# MANAGERIAL AND ORGANIZATIONAL ASPECTS

FOR THE EVALUATION

OF DONOR-ASSISTED PROJECTS IN DEVELOPING COUNTRIES

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ABBREVIATIONS

SUMMARY

ABBREVIATIONS

CARE	CAtholic RElief (US Based Private Voluntary Organization)
DANIDA	DANish International Development Agency
DGIS	Directoraat Generaal Internationale Samenwerking
DHV	Dwars, Heederik & Verhey consulting engineers
ETC	Education, Training and Consultancy
FINNIDA	FINNish International Development Agency
IAC	International Agricultural Centre
IHE	International Institute for Hydraulic and Environmental Engineering
IRC	International Water and Sanitation Centre
IDWSSD	International Drinking Water Supply and Sanitation Decade
MIS	Management Information System
NGO	Non-Governmental Organization
NOVIB	Dutch NGO for development aid
O & M	Operation and Maintenance
PMT	Project Management Theory
PSWS	Public Standpost Water Supplies
RIVM	Rijks Instituut Voor Milieuhygiene
SNV	Stichting Nederlandse Vrijwilligers
ToR	Terms of Reference
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational Scientific and Cultural Organization
UNICEF	United Nations Childrens Fund
USAID	United States Agency for International Development
WASH	Water and Sanitation for Health Project
WHO	World Health Organization
WM	Wageningen Model
WSS	Water Supply and Sanitation

SUMMARY

This reports constitutes a study of the managerial and organizational aspects for the evaluation of donor-assisted projects in developing countries. A framework was developed after studying relevant literature, interviewing experts, and screening 47 evaluation reports.

In the framework six fields of interest were distinguished, which are of importance for the evaluation of managerial and organizational aspects of developing countries. These fields are: objectives of the project, financial management, personnel management, logistical management, organization, and information.

Objectives provide clarity about the intention of the project. This clarity of objectives is a necessity to familiarize the organization and all the involved actors with the destination or direction the project is aimed at. A project requires three main inputs. Financial resources is one of these inputs and because resources are scarce, they must be used as effectively and efficiently as possible. Manpower forms another input, which takes care of the physical and mental contribution of personnel, necessary to achieve the objectives of the projects. Logistics are concerned with the physical input of the project. The necessary material and equipment must be available at the scheduled time with a minimum of losses and at reasonable and affordable costs. The organization is the body in which inputs and objectives function in order to achieve a sustainable project result. To co-ordinate all activities mechanisms are needed. For instance, procedures for decision-making processes are an example of such a co-ordinating mechanism. Information links all five mentioned fields together. A Management Information System is a tool to provide relevant information to the project manager and other parties involved. Through this system, they are kept informed of the status of the project, and necessary actions can be undertaken.

The findings of the screened evaluation reports, clarify that the evaluation of managerial and organizational aspects can be improved. Studies are not carried out systematically. Often only the problems are mentioned, but it is not revealed, or at least not reported, what the real causes are. Also the problems are not related with other fields, and because of this, given recommendations stand by themselves. The researchers' opinion is that it should also be revealed what the decision-making processes are, that are the underlying cause of the problems. This in order to clarify what the bottlenecks are and how to solve them.

To simplify future evaluations a list of potential questions was formulated. It covers items of all fields of interest, of importance for evaluating managerial and organizational aspects of developing projects. The attitude of the evaluator should be one in which he plays an active role, so additional questions may be posed wherever necessary.

1 INTRODUCTION

1.1 Background of the study

At the moment, having access to safe drinking water and adequate sanitation is, the privilege of only a small part of the world population. Some 340 million people in developing countries have access to safe drinking water; almost 140 million people have benefitted from newly installed sanitation facilities.
To increase the standards of living, the General Assembly of the United Nations declared the decade 1981-1990 as one in which everybody in the world is entitled to access to the two following vital necessities of life: water and sanitation.

Nearing the end of the International Drinking Water Supply and Sanitation Decade, it can be concluded that the Decade has been successful in the sense that important lessons have been learned on the approaches to achieving this goal. A few issues (modified from IRC (56)), are:
- simultaneous development of water supply and sanitation facilities;
- strategies giving precedence to poorly served people;
- programmes promoting self-help;
- community involvement at all stages, with special emphasis on women;
- association of water supply and sanitation with other programmes, especially primary health care and hygiene education;
- provision of socially relevant systems that people can afford and a gradual development of payment for the services by the beneficiaries;
- attention to the operational stage, including maintenance;
- improvement of financial management.

Since many countries are increasing their rates of investment in rural water supply projects, the important questions are whether the projects have achieved their objectives, and whether the investments are effectively utilized to produce the desired benefits and impact. The instrument to judge this with, is to carry out a systematic evaluation. There are different types of evaluation (e.g. monitoring, on-going evaluation, impact evaluation). The resulting feed-back of information takes care of the necessary adjustments in the project progress. In a later stage, evaluation studies are done to contribute to decision-making on policy and programmes.

However, it should be realized that implementation of e.g. wells, handpumps or latrines alone is no guarantee whatsoever for improving the well-being of the beneficiaries. "Software" components, such as involvement of the community in the project, human resource development and so on, are just as, or even more,

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important for the success and sustainability of developing projects.

Management of the project is an essential ingredient for success. Evaluation studies should not only assess the pure results of the technical implementation. The relative succeeding or failing of projects also depends on the organizational set-up and on previous management processes. These processes are interwoven in all stages and at all levels in the project. In this context, it is clear that the functioning of the organization, as well as management processes should be evaluated.

1.2 Assignment of the IRC

IRC is an independent non-profit organization (Annex A). One of its main roles is to participate in evaluation missions to developing countries, in the drinking water- and sanitation sector. At IRC, people had the idea that in evaluation reports, the managerial and organizational aspects are not given enough attention. IRC wanted to identify the gaps in order to be able to formulate recommendations for future evaluation missions.
As management is a fundamental building stone for a satisfactory project performance, it should also be an integral part of the evaluation of projects. The main purpose of this study is to reveal if and how attention is being paid to managerial and organizational aspects in evaluation reports and if not, to indicate what gaps there are.

In a meeting with the IRC staff and the supervisor of the LUW, the following Terms of Reference were agreed upon:
1. To review evaluation studies and reports on managerial and organizational aspects and list those covered or not covered;
2. To study managerial and organizational aspects of a few specific water supply and sanitation projects in more detail;
3. To prepare recommendations and key indicators for the evaluation of managerial and organizational aspects of water supply and sanitation projects;
4. To prepare a written report on above activities.

It should be emphasized that the investigators mainly focussed on evaluating the implementation stage of projects. The reason for this is that very few reports are published of the post-project stages. This is a pity, because the latter stages would reveal data about the sustainability of the projects and could be used for further project formulation.

This report begins with a description of the used approach of the investigation (chapter 2). The taken steps to come up with the formulation of a framework for the evaluation of projects, as far as the managerial and organizational aspects are concerned, have been laid down. It is also described how and in what way the

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literature was reviewed. After that, chapter 3 will review the evaluation process in general and the framework is presented. The framework should be seen as a two-step model. Step one will cover all important fields for the evaluation of managerial and organizational aspects. The second step is a more detailed study of the possible questions that should be asked by the evaluators. Results of the evaluation reports after they have been screened, can be found in chapter 4 and, finally in the last chapter (5), conclusions will be drawn and recommendations given.

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2 THE APPROACH OF THE INVESTIGATION

2.1 Introduction

This chapter describes the approach used for the research. All of the processes the researchers went through in order to make their framework for the evaluation of projects, as for managerial and organizational aspects, are described. This was done so the reader could get familiar with the investigators' process of thinking and working.

2.2 Setting up a management model

A basis for the framework, two important theoretical management models were used. Firstly, the Wageningen Model (WM) was used. In this model of Kampfraath and Marcelis (58), four managerial conditions (information, management tools, organizational regulations and management personnel) together with four managerial concerns are expressed and used to describe management processes in organizations.

Secondly a management model, known as the Project Management Theory (PMT) of Wynen, Renes and Storm (66), was used. According to Noë and Moll (60), the latter model is more of an inventorying and ordering kind, while the WM is more analytical and conceptual (Annex B). Using the two above mentioned models the aim was to formulate an integrated model. This model was used to identify the problems in project management in the drinking water and sanitation sector. The aim being to get a grasp of project management problems in developing countries.

However, after having discussed the model with some internal and external staff members, the investigators decided to simplify the model substantially. From the practical experience point of view it is difficult and time-consuming to enter into a model. The outcome of this investigation should not result in an extra action for the evaluators, but is meant to facilitate the process of evaluation.

2.3 Preliminary questionnaires

A list with special questions, to be used for the evaluation of projects, was prepared. This list is a guideline for the further progress of the research. It provided a first access into the world of evaluating developing projects. Extracts from literature (53,54,65) and results of a common brainstorming process, lead to specific questions. These questions focused on all project stages (formulation, planning and design, implementation, handover and evaluation).

In a following stage, above mentioned list was reorganized in such a way that the basics of the WM and PMT were used. This resulted in questions about strategic management (capacity creating concern), logistics and project controlling in time, financial resources and quality (capacity utilizing concern), and desired management conditions.

The next step was the production of a generally applicable questionnaire, which would be sufficient to evaluate all project stages, using just one list of questions (Annex C). This was possible, because it became clear to the investigators that in all project stages the same sort of questions could be asked.

2.4 Literature search at the IRC documentation centre

To indicate which reports had to be screened, the investigators made use of a computer at IRC's library. The key words used were evaluation and administration and title evaluation.

In first instance, 271 references were found as a result of this computer search. A further selection as for the suitability left the researchers some 50 useful evaluation reports. These were evaluation studies carried out by different agencies (IRC,DHV, DGIS,FINNIDA,DANIDA,NOVIB,SNV,UNICEF,WASH), on water supply and sanitation projects.

