and its review signal.

Common recurring patterns

Certain patterns appear in many settings. Treat these as prompts for investigation, not diagnoses that can be assigned from a familiar story alone.

Pattern	Hypothetical NGO example	Question to investigate
Limits to growth	Outreach succeeds but service capacity becomes limiting	What constraint grows as the activity succeeds?
Fixes that fail	A temporary repair restores use, but recurring faults remain	What delayed effect undermines the quick fix?
Shifting the burden	External editors repeatedly solve reports while staff learning receives little time	Is the short-term response weakening the longer-term capability?
Eroding goals	A team gradually lowers a service standard because delays persist	Are we improving performance or redefining success downwards?

To test a pattern, draw the relationships that would have to exist. “Shifting the burden,” for example, requires more than external help: the short-term response must interact with the development or use of a more fundamental response. Useful specialist support can strengthen local capability rather than weaken it.

Likewise, a temporary repair is not inherently a failed approach. It may be essential while a permanent solution is arranged. The question is whether the team recognises its limits, allocates responsibility and follows through.

Ask what becomes easier immediately, what becomes harder later and whose experience defines success. Record alternatives. Two diagrams may explain the same observed pattern through different mechanisms, and both may require testing.

A worked management decision

Hypothetical WASH review. Three facilities have repeated downtime. Community members say the next awareness session will not solve the lack of spare taps. The team identifies a parts procurement delay and unclear approval responsibility.

Its first proposal is another community meeting. Its second is a small stock of commonly needed parts, a named repair coordinator and a clear spending limit. The team chooses the second as a pilot because it addresses the delay directly. It keeps a short feedback discussion to check usability and equitable access.

Decision element	Pilot agreement
Expected mechanism	Faster access to parts shortens downtime
Responsibility	Programme lead approves; designated caretaker records repairs
Resource	Locally costed parts and suitable repair support
Signal	Days from verified fault to restored service
Review	After four weeks and again after two months
Change trigger	No improvement, recurring safety concerns or unequal access

The review periods are illustrative. Real timing should reflect fault frequency, procurement conditions and programme risk. If facilities do not fail during the pilot, the team cannot conclude that the repair process has improved merely because downtime is zero.

At review, examine the mechanism as well as the outcome. Were parts available? Did approval occur promptly? Was repair technically successful? Did users return? If downtime improves but use stays low, a different barrier may now be more important.

An intervention is a testable management choice. The map helps explain why the team chose it; evidence determines whether it should continue.

Chapter 6 Monitoring learning and reporting

Monitor the links as well as the results

An output indicator can tell you how much was delivered. An outcome indicator can tell you what changed. A feedback-oriented review also asks whether the relationships expected to support that change are operating.

For the WASH loop, track uptime and repair response alongside use. For the reporting loop, examine when evidence becomes available alongside final report quality. For disaster preparedness, test communication and follow-up on drill findings alongside attendance.

Choose a few signals that inform decisions. Avoid trying to measure every variable in a large diagram. Use information the team already collects where possible, and define any additional measurement clearly.

Signal	Definition in a hypothetical WASH review	Decision it supports
Uptime	Operating hours divided by planned service hours	Is service reliable?
Repair delay	Days from verified fault to restored service	Is the response improving?
Access barrier	Themes from safe voluntary feedback	Who remains unable to use it?

Record missing information. If observation covers only mornings, do not imply that it measures all-day use. Check whether a rise in reported problems reflects a worsening service or a more accessible feedback channel.

Agree on a response to significant changes before collecting the data. A signal matters when somebody can use it. An illustrative threshold might be “review immediately after repeated failures,” but thresholds should fit the service, context and risks rather than being copied mechanically.

Monitoring a loop means examining the proposed mechanism, not simply adding more indicators.

Evidence contribution and alternative explanations

A diagram makes an explanation explicit; it does not verify it. Start by separating observed events, stakeholder interpretations and team assumptions. Seek evidence that could challenge the preferred explanation as well as evidence that supports it.

For each important arrow, ask: Did the proposed cause occur before the effect? Is the mechanism credible? What other factors changed? Do different sources agree? Would the effect be expected without the intervention? These questions support contribution analysis without claiming that a short review can establish a precise causal effect.

Suppose attendance improved after a gender-awareness activity. Parent feedback suggests more shared childcare. Yet school access also improved and agricultural workload declined. The project may have contributed, but assigning the whole attendance change to awareness would ignore other explanations.

