

Monitoring and evaluating a project's effectiveness

by Peter Tschumi

A community water supply and sanitation programme in northern Honduras developed an internal monitoring and evaluation system requiring no external support at no extra cost.

COMMUNITY WATER supply and sanitation projects are usually only monitored and evaluated in terms of efficiency, i.e. the direct progress and its immediate outputs. Although a more extended evaluation, which includes the systematic registration of the project's effects (effectiveness and impact) would be desirable, it is generally omitted because of its complexity, expense, and the additional resources needed. But it is possible to evaluate a project's effectiveness without external support, and with no extra costs. The PROPAR (Proyecto de Pozos y Acueductos Rurales) monitoring and evaluation system (MES), based on objectively verifiable indicators, is run by the project's own personnel and improves project management. In addition, the MES supplies some information about the project's (health-) impact and is therefore an excellent basis upon which to make high-level decisions, for both the national policymakers and the external support agency.

PROPAR is a community water supply and sanitation programme in northern Honduras. Co-financed by the Honduran and Swiss governments (Directorate of Development Co-operation and Humanitarian Aid and the Swiss Development Co-operation (SDC), PROPAR is run by the Honduran Ministry of Health and is therefore completely integrated into its institutional structure. It supports the Ministry's strategy of rural primary health care using health promoters, and in addition to the project-specific activities (water supply, sanitation, and hygiene education), are also involved in child survival programmes like diarrhoeal disease control, immuno-preventable diseases (vac-

ination), acute respiratory infection reduction, and others.

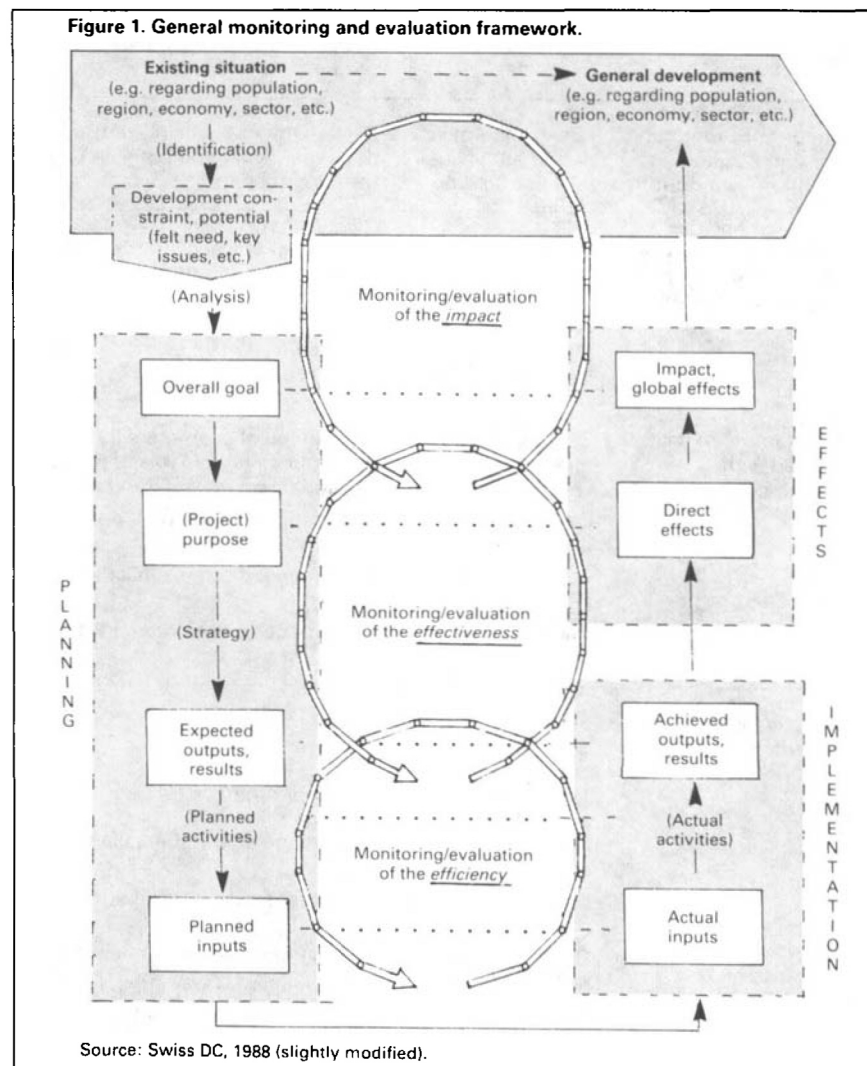
In view of this high institutional integration on the one hand, and the independent project management on the other, PROPAR created an additional internal instrument to measure not only the project's progress and efficiency, but also the project's effects (effectiveness) and its long-term improvements on the health status of the beneficiaries (impact).

General framework

Proceeding from the monitoring and evaluation framework used by

the SDC (Figure 1), PROPAR decided to produce a monitoring and evaluation system for effectiveness, using some indicators of universal public health significance (health impact) for the following reasons:

- To monitor the project's efficiency, i.e. to control the efficient operation of activities by best use of the available inputs.
- Experience shows that a sensible health impact evaluation requires complex study designs and extensive sample sizes to be statistically accurate, and therefore depends on external project support along with substantial extra costs.
- In contrast, the effectiveness of a project can be assessed through an adequate MES without the use of additional external resources. The MES may also be



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Figure 2. Synopsis of Objectives and Indicators.

