

Basics of Monitoring and Evaluation

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Abstract: *Monitoring and Evaluation usually abbreviated as M and E, are two essential parts of a program planning, implementation and management because they generate tangible results for programs to move ahead. They provide mile stones upon which programs can be assessed, and provide evidence for the assessment. While monitoring takes periodic records of performance of a program, guides program direction towards agreed objectives and torchlights the utilization of project resources, evaluation takes a snapshot of the project condition at a point in time, informs the project manager how well the project has performed, what next should be done and where resources needs to be channeled for the intervention to yield the desired goal. The two components (M&E) therefore provide the impetus for donors' decision about the life of the project. They support evidence based decision in program implementation.*

Unfortunately program implementation especially in the developing world like Nigeria, has often been plagued by the fear of M&E due to the misconceptions of some program managers about the purpose and methods of M&E. Some of these misconceptions include seeing the M&E Officers as unnecessarily policing project implementation, accusing donors and their grantees as being judgmental. Neither "M" nor "E" is guilty of any of these accusations, rather they both complement each other to provide a level playing field for all the actors involved in a project (program officers, stakeholders and donors) to interact; resolve challenges and chart ways forward for the project to achieve its planned objectives. The level of skill and technicality required in achieving good result in M&E is another scare for some non-governmental organizations (NGOs), community based organizations (CBOs) and civil society organizations (CSOs). They do not understand why donors should spend so much money to monitor a project when indeed the community members are not complaining about the implementation of the project activities. Unfortunately, little did they know that there is a big valley between the donor and the community and this valley can be covered by the monitoring officers who in fact represent the donors' eyes. How would the donor know that the project activities were actually directed to the target groups if activities are not recorded and reported in an internationally accepted standard? The truth is that "what is done and not recorded and reported is considered not done". This is the standard in monitoring and evaluation. Without recording and reporting, learning cannot take place. This is why in the new world of public health practice, monitoring and evaluation are not complete without learning; hence the field is now extended to include "knowledge management". When next you meet a Monitoring and Evaluation guru, you can also address him/her as Knowledge Management Specialist.

This paper has been packaged to carefully elucidate the concepts Monitoring & Evaluation, why it is necessary, when it be applied in the life of a project and how it should be interpreted. It also explained the need for logical framework often regarded as log frame in project design. This had often constituted a nightmare to program planners. Indeed, it is often avoided by most proposal writers. The authors explained the details for log frame and advised program designers not to run away from it as it prepares the foundation for the life of the project.

This article is a must for every public health practitioner, the academia and those intending to go into the field of public health practice.

I. Introduction

Monitoring and Evaluation (M and E) of sexual and reproductive health programmes are essential components of programme planning, implementation and management because they lead to evidence-based programming. Components of reproductive health programmes include safe

motherhood-related programmes and activities, providing high quality services to address infertility, eliminating unsafe abortion, combating sexually transmitted infections, including HIV, reproductive tract infections, cervical cancer and other gynecological morbidities and promoting sexual health.

The current debates that surround the evaluation of development projects are embedded in wider debates about authority, legitimacy, transparency and accountability. M and E are essential to improving the overall effectiveness of sexual and reproductive health programs. Imminent scarcity of resources for programming in developing countries dictates that programmes and projects are carefully planned, monitored

and evaluated to demonstrate a cause-effect relationship between interventions and results in an efficient manner.

In many parts of the world including Africa, Monitoring and Evaluation are perceived by Non - Governmental Organizations (NGOs), Community - Based Organizations (CBOs) and other service providers as unnecessary pressure imposed by donors. Even today, the purposes and processes of M and E are plagued by various misconceptions both on the part of donors and their grantees. Frequently, donors have applied evaluation as a judgmental rather than a learning tool. NGOs and CBOs dread the processes because they presume that M and E require very complex scientific research that can only be conducted by highly qualified specialists in order to produce acceptable results.

This paper presents M and E as desirable components of the project cycle. It provides simple definitions of the concepts associated with M and E and explains the processes in an uncomplicated manner. It further demystifies the dreaded Logical Framework Analysis (Log Frame) and explains the vertical and horizontal logic between the various levels of measurement. This paper does not address theory-based evaluation.

II. What then are Monitoring and Evaluation?

Having provided simple definitions, descriptions and explanation of the *jargons* used in the field of M and E, the stage is set for brief descriptions of the processes involved. It is pertinent to keep at the back of our minds that M and E are processes that happen at all levels in the project cycle. Developing a good M&E system requires careful attention during the initial design phase where parameters to be monitored and evaluated are determined. As we monitor implementation, aspects of the plan that need revision (i.e. re-planning) are revealed. Monitoring also points out aspects that need to be evaluated in a project. Thus the success of any project depends on the regular flow of information from one level to another.

