Co-funded by the European Union

german cooperation
DEUTSCHE ZUSAMMENARBEIT

nexus

THE NIA NEXUS IMPACT ASSESSMENT (NIA) TOOLKIT

Turning Concepts into Action

SEPTEMBER 2023

ALTUS IMPACT

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

NEXUS IMPACT ASSESSMENT (NIA) TOOLKIT
Turning Concepts into Action

Published by the Nexus Regional Dialogues Programme

c/o Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn
Germany

E nexus@giz.de
I www.water-energy-food.org

Registered offices Bonn and Eschborn, Germany

This publication was produced with the financial support of the European Union and the German Federal Ministry for Economic Cooperation and Development. Its contents are the sole responsibility of GIZ and do not necessarily reflect the views of the EU or the Federal Ministry for Economic Cooperation and Development.

The Nexus Regional Dialogues Programme is funded by the European Union and the German Federal Ministry for Economic Cooperation and Development.

Place and date of publication
Bonn, 2023

Authors
Altus Impact

Co-Authors
GIZ Nexus Regional Dialogues Programme Phase II Staff

Photo Credits
© GIZ

Design/Layout
The Nexus Regional Dialogues Programme

3. Monitoring and Evaluation (M&E) for WEF Nexus projects

Background

To breach decision-making silos evidence is required to show that projects can be conceived to create synergies across Water, Energy and Food (WEF) sectors. Following the chapter on WEF Nexus Principles and WEF Nexus Safeguards we define a WEF Nexus project as a time-bound intervention or series of interventions aimed at improving synergies between at least two WEF sectors, or improving the resource-use efficiency of one WEF sector. [1] Achieving these ambitious goals requires rigorous evaluation so that public, private, and non-governmental agencies, involved in the implementation of WEF Nexus projects can witness the added-value of integrated solutions and continually improve their budget allocations and how they carry out their work and budget allocations.

This chapter has been designed to help lay solid groundwork for building M&E assessments of integrated projects, including the main steps in undertaking an M&E, the theory of change and how to develop relevant indicators. A complementary WEF Nexus Indicator catalogue is shortly introduced in the following chapter along with an excel-based spreadsheet. The importance of undertaking rigorous M&E, from the outset of the project, is not to be undermined.

Baseline data can prove valuable for the project lifespan, in facilitating an attribution of project outcomes to WEF Nexus projects and provide a basis upon which to undertake a Cost-Benefit Analysis (CBA; chapter of WEF Nexus projects). In term, such data can be used to conceive a WEF Nexus project database and build the needed evidence base for WEF Nexus projects.

The WEF Nexus approach have been criticised for lacking tools to quantify cross-sectoral impacts; facilitate monitoring processes and supporting decision-making processes for the integration of the WEF Nexus approach in resource governance (GNS 2020). Addressing this deficiency, the next three chapters demonstrates how carefully designed M&E assessments and Cost-Benefit Analysis can be used to track, value and communicate progress on enhancing WEF security and wider goals, such as improved livelihoods, enhanced climate change mitigation, and aggregate diverse benefits within WEF Nexus project interventions.

Starting with the M&E framework, in the following we provide an overview of the **main steps involved in undertaking monitoring and evaluation** and the important questions to ask along the way. Emphasis is placed on providing an easy to-use overview, as opposed to an exhaustive account of all the methods, tools and processes that can be deployed when undertaking M&E. We are drawing on resources from the BetterEvaluation (2022) framework, our experiences in implementing M&E in pilot case studies in Ecuador and Peru (chapter 1 for details) and an interview with senior M&E expert (Hastings 2021). For the most part we propose one approach to undertaking a given step. For further detail on the methods and tools, the reader is referred to BetterEvaluation (2022).

What is M&E for WEF Nexus projects

Monitoring and Evaluation are processes to help projects, programmes, and organisations in being accountable, adaptive, and sustainable through the sound use of data, research-evidence and continuous reflection.

[1] Efficiency gains can free up scarce resources to achieve more with less. The WEF Nexus project selection tool provides a further detail of what makes a project eligible to be classified as a WEF Nexus project.