Use administrative records, observation and appropriate voluntary feedback together. Where comparison is feasible and ethical, it may strengthen understanding, but groups can differ in ways that influence results. Simple before-and-after comparisons should be interpreted cautiously.

Information about sensitive matters needs a separate, qualified approach. Do not pursue private GBV details to prove a theory. Programme learning can often focus on staff readiness, service availability and the quality of safe information channels instead.

Practical output: a short evidence note for each priority relationship, listing support, uncertainty, alternative explanations and the next reasonable check. A disputed arrow is valuable information. Removing it or marking it uncertain can improve the map more than forcing agreement.

Turning learning into reports and decisions

An ordinary review can follow a compact cycle: examine the pattern, question the map, agree an action, assign responsibility and review its effects. Keep the map dated so changes in understanding remain visible.

In a donor report, distinguish delivery from outcome and outcome from causal interpretation. Explain an adaptation through evidence and purpose. Do not present a hypothesis as a confirmed result or include identifying details from sensitive cases.

Illustrative report paragraph: “The project completed six hygiene sessions and restored three handwashing facilities. Follow-up observations identified repeated downtime associated with delays in obtaining replacement taps. Community feedback indicated that reliability remained a barrier to use. The team introduced a small parts stock and clarified repair responsibility. The next review will examine repair time and service availability. At present, the evidence supports a maintenance-related barrier; it does not establish the full ownership feedback loop.”

The figures in this paragraph are invented. Replace them with verified project data and specify observation coverage in an actual report.

For internal learning, record whether the agreed action occurred. A diagram may be sound while implementation is incomplete. Failure to act is different from evidence that the mechanism is wrong.

Ask the final decision questions: What do we know now? What remains uncertain? What will change, who will act and when will we review? If the review produces no decision, simplify it until the information has a clear use.

Systems thinking becomes operational when feedback changes a management choice and that choice is examined later.

Chapter 7 Worksheets and team practice

Worksheet 1 Causality and unintended effects review

Use during design, inception or a review. Write brief answers; leave unnecessary personal detail out.

Project and review date: _____

Management question and time horizon: _____

Intended outcome and affected groups: _____

Observed pattern and available evidence: _____

Other changes that may occur or have occurred: _____

Proposed returning pathway, if any: _____

Groups who may benefit or carry additional burdens: _____

Support gaps, limits and important delays: _____

Priority response and rationale: _____

Responsible person, resources and review date: _____

Decision signal and reasons to change course: _____

If no returning pathway is supported, retain a causal chain. Do not invent a loop to complete the form.

Worksheet 2 Link and evidence log

Use this log for the few relationships most important to a decision. “Observed” means there is relevant evidence, not that all uncertainty has been removed.

Proposed link	Sign	Mechanism and evidence	Uncertainty and next check
Maintenance to reliability	+	Example: timely repairs restore service; compare repair and uptime records	Other faults may dominate; examine failure types

For each link, record who suggested it and whether other groups agree. Use a short status: supported locally, plausible but untested, or disputed. Avoid numerical confidence scores that imply more precision than the evidence allows.

Loop name and type: _____

Trace a small increase around the loop in words: _____

Important delay and expected timing: _____

Alternative explanation worth testing: _____

Version date and person responsible for review: _____

Keep this as a management record. Sensitive case information belongs in authorised specialist systems, not in a general link log.

Worksheet 3 Intervention and learning plan

Complete one page for each priority change. Agree on an action the team can actually implement.

Pattern we want to improve: _____

Link or loop we expect to influence: _____

Action and expected mechanism: _____

Decision owner and implementing person: _____

Budget, staff time or partner support needed: _____

Affected groups and possible burden or risk: _____

Mitigation and support arrangements: _____

Signal, definition, source and collection frequency: _____

When an effect could reasonably appear: _____

Review date and change trigger: _____

At review, note whether the action occurred, whether the expected mechanism appeared and whether outcomes improved. Record unintended effects and who experienced them. Choose to continue, adapt, stop or investigate further, with a short reason.

Learning and next decision: _____

Worksheet 4 Sustainability review

Begin before the final project month. Sustainability concerns whether important functions can continue under realistic conditions; it is not demonstrated by a committee list or a signed handover alone.

Function to sustain	Current responsible actor	Resources or incentive	Failure signal and response
Example: routine repairs	Agreed local caretaker with support	Parts, tools and workable financing	Repeated downtime prompts a service review

Which functions depend on project-funded staff or repeated external support?