For any project or programme to achieve its aims and objectives, a monitoring and evaluation plan is required. M and E plans answer questions of when, what, who, how, and how much. It defines the tasks and assigns responsibilities.

Bartle defines monitoring as *the regular observation and recording of activities taking place in a project or programme. It is a process of routinely gathering information on all aspects of the project.* Family Health International (FHI) also defines monitoring as *the routine process of data collection and measurement of progress toward program objectives.* The words *regular* and *routine* are key and underscore the point that monitoring is not an exclusive preserve of so-called M and E experts but a collective responsibility of the individuals involved in project implementation. Monitoring is an essential part of the management information system (MIS) as information gathered during monitoring form the basis for evaluation. It is not an *ad hoc* activity. It helps track changes that occur over time in inputs, processes and outputs. Monitoring is a process, which systematically and regularly checks if project activities are being carried out as planned. The process of monitoring is described below under the headings – **why, when, what, who and how?**

Why monitor?

Information gathered during monitoring is useful for several reasons. These include:

1. Provides analysis of the current situation.
2. Reveals gaps in project design. When these gaps are revealed, it assists decision-making, especially in the short-term, for increased project efficiency and effectiveness. Monitoring enables management to improve operational plans and take corrective action in the case of shortfalls and constraints.
3. Helps to discover trends and patterns arising from program results.
4. It keeps project activities on schedule (e.g. timely reporting).
5. It guides programme implementation towards stated objectives.
6. It ensures accountability at all levels within the project hierarchy.
7. It helps to make informed decisions about project staff performance, financial returns and material logistics.

When should project monitoring commence?

Generally, project monitoring is assumed to begin when a project contract is signed and funds are disbursed to an implementing partner (IP). This is based on the fact that without a contract agreement, there is no legal commitment between the donor and the implementing partner. Experiences of the author however show that monitoring could begin as soon as the donor and the prospective partner begin contract negotiation. Proposal writing is a part of the total business of the project to be implemented and as the proposal goes back and forth, the donor observes and can make judgment about the partner's skills in the proposed field. When the donor visits the implementing partner, findings could inform the decision to go on with the contract negotiation or not. Both the proposal submitted to the donor and the visits made to the partner, in technical terms, feed into

the entire business of monitoring. The money spent on proposal writing and the donor's visits constitute part of the total inputs, if it becomes necessary to compute the cost - benefit analysis of the project.

Often, donors expect a prospective partner to commence preliminary activities prior to the signing of contracts or disbursement of funds. Funds committed to preliminary activities are often not reimbursable. To the donor, it is a direct measure of the level of seriousness and commitment of the partner. To the prospective grantee, preliminary activities undertaken by the donor (e.g. visits) are a measure of the level of preparedness of the donor to give out the contract.

What should be monitored in a project?

Though monitoring occurs at every level of the project cycle, three domains - inputs, process and outputs are recognized. All observations carried out are guided by indicators at these three levels. Inputs are tracked through indicators that answer the questions; what and how much financial, material and human resources went into the implementation of a particular task in a project? This includes checking receipts and expenditure, as well as commodities procured for distribution, staffing and staff development (capacity building) and behaviour change communication (BCC) materials produced for distribution etc. In a family planning project, it is important to make projections concerning commodity procurement and stocking levels. While under stocking would affect clients' brand loyalty, over stocking could result to loss of capital through expiration of unsold commodities. Program implementers need to strike a balance between under-stocking to minimize stock-out situations and over-stocking to avoid loss of project funds through expiration of large quantities of unsold products.

At the level of activities, process indicators answer the questions: what is happening and how many activities have occurred, to what use have we put our inputs? Activities to be monitored include: project work plan, timing of activities and on-going training activities. Are the proposed activities being conducted as and when due? Are there important lessons from events carried out that require corrective action in subsequent activities?

If the activities are carried out according to plans, it is expected that the deliverables (outputs) will be achieved. Output indicators answer the questions: what was the immediate result of the activity, or an event (e.g. a rally)? For a family planning project, parameters to be monitored may include, *number of midwives who passed a refresher training test, client flow (old and new clients) at clinics, quantities of commodities distributed by types, number of persons (by sex) reached with programme messages, quantity of posters, pamphlets, t-shirts, face-caps and so on, distributed during an event.*

It is critical to keep in mind the difference between output and outcome (effect) in the course of monitoring. While output is the immediate result of an activity conducted, for example, *number of people who attended the rally or seminar*, outcome is the effect of the activity on the population or community. For instance, as a result of new ideas learnt during the rally or seminar, are there noticeable changes the life style or belief system of the people? Impact on the other hand, answers the question, *what difference has this change in lifestyle brought to the community or neighbourhood?* Long-term changes are usually not attributable to the activities of one organization. They are the consequences of the activities of various organizations over a long period of time. However, it is possible to calculate the contribution of each particular event to the total change.