Summary of objective	Objectively verifiable indicators	
	Criterion	Indicator
Overall goal: Target population's living standard improved	Overall health indicators: Cases of diarrhoea	Diarrhoea cases attended of children < 5 years Total cases attended of children < 5 years
	Mortality rates	Total deaths of children < 5 years Total births (X 1000) Total deaths caused by diarrhoea of children < 5 years Total population < 5 years
Project purpose: The provision of potable water and basic sanitation of target population improved	Indicators which show the achievement of a successful project purpose: Population coverage of potable water and sanitation	Total population served with well Total target population Total population served with gravity-flow systems (GFS) Total target population Total population served with latrines Total target population
Results/outputs: 1. Beneficiaries made aware of health, sanitation and hygiene topics related to the use of water and environmental sanitation	Indicators, describing the result/outputs: Extent of women's participation Extent of participation in the operation of the work Actual acceptance of latrines	Extent of participation of women on the water committees Term of project completion Population covered in the programme area
2. Importance of potable water and sanitation recognized by authorities	Financial participation of authorities in construction	Percentage of financial contributions of mayors and politicians in the construction
3. Durable and adequate water and sanitation systems constructed	Quality of water Direct cost of the project to the institution (DCI)	Number of faecal coliform organisms per 100ml (MPN index) DCI of the project per beneficiary
4. Programme of wells equipped with handpumps	Capacity to promote and direct well projects Quality of construction of wells Quality of installation of pumps Use of wells	Percentage of promoters located in proper zones capable of promoting and directing well projects Percentage of wells built properly Percentage of pumps installed properly Percentage of constructed wells in use
5. Effective operation and maintenance achieved	Initial interest in wells of water committees Training of water committees Fluctuation of committee members Quality of maintenance of wells Quality of maintenance of gravity flow systems	Ability to attain funding Water committees trained Percentage of members fluctuating per year Percentage of wells functioning Number of taps in poor condition Availability of water at tap level State of maintenance of spring catchments and water tanks

used to improve the project management and to evaluate the project's sustainability.

Objectives and indicators

Using the ZOPP (GTZ's objectives-orientated project planning) method, PROPAR was reviewed in 1988 to prepare for the forthcoming project phase (1989-91). Constructed in different phases, the end product is a logical planning matrix which depicts the basic structure of the overall project: the hierarchy of objectives (overall goal, purpose of the project, and results/outputs) as well as their logical relationship to the indicators, activities, given means of verification, and the important assumptions (external influences representing a risk for implementation).

The central feature of monitoring is the measurement and verification of the *operation* of activities, the *performance* (outputs and effects), and the *impact* of a project. Whereas activities are directly measurable and controllable, objectives (expected results, project purpose and overall goal) can only be indirectly observed and measured because they mostly produce outputs and effects in complex situations. This requires indicators, i.e. the specification of variables that will register indirectly the real situation. Indicators reflect both the qualitatively and quantitatively measurable changes in an existing situation, classified as subjectively valuable and objectively verifiable indicators, respectively.

The ZOPP method considers only objectively verifiable indicators to guarantee an independent and correct record of the indicators' measuring process. On this basis the PROPAR planning team identified indicators for all objective levels using the following procedure:

- search for a criterion to describe the development of a situation;
- formulate a precise indicator for the application of the criterion;
- define the absolute (limiting) values (goals) of the indicators;
- identify the means of verification.

The Synopsis of Objectives and Indicators, (Figure 2) gives some indicators on an overall level (cases of diarrhoea and infant/child mortality rates). These enable PROPAR to approximate the improvement in health status of the target group (health impact).



A health promotor gathers MES data from the field.

they can only afford to pay for the operation and maintenance of such a handpump.

Evaluation

The objectively verifiable indicators can be very valuable for the project, but as they provide only absolute numbers, there is the risk of them being wrongly interpreted by people unfamiliar with the project. This recorded data helps the project managers to understand the project's progress in more detail, especially the effectiveness of its output. More importantly, it supplies the necessary information, prepared in an objective and comprehensive manner, for a discussion and analysis at fieldworker level.

For this purpose, PROPARG organizes annual evaluation meetings with the project management, all fieldworkers, the administration, and people indirectly involved in the project such as executives from the Ministry of Health and the SDC. These common discussions and assessments of the annual MES results guarantee their correct interpretation and a participative analysis of the substantial and direct causes of both negative and positive aspects of the project's progress. At the same time, evaluation meetings give fieldworkers the opportunity to report and discuss other observations or (personal) requests concerning the project environment. Such information, classified as subjectively verifiable indicators, complement the objective MES indicators. Their consideration, even if it is not quantifiable, is essential

and in many cases indispensable for interpreting the effects indicated by the processed MES information.

The annual data gathering by means of specially created forms (Figure 3) has intensified and improved the field supervision. These forms, recording objectively verifiable information only, assist supervisors by indicating deficiencies in field work. For their part fieldworkers participate directly by completing the forms and therefore undergoing a self-evaluation. This also increases their identification with the MES, which is an essential pre-condition for the successful implementation of an MES and vital

if it is to become an integral part of the project management.

The Ministry of Health and the SDC headquarters also have an interest in information about the project's effects, its effectiveness, and its impact. This is where basic decisions are made concerning important events within a project, such as the preparation of a new phase or a fundamental change in the project objectives.

The PROPARG monitoring and evaluation system has become a very helpful instrument for refining the project management. It makes decision-making for all project personnel easier and improves, through its objective monitoring process, the willingness and capacity of project personnel for self-evaluation and self-criticism. In addition, it supplies national sector policymakers and external support agencies with information for high-level executive decisions. As for PROPARG's future, its own MES will help to determine, at the end of 1991, if and how PROPARG will continue. ●

References

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Two promoters collate data for the annual analysis and group discussion.