What happens if the key volunteer or partner changes? _____

Whose unpaid time is required, and have they agreed? _____

Which information will continue reaching decision-makers? _____

What realistic financing, supplies or supervision arrangements remain?

Who can respond when a failure signal appears? _____

Next review and agreed follow-up: _____

Use the answers to revise the loop. Remove arrows that depend on resources or authority that will no longer exist after project closure.

A 90-minute team learning session

This is an introductory practice session, not specialist certification. Use a hypothetical sector case if real examples contain sensitive information. Provide paper, pens and a visible timer; online teams can use a shared drawing surface.

Minutes	Activity	Expected output
0–10	Explain chain, unintended effect and loop	Shared vocabulary
10–25	Describe one recurring pattern and boundary	One management question
25–45	Draw variables, arrows, signs and a returning pathway	A small draft diagram
45–60	Challenge links, delays and missing perspectives	Evidence and uncertainty notes
60–75	Choose one response and monitoring signal	An intervention plan
75–90	Share learning and assign follow-up	Owner and review date

Facilitator prompts: “What changes next?” “How does that influence the starting variable?” “What mechanism supports this arrow?” “Who might see it differently?” “What evidence would make us redraw the map?”

Include participants who understand implementation, monitoring, resources and community experience. Invite disagreement without asking people to represent an entire group. Offer an alternative way to contribute for participants who are less comfortable speaking publicly.

Avoid scoring teams for diagram complexity. Evaluate whether they explain the loop correctly, acknowledge uncertainty and select a feasible response. The most useful output is often a clear question that the team had not previously asked.

Follow up at the agreed review; otherwise the session itself risks becoming another completed activity without a learning cycle.

Practice questions and suggested answers

1. Training is followed by improved knowledge and then better practice. Is this a loop? Suggested answer: no returning pathway is described. It is a proposed causal chain. Confidence from better practice might encourage further practice, but that relationship must be added and examined.

2. Facility use increases, wear increases, downtime increases and use decreases. R or B? Suggested answer: B. The returning effect counteracts the initial rise in use. The loop has one negative link, from downtime to use.

3. A woman leaves an abusive marriage after attending a session. Does the sequence prove programme harm? Suggested answer: no. It does not establish causation or determine whether leaving was harmful. Review preparedness and support without judging her choice.

4. Farmers produce more, but earn less. What should the team examine? Suggested answer: prices, market demand, product quality, unsold quantities and costs. Yield alone does not establish improved income. Test whether local supply influenced prices.

5. Complaints rise after a new channel opens. Has performance worsened? Suggested answer: perhaps, but improved access or trust may also increase reporting. Examine complaint content, response and independent service information.

6. Repair effort rises but the backlog grows. Is the balancing hypothesis necessarily wrong? Suggested answer: no. New faults may arrive faster than repairs, capacity may be insufficient or the response may be delayed. Examine flows, timing and implementation.

Readiness check: Can you explain a signed link, trace both loop types, mark a delay, distinguish evidence from hypothesis and assign a reviewable action? Practise any step that remains unclear before applying the method to a high-stakes decision.

Glossary

Balancing loop: feedback that counteracts a change. It may seek a target, respond to a limit or maintain an existing condition.

Causal chain: a proposed sequence of causal influences without a demonstrated returning pathway.

Causal loop diagram: a qualitative map of proposed causal relationships and feedback structure. It is not, by itself, a causal evaluation or quantitative simulation.

Contribution: the role an intervention may play alongside other influences in producing an outcome.

Delay: time between a change and an important resulting effect.

Feedback: an effect that returns through a pathway to influence earlier conditions or decisions.

Leverage point: a place where changing an element or relationship may substantially influence system behaviour.

Link polarity: the + or – sign describing the direction of a causal influence, all else equal.

Loop dominance: the relative influence of a feedback process on observed behaviour during a particular period.

Mental model: a person's working explanation or assumption about how a situation operates.

Reinforcing loop: feedback that amplifies a change, whether it supports improvement or deterioration.

Stock and flow: a stock accumulates, such as an unresolved backlog; flows add to or remove from it, such as new requests and completed repairs. Loop diagrams can describe relationships, but a quantified model needs consistent units and equations.

System boundary: the scope chosen for analysis, including relevant variables, actors and time horizon.

Unintended effect: a change outside the original expectation; it can be beneficial, harmful, mixed or uncertain.