Who should conduct monitoring?

As opposed to popular practice, monitoring is not an exclusive responsibility of a designated monitoring officer. It is a participatory process that requires commitment at all levels – project staff, project participants, community leaders and donors. In designing the monitoring plan, field staff and project participants need to be fully involved to ensure buy-in at all levels. Otherwise, monitoring visits by donors or senior management will be perceived with suspicion. Responsibilities for keeping monitoring records however lie with project staff.

How should monitoring be conducted?

As discussed earlier, monitoring is systematic because a track record of activities and data is kept. This information helps establish a trend between the past and the present, to be able to project into the future. Methods of collecting monitoring information are numerous and include interviews, use of checklists, participatory rural appraisal and observation among others. Details of methodology are beyond the scope of this paper.

Evaluation is the episodic assessment of activities designed to determine the value or worth of a specific program, intervention or project. That means being able to link a particular output or outcome directly to a particular intervention. As mentioned above, the project plan highlights aspects to be evaluated while monitoring provides the building block. Similarly, evaluation highlights areas that need close monitoring and

provides lessons for future planning. The subject of evaluation is further explored below under the headings - - why, when, what, who and how?

Why evaluate?

We conduct project evaluation for the following reasons:

- To make evidence-based decisions. It is a learning tool and highlights best practices that could form the basis for advocacy, future programming and allocation of resources.
- Assessment / improvement of performance. Evaluation reports may inform revision of a programme / project's implementation strategy.
- It is an accountability tool and helps to determine whether the inputs (resources – material, financial, human) to the project are well utilized.
- It highlights gaps in research and provides baseline information for new interventions.

When should evaluation be done?

An evaluation is usually scheduled at key points throughout the project cycle. Depending on the funds available, evaluation can be conducted before the commencement of program intervention (baseline evaluation or formative study), midway through the life of the project (mid-term evaluation), and at the end of program intervention activities (end-line evaluation). The reason for mid-term evaluation is to measure performance and determine if activities are yielding the desired outcomes. Otherwise, deliberate efforts are made to re-design intervention activities before the project comes to an end.

What should be evaluated?

The guiding tools for determining what ingredients should go into the evaluation document are the project indicators. Process, outcome and impact indicators naturally form the focal areas around which searching questions are centered.

Process Evaluation is the assessment of the program or project's content, scope or coverage together with the quality of implementation including the need to proceed with an outcome evaluation. Essentially, it examines what happened during the intervention by looking at the operational aspects and processes. It assesses the context of the activity rather than the outcome of the activities. Questions raised include:

- How well were things done?
- How and why are things going the way they are?

Outcome Evaluation is designed specifically with the intention of being able to ascertain that changes are attributable to the intervention itself and not to other non-program or project factors. With reproductive health interventions, immediate effects or outcomes are often related to behaviour change and underlying change in knowledge, attitudes and beliefs.

Impact Evaluation is designed to attribute long-term changes to a specific program or project. However rarely is this achieved and usually outcome and process indicators are used jointly to determine overall impact. Note that while it may be easy to determine values for outcome indicators during an end-line survey, the same cannot be said for impact indicators.

Who should be involved in evaluation?

The terms of reference (TOR) is an important document that spells out the scope, methodology, tasks, deliverables and responsibilities for an evaluation exercise. Evaluation ideally should involve external persons, the project team and stakeholders. In practice, many organizations embark on **internal evaluation**. This means that people implementing the project are responsible for conducting the evaluation. Internal evaluation is cheap. The evaluators also have inside knowledge, understand the dynamics and politics of the organisation, the donor and the beneficiaries and are highly committed to seeing results. The major drawbacks are that internal evaluators may be biased, may not have all the skills required and may not be able to devote time to the process.

In many instances, an external person (usually called a consultant) or another organisation is appointed to undertake evaluation. An external evaluator usually has an independent, unbiased and fresh view of the project, has specific expertise, usually signs a contract and so will dedicate time and energy to ensuring that the deliverables are achieved. Where an external consultant is used, it is important that he or she is assisted by the project team who knows the history of the project. External evaluation could be expensive.

How should evaluation be conducted?

The kinds of data to be collected usually determine what methods to employ in evaluation. Quantitative data require structured methods while qualitative data require unstructured, ethnographic methods. At the planning stage of the project cycle, the third column of the log frame clearly spells out sources of data / information. Undoubtedly, a combination of quantitative and qualitative methods gives more robust information. Once the methods have been agreed, the data collection 'instrument' is developed. These include, checklists, tally sheets, client cards, questionnaires, Focus Group Discussion Guides etc. Details of data collection and data use are beyond the scope of this paper.

