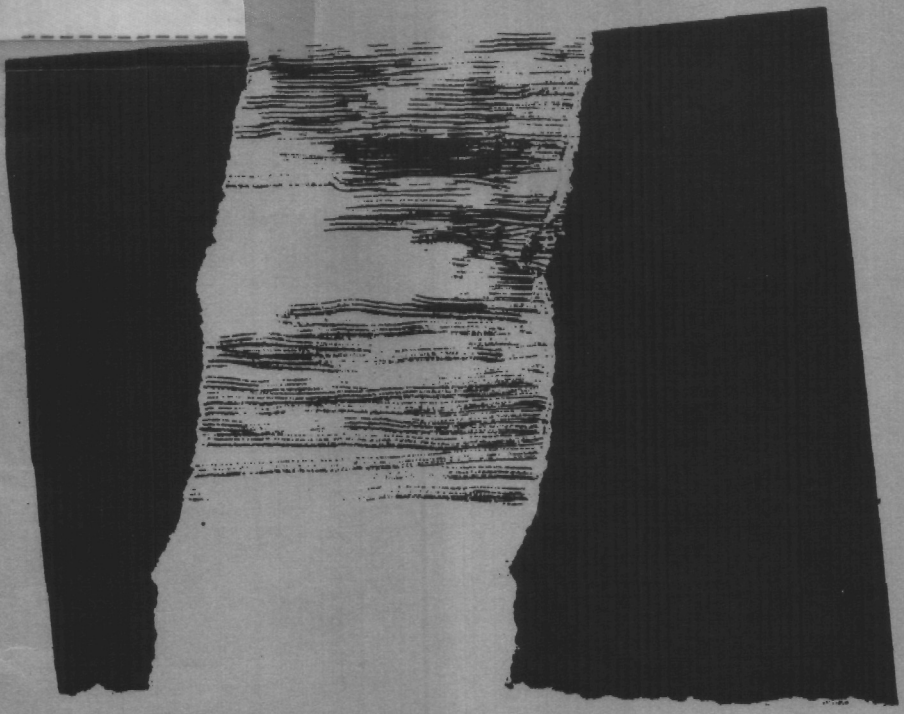

WATER & SANITATION 89 - A SYNTHESIS

Cross-Analysis of five Evaluations concerning Drinking Water Supply and Sanitation Projects

Commissioned by the Swiss Development Cooperation (SDC), Berne, Switzerland, Water and Infrastructure Service

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What This Is About

The cross-analysis "CA Water 89" aims at evaluations of five Drinking Water Supply and Sanitation Programmes (DWSS) supported by the Swiss Development Corperation (SDC) in five countries: Bangladesh (1987), Mozambique (1987), Lesotho (1988), Nicaragua (1988), Nepal (1989).

Their relevance to key issues is analyzed:

- sustainability
- interdependence between project-environment-health
- relationship project-power structures or project-women
- efficiency.

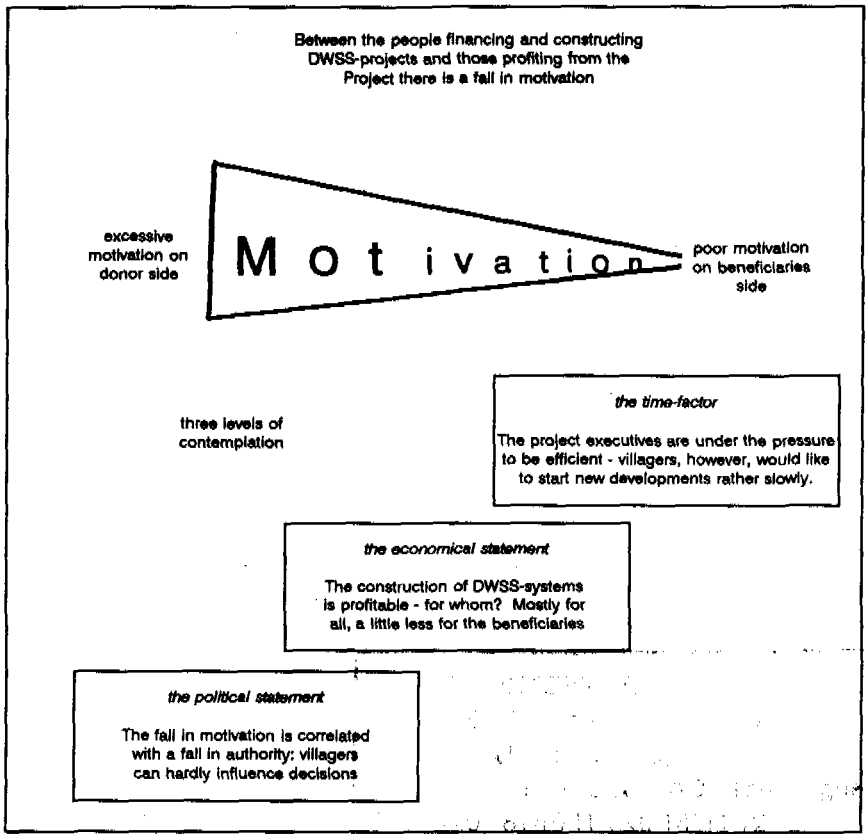
The CA analyzes the work done by the evaluators of the individual projects from a broad perspective. This overview aims to contribute to a better formulated strategy for sector programmes. On the other hand such overviews run the risk of being too detached from project-related details and from the experiences of the evaluators. To avoid this the authors held discussions with the evaluators and experts within SDC, Helvetas and SKAT (Swiss Centre for Appropriate Technology). The information exchange during the AGUASAN Drinking Water and Sanitation Workshop 89 provided additional essential inputs.

