

Handbook

Basics of Indicators, Targets and Data Sources

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Produced by Poverty and Environment Initiative (PEI) Project

Tajikistan-Phase 1



*Empowered lives.
Resilient nations.*

1. HOW WILL WE KNOW IF WE'VE GOT THERE?

1.1 Laying the foundations for Monitoring, Review and Evaluation (M,R&E)

One of the key strengths of the result based management approach is that it forces the planning team to build into the design how the project will be **monitored, reviewed and evaluated**. The development intervention is planning to achieve deliver, achieve and contribute a **chain of results** at different levels; these are the **intended changes in development conditions** resulting from the development project or programme.

Indicators are identified to show how we intend to measure change from the current **baseline**. **Targets** are set to be achieved by the end of the time period, together with **milestones** to measure progress along the way. And the result based approach helps in addressing and reaching agreement on these issues early at the design stage. It helps to pinpoint the gaps and determine what needs to be done. It asks what data is needed now and in the future, and what **data sources** will be used, be they **secondary**, external, reliable and available, or **primary**, internal and requiring budgeted data collection activities within the project.

An oft-quoted principle is '**if you can measure it, you can manage it**'. The one may not inevitably follow the other, so I prefer the qualified version: '**if you can measure it, you are more likely to be able to manage it**'. Or the reverse that '**if you can't measure it, you can't manage it**'.

1.2 Terms and principles

An **Indicator** is a quantitative and/or qualitative variable that allows the verification of changes produced by a development intervention relative to what was planned.

A **Target** is a specific level of performance that an intervention is projected to accomplish in a given time period.

Milestones are points in the lifetime of a project by which certain progress should have been made

A **Baseline** is the situation prior to a development intervention against which progress can be assessed or comparisons made.

The main confusion comes with Indicators and Targets. Indicators are a **means** by which change will be measured; targets are definite **ends to be achieved**. So to take two examples:

Indicators	Targets
the proportion of population with access to improved sanitation, urban and rural	halve, between 1990 and 2015, the proportion of people without sustainable access to basic sanitation
the proportion of girls achieving Grade 4	increase by 15% in girls achieving Grade 4 by month 36

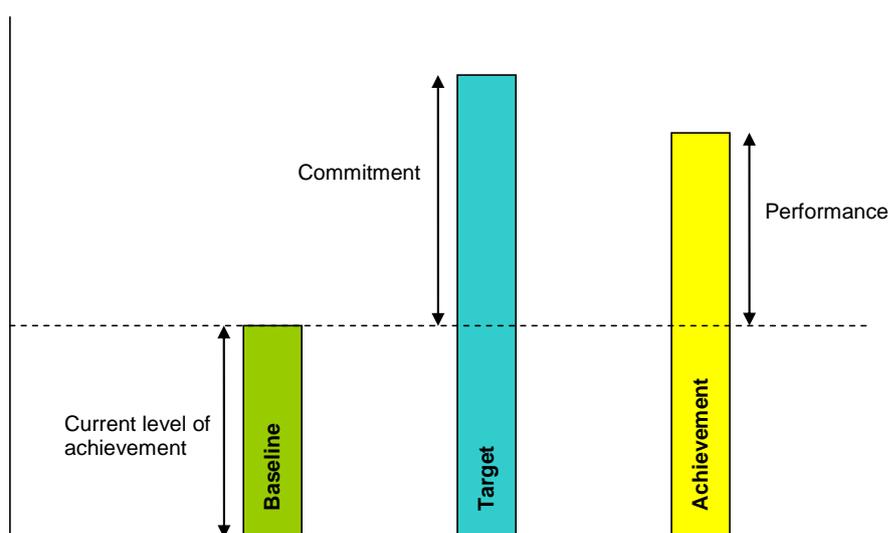
The indicator shows **how** the change from the current situation will be measured. An indicator is not something you achieve. You do however aim to achieve a target. A target is an **endpoint**; a Specific, Measureable, Achievable, Relevant and Time-bound endpoint.

It's useful to think of **milestones** as interim or formative targets. Thus for the first example target above of *halving by 2015 the proportion of people without sustainable access to basic sanitation*, reductions of 35% by 2009 and 42% by 2012 would be milestones. They provide an

early warning system and are the basis for monitoring the trajectory of change during the lifetime of the project.