Evolutionary Trends in Monitoring and Evaluation

M and E is an emerging field. Traditional M and E systems are highly technocratic and appear to assume that human development even in all fields including sexual and reproductive health can be monitored and evaluated through purely scientific methods that are objective, irrespective of the values of the individuals, communities and societies. Within this paradigm, the human angle to development is lost and anecdotal evidence is dismissed unless it can be proved scientifically. Emphasis is thus placed wholly on the intrinsic merits of a program or project. Guba and Lincoln 1989 report that M and E has evolved over 4 generations. The 1st generation evaluation is dominated by quantitative measurements and focuses strictly on facts. The 2nd generation is more descriptive and appraises the entire project against objectives. The 3rd generation is a step further but still largely technocratic as it examines data and attempts to provide answers to why a project has failed. It is purely scientific with narrow definitions of valid views / opinions. All three above embody managerialism, which disempowers other stakeholders. The most recent approach is the 4th generation M and E, a pluralistic and responsive stakeholder approach. It entails a radical shift in roles in terms of who initiates and undertakes the process as well as who learns and benefits by the process. This is the transformative paradigm hinged on participation, learning, negotiation and flexibility,.

For development projects especially those impacting human behaviour including Sexual and Reproductive Health, evaluation must be situated in the transformative paradigm, which interrogates reality from the perspective of social justice, oppression, power and transformation. Within this paradigm, the analysis of asymmetric power relations is crucial. It is a shift from tokenism and manipulation to self-mobilization and self-actualization. Here, participants of a program shape the questioning and analyses and this includes those in whose names the program is formulated (stakeholders), project managers, researchers, policy makers and donors. The role of the evaluator is re-defined as facilitating the process of negotiation between stakeholders. The latter rather than the former set the boundaries and creative evaluation techniques and flexible methodology assist beneficiaries in finding their own solutions to their own problems,.

A critical first step in Participatory M and E is stakeholder analysis. Stakeholder grouping requires careful analysis and a thorough knowledge of the geographic project area, its inhabitants and their culture. Assumption that different groups of beneficiaries share the same values and needs are often misleading. Stakeholder participation means more than beneficiaries' contributions to project execution. It goes beyond contribution of resources to include negotiating and developing a common understanding, agreed outcomes, and accountability through formalized processes at every point in the project cycle – planning / design, implementation, monitoring and evaluation. Participation leads to empowerment because it gives voice to marginalized groups including women, young people and the disabled. It starts with consultation and moves to negotiation (of problems, solutions, approaches).

Negotiation entails a commitment to working through diverse views on what should be measured, methods to be employed and how the information should be used. Sexual and reproductive health programmes and projects must be flexible enough to accommodate changing circumstances, views and expectations of project participants. All these lead to joint decision-making and action. Participation is a human right – it holds that individuals, local communities and national governments have the fundamental right to be involved in the decision-making processes that affect their future,.

In participatory M and E, several participatory methods including Focus Group Discussions, community mapping, participatory rural appraisal, participatory learning and action, interviews etc are employed along with quantitative methods.

An important tool that has been found useful in capturing the voices of marginalized people in an empowering manner is Appreciative Inquiry (AI). This is a process that employs positive questions that mobilize vision and creativity as opposed to the traditional questions that search for problems and deficits in a judgmental manner. Employing Appreciative Inquiry, the search is for what works, what keeps the group, and organization or community alive. It draws attention to achievements, assets, wealth, creativity, and capacity of its people rather than their deficiencies, poverty and misery.

Mainstreaming Gender in Monitoring and Evaluation of Sexual and Reproductive Health Programs

Health providers, program managers, policy makers and donors are increasingly aware that gender equality is a critical element in the design, management and implementation of programs and ultimately in their ability to succeed and generate the desired outcomes and impact. Reproductive health services that meet both men's and women's needs will encourage increased use of those services and promote sound reproductive decisions.

Sexual and reproductive health issues in Africa are embedded within social constructs of femininity and masculinity in our patriarchal society. In sub-Saharan Africa, 40% of all illnesses affecting women of reproductive age result from the processes of sex and reproduction. A Nigerian study traced women's vulnerabilities to the behaviour of their male partners. Gender inequality negatively impacts sexual behaviour of women and men. Power relations, largely grounded in culture, socio-economic and political status determine vulnerability to infection and access to health services. A typical example is the fact that power imbalances in relationships prevent women from being able to say no to unprotected sex. For some women, saying no to sex can lead to violence. Gender-based violence and sexual coercion are now recognized as pervasive problems, putting women at risk of many negative outcomes, including injuries and STIs including HIV. Sexual and reproductive health programming and service delivery that incorporate a gender equality perspective can respond to the issues raised above. Any successful sexual and reproductive health program or project must therefore pay attention to gender issues at every level of the project cycle. From the onset, it is useful to ask such questions as: How many women and men are involved in the various stages of project design and implementation?; how many women and men participate in the project as recipients of project benefits? How many women and men are involved in decision-making and control of project activities and resources?