This report presents the rough summary of the findings of the CA. It has been prepared by Andrea Pozzi of Niederer + Pozzi and Jean-Pierre Wolf of KEK/CDC-AG, Zürich. The views and interpretations are those of the authors and do not necessarily coincide or reflect the opinion of SDC. Readers interested in a full report in German may contact SDC.

(Translated from the German original published in November 1989)

The Crux

What are the global questions confronting projects in the Drinking Water Sector? The following diagram sums up the situation:



About Motivation

The villages are poorly motivated

- Water supply systems exist in every village. In each of them some means of finding, fetching and storing water are available. This often requires time; furthermore, supplies are often precarious and of dubious quality. However, these traditional means are integrated into the social life and they fit well within the community's maintenance and administrative capacity.

- Daily life in the village has many faces: it involves eating, drinking, loving, working, sleeping, celebrations, political activities, organizing, trading, bringing up children, praying, playing, etc. - all of which require time and fill the day. Changes are happening everywhere and must be confronted. But where are the priorities ? On what subjects do the different individuals and groups concentrate their energies? Who is influential in the village? The motivation for a DWSS is high wherever a high value is assigned to satisfying the need for clean drinking water, as compared to other needs.
- The modernization of the water supply involves replacing the present system with one that has a higher capacity. The system's function remains the same. The change is welcome wherever the relevant groups or individuals make it their priority. Often, the need for modernization is inspired by modernization in other villages. But it should not be too expensive. It should not interfere with the community's traditional organization and hierarchy.
- Motivation may vary greatly because it also depends on factors unrelated to the DWSS-project, e.g., changes in the level of income within the population, political tensions.

We are excessively motivated

Whereas the villages may often lack motivation, the donors and their project staff are highly motivated:

- Improvements in the DWSS situation make sense. The discrepancy between actually existing systems and those that are nowadays technically available is so apparent that the advantages of a change are obvious to us.
- As far as the health factor is concerned, the utility of modernization cannot be denied. Health is one of our highest values. Any effort that contributes to it must be positive.
- The financing of a DWSS-project is not usually a problem. The value of drinking water stands high on any "scale of needs". Sponsors will readily finance a project, since they feel very "sympathetic" towards the needs of a population suffering from insufficient water supplies and consequent disease.

Economic Aspects

Given the asymmetry in motivation, why are DWSS projects built in such great numbers and in so many areas?

- Money is available. Most participants benefit: planners, coordinators, consultants, project managers and collaborators receive their salaries without question. They profit from the project. First World businesses sign contracts for the supply of vehicles, pumps, machines, waterpipes, laboratory equipment.
- Local partners receive a (low) salary, daily allowances, bonuses, possibly a grant. They may be allowed to use a project vehicle, even though this right will not always be granted easily. Partner organizations are paid money which allows them, at least partially, to sustain their own undertaking.
- The men and women from the villages are not very willing to do unpaid work for the project, even when its usefulness is apparent. They would like to be paid, like all workers. They thus often receive a daily allowance in cash or food or they benefit in another way from the project.
- All participants to a DWSS-project profit from it. However, the closer to the village level, the lesser the profit. Operation and maintenance of the installations do not function smoothly because it is the beneficiaries who are the losers: they have to finance this at the expense of other tasks.