2.5 Screening the evaluation reports and the set-up of the fact sheet

In order to clarify the way in which evaluation studies are being carried out in practice, information had to be handled systematically. To facilitate the screening process, a list of questions (Annex C) was used and a fact sheet (Annex D) was made. A fact sheet is a form with specified fields of interest, which is made to gather and document information in a systematic way.

Using the fact sheet, 47 evaluation reports were screened, so that the interesting issues were categorized. Subsequently, the comments were analysed and general observations resulting from the evaluation studies were listed (Annex E). The main observations are described in chapter 4.

It should be clear to the reader that this was merely a screening process, and not a detailed study into all of the evaluation reports. As this screening process was more thoroughly than was planned originally, there was not enough time for a detailed investigation into a number of cases.

The purpose of the screening of the reports, was for the researchers' to keep the central themes, the managerial and organizational aspects of evaluations, in their minds. To illustrate the working method as for the themes, later on two examples will be given. Where financial management is concerned,

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the emphasis was not laid on merely economic matters (availability, sufficiency), but on the controlling processes (for instance how was exceeding of budget controlled).
It is not important whether data collection has already taken place or whether the information is available for the community, but it is of more importance what the project team has done with the information. In other words what procedures have been formulated to streamline the information and to make an effective use of it.

2.6 Interviews with experts

In order to check the accessibility of the evaluation framework, some experts from the IAC, IHE, IRC, ETC, DHV, Matrix Consultants and RIVM (Annex F and G) were asked to give their opinion. All of them were experts in evaluating projects in developing countries. Both independent institutions and commercial consultants were involved. As a result of the dialogue with them a selection was made of important issues to be concentrated on, concerning the managerial and organizational aspects of projects. The following issues were selected: objectives, financial-, personnel- and logistical management, organization and information. These issues were put into a framework, serving as a base from which an evaluator could start working in the field. Additional literature and interviews made some adjustments desirable to formulate the framework.

2.7 The framework

After all the preparatory activities had been carried out (2.2-2.6), a framework to evaluate the managerial and organizational aspects could be developed. Chapter 3 describes the framework. It is in two parts. First there is a list of key words, which is supplemented by a list of additional questions.

3 EVALUATION OF MANAGERIAL AND ORGANIZATIONAL ASPECTS IN WATER SUPPLY AND SANITATION PROJECTS

3.1 Introduction

This chapter is separated into two main parts. The first section (3.2) deals with the process of evaluation of WSS projects. The need for evaluation studies is made clear, in the context of the project cycle. Consequently, some information is given about the composition and background of evaluation missions. In addition the next sub-paragraphs have been reserved to discuss the WHENs and WHATs of evaluation.
The second part (3.3) describes the framework used to evaluate managerial and organizational aspects of development projects.
Here the first sub-paragraph deals with the description of the chosen fields of interest for the evaluation of managerial and organizational aspects. The fields were selected after screening the literature, the researchers' own background and after interviews with experts on the evaluation of development projects.

The framework itself consists of two main parts. The first section (3.3.3) provides an overview of all the areas of interest that need attention. The second part of the framework (3.3.4) deals with a list of potential questions which can be used in a next stage of the evaluation.

3.2 Evaluation of water supply and sanitation projects

3.2.1 The need to evaluate WSS projects

There is a growing awareness of the need to evaluate WSS projects. Evaluating WSS projects allows testing the assumptions against actual experiences gained from completed projects, so that the faults can be rectified, strengths identified and future plans improved (57).
It is hardly possible to produce a global organization set-up for the evaluation of WSS projects, which could serve the needs and requirements of every water and sanitation sector organization in each country. This has to be tailored to adapt the specific conditions of each country's organizations.

Often evaluation is seen as the last key in the project cycle. This shouldn't be the case, it should be integrated, overlapping in all stages. UNESCO (64) states that evaluation is a process that attempts to determine as systematically and objectively as possible the relevance, effectiveness and impact of activities in the light of their objectives. This means in every stage of the project a continued "looking over the shoulder", is a necessity for satisfactory project performance. Imboden (55) argues that

the main purpose of evaluation is to improve the management of the services by providing timely information on the success or failure of projects and assuring that this information is used by the decision makers.

Van Dusseldorp (50) distinguishes five different functions of evaluation. They are: learning function (for future usage); steering and management function; control and inspection function; accountancy function (information about right allocation of money of e.g. taxpayers); advocacy function (results are used to obtain more funds in the future).

3.2.2 The composition and background of evaluation missions

Evaluations of WSS projects frequently occur ad-hoc. The evaluation missions are often small and consist mainly of external experts, with differing disciplinary backgrounds. These experts will work on the basis of their own background field of specialization.
Management specialists are hardly ever involved, which means management issues have to be evaluated by all of the team members. Not focussing on management issues in particular, will definitely lead to an underestimation of reviewing the institutional frame of the organization. As for the operational stage, it is to be doubted if a sustainable organization has been developed. For this reason it is important that an evaluation be done systematically, trying to identify whether problems can be ascribed to managerial or to organizational origin and to recommend how to improve problems that have come up.

3.2.3 The moment of evaluation and the content of evaluation studies

Evaluation studies can be categorized in various ways. One possibility is to make a distinction between the time of evaluation compared to the project stage. The following table, modified from Imboden (55), could be derived. Although basic purposes, primary users of information, type and sources of information are indicated, nothing is said about the evaluation of managerial and organizational aspects. All types of evaluation studies mainly emphasize technical, administrative, health, social and economic benefits. They are mainly the technical content of achieved project results. A comparison between in- and outputs is made, but not connected with managerial or organizational aspects of the project.

Table 3.1: Summary of types of evaluation and their character-
istics (modified from Imboden (55) and Issayes (57))

Characteristics Type of evaluation	Basic purpose	Type and source of information	Primary users of information	Collectors of information	Timing
Monitoring	Keep track on the progress of project implementation. Timely removal of project lags and correction actions (management orientation).	Input/output purpose, intervening variables. Source: Periodic reports and observations.	Project managers, supervisors, beneficiaries and funding agency.	Project management and operation personnel.	Continuous
On-going evaluation	Determination of the continuing relevance, output and effectiveness of project. Assessment of validity of immediate targets, effects and objectives (target orientation).	Input/output process, purpose Source: In-depth studies, participation observation, sample surveys and rapid reconnaissance.	Project management	Project management/ outside help	Continuous or Ad-hoc
Impact/ex-post evaluation	Assessment of the overall output, maximum and long-term objectives, differential effects and impact of project/programme (beneficiary orientation).	Input/output purposes, goal, hypotheses, long term objectives. Source: socio-economic surveys.	Policy management	Outside institution in collaboration with policy management.	Data collection beginning/ end of project. Analysis: end of project.
Research evaluation	Determine effects of policy	- ditto -	Policy management and planning	Research institution and local universities	Data collection periodical Analysis: end of project.

3.3 The framework

3.3.1 Fields of interest

The lack of attention paid to managerial and organizational
aspects can be concluded from table 3.1, again emphasizes the
importance of the need focussing on these aspects. The
researchers' opinion is that the success of the project is also
dependent on the process of realization. This means that not only
the technical output, but the processes that led to realization,
e.g. decision-making processes and other social concerns, should
be reviewed. Both of these contribute to the success or failure
of projects. So it is obvious that these matters should be dealt
with in evaluation studies as well.

For the evaluation of projects on managerial and organizational
aspects, fields of special interest to focus on are: objectives
of the project, financial resources, manpower, logistics,
information and organizational issues.
Formulation of objectives is necessary to clarify what the
project aims to achieve. Financial resources, manpower and
logistics are the inputs that provide the desired capacities
available for project execution. Organization and information
form the body, in which the project functions. An optimal
exchange and application of information should result in adequate
control, leading to a sustainable project result.
The next figure illustrates the framework.