Gender mainstreaming in reproductive health projects is a commitment that project managers must make. It is often evident in the type of indicators proposed at every level in the hierarchy of aims. Gender-indicators for sexual and reproductive health projects respond to questions around participation e.g. *number of women participants in RH policy process or number of women's advocacy groups included in research decision making process*; empowerment e.g. *changes in men's and women's attitudes toward violence against women*; equity (fairness) e.g. *percentage of microcredit funds used for FP/RH services; options for transport to service delivery points or increase in male STI clients' satisfaction with services, hours, and location*. Gender indicators also measure respect for the human rights of women and men e.g. *changes in policymakers' knowledge of and attitudes toward human rights approaches, increase in number of state-level RH rights enforcement mechanisms and assessment of whether revised service delivery protocols include human rights language or existence of patients' bills of rights*.

Generally, gender-sensitive indicators address gender gaps and inequalities, require the collection of data, disaggregated by sex, as well as by age and socio-economic and ethnic groups, and are couched through participatory processes that ensure that women and men actively take part in the planning of performance measurement frameworks, in their implementation, and in the discussion of their findings. Attention must be paid to issues such as whose voice and whose story comes out clearly, time of interviews, choice of language for interviews or group discussions and level of language used in questions, composition of discussion groups, composition of interviewing team, venue of interviews or other types of inquiry, and levels of visibility of men as compared to women.

Disaggregation of data by sex, age and time is of utmost importance in demonstrating outcomes and impact as mentioned above. Sex and age-group dis-aggregation needs to be maintained wherever feasible, particularly among the 15-19 age group for those projects focusing on adolescents. Indeed, because of the rapidity of change and the differing needs of each period of adolescence, it is preferable, subject to feasibility, to establish age groups of adolescents appropriate to adolescent realities, namely, single- or two-year periods. Data should also be kept specific to particular time-periods, which should not be too large. For most indicators quarterly, half-yearly or annual time periods are appropriate.

Data analysis is clearly beyond the scope of this paper. However, it is pertinent to note that in interpreting data from empowerment projects, attention must be paid to the role of internalized values and oppression. For instance, if in a questionnaire based survey aimed at determining female-headed households, a typical African woman is asked: *who is the head of your family*, the likely response would be *husband*. Her response is often determined by what she perceives as the ideal gender role of men and women. An indirect assessment of who pays for what however may reveal a different picture. Similarly, in a recent evaluation experience of the author, school children who had been exposed to sexuality education in junior secondary school in Nigeria were surveyed using a well-designed and standardized questionnaire. The first round of evaluation revealed that the children's knowledge of contraceptives had increased. However, increase in knowledge did not seem to engender any significant increase in the use of contraceptives though some students reported that they were sexually active. A Focus Group Discussion (FGD) session to validate the data revealed that their non-utilization of condoms is embedded in the cultural value that condemns sexual expression in

young people. Some of the FGD participants revealed that they would be *embarrassed* or *afraid* to purchase condoms as the local patent medicine dealer or salesperson could consider them *spoilt kids* or *report them to their parents*. Some of them said they would use it, if the condoms were kept in discreet places for pick up. A fraction of the children opined that though some of their mates already used it, not many would report this even in an anonymous questionnaire for fear of *being found out*.

III. Monitoring and Evaluation and the Project Cycle

A typical project cycle consists of at least four interrelated components: Situation analysis/Problem Identification, Project Design/Planning, Project Launch/Implementation and Project Evaluation. Each of these components are of great importance and though often represented in a cyclic form, the relationship is usually a complex one as each component refines both the one before and after it in a back and forth feedback manner.

Problem Identification Stage –

This is an important part of the project cycle and though depicted as the first stage, it is often based on lessons learnt from evaluation of previous projects or analyses of secondary data. Problem identification begins with situation analysis - the process of understanding the status, condition, trends and key issues affecting people and their livelihoods, ecosystems or institutions in a given geographic context at any level (local, national, regional, international).

Once the problem is defined, it is often important to establish a baseline. This could be based on primary or secondary data. As soon as this is done, it is possible to relate changes in the target population to interventions by the project.

Project Planning Stage –

It is the stage at which the *cause-effect* relationship between proposed project intervention and results is established. Project design entails setting priorities and defining the scope of a project / programme. The external goals and policies, the organisation's mission and the needs of the beneficiaries determine the scope of a project. Certain parameters must be defined during project design. These include **project goal, objectives, activities, indicators of success, risks of failure and how these will be managed**.