The monitoring piece of M&E refers to the routine collection of data to track change over time. It helps us understand "What is happening?" The evaluation side is a periodic assessment that goes deeper to examine the data and discover the how and why a programme, project or WEF action is achieving what it is "Why did it happen like that?". The evaluation can then be used to report on the tangible outcomes of the WEF intervention and where improvements can be made.

Finally, M&E should be complemented with learning[2]. Learning (L) is the continuous process to ensure that findings from monitoring and evaluation are used and incorporated into the future design of the project or any attempts to scale-up an existing project. Ultimately therefore, any ME(L) plan should therefore result in better decision making. For this purpose, WEF Nexus M&E assessment should provide timely, trusted, reliable and decision-useful information. In particular, we need to be really clear about what we want to measure, who is going to collect the information, and what we want to do with it once we have it? Data-collection and reporting are not in themselves the end goal.
The next section lays out the main steps in this process and Figure 1 summarises key elements of an M&E system.

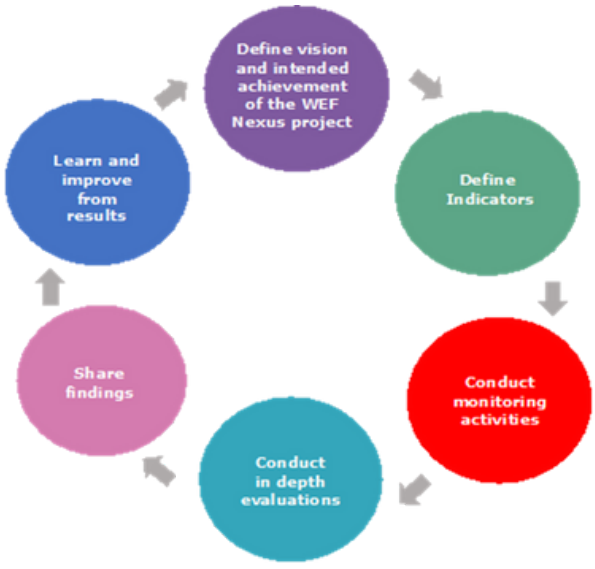


Figure 1: Key elements of an M&E system

Step 1: Define intended users and uses of the M&E system
The actual uses of the M&E system should be defined at the outset. Questions of relevance are:

- What is the value of undertaking M&E in this given context?
- Who are the intended users of this evaluation?

For example, users could include project donors or funders, interest groups with a stake in the project, and the project implementers themselves, whilst the M&E system may be used to understand whether a WEF Nexus project is achieving its objectives and help inform where performance and outcomes should be improved.[3] Table 1 shows an example of some of the identified values and uses of the M&E frameworks in the context of a generic WEF Nexus project.

Step 2: Define responsibilities in M&E management
Once the overarching purpose and uses of the M&E system have been defined, decisions need to be made regarding who will undertake the evaluation? There is no one-size fits all approach. The evaluation can be done by community members, through an expert-review, external consultant(s), internal project staff (e. g. project developers themselves), a hybrid of internal staff, community and/or external consultants.

The chosen option depends on the resources available and the decisions on the frequency with which monitoring will be conducted. For example, if there is an interest in undertaking repeated and frequent measurement (monitoring) over time, it may be of interest to involve community members and internal staff, e. g. by using data measurements measured through a mobile phone-app.

[2] M&E is therefore sometimes referred to as a MEL in the common literature.

[3] Also, the selection criteria of the NIA Toolkit can be used to plan and develop a project to ensure that it follows a holistic approach and takes into account all possible trade-offs.

Value	Uses
Understanding: How and to what extent are the WEF Nexus intervention achieving (or not) the desired changes? *E.g., is access to and availability of food supply improved whilst the water footprint is reduced?* **Adaptation:** How should the WEF intervention be adapted as a result of what we are learning? **Credibility:** Do our interventions have the impact that they claim? With respect to enhancing synergies in water, energy and/or food security? **Publicity:** What impact can be communicated to partners and other interest groups?	Inform WEF Nexus interventions Build internal capacities in M&E amongst project implementers Understand value for money Create a database for WEF security over time Impact communications regarding the value added of WEF Nexus projects Donor reporting More…?