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                          ┌──────────────────────────┐
                          │       OBJECTIVES         │◄──────────────┐
                          └──────────────────────────┘               │
                                    ↑↓                               │
                                    ↑↓                               │
┌────────────────────────┐          ↑↓                               │
│       INPUTS           │  ┌──────────────────────────┐             │
│ ┌────────────────────┐ │  │                          │  ┌──────────────┐
│ │ FINANCIAL RESOURCES│ │↔ │                          │ ↔│ PROJECT      │
│ └────────────────────┘ │  │                          │ ↔│ RESULT       │
│ ┌────────────────────┐ │  │      ORGANIZATION        │  └──────────────┘
│ │      MANPOWER      │ │↔ │                          │        ↑↓
│ └────────────────────┘ │  │                          │        ↑↓
│ ┌────────────────────┐ │  │                          │        ↑↓
│ │     LOGISTICS      │ │↔ │                          │        ↑↓
│ └────────────────────┘ │  └──────────────────────────┘        ↑↓
└────────────────────────┘                                      ↑↓
          ↑↓                          ↑↓                        ↑↓   ▼
┌──────────────────────────────────────────────────────────────────┐
│                          INFORMATION                              │
└──────────────────────────────────────────────────────────────────┘
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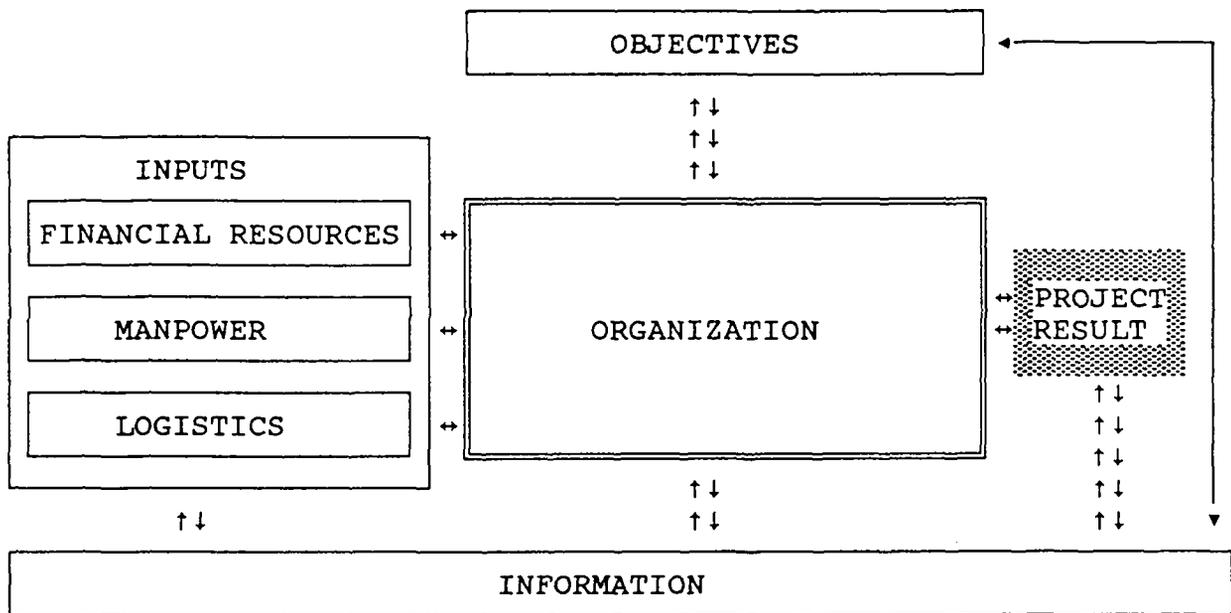
Figure 3.1: Illustration of the framework: Fields of interest for
           the evaluation of managerial and organizational
           aspects and their interrelationships

3.3.2 Description of the selected fields of interest

The following sub-paragraph describes the importance of the
selected fields for the evaluation of managerial and
organizational aspects.

Objectives

An objective is a formulated desire for a future situation that
one has decided to realize. The situation can already exist, and
must be continued, or it could be a new non-existent situation.
Clarity of the objectives is a necessity to familiarize the
organization and all the other involved actors familiar with the
destination or direction the project is aimed at (52).
"Without objectives, organization is like a rowing boat full of
little boys - except that nothing much is lost if the boys get
nowhere, but an organization which fails can be cause of great
hardship" (Oldcorn, 61).
A distinction can be made between long-term and short-term
objectives and/or between main- and specific objectives.
As objectives are important for project execution, it is also of
the interest for the evaluation of the project. To evaluate the
objectives originally set, they must be compared with the project
result achieved, utilizing verifiable indicators (such as the
number of trained people and number of drilled wells).

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Financial Management

Financial resources are an important project input. Because the amount of money is always limited, care has to be taken what to do with it and how to spend it as efficiently and effectively as possible. Financial resources for development projects can either come from the government, or from donors, or from the community itself, paying for the delivered services. In accordance with the objectives, the resources have to be allocated and made available at the right time to the right person in the desired quantity. Therefore all these issues should be evaluated regularly and, if necessary, adjustments be made. This is also the case for the procedures needed to make the budgets available. There should be one person responsible for signing the cheques, sometimes with the countersignature of somebody else's. During evaluation missions an investigation should be undertaken to find out whether the budgets were sufficient and if reallocation has taken place.

Personnel Management

It is obvious that manpower is an important input for a project. Both physical and mental contributions of personnel are needed to achieve the objectives for the project. One can distinguish staffing and staff facilities. In the former component there are the following classifications: manpower planning, recruitment and selection. Manpower planning is the allocation of the right people, in the right numbers with the desired qualifications, available at the right place on the right time. During the selection and recruitment of personnel, one must pay attention to intellectual ability, skills, qualifications and personal characteristics. For the requirements of each position it is necessary to include a description of the position and an outline of the skills and expertise expected from the candidate (51). The second component includes training, educating and motivating employees. Training and education may improve the skills and knowledge of personnel, which has a strengthening effect on the organization. Motivating personnel is a necessity for guaranteeing a good performance.

Logistical Management

Logistical management is concerned with the delivery of the necessary equipment and materials to the chosen sites on time, with a minimum of losses or damages, and at reasonably, affordable costs. Logistical management focuses on the transformation of raw materials into the final product and on the distribution of goods. The integral fine-tuning of purchasing, production, sales, and transport forms the logistical management. Several inputs are needed to make a successful logistical management feasible. Financial resources are needed to cover, for instance, the costs of stock-keeping, consequences of shortages,

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of transport, and the costs of understaffing or shortage of machinery. Manpower must organize, co-ordinate and supervise logistical operations. An activity plan can form the base for an indication of the desired quantity of inputs, such as physical means. By physical means not only construction materials are meant, but also office furniture and equipment, vehicles, and warehouses. Non-availability of inputs can lead to time expenditures or over-expenditure of the budget.

Organization

The organization is the body, in which objectives and project inputs are encompassed and function in order to achieve a sustainable project result. Without an organization, there is no co-ordinating mechanism to strengthen the activities needed to deliver the services. Procedures for decision-making processes is an example of such a co-ordinating mechanism. Evaluation teams must check if these procedures have been formalized and if they are followed.
A clear internal and external structure for the project is a necessity, but not a guarantee for the well-functioning of the organization. A good organizational structure is a means to an end, not an end in itself. In addition to one being familiar with his own and others people's tasks, responsibilities and authorities, one should also act accordingly. Consequently the informal organization structure should be taken into account as well. The target group of WSS projects, the community, must be integrated in the organization as a whole. Especially in project formulation and planning a role can be laid aside for them, guaranteeing a sustainable project in the long run.

Information

Without relevant information, which links the five other fields, it is difficult to achieve the required project results. A Management Information System (MIS) is a tool with which project managers and other involved parties are regularly kept informed of the status of the project. Another purpose of MIS is to enable personnel that has been newly assigned to the program to gather information on their new responsibilities as soon as possible. MIS must compare the progress of the project with the original (activity)plan so that corrective actions can be undertaken.
Management information must be available in time, must be reliable and easily obtainable. These are important conditions for effective decision-making, the fine-tuning of decisions to the global- and detailed plans and the controlling of project processes.

One can distinguish two kinds of data flow: formal (recorded) and informal (not recorded) information, such as informal talks and conversations. Other forms of data flow are:

- data flow about the smooth running of things (actual
  developments), such as costs and use of equipment. The project
  co-operators must provide information about their work
  (duties), problems in the progress and advices. This can be
  realized by calling meetings to discuss work or the progress of
  the project. The different types of information should be
  documented;
- data flow about decisions taken. Project co-operators must be
  familiar with each other's activities, the progress of the
  project, the requirements (time, money and quality), problems
  and the resulting changes in the project plan. The co-operators
  can be informed about this during meetings or via notes;
- data flow about the content of information (in the sense of
  transfer of knowledge).

3.3.3 Specified points of interest for evaluation

This section lists specified points of interest for evaluation.
Again, it must be emphasized that the evaluator himself plays an
active role in formulating potential questions. The enumeration
is meant as a guideline and should be extended in accordance with
the existing circumstances and bottlenecks of the project.
The strategy of the evaluator should be one with which in first
instance, within a short period of time bottlenecks in project
execution can be detected. This is done by studying available
project document(s) at an early stage and also by interviewing
people involved in the organizations. In a second stage, these
bottlenecks should be worked out by posing the more specific
questions (3.3.4 and Annex C).

List of points of interest for evaluation, specified per field.

1. OBJECTIVES

        formulation   - clear and unequivocal
                         - actual and feasible
                         - measurable
                         - moments of evaluation indicated
                         - sustainable
        planned result - activity plan
        comparison formulation and planned result

2. FINANCIAL MANAGEMENT

        - planning
        - allocation
        - availability
        - responsibility
        - reporting

3. PERSONNEL MANAGEMENT
(quantitative/qualitative characteristics of personnel capacity)

        staffing
- manpower planning
- recruitment and selection
- salaries and allowances
- turn-over

        staff facilities
- training and education
- career planning
- motivation and satisfaction

4. LOGISTICAL MANAGEMENT

- availability and responsibility of personnel
- supply of materials (buildings, construction materials and equipment, fuel, office furniture and equipment)
- means of transport
- infrastructure
- stock-keeping

5. ORGANIZATION (structure and processes)

external project structure:
- organigram
- clarity
- relations with involved agencies in project environment
- tasks, responsibilities and authorities
- contractual agreements

internal project structure:
- organigram
- clarity
- lines of command and communication, clusters of power
- tasks, responsibilities and authorities
- job descriptions
- relations with co-operating and collaborating groups

community involvement:
- organigram
- representatives

decision making processes:
- decision-making procedures
- stress management/conflict handling
- decision-making potential of the organization

6. INFORMATION

- Management Information System
- application of information by the project manager
- quality of information
- data flows
- communicative structures linking project organization and target groups

3.3.4 List of potential questions for evaluation purposes

As was already mentioned in the last sub-paragraph, potential questions for evaluation are gathered. Additional questions can be found in annex C.

1. OBJECTIVES

- What are the objectives of the project?
    * Are they clear and well defined?
    * Are they realistic and feasible?
    * Is sustainability guaranteed?
- Has an activity plan been formulated to achieve set objectives?
    * Is the plan readjusted once in a while, if so how?
    * Is it indicated what the verifiable indicators are and when these are going to be verified?
    * Is it clear what part of the objectives has to be reached at a certain time in the project execution?