On Politics and Power

All participants try, in their own way, to gain power.

- Once a village has agreed to the modernization of its drinking water supply system, it has to accept an endless series of stringent conditions. DWSS-projects simply assume that the population will agree to these: special village committees must be formed, training courses must be attended, construction and maintenance costs must be paid, changes in the division of labour between the sexes must be accepted, latrines must be built, public and private hygienic habits must be adapted, etc.
- Villages have no alternative - they do not define the conditions. Development cooperation does not work on a democratic basis. Decisions are made at the top. A high percentage of the decision-makers are politicians, but also development, water, construction and health specialists. They have created mankind's greatest project: to

reduce the discrepancy between the poverty in the rural regions of the three continents and the comfortable conditions they (we) live in. Those who do not understand this are encouraged to try.

- But the beneficiaries also have power: they may practice a passive resistance and remain outsiders.

The Time Factor: The Work of a Generation

Analyses of the five evaluations clearly show that the programmes will hardly satisfy sustainability criteria. Governments in the developing countries do not have the means of maintaining the institutions we painstakingly build. They cannot guarantee the serviceability of the installations and are unable to contribute enough to their operation and maintenance. The existing systems are falling apart or must continually be renovated within further projects. Some villages have reverted to the traditional means of supply used before the DWSS-project. Essential elements are missing which would allow an evolution in the sanitary domain: qualified personnel, an understanding of interrelations between DWSS-projects and health, and short-term visible success.

Improvements in the field of DWSS are evolving slowly. This should be remembered when considering past difficulties. Until now, projects have been carried out too hurriedly. Arguments such as the importance and urgency of the problem have been used to speed up the process. However, the following factors are considered to play an important role:

- the collaborators in many programmes put themselves under a pressure of efficiency standards,
- they feel the need to justify their work to the sponsors, independently of whether these actually urge them to do so or not,
- pressure results from competition between the various organizations and projects.

On a long-term basis, those DWSS-projects must be preferred which, in the users' view, offer economic and ecological advantages, while alleviating hardships. Population growth and changes of environment and consumption patterns enhance the need to adapt existing DWSS-systems. Being ready to react timely and with adequate means to these challenges implies that the efforts instigated in the DWSS-sector must be continued, albeit on the basis of a re-orientation of the priorities.

How should the DWSS-projects of the 1990s be conceived? A number of recommendations are elaborated in the next part of this paper.

5 Recommendations for the Design of the Sector Programme for the 1990s

DWSS-programmes will maintain their worldwide and long-term relevance. What are aspects in focus for a sector programme of the 1990s? Which adaptations, according to past experience, should be made in project design? We consider the following reflections to be crucial:

1. Less Ambitious DWSS-Projects

DWSS systems are being built daily. The proclamation of the "Water Decade" resulted in a world-wide campaign against under-development, disease and the difficulties of satisfying vital needs. Given the fact that the campaign was burdened with several shortcomings for which no solutions could be found before the end of the Decade, there is widespread consensus that efforts must be doubled in the 1990s.

However, the CA suggests a different approach. We recommend that the numerous standards which have gradually been associated with the construction of a DWSS-system be reconsidered systematically. Aim: to dismantle the ideology.

We believe, for example, that a number of questions should be re-examined for which answers have been taken for granted in the past:

- Is the new DWSS-system better than the old, "traditional" one?

The new system can only be better if it is conceived on a holistic basis: drinking water must be available everywhere and for everyone, i.e., also in the place of work (e.g. fields). Traditional watering-places will still be used where they have long proven reliable. They must be integrated into the project and improved. The following questions may serve as a test: Is a new construction absolutely necessary? Is it possible to improve existing resources (e.g. improvement of an existing well)?

- Can social mobilization bring about a higher degree of participation?

The fact that alternatives to the installations which are actually built have not been discussed leads to false expectations on the part of the beneficiaries. Do they have points of comparison? Do they know what they will be faced with? What do they expect with respect to the operation and maintenance of the system? Extension agents, usually tend to focus on the advantages of a planned system: health, well-being. Disadvantages, or political and material consequences, are hardly ever mentioned. But marketing is of no use to the villages; they need information.