Step 3: Define evaluation alternatives and high-level WEF intervention objectives

With an understanding of who undertakes and manages the M&E system, the objectives of the project need to be spelled out and compared to the situation without the project or the alternative project. At a very basic level, the first questions to be asked by the M&E staff are:

- What is the project about?
- What is the project seeking to achieve relative to the 'without project' situation or an alternative 'single-sector' project?

If the WEF project is not yet implemented, the "without-project" situation may be considered the baseline situation, depicting what would happen if we continued with Business As Usual. In some cases, the without-project situation may also be 'single-sector project', e. g. the farmland in Niger that was used to produce crops but was not accompanied with solar powers irrigation equipment which can serve to enhance energy and water security, simultaneously.

The same decisions are relevant when undertaking a CBA (see chapter on WEF Nexus Benefit-Cost Framework). Table 2 shows with and without project examples from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Nexus Regional Dialogues (NRD) Programme WEF Nexus projects and intended vision.

Box 1: When a CBA should precede a M&E Plan

In some cases, it may not be clear whether a project should be implemented, i. e. whether it is financially or economically viable. In that case, a Cost-Benefit Analysis (CBA) can provide clarity whether it is a worthwhile investment. The CBA can also be used to prioritise amongst different 'with-project alternatives' so as to choose the alternative that provide the highest net-benefits to society. In this case the CBA should inevitably precede the M&E plan that can only be planned once it is decided what the WEF Nexus intervention consist of. See chapter on WEF Nexus Benefit-Cost Framework for an overview.

Where / Toolkit application	'Without-project' alternative	'With-WEF Nexus project' alternative	Vision the project is seeking to achieve
Peru Activity: M&E	San Pedro de Casta: • No land is under irrigation • No vegetables greenhouse production • No guinea pig rearing facility (Or: guinea pig rearing facility enabled without renewable energies) • the q'ocha is not rehabilitated • all electricity is derived from diesel powered generator	• Rehabilitation of the q'ocha for flood control and groundwater infiltration • Construction of greenhouse for the production of fruits and vegetables • A composting facility • Increased ha of irrigated cropland • Guinea-pig rearing facility enabled with solar powered irrigation	• Enhanced disaster risk resilience • Improved incomes • Enhanced food security • Enhanced water and energy security
Ecuador Activity: M&E	Kallari Association: • uses a highly energy-intensive and fossil fuel driven grain drying process	• Cocoa drying using an innovative and energy efficient solar powered process	• Improved energy efficiency • Reduction of greenhouse gas emissions • Higher premium price on cocoa output • Increase in productivity and thus economic benefit
Niger, Kollo Activity: CBA	• Residual water from rice field used for irrigation of a collective agricultural land plot	• Solar powered irrigation pump, providing a reliable supply of water to enhance agricultural produce in wet and dry season	• Increase the total annual harvest of agricultural crops • Improve yields in the dry season • Improve income
	'Without-project' alternative	**'With-WEF Nexus project' alternative**	**Vision the project is seeking to achieve**
Uzbekistan Activity: CBA	• Continued silting of the Tuyamuyun Hydropower complex until it is no longer operational (estimated remaining)	• Reduce sedimentation of the Tuyamuyun Hydropower complex with dredging and/or flushing • Reuse of sediments for building material / fooder production etc.	• Enhanced reservoir storage capacity for improved water, energy and food security of Uzbekistan, Turkmenistan, and Kazakstan

Table 2: Some examples of GIZ-funded WEF Nexus projects[4], and what the projects are seeking to achieve

[4] Further information on the demonstration projects can be found in respective chapters.

Step 4: Define what should be evaluated – using a Theory of Change

With an understanding of values, users, as well as responsibilities and alternatives to be considered as part of a WEF Nexus M&E assessment, the M&E assessment can be planned. This starts with an understanding of what needs to happen to achieve the intended vision of the project. By drawing up a Theory of Change (ToC)[5], we explain how WEF Nexus interventions contribute to outputs and outcomes that lead to the intended impacts.

"The theory of change tells us: What needs to happen to achieve the intended vision of the project."

The Theory of Change will subsequently inform what are good evaluation questions, what should be measured, and provide a structure for data analysis and reporting.

In the context of WEF Nexus projects, it is advised that a ToC is drawn up during the project design phase, or prior to the implementation of WEF Nexus implementation activities have begun. If the M&E assessment is commissioned after WEF project activities have started it can be used to make sense of what has happened and the data that have already been collected.