2. FINANCIAL MANAGEMENT

* Does the financial plan describe all planned and allocated budgets?
* Are all budgets specified in activities?
* Is it clear when budgets need to be available and who is responsible for doing so?
* Are planned budgets available at the right time, in the desired quantity, for the right person?
* Does budget reallocation take place?
* Are all transactions reported in an adequate way to the right person? Is the expenditure rate of budgets documented?

3. PERSONNEL MANAGEMENT

- Has there been formulated a manpower plan?
    * Is this planning specified in manpower quantity, quality and in time?
    * Does the plan distinguish personnel needed for construction, logistics, training and administration?
    * Has it been checked whether the plan is effective?

* Is all personnel at the required places and doing
               what they are supposed to do?
        - Has a training and educational plan been formulated?
            * Is the educational level of manpower sufficient?
            * Is it monitored once in a while if the plan is
               functioning effectively regarding education?
        - Is personnel satisfied about their jobs, their working
           environments and their salary/allowances? If not, what is
           the cause of dissatisfaction?
        - How high is the turn-over rate of personnel? What is the
           cause of a high turn-over rate (lack of motivation or
           other factors)? What are the consequences (positive or
           negative)?

4. LOGISTICAL MANAGEMENT

        - Do logistics match the activities planned?
        - How and by whom will logistical operations be organized,
           co-ordinated and supervised?
        - Have problems risen in the logistics field been solved
           adequately? Problem areas can be:
            * supply of materials (buildings, construction
               materials and equipment, fuel, office furniture
               and equipment);
            * means of transport;
            * infrastructure (accessibility);
            * stock-keeping.

5. ORGANIZATION

        - internal project structure
            * Has an organigram been made, is it clear?
            * Is the organization in accordance with the
               objectives?
            * Are the lines of command and communication clear?
            * Are all tasks, responsibilities and authorities clear
               and obeyed by all actors involved?
            * Is there an informal working structure? In what way
               does it influence the project?
        - external project structure
            * Has an organigram been made, is it clear?
            * Is it clear what relationships there are with
               involved agencies in the project environment?
            * How is the communication between these parties?
            * Are all tasks and responsibilities clear to all those
               involved and are these obeyed by them?
            * Are contractual agreements documented and executed?
        - community involvement
            * In what way is the community involved in the project?
            * Is the involvement documented in an organigram or
               other documents, is it executed this way?

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- decision-making processes
    * Has the project arrived at the decisions, which had to be taken?
    * Are procedures for decision-making available and being used?
    * If there is a case of stress management, what is done and is it adequate?
    * How does the organization solve problems, is the problem-solving adequate?

6. INFORMATION

- Has a good Management Information System (MIS) been defined to inform the project management team of the actual status and progress of the project?
    * Are relevant problems passed on to the project manager, so he/she can react adequately?
    * Is the project manager aware of disfunctioning of personnel and are means available to correct somebody who neglects his duties?
    * Is the PM aware of over-expenditure of financial resources, exceeding time limits and malfunctioning logistics?
- What has the PM done with the information available? Has any action been taken and what effects have resulted from actions taken?
- Is the gathered information documented? What is done with it?
- What are the communicative structures linking the project organization and the target group?
    * How often do meetings take place, who are the absentees and who takes care of the minutes?

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4 SCREENED EVALUATION REPORTS

4.1 Introduction

After screening 47 evaluation reports the general findings were abstracted and described (Annex E). In combination with the framework, to be found in chapter 3, an overview is given in section 4.2 on screened literature.

4.2 Summary of findings

4.2.1 Project objectives

All evaluation studies have a different approach when paying attention to objectives. The general opinion is, that evaluation studies do not sufficient analyse the main goals and more specific objectives, nor do they draw up conclusions on strategies followed and the finalization of project status. Even if the main objectives and specific objectives are formulated, that is still no guarantee that the execution will proceed smoothly. It should be analysed what plan there is for reaching the set objectives. In view of this it is important that the strategy of the project is reviewed by the evaluation team. In this way relations between objectives, means and strategy become more clear and gaps can be detected at an early stage.

- Available objectives

To run a project effectively and efficiently, objectives must be available to and comprehensible for all involved actors. For the evaluation of projects, it is essential that one can compare project objectives, inputs, expected results and actually achieved outputs. Some evaluation reports conclude that no project objectives could be found. A FINNIDA evaluation team of a project in Tanzania (42) had to work out the objectives by themselves: "A formal statement of the project objectives has apparently not been made. However, a general understanding of the main objective is to improve the water supply situation in the rural areas of Mtwara and Lindi Regions in order to achieve an improvement in the general health of the population and to create higher potential for economic development".

- Clear and unequivocal objectives

Project objectives are often not perfectly clear. So, problems of misunderstanding can arise at an early stage of the project. A good example of project objectives is a project in Malawi, which has very clear objectives (5). First of all there is the program goal: "..to improve the basic living conditions and health of Malawi's rural population/poor by reducing the water-related

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diseases among rural villagers and increasing disposable time for rural women and children". The project purpose deals with the provision of safe drinking water for the Malawi population and even the specific end of project status is indicated. A study in Burkina Faso reads"...some of the objectives were found to vary from document to document....this resulted in some confusion" (22). Another example of non-unequivocal objectives is that during 4 years, the emphasis of the project changed to different areas of interest (7,42).

A few projects have explicitly stated managerial and organizational aspects in the formulated objectives, although, vaguely way: "To further develop a permanent water supply organization in the South Kordofan Province" (9). Although the intention was a good one, it was not described in more detail how the organization should develop.

- Actual and feasible objectives

And even if objectives are formulated well, nothing is said about the actual and feasible possibilities to achieve them. As an example the reader could refer to the above-mentioned example from Malawi (5) with the following remarks on water supply: "Up to 202.000 rural villagers (approximately 40.000 rural families) will have access from 23 rural piped water systems". Although well formulated, remarks could be made about the feasibility of the number of people per system (202.000/23), which is very high! Although the objectives can be clearly formulated, one wonders if they are feasible.

- Measurable objectives

Because USAID-financed projects are standardized with a logical framework, it is easier to verify whether set objectives are reached or not (4 cases encountered). An UNICEF-assisted integrated water and sanitation programme in Pakistan (43) gives an overview of long- and short term objectives, and targets are stated as well. In the targets the actual results in measurable outputs have been defined. Speaking generally, most projects do not have formulated objectives that can be verified or measured. This will not only lead to confusion for the evaluators, but also to management problems. It must be clear how the progress is going to be measured and in what way the project management team should deal with monitoring data.

Final remarks

Evaluation missions need to review the project objectives. However, the objectives are not analysed in sufficient detail, and more attention has to be paid to clarity, feasibility and measurability of objectives.

Only a few projects explicitly stated managerial and organizational aspects in the formulated objectives. Including

organizational aspects can influence the sustainability of the project positively.

4.2.2 Financial management

Financial resources form an important input for the project. For this reason a lot of attention is paid to financial resources in evaluation reports, yet the approaches followed are different. In three cases, there was no information about this project input (3,7,22). However, it must be stressed that more attention should be paid to gathering information on the reason why budgets are exceeded. Did the project team try to control over-expenditure of the budget and have adjustments been made? It is important to clarify exactly what is done by the project team to correct this form of mismanagement.

- Planning and allocation

Financial plans are often mentioned in evaluation reports. Financial resources are found there and specified in terms of quantity, type of costs (personnel, running costs, investments) and, if necessary, time. In most cases this is specified, but not in a comprehensible or processable way.

- Availability and sufficiency

Little information is revealed on the timely availability of financial resources. One study explicitly points out that the allocated budget is said to be adequate in terms of quantity, the availability at the desired time is not mentioned at all (25). Another study points out that the budget of a training program is found to be insufficient, however no indication is given for this deficiency (8). A distinction must be made between funds originating from donors or from governmental resources.

Inflation in general is always a black sheep: the high rate of inflation has reduced available government funds to support personnel and transportation requirements, in accordance with agreements (16,34). In view of this the fixed exchange rate is said to be important (24,31). As for some other cases, it was made clear that budgets were not available at the right time (34) which induced overspending of time for the project (39,44,46).

- Over-expenditure of the budget and percentage of expenditures

There are four cases of over-expenditure, however, it was not clarified or discovered why this happened and what was done to correct the over-expenditure (5,18,24,29). In one case a financial analysis is made, expressing the percentages spent on technical assistance, material and equipment costs even. It is indicated what percentage was too high and what had to be done to correct it (22). The study continues: "A complete review of

the project expenditures was not possible during the evaluation. Not all of the expenditures were documented completely at project headquarters. Therefore some of the data used in this report, while it is essentially complete, may not be verified".

Final remarks

Quotes for financial resources are often done by evaluation teams. Budgets are often quantified, but not sufficiently analysed or specified. Progress reports often contain a lot of financial information (columns with figures), which is difficult to interpret.

4.2.3 Personnel management

It is obvious that manpower, as one of the major project inputs, is a necessity for the proper execution of projects. To be able to fulfil the working activities, personnel needs specific skills, knowledge and attitudes. Therefore, personnel capacity has to be fine-tuned to the implementation activities. This will result in manpower-, training- and educational plans. These plans should also include manpower planning in the handover stage.

- Manpower planning

In none of the screened reports, a clear manpower plan is described. In six reports the number of employees is indicated. Sometimes it is not clarified whether the number of persons involved in the project is sufficient or not (1,29,42). Some of these reports give an overview of the existing, required and deficit number of engineers, supervisors, technicians and skilled labor (5,9,21,39). Lack of skilled or qualified personnel is also mentioned in a number of other evaluation reports. A good manpower plan should not only contain an enumeration of required numbers of personnel, but should also indicate the desired qualifications, and when and where manpower should be made available. There were hardly any evaluation studies, in which manpower plans included all these necessary items in a harmonized way.
In, for instance, the instruction of DGIS (49), it was explicitly recorded that evaluating personnel in particular, was not the intention. However, in some reports attention was paid several times to the quality of personnel. This can take place in a more tactical and diplomatic way or in a directive way, such as in a project in the Philippines (8). Here, the team speaks of poorly selected, poorly trained and poorly motivated personnel. "Few, if any, of the project management staff have the required qualifications for their positions. Their lack of knowledge, skills, confidence and sense of authority have filtered down to the provincial and local levels, jeopardizing the entire water project". This example again emphasizes the importance of good management and well-functioning of the organization.