The **Goal** of a project is the over-arching aim to which any particular project will contribute. It is often a national- or sectoral- level aspiration that requires the commitment and cooperation of several actors in the development arena. Results captured at this level are referred to as **impact**. For example, Nigeria's HIV/AIDS National Strategic Framework for Action 2005-2009 has as part of its over-arching goal: *To reduce HIV/AIDS incidence and prevalence by at least 25% by 2009*⁶. This is a tall dream and its realization requires multi-sectoral and multi-disciplinary co-operation and partnerships. If this goal is realized by 2009, no single organization can lay claims to having brought it about. However, each organization can measure its contributions to the achievement of this goal.

The goal is further broken down into Objectives. An objective is an incremental and realistic step towards achieving a goal. It is more specific than a goal and describes the desired changes in the way the people or organizations behave. Objectives are milestones on the path towards achieving the development goal and state categorically what contributions a project would make towards the goal. Objectives are also referred to as purpose and results measured at this level are called outcomes or effect. Outcomes are influenced by many factors, some of which depend on the project itself. There exist other factors beyond the control of the project that could interfere with the achievement of objectives. In other words, changes can fail to occur even when the project delivers what has been planned in a manner that is consistent with ethics and values and meets standards of timeliness, quality and accuracy.⁸

In order to achieve objectives, human, financial and technological resources are required. So also are facilities and supplies. These are referred to as inputs. No organization has inexhaustible resources. The need for planning and prioritization cannot therefore be over-emphasised. A cost-benefit analysis will ensure that available resources are used to achieve optimum results.

Once the inputs are carefully mapped out, certain tasks must be carried out. A constellation of these tasks is known as activities or processes. Examples of activities include training of peer educators, provision of HIV Counseling and Testing, design and printing of Behaviour Change Communication materials etc.

Naturally, processes should yield immediate results called **outputs**. Outputs are, therefore, **products** or **deliverables** of activities undertaken, a combination of which will achieve the objectives or purpose. For example, the corresponding outputs for the activities listed above would be *number of peer educators trained, the number of people accessing HIV Counselling and Testing, number and type of BCC materials designed and printed*.

It is important to reiterate that the various components of the project cycle do not happen as isolated events. Monitoring and Evaluation are key components of the project cycle, which happen throughout the life of a project. During the design / planning stage, parameters to be monitored and evaluated are decided and markers

of change or performance are selected. These markers are called **indicators**. An indicator can be likened to a road sign, which shows a traveler whether she or he is on the right track, how far she or he has traveled and the distance to her or his destination. Indicators are discussed in greater details below.

The project plan / design show clearly the goals, objectives, inputs, activities / processes and outputs of any given project. It also shows what indicators will be employed to monitor and evaluate performance / achievement at every level and the sources from which data / information will be collected. All these can be summarized systematically in a matrix referred to as the logical framework analysis or log frame.

Demystifying the Logical Framework Analysis.

Logical Framework Planning was created by the United States Agency for International Development (USAID) to assist in the planning, management and evaluation of its development interventions. The Log frame is a matrix (table) that presents information about the key components of a project in a clear, concise, logical and systematic way. It lays out clearly what the project is going to achieve, what activities will be carried out to achieve outputs and purpose /objective, what resources (inputs) are required, the potential problems which could affect the success of the project, how the progress and ultimate success of the project will be measured and verified. It depicts expressly, a *cause and effect* link between inputs, process / activities, outputs, effect / outcome (objective) and impact (goal) in a logical or coherent manner. Once the various levels are understood, constructing the Logframe is a simple process, which unfortunately has been made to appear complicated over the years. In order to understand the intervention logic, the diagram below is very useful.

Fig 1 – Cause and Effect in a Logical Framework

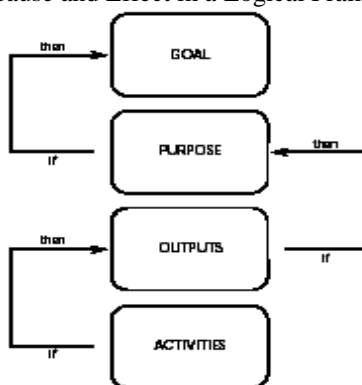


Figure 1 was adapted from Horstman *et al*, 2002, Monitoring and Evaluation of Reproductive Health Interventions, A Manual for the EC/UNFPA Initiative for Reproductive Health in Asia. The *cause and effect link* between one level and another is the main principle of the logical framework. The above diagram is explicit and shows that *if* activities are carried out, *then* outputs will inevitably be achieved. In the same vein, *if* outputs are achieved, *then* the objective or purpose will be achieved and so on. Strictly speaking, any particular project has control only up to the level of purpose or objectives. Achieving a goal is a collective responsibility of several projects each of which makes a contribution. It is important to understand that even at the levels of *outputs to purpose* (objective / effect / outcome), external factors may affect the realization of results. For example, in a project whose goal is to *reduce maternal mortality from x to y in 2006*, one of the objectives may be to *increase by 30% the number of women in a given community who have access to family planning counselors by 2006*. At the output level, the expected result may be *5 new Community Health Extension Workers (CHEWS) trained in family planning counseling within 6 months*. While project management can ensure that the counselors are trained, the critical assumption is that those trained will be employed at the local health centre in that community. This may or may not happen. The table below shows clearly what a Log Frame and its components look like.