As monitoring and evaluation data become available, stakeholders can periodically refine the Theory of Change and associated logframe (next section). This is often done during evaluations reflecting what has worked or not, in order to understand the past and plan for the future.

Key questions to address when developing a Theory of Change

In any order that may be fitting for the discussion, the key questions to be asked or addressed by the practitioner when developing the ToC are:

- What is the impact we want to achieve?[6]
- What are short/medium-term outcomes that are preconditions for the impact?
- What are the basic inputs and activities of the project? What kinds of outputs are expected as a result of these activities?
- What do we expect in terms of outcomes in the short and long term?

In answering these questions under the 'Theory of Change', it is important to draw on a range of evidence – previous research and evaluation, projects and programmes, the mental models of stakeholders (including planners, managers and staff, partner organisations, and intended beneficiaries) and observation of preliminary outcomes.

A ToC model is conveniently developed in a workshop with project stakeholders and by reading program documents, talking to stakeholders, and analysing data. As the starting point, long-term goals are typically defined in terms of desired impact. These impacts are then mapped backward to identify necessary preconditions, in terms of activities, outputs and outcomes (Brest 2010).

It is important to ensure that the process is adequately inclusive of relevant perspectives, values and evidence. Having worked out a change model, practitioners can make more informed decisions about **appropriate indicators and an evaluation strategy.**

WEF Nexus interventions should ultimately serve to enhance synergies between water, energy and/or food resources, with consideration to access, quantity, quality and governance of water, energy and food and related ecosystems. However, providing more water, energy or food does not guarantee that other challenges are addressed. WEF Nexus projects therefore typically aim to generate wider social, economic, and environmental benefits within the project area of interest.

[5] Brest, P. (2010). The Power of social change. Stanford Social Innovation Review. Spring.

[6] The impact describes long-term outcomes and can be understood as the change that one sees in society as a result of the activity.

In this context it is important, not only to be able to measure changes in W+E+F security, but also ensure that complementary indicators are developed, to measure for example, the creation of jobs and additional income.

A ToC is often illustrated as a flowchart that describes the steps and assumptions taking place between the intervention – activities, outputs, outcomes – and the ultimate change desired – impact. Diagrams should clearly show the direction of change. It is important to choose a format which will communicate clearly and allows for deliberation with project developers and non-M&E experts. A theory of change diagram is usually represented with an accompanying narrative (see Rivera (2022) as an example).

Note: A ToC was not done in Peru and Niger. Due to time pressure, in Peru a questionnaire has been developed and resorted to phone calls. In Niger a CBA were defined so that there was no need for a ToC.

Box 2: The Theory of Change for Ecuador and associated indicators

In the case of Ecuador, the main intervention concerns the installation of a solar powered cocoa dryer at the Kallari Association facilities to be used instead of a greenhouse dryer. Expected outcomes of the intervention are to enhance energy efficiency in the cocoa process, allow cocoa farmers to sell premium priced cocoa and generate more jobs within Association. To assess whether the new solar powered dryer is helping achieve these outcomes, the ToC was an essential tool for defining the indicators to be measured including, amongst others: Number of new jobs that are created, increased purchasing power and economic wellbeing of cocoa farmers in Tena and increases in the average farmgate price of cocoa. See log frame for the full range of indicators. For that purpose, documents, records, and logs, along with household questionnaires have been conceived to allow for the baseline assessment of these indicators. In parallel, cocoa yields and prices in control locations are observed, to ensure that any changes can be attributed to the actual WEF nexus intervention. Supplementary interviews with donors, also highlighted the importance of ensuring that the interventions would be long-lived. This led to the addition of other questions which assessed community members understanding of "who to go to" if there are technical problems and their overall confidence with the activities being unrolled by the Geological and Energy Research Institute of Ecuador (IIGE, for its acronym in Spanish), the project developer.