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- Training

In addition to a clear personnel plan, a good training and education plan is often required in WSS projects. More than 30 reports are more or less focused on training. In 5 cases specific objectives are dedicated to training, in two of these cases set objectives were not achieved.
In one study (29) this failing resulted in more than 58 percent of the training budget being used for types of training that are not included in the approved project proposal.
An overview of training activities is given twice (1,47). In several reports the training courses or the training programs are described (10 cases). In these programs it is often indicated how many people followed a certain course and for how long. In some reports one could speak of a lack of appropriate training (8,9,10,18,21), or problems with the training itself (16,31). In Kenya there has been little or no training of water committee members in the managerial, maintenance, and financial aspects of the system. There has been very little follow-up in these same areas since the project became operational (10).

- Job descriptions

For a proper project execution it is important that all the employees are familiar with their activities. This is not the case and that is why a lot of reports deal with job descriptions and responsibilities. In a project in Nepal (4) the duties and responsibilities of the volunteers, the working situation and supervision are described. In a project in Sudan (9) the job description of the chief instructor/ mechanic is defined, while in a project in Tanzania (24), there is no good job description of the expatriate staff.

- Other factors

In a project in Tanzania (42) there is a high turn-over of Finnish expatriate staff, with only very few people staying more than 1 to 2 years. The negative consequences of this are a loss of productive staff time, lack of continuity and increased costs of recruitment, travel and overheads. The explanation they have for this situation is the difficulty of the post, which is, however, a feeble excuse.

Another issue is the motivation of the project employees. In Java, for instance, 20 professionals deal with planning, supervision, training and information. However, they do not have an official status, which has a negative influences, on the motivation of the people employed (1).

Final remarks

In general, sufficient attention is paid to manpower. Although it remains vague what the underlying causes of malfunctioning are. The evaluation teams are often limited to a general description of the problems. In one report (12) the team said that the management and administration has improved, but it is not mentioned how that happened and if this is sufficient. In a project in Bolivia (16) there were consistent and significant problems in training, operation and maintenance. There is no description of the kind of problems and there is no information whatsoever on what they have done to avoid this situation.

4.2.4 Logistical management

Almost 30 evaluation reports paid attention to logistical problems. This is not that remarkable because on the one hand the WSS projects are complex (many agencies involved) and on the other hand the infrastructure is not at a desirable level. Logistical problem situations are often unpredictable. It is difficult to foresee problems with delays in harbours or lack of fuel.
In most of the cases the evaluation teams have restricted themselves to the description of logistical problems and is not indicated how the project manager has dealt with that. It is difficult for the investigators to indicate whether the project team anticipated logistical problems or not.
It was only in a few cases that some recommendations are suggested. Besides, the evaluation teams hardly ever try to find out whether the logistics are adequate in relation to the planned activities, or not. It is possible that people have too high expectations of the possibilities in the country?
In the following text the main areas of problems will be highlighted.

- Supply of materials

The most problem that occurs frequently, is problems with the supply of materials (13 cases). This can be due to long delivery delays (9,34,41,43), bad physical access to the project (4,17), lack of transportation vehicles (16), lack of foreign exchange (20), scarcity of funds (34), non-budgeting of materials (17), damages of valuable supplies (9) or poor planning of required materials.
Often the evaluation teams cannot find out what the reason is for the problems with the supply of materials (4,6,16,42).

- Means of transport

The availability of a means of transport is close by related to the supply of materials. This can also be found in a WASH report about Bolivia (16). Because of the limited availability of

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transportation vehicles, the Departmental Development Corporations often could not meet the obligations for a disbursement of materials to the communities. In these cases the communities themselves arranged for the transport of materials from the regional warehouse.

The transport problems (12 cases) vary from a shortage of vehicles, lack of fuel and spare parts (15,20,22) to the problem of skilled labor and technicians needed to repair and maintain the vehicles (6,9). The overall shortage of vehicles is often made worse by low availability due to poor maintenance (43,46).

- Infrastructure

In connection to the above-mentioned areas of problems, another problem is formed by the infrastructure (7 cases), which influences the physical access to the projects. Because there are no roads in the surroundings of the project in Nepal, the material supply took place by air. On account of the high cost they switched over to transport by porters, which was time consuming and difficult to realize in practice (4).

- Stock keeping

In two cases there were some problems with stock-keeping. In a project in Sudan the stores capacity is less than the required stocking capacity. This shortage leads to the stocking of some of the handpump components in the open air, where they are exposed to rust and corrosion, as well as being subjected to bending. The project team has introduced a coding system to organize the stores. But this is only theoretical (19). In a project in Burkina Faso they have a stock-keeping system that has not been applied very satisfactorily. This judgement was based on a small sample of stock-cards reviewed by the evaluation team (22).

Final remarks

That logistics can be a main cause of delays in project progress has become obviously. Therefore it is important that logistical management is an integrated part of project control. It is of importance that the project team is aware of logistical problems, at an early stage, so that the team can deal with forms of misfunctioning adequately. Evaluation missions must check to see if the project team has adequately dealt with problems in logistical management. This is strongly related to the problem-solving capacity of the organization.

4.2.5 Organization

Without a good organizational set-up it is obvious that it is very difficult for the project team to achieve the formulated objectives with the required result. A clear internal and external project structure is a necessity, but not a guarantee

for the well-functioning of the organization. Not only should one be familiar with one's own and other people's tasks, responsibilities and authorities, one should also act in accordance with them.

- Internal project organization

In some reports no attention at all is paid to the internal project organization (33,34,45).
However, the majority of the reports describe the internal project organization, or illustrate it in organigrams. What is mentioned is, for instance, the organizational structure, organizational charts on national, regional and/or local level, the involved ministries, departments, institutes and other agencies. Sometimes, in the organizational set-up, the functions and the number of employees is mentioned per division or district (3,23,29,31).
In the project screened in Indonesia, the internal and external organizational structure are not clear (no charts are included in the report). Lack of clarity and certainty about the formal status of the staff was the cause of wrong expectations in the minds of people concerned (32).
Sometimes the evaluation teams provide some advice, however, it is usually very vague and difficult to interpret. For instance, there was a project in Tanzania, where the evaluation team recommended the following: "A stepwise approach is needed to develop a clearer and recognized organizational structure for the project, defining roles and responsibilities of all parties involved in the project". It is still not clear where the difficulties or bottle- necks are.
To guarantee the sustainability of the project, the organizational set-up should take the responsibilities for operation and maintenance into consideration. In a few reports (15,18,19,33) these responsibilities are not clearly defined (or recorded in the organizational structure).

- External relations

It must be emphasized that clarity of external relations is a necessity for a proper functioning of the project. Not only in a structural way, but also clarity in the sense of relationships of involved actors with the project- and other organizations.

Roughly one third of the reports paid attention to external relations. For instance in a project in Nepal a good relationship is documented between UNICEF and other voluntary organizations (4). The collaboration with the guest organization was more difficult because of the insufficient financial management and manpower planning. Another study in Yemen described the external relations between the project organization and national, bilateral and international organizations as being of an informal nature and as such not yet productive for a regular exchange of

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information, co-operation and co-ordination between the various involved organizations (36). So there will be confusion about tasks and duties between organizations if it is not described at an early stage what is expected from each other.

In almost all the screened reports the relations with the involved ministries were documented (e.g. 35,42,43). In Nigeria, integrated activities between ministries are virtually unknown. Co-ordination is a rare thing, even among divisions of the same ministry (11). In Burkina Faso, the co-ordination of the activities of several ministries is also cumbersome. Therefore, the Ministry of Health and Water, Plan & Development established a control committee. This was a good initiative, although only one meeting took place in the implementation phase (22). In a project in Botswana the intersectoral co-ordination was very difficult, although there is no explanation of the reason for this. In Swaziland, the project organization is not integrated in the parent organization. There is an undefined relationship between the Control Unit and the Ministry of Health (no clear line of authority)(26).

- Community level

The targets for development projects are, in principal, aimed at the improvement of the well-being of the local people. Therefore, it is important that the beneficiaries are involved in project formulation and design at an early stage, so that the possibility of achieving a sustainable project is increased. That is why it is important that the community appoints a responsible person who functions as a intermediate between the project employees at, for instance, the district level. A good exchange of information is necessary here.
In almost every report community participation is mentioned. An intensive co-operation can result in a good relationship between expatriates and counterparts, such as is the case in Guinee Bissau (31).
For example, the DANIDA project in Tanzania has a Regional Steering Committee (decision-making body for the project), whit, among others, a village participation co-ordinator (24). As an example of lack of community participation, inhabitants of a village in Tanzania are mentioned, who are not involved fully in the decision of the type of water supply, and where, in particular, the women do not have a say in the matter (20).

- Decision-making processes

In several reports attention is paid explicitly to decision making processes (1,20,24,31,47). It is obvious that without decisions, there can be no progress. Decision-making processes should be systematic and structured to streamline the information and communication between involved actors. This is one of the ingredients, which can lead to effective project management.

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The importance of good decision-making processes is illustrated in the next case. Due to over-centralized management of a water project in the Philippines, the consultants have no authority whatsoever to take action when they are confronted with problems in the field. There is no systematic way which recommendations are followed up properly (8). So, in this case, the exchange of information is not done in such a way that important decisions be made relevant to the progress of the project.