- Must DWSS-projects include a promotion programme for women?

DWSS-projects do not require specific programmes aimed at the women. However, women must be involved in the responsibilities and participate in the decision-process. The tasks of water collection and hygiene education are almost always carried out by women; this will remain so in the near future. DWSS is not a technical problem; it is a social need.

- Do DWSS-projects contribute to improving health?

It is well known that new drinking water supply systems constitute a necessary, but not a sufficient condition for the improvement of health. Health depends on a complicated network of factors. None of the programmes analysed included measures designed for improving sanitation, and none of them were rooted in a holistic concept. Quite the contrary: they are cheerfully continuing to build single systems.

- Will beneficiaries be held responsible for operating and maintaining the installations?

How can the beneficiaries afford the money required for operating and maintaining the systems when their most elementary needs are not even being catered for? Infrastructure projects implemented in the industrialized world are being subsidized. DWSS-projects must be expanded to include maintenance. Time planning and financing must take this aspect into account.

- Are WHO-norms for DWSS always meaningful?

The norms designed by the WHO for DWSS are very strict and demanding. Is it really justifiable to insist on these norms in every case? The criteria applied make it impossible, for example, to implement the improvement of a water hole, despite the fact that it would improve the global situation. An adaptation of aims is more important than norm fulfilment.

2. Simplification of Targets

This recommendation derives from the need to make DWSS-projects less ambitious. It seems to us that DWSS-projects should be considered first and foremost as infrastructure projects, and not projects contributing to education, health, support of women or agricultural production. These secondary activities must be dealt with and coordinated by the relevant

organizations. An integration of secondary activities into the project must be based on answers to the following question:

- Does the activity contribute to the long-term operation and maintenance of the installation?

The development of institutions, the training of technicians, mechanics, engineers, as well as the promotion of local handicraft, should only be supported by the project to the degree that they contribute to the fulfilment of those needs that *instigated the construction of a DWSS-system.*

3. Deceleration of the Programmes

Given the long-term need for the construction, modernization and regular adaptation of DWSS-systems to changing needs, the creation and support of a sense of commitment is very important. This sense of commitment is made up of three elements: a functioning organization, a secure budget and a well-tested approach.

At the operational level, this results in:

- Fewer installations being built,

as long as no guarantee exists that they can be operated on a long-term basis. Speed of implementation is important only in rare cases. The most difficult problem in achieving a deceleration is to resist competitive pressure from other donor organizations.

- More time being devoted to observation and inquiry into local needs.

DWSS-projects operate within a particular area. It is thus possible to learn more about this area: Where does the water come from? Where does it flow to? How much does it cost (in labour)? Does it taste good? We recommend unprejudiced curiosity.

We also recommend that the emphasis be shifted from a (admittedly false) fixation on outputs to the promotion of a sense of commitment. People will be committed once the conditions for a long-term use of the systems to be built are favourable. This change in emphasis will certainly have consequences for each programme (number and role of participants, etc.). It would be useful to analyse these consequences.

4. Formulation of Clear Contracts

The better we are able to formulate clearly the *conditions* under which we are prepared to help realize a DWSS-project at village level, the easier is our negotiating position and that of our partners. A number of minimum conditions must be fulfilled for a collaboration to be possible at all. Beyond these, everything is negotiable and depends on the possibilities available to a specific partner.

- Negotiation instead of social mobilization

Social mobilization has too often been considered an instrument for convincing a reluctant population of the usefulness of a project. On the other hand, overworked project teams have hardly ever been 'mobilized' and provided with information by the villagers. Partnership involves feedback and negotiation between partners. This approach will not eliminate the fact that the village is (structurally) in a position of inferiority; but it makes it more open.

- Adhesion to contracts

Authorities independent of the negotiating partners are required to check whether contracts are being kept to. Modifications to the contracts must be discussed and agreed upon. Aim: frankness of relations between partners, as well as clarification of their respective contributions.

5. The Question of Transfer

The question of when a project should be handed over to its beneficiaries must be negotiated. In the past, it was considered that projects would have a starting point and an end. At the end, i.e., at the time when they were handed over, they were considered *closed*. Projects are still being 'closed', despite a lack of plausible and verifiable indicators as to the justification of such an approach. One single indicator exists: the norms defining the number of systems to be built per head of population. But such an output-oriented indicator is insufficient.