References and further learning

These sources provide conceptual foundations and specialist resources. The original NGO cases and worksheets in this guide are applications for learning, not quotations or reproductions of their diagrams. Web resources were checked on 12 October 2026.

[1] Sterman, J. D. (2001). Fine-Tuning Your Causal Loop Diagrams—Part I. *The Systems Thinker*, 12(5). Explains causal links, polarity, loop identification and the distinction between causation and correlation.

<https://thesystemsthinker.com/fine-tuning-your-causal-loop-diagrams-part-i/>

[2] Sterman, J. D. (2001). Fine-Tuning Your Causal Loop Diagrams—Part II. *The Systems Thinker*, 12(6). Further guidance on variable names, delays and diagram clarity.

<https://thesystemsthinker.com/fine-tuning-your-causal-loop-diagrams-part-ii/>

[3] Meadows, D. H. (n.d.). *Dancing With Systems*. The Donella Meadows Project. Source of the short quotations on learning and responding to systems.

<https://donellameadows.org/archives/dancing-with-systems/>

[4] Meadows, D. H. (1999). *Leverage Points: Places to Intervene in a System*. The Donella Meadows Project. Explores different places where system behaviour may be influenced.

<https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>

Recommended books for deeper study: Senge, P. M. (2006), *The Fifth Discipline: The Art and Practice of the Learning Organization*, revised edition, Doubleday; Meadows, D. H. (2008), *Thinking in Systems: A Primer*, edited by Diana Wright, Chelsea Green; Sterman, J. D. (2000), *Business Dynamics: Systems Thinking and Modeling for a Complex World*, Irwin/McGraw-Hill. These are further-reading recommendations, not sources of reproduced passages in this edition.

Specialist and practical learning resources

[5] Alliance for Health Policy and Systems Research, World Health Organization. (2015). Course package on Causal Loop Diagrams. A case-based course with participant and facilitator manuals, including systems boundaries and behaviour over time.

[https://ahpsr.who.int/resources/meeting-report-item/course-package-on-causal-loop-diagrams-\(clds\)](https://ahpsr.who.int/resources/meeting-report-item/course-package-on-causal-loop-diagrams-(clds))

[6] GBV Guidelines and GBV Area of Responsibility. (n.d.). GBV Pocket Guide resource package. Guidance for non-specialists responding to disclosures where a GBV actor is unavailable. Use the current materials and seek specialist support for local adaptation.

<https://gbvguidelines.org/en/pocketguide/>

[7] GBV Guidelines and GBV Area of Responsibility. (2018). How to Support Survivors of Gender-Based Violence When a GBV Actor Is Not Available in Your Area: A Pocket Guide. The English guide contains practical dos and don'ts, confidentiality and consent guidance, and separate considerations for children and adolescents. Access it through the resource page above, which also lists a Burmese edition. This guidebook does not replace it.

For learning about qualitative maps, begin with [1] and [2], then practise with a non-sensitive case. For facilitation, explore [5]. For preparation related to sensitive awareness activities, consult [6] and [7] with qualified support.

Publication note: the education-project account remains an anonymised practitioner reflection. Before wider publication, the author should confirm that even combined contextual details cannot identify the people involved. Do not add names, locations, dates or private case records to make the story appear more detailed.

Original diagrams are drawn for this guide. External quotations retain their attribution. No third-party photograph or textbook figure is reproduced.

Closing reflection

“We can't control systems or figure them out. But we can dance with them!”

— Donella Meadows, *Dancing With Systems* [3]

In NGO work, that thought encourages careful observation, humility and timely response. A project enters a living environment. Its activities meet existing relationships, resources, norms and constraints. The effects may influence future participation, service reliability, workload, market decisions or trust.

Circles of causality help teams ask how those influences return and what they mean for the next management decision. The method does not promise complete prediction. It makes assumptions visible so people can question them and learn together.

Begin with one recurring pattern. Draw one defensible loop, or keep a chain if no returning pathway is supported. Choose one feasible response. Agree on one useful signal and a review date. Then ask whether the expected mechanism actually appeared.

Good project management includes preparation for wider effects, respect for people's agency and a willingness to revise the plan. A completed activity is an important record. A learning system helps make the next activity more useful.

About the author

Aung Ko Ko is an independent consultant with experience in NGO programme support, project management and donor reporting. His professional interests include programme quality, organisational learning, social innovation and practical management tools for development practitioners.

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This guide adapts established systems-thinking concepts for everyday NGO practice. The author's contribution is the field reflection, teaching applications and practical tools.