Final remarks

Generally speaking, it can be stated that the focus of the evaluation teams is on the structural side of external and internal relations. However, evaluation missions are usually aimed at describing organizational structures (static aspects) and hardly ever at the consequences or effects of the chosen structure on the achieved results. Issues such as decision-making processes, co-operation, communication and the role of the community are underestimated in evaluation missions.

4.2.6 Information

As was already said in 3.2, information is an aspect that can be seen as the bloodstream of the project. The continuous exchange and application of information, be it documented or verbal, is a necessity for adequate project performance.
The project manager needs a good MIS in order to anticipate developments. This corrective actions can be undertaken at an early stage. However, only a few reports mention the necessity and application of an MIS. CARE has formulated what a simple MIS should cover (16):
  - basic technical and social data and analysis for planning, design, and evaluation needs;
  - information on quality and availability of materials and related logistics;
  - construction monitoring information (scheduling, costs, work supervision and progress, final inspection);
  - operation and maintenance (status of completed systems and simple procedures and forms developed for community operator and committee members);
  - financial and accounting information (updated materials requirements and costs for planning purposes, inventory control, and simple accounting of fee collection for community management of systems);
  - institutional and administrative information for identification of constraints in counterpart and internal absorptive capacity.

A good MIS simplifies progress reporting. These reports should be used actively by the management team. As a consequence of this reporting, adjustments and controlling should take place. However, these reports are often merely used to describe the

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actual project status, and recorded information is not used to improve management. Good progress reporting is an additional profit for evaluation teams when preparing the mission.
For information to be used properly, it is necessary that information is available, exchanged relevantly way and applied to the benefit of project execution.

- Availability of information

In general all evaluation studies use progress reports to get background information about the project (monthly-, quarterly-, yearly reports are used). Information is often gathered using progress reports describing the actual status of the project. Here bottlenecks are indicated and working plans for the future suggested (4,5,7,12,29,33). If there is no information available, evaluation teams would suggest the production of progress reports (33). Beside monthly progress reports, annual- and quarterly reports are also sent to e.g. ministries (17,20,25).

Many evaluation teams mention the non-availability of the desired data to carry out a good evaluation. Up-to-date data not always are available or reliable for evaluation purposes.

- Exchange of information

The reviewed studies do not often reveal the accessibility of information at ministries or other authorities. It is often suggested to use Management Information Systems in the future, however, the method for meeting the requirements for information, remains very vague.

The exchange of information in projects is limited. Evaluation reports do take into consideration that often the exchange between ministries and agencies is kept to a minimum, hereby inducing project delay and over-expenditure of the budget. Very often this is due to a lack of or bad formulation of communication canals. A reason for bad communication inside the organization can be the long lines of commands as was illustrated in an evaluation of a Tanzanian project. If an exchange is found, it mostly concerns technical information.

- Application of information

The data that could be collected about the application of information was rather limited. The use of information is mentioned in a few reports. In Yemen, information which was made available in previous evaluation studies was indeed taken into account (problems due to poor management were solved) (29). In another report it is said that: "Information is continually being gathered by repair teams, monitoring assistants and project supervisors, all of whom have responsibilities for undertaking corrective action at the first sign of trouble in the water

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system" (21). A report on a project in Indonesia revealed that the bookkeeping system seemed to be too complicated to base management decisions on (32).

Final remarks

The attention paid to MIS should be increased in evaluation missions, in order to check if project managers have access to, and applied relevant information for project controlling.
Information should be tailored to the needs of the information users. Up till now it is often the case that the clients have to tailor their way of using of information to the set-up of the information system made by the designers. The clients were never involved in the design as for the type of information needed, in what quality and quantity, and the actual time when it is needed.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This final chapter describes the conclusions and recommen-
dations, which can be abstracted from the screened literature and
interviews held with external experts. Finally, the framework is
suggested for systematizing and/or improving the evaluation of
the managerial and organizational aspects.

5.2 Conclusions and recommendations for future evaluation

Project objectives

Because objectives should provide clarity about the intention of
the project, it is of importance that evaluation teams pay
attention to objectives.
Some evaluation reports do appraise the objectives, but even if
missions analyse the objectives, it is still usually very vague.
When it comes to relating objectives and available means, the
described strategy must be evaluated, something which is hardly
ever the case. Also the actual and feasible components of
objectives are neither considered frequently, nor in sufficient
detail. Many projects do not have formulated objectives that can
be verified or measured. This will lead to confusion for the
evaluation teams as well as for the project members themselves.
Evaluation teams should focus on the formulation of objectives,
so they can judge if the project will be sustainable after the
handover stage.

Financial Management

Frequently, information is found about the (re)allocation and
availability of financial resources. Cost specifications are
often given, as well as responsible donors. However, the provided
financial data often remains difficult to interpret. Because
long tables enumerating financial figures, without clarity as to
what exactly has been included, the readers have to analyse the
figures themselves.
Nevertheless, it must be stressed that reasons for budget
overruns must be revealed in evaluation studies. It is the
researchers' belief that budget overruns are generally accepted
by both donors and evaluation teams. The frequency and actions
undertaken to correct budget overruns by the project team
members must be of interest for evaluation studies.

Personnel Management

Projects cannot be executed without input of labour. To get the
right person in the right place, it has to be clear what skills,
knowledge and attitudes are required. Good manpower, training

and educational plans are needed. In these plans, it should be defined what to do, by whom, when and how.

None of the screened evaluation reports describes a clear manpower plan, let alone any form of analysis. To some extent remarks are made about manpower availability and sufficiency. Many areas of personnel management are not given sufficient attention, such as a personnel development plan (career planning), motivation and functioning of personnel.

Logistical Management

A lot of information about logistical problems is provided in evaluation reports. In most cases the evaluation teams have restricted themselves to the description of logistical problems. Logistics form a fundamental part of project management and control. However, the logistical problems found are not related to other areas in the project. So they see it as a separate problem, and integrated solutions are not suggested.

The mission members do not frequently enough indicate how project teams have anticipated logistical problems. The logistical problems described are concentrated on supply of materials, transportation and stock-keeping. The infrastructure is often barely mentioned in literature.

Organization

Evaluation teams do focus on the internal and external project organization. This is done by describing, but unfortunately, hardly ever by analysing the structure or by depicting organigrams. Some attention is paid to job and task descriptions. However, how the organization actually functions, remains very vague. Very few data could be found about decision making processes, problem solving and stress management of the organization.

It is obvious that more emphasis must be laid on the co-operation between actors. Also decision-making processes are underestimated and must receive more attention.

Information

The exchange of information in projects is limited. Evaluation reports do take into consideration that often the exchange between ministries and agencies is kept down to a minimum, hereby inducing project delay and budget overruns. There was only limited data on the application of information. Progress reports are mainly used as an information source for missions. It is to be doubted if the reports are used by the management teams for project improvement. It is less clear if the information is used for collaborative actions.

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Evaluation missions should try to gather more information about the exchange and application. Secondly, the necessity for gathering information about the use of information must be emphasized. Questions such as: "Is the supply of information sufficient and available to the right person in the desired quantity?", must be answered.

5.3 Framework

In the text above it is made clear that the evaluation of managerial and organizational aspects can be improved to a great extent. Regarding to these aspects, evaluation studies are not carried out systematically. Although problems are mentioned, the real causes are often not revealed, and neither is the relationship with other fields of interest taken into consideration. Besides, in many cases no definite recommendations are submitted to improve project management. To simplify evaluations, as a first step, the proposed framework (3.3) can be used. The evaluator must play an active role in the process. It is not guaranteed that using this framework will lead to a successful evaluation of managerial and organizational aspects. The suggested list of questions can never be complete and can be extended with more specific questions, if necessary.

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TABLE OF CONTENTS

IRC organization

IRC was established in 1969 by agreement between the Netherlands Government and the World Health Organization (WHO), which designated the centre as the WHO International Collaborating Centre for Community Water Supply. Since 1981, IRC has operated as an independent, non-profit organization. It has a core budget from the Netherlands Government, and additional funds are obtained from bilateral and multilateral agencies for specific programmes and projects.

The centre has also links with the World Bank (IBRD), United Nations Development Programme (UNDP), and the United Nations Children's Fund (UNICEF). As appropriate, IRC co-operates with of governmental and non-governmental organizations (NGOs) worldwide as well as with UN agencies at field level.

The total number of staff is 30 including professional staff in sanitary engineering, public health, social sciences, manpower development and training, and also in information and documentation. External specialists are employed as consultants for specific assignments.

IRC

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Telex: 33296 irc nl
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Role of IRC

- The IRC is committed to supporting water supply and sanitation programmes in rural and urban fringe areas of developing countries.

- *Information is the cornerstone of IRC's activities. The centre seeks ways to promote the generation, transfer and use of information on water supply and sanitation.*

- Through this approach, IRC works to close the gap between the actual information needs of water supply and sanitation agencies and available knowledge and information.

- Government agencies and other organizations involved in planning and implementation form the primary target group. IRC activities are also designed to meet the information needs of professional staff working in the sector.

- IRC adopts innovative ways to generate and transfer information. This is done through four main mechanisms: publication, training and education, evaluation and advice, development and demonstration. Closely related to these mechanisms is the development of the knowledge base on key issues in water supply and sanitation.

- IRC also has a more general role in providing technical information exchange through its newsletter, documentation services, and reference and referral functions. In addition, IRC supports effective information delivery and the development of information facilities in developing countries.