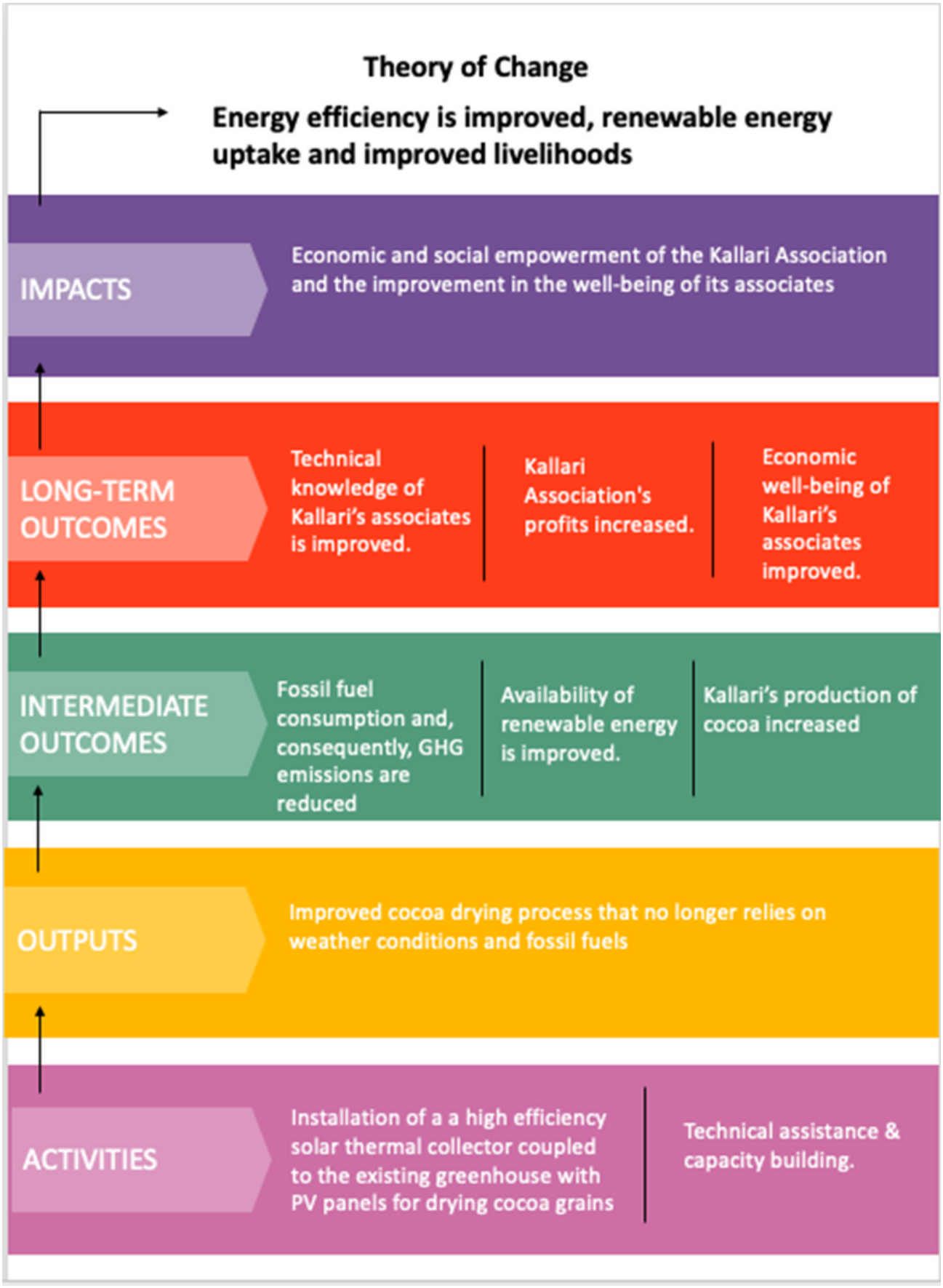


Figure 1: Example of the ToC developed in the context of the WEF Nexus project in Ecuador

Step 5: From the Theory of Change to a Logframe

Once the ToC is drawn up, it is advised that a logframe matric is used guide the implementation of the M&E plan. Logframe matrices assist in establishing the development pathways by which objectives in the ToC are reached, and how outputs and outcomes indicators are best monitored and evaluated. Unlike the ToC which gives a "big picture" of what the WEF Nexus intervention is seeking to achieve, the logframe is essentially for internal use to allow for more specific understating and elaboration of the monitoring component of the M&E plan.