Today it is apparent that the traditional project concepts must be redefined, with regard to both schedule and contents:

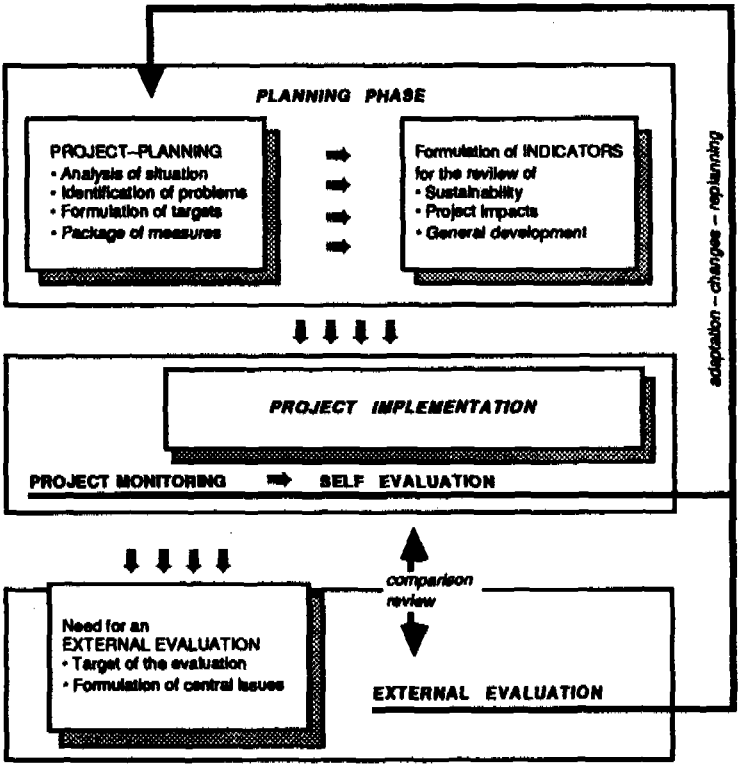
- A *support* phase should follow the actual construction of a system.

In this sense, it would be useful to examine the question of how far operation and management require, under certain conditions, the long-term support of *external* means.

5 Recommendations for the Preparation of Terms of Reference for External Evaluations

1. External Evaluation is Linked to the Planning of the Project

During the planning phase of a project, indicators are defined at various levels (global target, project goals, results and activities). Evaluations must start from there. This implies that the indicators used during the planning phase must be remembered while preparing Terms of Reference. Those corresponding to a genuine need for evaluation will be selected amongst them.



The Terms of Reference for an evaluation are clear. Essential problems have been defined before the external evaluation; monitoring and self-evaluation are used towards this end. Causes and consequences are then analysed by external evaluators and a report presented.

2. Every External Evaluation Must Keep To Certain Standards

We propose that the standardized (i.e., compulsory) part of each evaluation focuses on the following three topics:

- ☐ Operation and maintenance with respect to sustainability:
  - Are the installations being maintained? If not, why?
  - Are operation and maintenance secured on a long-term basis (institutions, organization, finances)?
- ☐ Securing of water resources with respect to sustainability:
  - Is the productivity of water resources known (within the project, to the population, to the partner institutions)?
  - Are the productivity and quality of water resources secured on a long-term basis?
- ☐ Transfer and long-term support at *village level*:
  - Is the transfer organized (contract, responsibility for maintenance)?
  - Is long-term support organized? Is direct technical, administrative and financial support available to the beneficiaries?

These three topics have been neglected by early DWSS-projects. Only recently is more attention being paid to ecological problems. Questions connected with the operation and maintenance of the systems are sometimes being pushed aside because of the notion that a project must be implemented in an "efficient" manner. Questions concerning the village at the time of handing over are assumed to be easily resolved, provided sufficient motivation is there. This is precisely what does not happen.

These three topics are key issues and serve as the basis on which a decision can be made on *project continuation*. They concern results, whereby the manner how these results are attained is of secondary importance (=result-based evaluation). These results help set clear priorities in the selection of targets.

It is expected that the evaluators analyse these issues with the *groups concerned.* They should then be able to make clear statements with regard to both the questions themselves and the search for answers at the time of the evaluation. Should they not be able to answer the questions with a clear 'yes', suggestions are expected on how the situation may be improved.