3

Information exchange

The 14th meeting of the Steering Committee for Co-operative Action for the International Drinking Water Supply and Sanitation Decade acknowledged the valuable contribution of IRC to information exchange and training material. Following this meeting and in consultation with various agencies, in 1987 IRC initiated the development of a plan of action for information exchange for the remainder of the Decade and beyond. Areas of concentration are: analysis of information needs in developing countries, improved product development and delivery, availability and accessibility of technical information, and compatibility of information systems in water supply and sanitation. Training to improve skills of information staff and for better use of information facilities is another area of IRC action.

Access to and use of information

Professional staff working in community water supply and sanitation need timely access to appropriate information. Effective use of this will facilitate successful design, construction, operation, maintenance, and use of facilities.

Each year IRC handles hundreds of outside requests for information. The centre has the largest specialist holding on community water supply and sanitation for developing countries. The collection of more than 7000 documents includes many unpublished reports of limited circulation, and 240 specialist journals and periodicals from numerous countries throughout the world. In addition, there is a collection of audio-visual materials including films, videos, slides and training materials. To stimulate awareness of the information available, accession lists, current awareness bulletins, and reference lists are produced and circulated regularly.

A number of tools are produced to assist in finding and getting better access to information. They include: directories of information sources, a thesaurus or structured vocabulary of terms, lists of basic reading materials, and a list of commonly used expressions in the sector.

To increase access to information and to assist with request handling, the IRC data-base has been computerized. This also permits on-line searching of other data bases. IRC recently switched to using the MINISIS software programme on HP-3000 equipment.

Support to country activities from IRC has included organization of workshops, together with production of practical guidelines on hygiene education, community-based financial management and user participation in the maintenance of standpost systems.
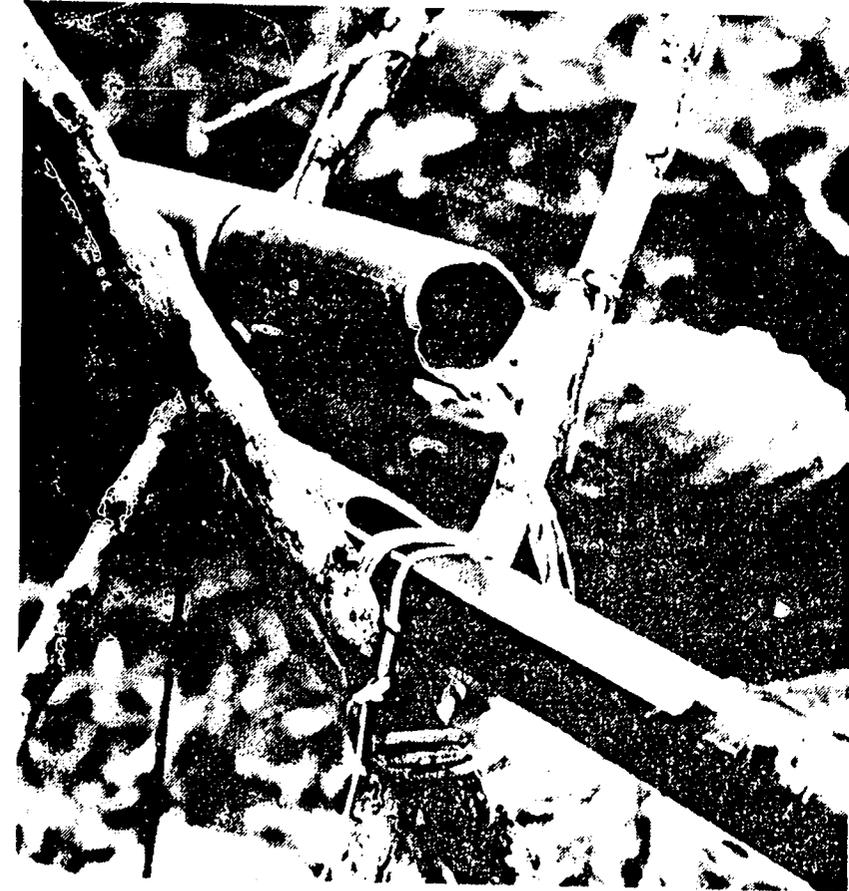
Publication

Publishing is an essential part of the work of IRC. Information is collected, analysed and published on a wide variety of aspects of community water supply and sanitation. Since 1971, more than 40 000 copies of IRC publications have been distributed in English, French and Spanish. The IRC Technical Paper series is produced for professional staff involved in water supply and sanitation projects. Recent publications in this series have focused on the role of women in water supply and sanitation, hand pumps, renewable sources of energy for water-pumping, and slow sand filtration.

Ongoing work at IRC is published in the Occasional Paper series. This series covers a wide range of topics, including case studies in human resources development, maintenance systems development, artificial recharge of groundwater, community-based financial management, and household options for water supply and sanitation.

In response to the pressing demands for training materials for manpower development, a number of manuals have been produced. Subjects covered include slow sand filtration, training skills for supervisors and project evaluation. Manuals are usually prepared in English or French and translated into local languages, as required. The training manual for caretakers of slow sand filtration plants was prepared in English and is now available in Spanish, Arabic and Thai.

Newsletter

Since 1969, IRC has produced and circulated a regular newsletter in both English and French. With a circulation of more than 5000 per issue, the newsletter is directed particularly to those working in organizations and projects in developing countries. The newsletter highlights recent trends and developments in community water supply and sanitation, focusing particularly on the issues of the Decade.

Matrix of country activities

This list contains countries in which more than one transfer mechanism/project activity takes place, in addition to general information exchange in more than 100 countries.

Countries (Transfer Mechanisms)	Publication	Evaluation and Advice	Training and Education	Development and Demonstration	Country Information Support	Information Exchange
Burkina Faso (+ regional)	✦	✦			✦	✦
Colombia	✦		✦	✦		✦
India	✦	✦	✦	✦	✦	✦
Indonesia	✦	✦	✦	✦	✦	✦
Kampuchea		✦				✦
Kenya	✦					✦
Malawi		✦		✦		✦
Malaysia (regional)					✦	✦
Mali		✦				✦
Nepal	✦		✦			✦
Peru (regional)	✦				✦	✦
Sri Lanka	✦	✦	✦	✦	✦	✦
Sudan		✦				✦
Tanzania	✦	✦	✦			✦
Thailand	✦			✦	✦	✦
Viet Nam		✦				✦
Yemen Arab Republic		✦				✦
Zambia	✦	✦	✦	✦	✦	✦

ANNEX B: MANAGEMENT

1 THE WAGENINGEN MODEL

1.1 Introduction

Firstly the term management is defined: "Management relates to decision making and covers all those initiation, guidance, control and supervision processes, aimed at creating conditions and defining actions for execution in order to achieve the preset targets, goals and objectives of the organization" (62).

There are different ways to analyse organizations in managerial and organizational respect. The so-called structural view of the organization deals with the description of functions, tasks, formal rules, procedures and budgets. However a good structure of an organization is still no guarantee for good functioning.

To review the functioning of an organization it is more important to consider the organization in a process view. This means that not only the way people are functioning inside the organization is important, but also communication structures and clusters of power are to be considered to review the performance of the organization in total.

This way of looking at organizations is the so-called process view. In this view the output of the organization is nothing more then the result of decision processes. Therefore it is worth to analyze these decision processes.

1.2 Management concerns and conditions

A systematic way to look at and analyze these mentioned processes is the "Wageningen model", which was developed by prof. Kampfraath and mr. Marcelis. Distinction is made between:
- conditions;
- concerns;
- results.
All processes are influenced by the socio-economico-politico- and cultural environment. The Wageningen Model with its concerns and conditions,is depicted in the next figure 1.

All management processes become more clear if all activities are grouped according to the function they have in management. Each concern represents the taking care of a specific area of management processes, in order to achieve desired results in these management processes. In every process both the results as the shaped conditions are important. Here the "Wageningen Model" is focused on working inside a project organization.