Classical logframe components include:

1. the outputs, outcomes and impacts of the intervention, extracted from the ToC;
2. indicators for each of these outputs/outcomes/impacts;
3. baselines/ milestones/targets for each of these indicators;
4. roles for different stakeholders in terms of collection, analysis, and reporting of the data for this indicator;
5. the source of data for that indicator and the methods and data collection method;
6. any assumptions for each indicator that may impact on the ability to reach targets can also be included;
7. frequency by which this indicator data will be collected, and a proposed schedule.

The level of detail of the logframe can vary and the logframe can be revisited at any time, as the M&E plan is updated. Table 3 is an example of the logframe developed for Ecuador

Step 6: Devise the data and information gathering processes

Where to collect data

With the logframe developed, M&E practitioners can now collect data to answer questions about the situation prior to the WEF project intervention, or the WEF project intervention itself, in terms of the results it has had and the context in which it has been implemented. Data on relevant indicators will most likely need to come from a variety of sources. For example, high level data on the proportion of households that have access to portable water, may be obtained from the water utility or municipality, whilst other information may need to be gathered at the level of the household.

It is therefore also important to decide on the appropriate sampling strategies for data collection. Is it desirable to use probability sampling, such as a simple random sample, a stratified random sample, or convenience sampling? This depends on the required degree of statistical confidence that is sought and the budget that is available for data collection. In some cases - as we found in Ecuador – deliberation through direct interviews was considered a more suitable method for eliciting operational and financial data.

Table 4 provides an example of the various ways by which data can be collected. The reader is referred to the better evaluation framework for more detail on these and other methods.

Impact		Economic and social empowerment of the Kallari association and the improvement in the wellbeing of ts associates						
Outcome		Indicator	Baselines	Milestones/ Target	Source of data/means of verification	Frequency	Responsible	Risks and assumptions
Long-term Outcomes	Strengthening of the agro-industrial production chain of the Kallari Association	Increase in the average purchase price / quintal from local farmers by Kallari				Annual	Kallari Association	Risk: prices depend not only on domestic operations but also on the national and international market.
		Number of new jobs created within the Kallari partnership (disaggregated by gender)				Annual	Kallari Association	As cocoa production and sales may increase, the Association may need more labour. Risk: Improving efficiency in the process could make the work of some employees redundant.
		New Kallari associates: New male members / New female members						New drying system makes the drying capacity more efficient, allowing the integration of new cocoa producers into the Kallari Association
		New Kallari business partners (disaggregated by sex)						New solar dryer system increases the amount of dried cocoa per batch and, consequently, an increase in cocoa derived products.
	Economic well-being of Kallari's associates improved	Increased purchasing power and economic well-being of cocoa farmers in Tena			Household survey	Annual	Kallari Association[7]	Due to the new drying system, the association increases production and thus the demand for fresh grain from local farmers, at a better purchase price.
	Kallari Association grows and profits are increased	% Increase in cocoa bean production						New solar dryer system increases the amount of cocoa dried per batch.
		% Increased in processed cocoa sales						Dried cocoa grain quality improves since humidity level is better regulated.
Medium-term Outcomes	Energy efficiency in the cocoa production chain is improved	Fossil energy (kWh) saved in conventional cocoa drying process derived from diesel	____ Kwh			Quarterly		The amounts of energy used are calculated from an absence of the project point of view/scenario.
		Fossil energy (kWh) saved in conventional cocoa drying process derived from GLP	____ Kwh			Quarterly		
		CO_2 emissions (Kg)saved regarding conventional processes using diesel and LPG	___Kg of CO_2			Quarterly		
	Availability of renewable energy is improved	Energy (kWh) generated by the solar PV system used in the cocoa drying process				Quarterly		
		Energy (kWh) generated by the solar thermal collector used in the cocoa drying process				Quarterly		
	Technical knowledge of Kallari's associates is improved.	Number of employees from Kallari Association trained on the use and maintenance of the solar dryer system.	0 employees	At least 5 employees from Kallari	Reports from IIGE including attendance records	Annual		
		Number of technical guides, scientific papers or other informative documents generated from the implementation of the solar dryer system	0 documents	?	technical guides, scientific papers	Annual		
		Number of dissemination and training events on climate change issues and the benefits of the use of renewable energy in agricultural processes	0 training events	1 training event	Reports from IIGE including attendance records	Annual		There is interest on the part of the Kallari's associates in receiving the training.
Short-term outcomes	Kallari's grain drying operations are improved.	Additional mass of cocoa grain (kg) dried per batch when implementing the solar dryer		Drying capacity per batch = 2,500 kg		Quarterly		

Table 3: Example of the logframe developed for Ecuador

[7] IIGE and Altus Impact will be responsible during the first year of the project.