The questions force the evaluators to analyse the global framework of a project, as well as its environment. Only then will they be able to formulate feasible recommendations. By global framework we mean the chronological and political evolution of a project, but also the manner in which it is embedded in its social and ecological environment.

Regarding other elements of the Terms of Reference, we refer to the SDC publication on guidelines for the formulation of external evaluations [1]. It introduces all the important questions and presents them in a logical manner. We recommend that persons responsible for the formulation of Terms of Reference follow such guidelines. From them, they should select the most important, project-specific questions. Care should be taken that the questions do not overlap each other. The Terms of Reference should clearly outline the tasks allotted to the evaluators.

3. *Self-Evaluation and External Evaluation Are Complementary*

The diagram presented on page 9 takes this recommendation into account: the project selects three indicators for each of the categories ecology, maintenance and transfer; these indicators are used during self-evaluation. The external evaluation centres around a discussion of these indicators; collaborators of the project and evaluators are involved.

Indicators must be selected in such a way that

- they are relevant to one target level only,
- they are plausible, i.e., changes in the indicators can be attributed to specific activities,
- they focus on what is essential and they list the contents of a target in a precise and concrete manner,
- they can be verified objectively,
- the data can be collected rapidly.

Questions such as efficiency of project activities, working methods and internal organization are relevant to project monitoring. External evaluations should not serve as a control authority, because information about background problems is not available to evaluators, who, at most, may act as consultants.

1) SDC 1988: Working Instrument for External Evaluation.

4. External Evaluations are Moments of Joint Reflection

The evaluators take up questions raised by the project and by the institutions involved. They are expected to assess the extent of the problems and their interconnections. Further, they must relate the problems to experiences gained within other projects. They should keep an *objective distance* and foster the communication of results between the different agencies involved.

Time is a central factor. The evaluators should thus concentrate on a few clearly defined, substantial points. Otherwise, they will only report on what is obvious. This would be of no use to the project and cannot be satisfactory to the evaluator. Less is often more! Evaluators should have the courage to say how much time they are able to devote to their task; only in rare cases will they lose the job as a consequence.

Expert knowledge is essential. It requires a special talent to be able, within the short time allocated, to become familiar with a project and its environment. Human relationships play a very central role. External evaluators are not a control authority; for a short time, they become collaborators in the project [1].

5. The Terms of Reference are Used as Table of Contents in the Evaluation Report

The Terms of Reference should be structured in such a way that they can serve as a table of contents for the evaluation report. This gives both the evaluators and the readers a better orientation. It also simplifies comparisons within the sector programme. Small exceptions to this rule may be argued in specific cases, but the evaluators should not be given as much leeway as they have had in the past. This, however, will only be possible if the Terms of References are formulated adequately and correspond to the actual needs of the participants.

1) see also chapter 4 of the SDC guidelines

25 Criteria for the Evaluation of DWSS Projects

The criteria listed below serve as guidelines for the formulation of project-specific indicators. They are intended for future evaluations and monitoring programmes.

Sustainability

Motivation and Participation

- ☐ Beneficiaries will remain motivated with respect to DWSS-installations if their need for clean drinking water is high as compared to other needs.
- ☐ Beneficiaries will remain motivated with respect to DWSS-installations if water is always available in sufficient quantity and easily accessible.
- ☐ Beneficiaries participate if the organization and financing required for the operation and management of installations have become effective.
- ☐ Motivation and a commitment to participation often have little to do with the project. They depend on previous experiences of the beneficiaries with administrative bodies. They also depend on the position granted to various social or ethnic groups, or on the degree to which they have been allotted or refused responsibilities.

Operation and Maintenance

- ☐ Long-term operation is guaranteed if the DWSS-installations are simple and cheap to operate and to maintain (adapted technology).
- ☐ Long-term operation is guaranteed if the financing of the installation, its administration, operation and maintenance are organized and assured.

Institutional Organization

- ☐ A long-term institutional support is guaranteed if the new agency is integrated into the existing institutional environment, is allotted clearly defined tasks, and is accepted by the government.
- ☐ A long-term institutional support is guaranteed if the budget of the agency concerned is financed locally and is used adequately.