A **baseline** is needed to identify a starting point and give a clear picture of the pre-existing situation. Without it, it is impossible to measure subsequent change and performance (Figure 1). For example, without knowing the baseline, it would not be possible to assess whether or not there has been a '25% improvement in crop production'. Collecting baseline data clearly has a cost; but so does the lack of baseline data! The reliability and validity of existing, secondary data may be in doubt and there may not be enough of it. In which case, baseline studies will be needed before targets can be set and **before approval for implementation can generally be given**. In some circumstances, it may be appropriate to carry out some baseline data collection and target-setting post-approval. Indeed it may be perfectly acceptable, indeed good practice, to state that some 'indicators and targets to be developed with primary stakeholders in first 6 months of the project.'

Figure 1: Baseline, targets and achievement (adapted from UNDG guidelines)

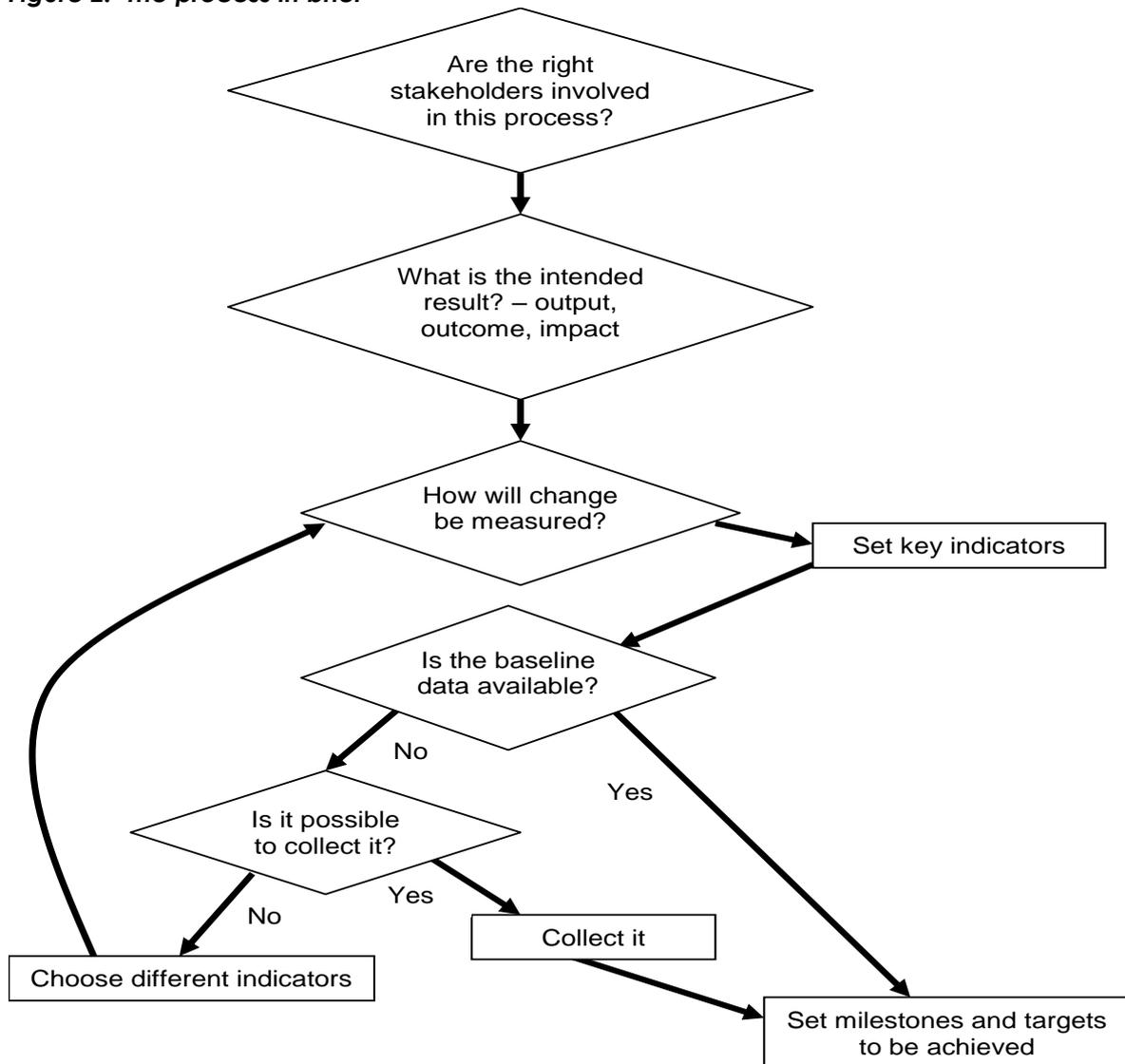


Before looking at how indicators are constructed, some important points:

- **Who sets indicators and targets is fundamental**, not only to ownership and transparency but also to the effectiveness of the measures chosen. Setting objectives, indicators and targets is a crucial opportunity for participatory design and management.
- Indicators and targets should be **disaggregated** for example by **gender, ethnic group, age, or geographic area**. Averages can hide disparities particularly if large sample sizes are needed for statistical reliability.
- **Some indicators in every logframe should relate to standard or higher level indicators**. Most organisations seek to attribute and communicate their work towards a set of standard results or indicators (often closely aligned with the MDGs). Operations in-country will need show linkage to national priorities; UN agencies to an UNDAF etc. Projects will need to show linkage of indicators upwards if they are part of a larger programme.
- A **variety** of indicator target types is more likely to be effective. The need for objective verification may mean that too much focus is given to the quantitative or to the simplistic at the expense of indicators that are harder to verify but which may better capture the essence of the change taking place. Managers sometimes need to be persuaded of the usefulness of qualitative data!
- The **fewer the indicators the better. Collect the minimum**. Measuring change is costly so use as few indicators as possible. **But** there must be indicators in sufficient number to measure the breadth of changes happening and to provide the triangulation (cross-checking) required.

- Data must be **collectable within the timeframe of the project**. There is no point measuring change that will not happen till after the end of the project. This is particularly relevant at Impact level.

Figure 2: The process in brief



1.3 Constructing indicators and targets

Before looking at the process of constructing indicators and targets, the point is made again here: **who should be involved in developing indicators and determining the target?** 'Insiders' are much more likely to come up with original and effective measures than 'outsiders'.

Step1: Start by writing **basic indicators** as simple measures of change. They are best written at this stage without elements of the baseline or target, without numbers or timeframe. For example:

a. Loan return rate
b. Immunization coverage
c. Community level representation on district councils
d. Fish catch

e. Rural households with livestock

Step 2: Indicators need to be clear, measuring **quality** and **quantity** and, where appropriate, **disaggregated** and **location-specific**. So reexamine your basic indicator to clarify your measure. The previous examples might develop into:

a. % loan return rate of men and women groups in 3 targeted districts
b. Proportion of one-year olds vaccinated against measles.
c. Number of women and men community representatives on district councils
d. Average weekly fish catch per legally certified boat
e. Proportion of female- and male-headed households in 3 pilot rural areas with livestock

Each variable in an indicator will need to be measurable and measured. So for an indicator such as *'Strengthened plan effectively implemented'* what is meant by 'strengthened' or 'effectively', or 'implemented'? Each of these terms will need to be clarified for this to become a usable, measurable indicator.

Step 3: Now for each indicator ask:

- i. **Is the current situation, the baseline, known?** If not, can the baseline data be gathered now, cost-effectively?
- ii. **Will the necessary data be available** when needed (during the intervention for **milestones**, and at the end for a **target**)?

If data is or will not be available, you should **reject the indicator** and find some other way to measure change.

Step 4: With the relevant baseline data to hand, **determine milestones** (at regular intervals during the project) **and targets** (at the end). For example

	Baseline	Milestone 12 months	Milestone 24 months	Target 3 years
a. % loan return rate of men and women groups in 3 targeted districts.	F44:M24	F50:M40	F70:M60	F80:M70
b. Proportion of one-year olds vaccinated against measles.	24%	30%	60%	85%
c. Number of women and men community representatives on district councils.	F0:M0	-	At least F2:M2	At least F2:M2
d. Average weekly fish catch per legally certified boat.	50kg	50kg	75kg	100kg
e. Proportion of female- and male-headed households in 3 pilot rural areas with livestock.	F24:M80	F36:M85	F60:90	F95:M95

Step 5: **Check that your milestones and targets are SMART, Specific, Measureable, Achievable, Relevant and Time-bound.**

To be useful, targets need to have a number of characteristics. They need to be:

- **Specific;** not vague and ambiguous; clear in terms of the quality and quantity of change sought; sensitive to change attributable to the project; disaggregated appropriately;
- **Measurable;** the information can be collected, and will be available at the time planned; cost-effective and proportionate
- **Achievable;** realistic in the time and with the resources available; targets not just 'made up', without baseline or stakeholder ownership;
- **Relevant;** substantial, necessary and sufficient; they relate to higher level indicators
- **Time-bound;** milestones will together show progress is on-course; targets are measurable within the lifetime of the project.