Aims	Objectively Verifiable Indicators (OVIs)	Means of Verification	Important Assumptions
GOAL – this is the overarching aim; national or sectoral level result to which the programme or project will contribute;	Quantitative or qualitative markers (indicators) that demonstrate the impact of the project	Sources of information, Cost-effective Methods used to quantify or assess indicators	External conditions beyond the project’s control necessary to sustain progress towards the achievement of goals
PURPOSE / OBJECTIVE – who is to be reached and what is to be achieved?; the effect of the programme / project; the change or benefit to be achieved; the new situation that the project aims to bring about	Quantitative or qualitative markers (indicators) that demonstrate the effect of the project or the progress being made towards achieving this. (End of project status).	Sources of information, Cost-effective Methods used to quantify or assess indicators	External conditions beyond the project’s control necessary if achieving the objective will contribute to the overall goal
OUTPUTS – project deliverables or products within the control of project management	Quantitative or qualitative markers (indicators) that demonstrate the production of outputs	Sources of information, cost-effective methods used to quantify or assess indicators	Important events, conditions or decisions beyond the project’s control necessary to sustain progress towards achievement of purpose / objectives.
INPUTS – costs, resources	-Resources- type and level of resources needed for the project. -Finance - Overall budget. -Time- planned start and end dates.		

Table1– Illustrative Log Frame highlighting key components of a project plan and the hierarchy of aims.

The above table is simplified and generalised for the purpose of explanation. It collapses various models including the DFID model and that proposed by Mikkelson, 1995: 51.

Whatever the presentation, the Log Frame usually illustrates both the vertical relationship as seen in figure 1 above and introduces the horizontal relationship across the matrix between the various aims, their objectively verifiable indicators (OVIs), means of verification and the important assumptions. The narrative summary describes an activity or intervention; it allows the identification of “inputs” that lead to a set of “outputs,” which should accomplish a “purpose” that is integral to achieving the ultimate “goals” of a project.

Objectively verifiable indicators (OVIs) are markers that help to *verify* that a given result is directly linked to the intervention. The **Means of verification (MOV)** column describes the method by which this verification can be measured. **Assumptions** are external factors or important events, conditions or decisions beyond the project’s control necessary for the project to run its course and bring about results. The identification of these external factors and an analysis of their influence play an important role in project planning. In total, the external factors constitute a project’s environment. The project objectives can be achieved only in a favourable environment.

Uses of the Log Frame

1. It provides a shared understanding of a project / programme among project staff, donors, beneficiaries and other stakeholders.
2. It gives the impetus for monitoring and evaluation as it spells out expected results, indicators and means of verification at each level. In other words, it helps to establish what needs to be monitored and evaluated.
3. It is a communication and negotiation tool.
4. It helps the project / programme team envisage factors beyond the organization’s control that could hamper the achievement of results. This information is useful for planning.
5. It serves as the main reference point for drafting detailed work plans, terms of reference, budgets, etc.
6. It promotes accountability

Limitations of the Log Frame

1. It gives an erroneous picture of a *straitjacket* approach to programming. Log Frames must be dynamic and flexible enough to accommodate changes based on emerging issues. Such changes may also include unexpected results.
2. The process of developing a log frame for a project can become bureaucratic. Wide stakeholder involvement is key if the Log Frame is to have relevance as an instrument of dialogue, negotiation, joint decision-making and joint action.
3. Often requires quantitative indicators and so undermines the qualitative forms, which are often more relevant in sexual and Reproductive Health projects.
4. It focuses too much on problems rather than opportunities and vision.

IV. Log frame Analysis and Monitoring and Evaluation: Exploring the Link

Having understood the concept of Logical Framework Analysis (LFA) as a planning tool, it is pertinent at this point to explore briefly, the link between LFA and the next stages of the project cycle – **Monitoring and Evaluation**. As earlier mentioned, the LFA sets the stage for monitoring and evaluation as it spells out what needs to be monitored at every point in the implementation of the project. The table below demonstrates the link between the hierarchy of aims in a log frame and levels of monitoring and evaluation.