Middle- and Long-Term Financing

- ☐ A scheme is sustainable if questions relating to expenditure and income have been looked into, relevant data are being collected and used, data computed, and the efforts for long term cost-effectiveness and profitability are given first priority.

- Long-term financing is only guaranteed if financial needs (in cash and in man-hours) are in due proportion to the income and to the daily workload of the beneficiaries.

Applied Technology

- Long-term maintenance of the installation is assured if it has been built as much as possible with local materials and can thus be maintained.

Transfer

- The project outlasts its handing over if a contract has been negotiated, including the timing and modalities of the transfer, as well as the activities required for its maintenance (maintenance project). The scheme is the property of the users.

Interdependences

Effects on the Environment

- Negative effects of the project on the environment can be kept low if the productivity of the water resources is maintained and protected.

Effects on nutrition, hygiene, and health

- The project will promote individual well-being only if enough facilities are available and functional without interruptions.
- The scheme will promote health if the water is not exposed to dirt on its way to and in the household.

Social Aspects:

DWSS-projects and power

- DWSS-projects achieve their development target if all social groups are given the same opportunity, in particular with regard to the selection of a project, to its location and to the use of the facilities.
- DWSS-projects may not lead to a deterioration of well-being for any one person.

DWSS-projects and women

- Women, as experts regarding water, will be motivated if activities do not confirm their traditional role (cleaning, caring, cooking, etc.), but instead show them ways of for participation and taking responsibility.
- Genuine participation of women means women being involved in the planning of the installations. They must be granted seats and votes in the new institutions.

Efficiency

Management

- A clear and flexible management concept improves the efficiency of project management.

Organizational structures

- Organization is efficient when it works on clearly defined tasks and avoids creating structures that run parallel to other structures. With regard to these, its task is one of coordination.
- Efficient organizational structures are to be found where the investment in the project implementation and in its administration stand in favourable proportions.

Programme implementation

- An efficient programme implementation requires a data-based evaluation of its efficiency.
- The partners involved must be clear and in agreement on the contribution to which they have committed themselves; these contributions are defined by contract.
- The potential of existing resources, logistical means and institutions must be analysed and better utilized.

Checklist for the Planning and Evaluation of DWSS-Projects

Name of Project:

Country:

Date:

FIELDS	YES	NO
SUSTAINABILITY		
MOTIVATION AND PARTICIPATION		
1. Clean water is highly valued by the villagers		
2. Water in sufficient quantity is available and easily accessible		
3. The organizations required for operation and maintenance O&M are functioning		
4. Experiences outside of the project are not a hindrance to the motivation and participation of the village		
OPERATION AND MAINTENANCE		
5. The installations are simple and cheap to operate		
6. Financing of administration, operation and maintenance is settled		
INSTITUTIONAL ORGANIZATION		
7. The institutional organization is integrated into the existing institutional environment		
8. The institutions's task is clearly defined, its budget is financed locally		
MIDDLE- AND LONG-TERM FINANCING		
9. Expenditure/profits have been studied, data collected		
10. Expenditure for O&M are in a reasonable relation to the local income and labour commitments		
APPLIED TECHNOLOGY		
11. As far as possible the installations are built with local materials		
TRANSFER		
12. Data and modalities of transfer, incl. long-term support have been defined by a contract		

INTERDEPENDENCE		
PROJECT ENVIRONMENT		
13. The productivity of the water resources is maintained		
14. The installations do not pollute the ground-water		
PROJECT - NUTRITION - HYGIENE - HEALTH		
15. Enough facilities are available (including the place of work)		
16. The water remains clean in its way to and within the household		
SOCIAL ASPECTS		
DWSS-PROJECTS AND POWER		
17. All social groups are granted equal opportunities		
18. The project does not lead to a deterioration for anyone		
DWSS-PROJECTS AND WOMEN		
19. Women participate in the planning and preparation		
20. Women's participation and decision-making are encouraged		
EFFICIENCY		
MANAGEMENT		
21. The managerial concept is clear, feasible and flexible		
ORGANIZATIONAL STRUCTURES		
22. No structures are created alongside existing ones		
23. The investment in the project implementation and that in the administration stand in favourable proportions		
PROGRAMME IMPLEMENTATION		
24. A data-based evaluation of efficiency is possible		
25. The potential of existing resources, logistical means and institutions has been analysed and used		

CA-Water, NiPo, Nov. 89

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