1.4 Types of Indicators

Binary Indicators

These simple **Yes or No** indicators are most common at Output and Activity levels. For example 'Draft guidelines developed and submitted to Planning Committee'.

Direct and Indirect Indicators

Direct indicators are used for objectives that relate to directly observable change resulting from your activities and outputs; for example *tree cover from aerial photography* as an indicator of deforestation. **Proxy** indicators measure change indirectly and may be used if results:

- are not directly observable like the quality of life, organisational development or institutional capacity
- are directly measurable only at high cost which is not justified
- are measurable only after long periods of time beyond the life span of the project.

The *number of lorries carrying timber out of the forest* could be an proxy indicator of deforestation. But then there's uncertainty as to whether timber resources are being used or burned within the forest; or are being taken out by means besides lorries; or on unsurveyed routes etc.

So proxy indicators need to be used with care. But well-chosen proxies can be very powerful and cheap. Sampling for a certain river invertebrate can give a very clear picture of pollution levels. The price of a big-Mac has been used to assess the health of a currency or economy.

Qualitative and Quantitative Indicators

Quantitative indicators measure numerical values over time. **Qualitative** indicators measure changes not easily captured in numerical values e.g. process-related improvements, perceptions, experiences, behaviour change, strengthened capacity etc. This is particularly relevant in gender and social aspects. Special effort and attention needs to be given to devising qualitative indicators. A balance of indicators is needed that will capture the total picture of change.

It is often, with care, possible to 'quantify' qualitative aspects; opinion polls and market surveys do it all the time. A citizen score card for example might collect public opinion data on the quality of public services. Whether the instrument is valid or crude or spurious will depend on the context, and the way the information is collected, analysed and used.

Process and Product Indicators

It is important to measure not just *what* is being done but *how* it is being done; not just the 'products' resulting from an intervention, but also the 'processes'. Processes may be 'means' but with an underpinning capacity building agenda, those 'means' themselves become 'ends'.

Focus on the processes will generally lead to better targeting of the activities at real problems and needs, better implementation and improved sustainability. At the outset of a process initiative it may be very difficult, and undesirable, to state the precise products of the initiative. Instead outputs and activities may be devised for the first stage or year; then later outputs and activities are defined on the basis of the initiative learning. Processes will therefore need more frequent monitoring.

Product indicators may measure the technologies adopted, the training manual in print and disseminated, the increase in income generated. Process indicators are usually more qualitative and will assess how the technologies were developed and adopted, how the manual was produced and how the income was generated, and who was involved. At least some of these indicators will be subjective. End-users and participants may be asked to verify them, but the means of verification may still be less than fully objective.

1.5 Identifying the Data Sources, the evidence

Having set indicators, milestones and targets, what Data Sources or evidence will be used for each measure? This is a vital aspect of the initial planning that is often overlooked. Building in data sources at this stage will make the monitoring, review and evaluating of the project easier.

A data source will almost invariably be **documents**; sometimes it may be films, DVDs, videos or audiotapes. The key point, a data source is **not an activity**, such as a survey, a stakeholder review.

In specifying our data sources we need to ask a series of simple questions:

- What evidence do we need?
- Where will the evidence be located?
- How are we going to collect it?
 - *Is it available from existing sources? (e.g. progress reports, records, accounts, national or international statistics, etc)*
 - *Is special data gathering required? (e.g. special surveys)*
- Who is going to collect it? (e.g. the project team, consultants, stakeholders etc)
- Who will pay for its collection?
- When/how regularly it should be provided (e.g. monthly, quarterly annually)
- How much data gathering (in terms of quantity and quality) is worthwhile?

Some typical Data Sources

- Minutes of meetings and attendance lists
- Stakeholder feedback, results of focus groups
- Surveys and reports
- Newspapers, radio and TV recordings, photographs, satellite imagery
- National and international statistics
- Project records, reviews and reports; external evaluation reports
- Reports from participatory poverty assessment or rural/urban appraisal exercises

Be careful not to commit yourselves to measuring things that will be very expensive and time consuming to measure. Remember the essential need to be realistic!

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