<i>Hierarchy of Aims</i>	<i>Levels of Monitoring and Evaluation</i>	<i>What is Measured</i>	<i>Indicators</i>
Goal	<i>Impact</i>	<i>Change</i>	- Changes in the longer term that occur as a result of a given programme or intervention (impact is usually observed at population level e.g. changes in HIV prevalence, maternal mortality rate etc
Objectives / purpose	<i>Outcomes</i>	<i>Effect</i>	Immediate changes observed (project or population-based)
Outputs	<i>Outputs</i>	<i>Effort</i>	Activities carried out (project-based)
Activities	<i>Input</i>	Resources invested in a programme / project; What is done and how well it is done	
	<i>Process</i>		

Table 2 - Exploring the link between LFA and M and E.

As can be seen in Table 2, the hierarchy of aims in a logframe has a direct relationship with the levels of monitoring and evaluation. The logframe activities relate to input and process, logframe outputs to M and E outputs, logframe purpose or objective generally relates to effect and the logframe goal relates to impact.

V. Indicators

An indicator is a "marker of performance" employed to measure the achievement of a project or programme. It is an observable change or event, which provides evidence that something, has occurred - whether an output delivered, immediate effect occurred or long-term change observed. Recall that in table 1 where we discussed the logframe, we mentioned that objectively verifiable indicators (OVIs) and their means of verification (MOVs) form columns 2 and 3. In other words, at the planning stage, the project team is tasked with the responsibility of thinking through the entire project and demonstrating the means to an end and how these will be measured at all stages of the project. In the log frame therefore, we need to show input and process indicators, indicators of effort (output), effect (outcome) and change (impact). In addition to these, there are indicators of efficiency which show whether resources are being put to the best possible use to achieve objectives.

Sexual and Reproductive Health indicators usually focus on a number of subjects. These include: the occurrence of an event, e.g. a live birth, a maternal death, a pregnancy complication; the prevalence of a characteristic in a population, e.g. use of a contraceptive method by men, low birth-weight of babies; the prevalence of a characteristic in a service delivery point, e.g. service delivery points providing antenatal care, non-prescriptive contraceptives etc.

For global monitoring, attempts have been made to standardize indicators in various categories. Global indicators for Demographic Health Surveys for example include total fertility rate, contraceptive prevalence rate, maternal mortality ratio, antenatal care coverage, births attended by skilled attendants, perinatal mortality rate, prevalence of low birth weight, reported prevalence of female genital mutilation, prevalence of anaemia in women and HIV knowledge.

VI. Conclusions and Recommendations

Monitoring and evaluation have been presented in this paper as essential components of development programmes and projects and as such must be properly planned during the design stage. Their usefulness lies in

the fact that they provide the basis for evidence-based decision-making, ensure effectiveness, efficiency and accountability and reveal gaps for further programming. Their results also provide the content for advocacy with important stakeholders. No matter the expertise with which an organization plans and implements a project, achievement of results may be influenced by external factors such as political and economic stability in the larger society. These must be envisaged at the planning stage and ideally, the project plan should address how these risks would be managed. In interpreting evaluation results, care must be taken to mainstream the views of project participants and attention must be paid to issues that may introduce bias such as cultural practices that influence the people's view of life and the role of internalized oppression.

Though a logical framework lays out in a coherent manner the total plan for a project, care must be taken so that it does not become a rigid blueprint or straitjacket that imposes all sorts of restrictions on the project team. The process of developing a logframe is often more important than the final product. It is ideally an empowering process hinged on the key principles of consultation, negotiation, participation, joint decision-making and learning. Log frames should be flexible enough to accommodate changes during implementation as the need arises.

For development programs and projects, including sexual and reproductive health projects to be successful, it must be informed by situation and gender analyses. The commitment to promote gender equality is often demonstrable in the project plan, including the monitoring and evaluation plan and the types of indicators, the type of data collection instruments and methods used and the data collected. Disaggregation by sex, age and time is key. In selecting indicators, we do not always need to re-invent the wheel as several sites abound on the Internet from where appropriate, gender sensitive indicators may be selected. These however should be relevant to the proposed project and feasible within the context of the project and the funds available.

It is important to always remember that the whole essence of development projects is *empowerment of project beneficiaries* and those whose lives are directly affected know better, whether things are changing for them or not. This is irrespective of what the statistics are showing. Evaluators must therefore discard personal opinions about local people and approach evaluation with a willingness to learn.

There is the need for donor agencies and local organizations to invest in capacity building of their staff, partners and project beneficiaries. Also, monitoring and evaluation reports must be organized to feed into a central Management Information System to which all stakeholders have unfettered access. This will reduce wastage of resources through duplication of efforts.

Finally, collaboration between organizations including donor agencies appears to be the pre-requisite for collective success.

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