Collect and retrieve data	
Information from individuals	**Information from groups**

• Expert and stakeholder interviews
• Deliberative opinion polls
• Diaries
• Goal attainment scales
• Interviews with individuals/households
  ◦ In-depth interview
  ◦ Key-informant interviews
• Questionnaires (for surveys)
  ◦ Emails
  ◦ Face-to-face
  ◦ Computer assisted interviewing
• Mobile data collection
	• Brainstorming
	• Delhi study
	• Fishbowl techniques
	• Focus group discussions
	• Concept mapping
	• Participatory rapid appraisal methods
	• Writing workshop

Table 4: Different examples of how data can be collected and retrieved (non-exhaustive)

Box 3: Recap of questions to consider when devising the data and information gathering process

Collect and/ or retrieve data:
- *How will you collect and/ or retrieve data about activities, results, context and other factors?*

Sample:
- *What sampling strategies will you use for collecting data?*

Manage data:
- *How will you organise and store data and ensure its quality?*

Combining information:
- *How will you combine qualitative and quantitative data?*

Analyse data:
- *How will you investigate patterns in the numeric or textual data?*

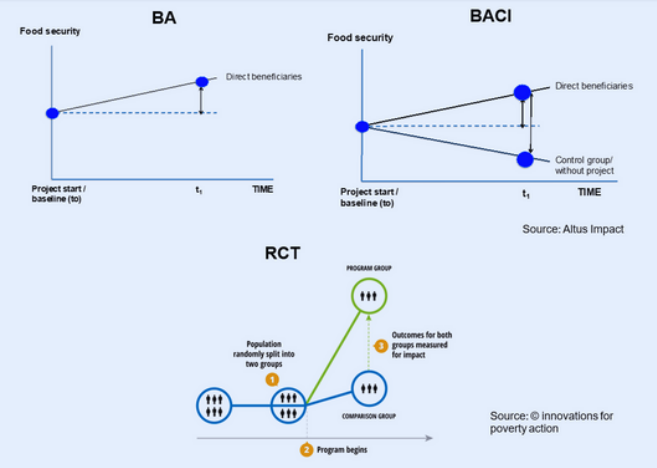
Assessing the counterfactual – what would have happened without the WEF nexus intervention?

In designing the M&E, it is important to consider how impact may be attributed to the project itself and not any external factors. The challenge is precisely to estimate a counterfactual, which is defined as a "situation or condition which hypothetically may prevail for individuals or groups were there no WEF Nexus intervention", i. e. which is not observed because of the intervention. This situation must therefore be simulated in some way. Several techniques are used to try to address this challenge. At a basic level the project or M&E team may seek to establish a baseline and assess project progress over time using a 'simple before-after comparison' e. g. with respect to food security or household income (Figure 2). When changes are observed, that have resulted from the project with some reasonable confidence, attribution may be expressed moderately as: "in light of the multiple factors influencing a result, […] the intervention made a noticeable contribution to an observed result" (Mayne, 2012, p. 273).[8]

When there is doubt that outcomes cannot be attributed directly to the project, as opposed to external circumstances, e. g. due to an economic upswing within the region, or more favourable weather conditions, project teams may also consider measuring outcomes with a control group[9] in the context of an in-depth evaluation. There are various statistical methods that can be used to find a matching control group. Figure 2 (righthand panel) shows the example where the actual impact of the project intervention is larger than what would have been inferred from a basic before-after (BA) comparison without a control group.

[8] Mayne, J. (2012). Contribution analysis: Coming of age? Evaluation, 18(3), p. 270-280.
[9] A control group should come from a location nearby to the impact site that is not impacted by the WEF project intervention but has the same or similar characteristics to the intervention site.

Figure 2 (righthand panel) shows the example where the actual impact of the project intervention is larger than what would have been inferred from a basic before-after (BA) comparison without a control group. With sufficient resources for monitoring and evaluation, it may therefore be decided from the outset to do a baseline assessment of a control group/ 'non-WEF project' using or before-after-control-intervention (BACI) or Randomized Control Trials (RCT). Box 4 provides more information on these techniques.



Box 4: Information on before-after-control-intervention (BACI) and Randomized Control Trials (RCT)

When control and intervention sites are randomly assigned (using Randomized Controlled Trials), differences in observed impacts between control and intervention can be attributed to the actual impact of the project if there are a sufficient number of sites, beneficiary households and points in time (see as an example 'Innovation for Poverty Action' for evaluation that uses RCTs for designing poverty actions: https://www.poverty-action.org/about/randomized-control-trials). Most WEF Nexus intervention sites or beneficiaries however are not randomly chosen. They have features that make them desirable as a focus for WEF Nexus project. This non-random allocation of 'control and intervention sites' may lead to biased results (Damgaard, 2019; Larsen, Meng, & Kendall, 2019).

To confront this, the before-after/control-intervention (BACI) approach is generally considered an ideal experimental method for both the socio-economic and biophysical modules of initiative, with its potential to effectively control for confounding factors. Using the BACI approach, identical data are collected using various survey instruments at two time periods: before and after the implementation of initiative interventions, at the 'intervention' site (that is, the location that is impacted by the WEF project interventions within the initiative boundary) and the 'control' site (that is, the location nearby to the impact site that is not impacted by the WEF project intervention but has similar characteristics to the intervention site). The 'before' phase is cautiously defined as the period prior to the WEF Nexus' initiative interventions. The control site serves as counterfactual for intervention sites, that is, as a reference site that indicates what would have happened without the intervention. For examples and information on how to design BACI evaluations in the context of evaluating water quality, see AGI (2022), or the evaluation of REDD+ on household forest revenues (Solis et al., 2021).

Step 7: Undertake the evaluation of outcomes and impacts as well as synthesise findings

When data has been collected from the various sources of interest, it may be used to:

- Form a baseline assessment of the project indicators of interest – such as level of water, energy and food security and human wellbeing within the project area;
- Be combined to conduct a WEF project evaluation, which is a systematic, objective assessment of a WEF intervention, that is ongoing or completed.

Whilst a baseline assessment is useful for understanding the situation at the outset of the project (or without the project), an actual evaluation is conducted whilst project activities are ongoing or have been completed. The evaluation should be used to answer questions about:

What actions work best to achieve outcomes, how and why they are or are not achieved, what the unintended consequences have been, and what needs to be adjusted to improve execution?

When done well, evaluation is a powerful tool to inform decision making about how to optimise scarce resources for maximum impact. It is distinct from simple measurement that focus only on observing whether change has occurred, not why or how that change occurred.

Finally, it should be questioned if data and findings from the evaluation can be generalised to the future, or other potential WEF Nexus project sites and WEF projects. In all cases, data and findings should be presented in a way that is useful for intended uses of the evaluation and support them to make use of them. Along with the findings, the Theory of Change can be used as a "performance story" that provides a coherent narrative about how the WEF Nexus intervention makes its particular contributions to Water, Energy and Food security.

This can be useful for communicating about the Nexus interventions to potential partners, participants and policymakers, and for also providing a consistent point of reference for those involved in implementing and managing it. In a longer-term perspective, it is also of interest to develop a WEF Nexus project database.

Other considerations: Connecting M&E with Cost Benefit Analysis

In many cases, the data collected, and the questions answered as part of the M&E system can serve as valuable inputs for an actual Cost-Benefit Analysis of the economic interest in the WEF project. Evident overlaps concern the valuation alternatives ('with-project' and 'without-project') as well as the impacts (benefits).

Conclusion

This M&E chapter has been conceived to encourage project teams and M&E staff to be transparent, strategic, and systematic in deciding what and how to monitor and evaluate. Our aim is to help project teams to integrate M&E into the structure of their WEF Nexus projects and achieve early alignment with partners (donors, project stakeholders etc.) on what is being evaluated and why? This process can also help provide the evidence that is needed to scale successful WEF Nexus solutions and learn from experiences.