6

```
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│ Management   │ │ Organization.│ │  Information │ │ Management   │
│ personnel    │ │ regulations  │ │              │ │ tools        │
└──────┬───────┘ └──────┬───────┘ └──────┬───────┘ └──────┬───────┘
       ▼                ▼                ▼                ▼
┌─────────────────────────────────────────────────────────────────┐
│   Strategic concern                                               │
│   ┌───────────────────────────────────────────────────────────┐  │
│   │   Conditioning concern                                    │  │
│   │                                                           │  │
└───┼───────────────────────────────────────────────────────────┼──┘
┌───┼───────────────────────────────────────────────────────────┼──┐
│   │   Effecting concern                                       │  │
│   └───────────────────────────────────────────────────────────┘  │
│   Operational concern                                             │
└─────────────────────────────────────────────────────────────────┘
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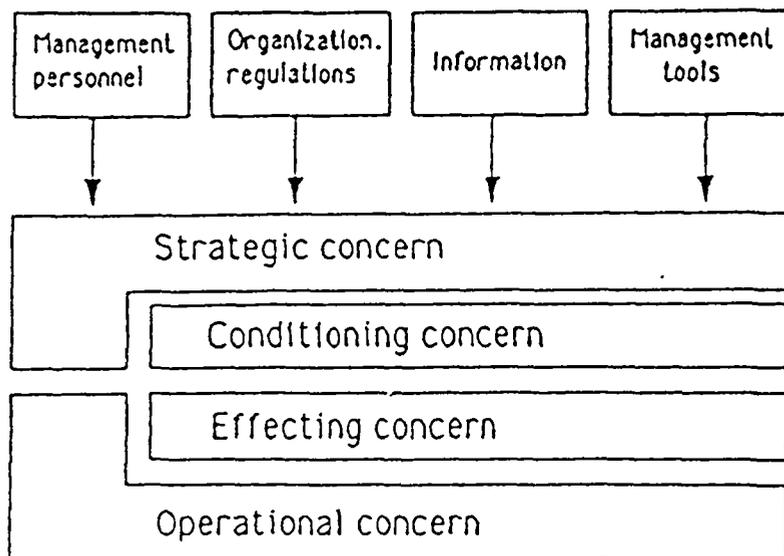
Figure   1:   Management   concerns   and   conditions   in   the
Wageningen Model (modified from Raad, 62)

Concerns

The first two concerns (strategic and conditioning) are so-called capacity creating concerns. The effecting and operational concern are what is called capacity utilizing. The project execution can therefore be analysed and discerned are:

strategic concern:
Questions as what way to follow in order to reach the objectives, are of interest in the strategic concern. It is a balancing process wherein desired objectives and available means are attuned to each other. It is focusing on project result and project progress. Besides of that, it is appealing to which means are needed to achieve the set objectives. The strategic concern also contains elements as the personnel plan, the budget to execute the water supply etc. It also indicates which means will come from the mother organization and which are allocated externally (decisions about contracting out).

conditioning concern:
The conditioning concern involves the constant care for the availability of the inputs of an activity and their proper quality. The conditioning concern is traced by the decisions made in the strategic concern. In this way questions as deciding the quantity and quality of the means for execution or the formulation of personnel and training programma are to be formulated.

<u>operational concern</u>:
This concerns deals principally with the design of project results (in respect to the formulated requirements) and timing of actions. Questions as what happens when are answered. Quality-, time-, and money limits are matters for consideration here.

<u>effecting concern</u>:
The effecting concern is to specify the contribution of personnel and equipment to achieve what is decided in the operational concern. Here responsibilities and duties of each member of the organization are defined. Also location of personnel in the system is described.

Conditions
Project execution and especially the results are influenced and depending on the circumstances existing during the courses of the processes. In the "Wageningen Model" four categories of management conditions are distinguished. These are the building stones of the organization.

<u>Management personnel</u>
All people in the organization have their own personality, their experiences, their motivation, behaviour, educational and cultural background. By training and education project performance can be developed if changes were desirable.

<u>Organizational regulations</u>
Organizational regulations cover agreements on tasks, procedures, responsibilities and authorities. The organization structure is a result of these regulations. Other examples are:
- procedures for water usage fees;
- regulation for maintenance;
- disciplinary measures;
- enrolment and selection procedures;
- travel authorization procedures;
- decision making procedures/structures;
- emergency procedures;
- procedures to make financial resources available.

<u>Information</u>
Information of different types (material usage, budgeting, information about taken decisions) is needed to support the management processes. Information needs to be streamlined and a proper employment of the information is necessary to control all management processes.

<u>Management tools</u>
Including all systems technical and physical means to support decision-making:
- budgeting systems;
- evaluation and monitoring methods;
- time registration;

- salary system;
- documentation system.

All management conditions are related and changes in one definitely influences another.

1.3 Regie of management processes

Projects can be very complex and many institutions can be involved (financing institutions (World Bank), local government, national government e.g. ministry of Agriculture). Therefore a framework is needed to streamline the management processes. This is called the regie of the administrative management. It is a constant process and main objective is to put emphasize on management conditions and processes in drinking water and sanitation projects. It is beyond the scope of the investigators to go deeply into regie process. Suffice it to say that an illustration can be found in figure 2.
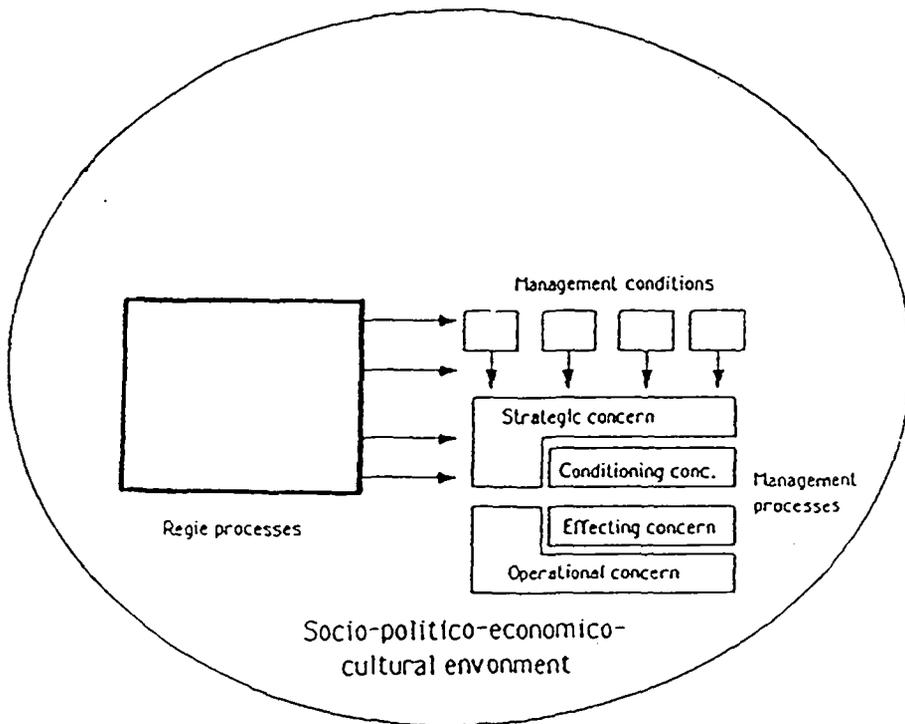

Figure 2: Management, regie and the socio-, politico-, economico-, and cultural environment (62)

2 PROJECT MANAGEMENT

2.1 Introduction

The above mentioned "WM" is a general organizational management process theory. This is in contrast with the theory of "Van Wijnen, Renes and Storm" (Project Management Theory), which is particular aimed at working with projects within an organization. A project can be defined as a once-only unique occasion, in which one is working aimed to achieve results under certain conditions. Project management has to be based on three mainstays:
- a phased decision making between possible alternatives;
- an integrated control of time-, financial- and quality aspects of the project;
- an appropriate personnel, organizational and international policy of the project.

According to the "Project Management Theory" one can distinguish three important key items within a systematic project management approach, namely: * phasing;
                          * controlling;
                          * deciding.
The next figure 3, depicts the key-items.

```
┌─────────────────────────────────────────┐
│          PROJECT CONTROLLING             │
└─────────────────────────────────────────┘
   ↓           ↓           ↓          ↓
   ┌──────────────────────────────────────┐
   │              DECIDING                 │
   └──────────────────────────────────────┘
   ↓           ↓           ↓          ↓
┌────────────────────────────────────────────┐
│              PROJECT PHASES                 │
└────────────────────────────────────────────┘
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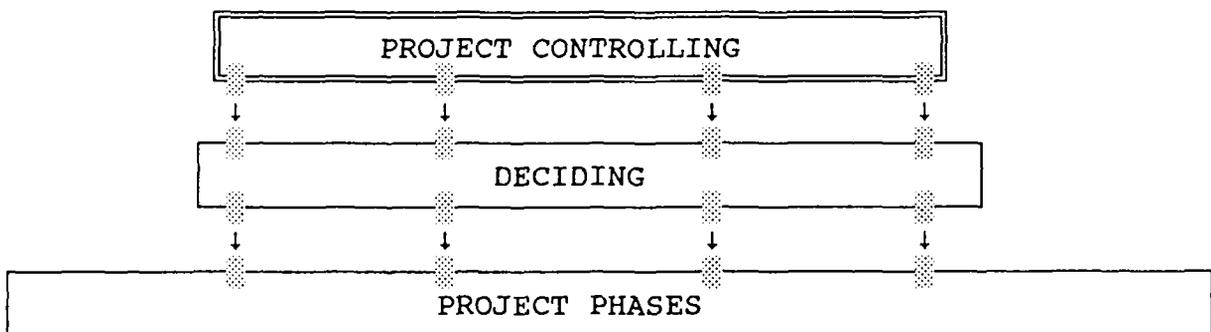
Figure 3: Key-items out of the Project Management Theory (66)

With phasing all project activities are divided into sub projects, which are necessary to achieve the project results. Controlling encloses all steering and regulating activities, which are aimed at the well execution of the activities according to the proposed schedules (time-,money-,quality control). In decision making it is important that during project progress specified decisions are made on the right time at the right place. Deciding is the bridging function between phasing and controlling.
The project activities can be classified into two groups. The concerning content activities enclosing those duties, which have a direct and necessary contribution to achieve the project result. The controlling activities are aimed at the efficient and

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effective regulating and steering of all concerning content activities.

2.2 Project cycle

There tends to be a natural sequence in the way projects are planned and carried out, and this sequence is often called the "project cycle". There are many ways, all equally valid, in which this cycle may be divided. Here it is divided into identification, preparation, appraisal/approval, implementation, handover, and evaluation. The sequence is adapted from an article by Baum (48) and Dusseldorp (50).

The stages in the project cycle

Each project phase has special management considerations and represents different operational problems and functional involvements.

Stage I: Identification
In the first stage the goals and objectives are formulated. There are often several alternatives to achieve the objectives or to solve the formulated problems. As project and programme design are relatively costly affairs and require scarce manpower, it is not possible to produce detailed projects designs for all alternatives available for realizing a certain objective. Therefore the pre-feasibility study takes place, so that technical and institutional solutions are likely to be found at costs commensurate with expected benefits.
Project identification is a complex (social) process. A part of the complexity is the result of the fact that in principle projects or programmes can be identified by a wide range of initiators: target groups, local leaders, politicians, local government employees, foreign technicians and consultans, micro- and meso-level authorities, donor agencies, local firms or banks etc, each with their own interests and criteria.

Stage II: Preparation
Once projects have been identified, there begins a process of progressively more detailed preparation and analysis of project plans. This process must cover the full range of technical, institutional, economic and financial conditions necessary to achieve the project's objectives. This stage is of two kinds:
 - data collection and analysis
   Data collection in itself is not enough. Topographical maps, population data and so on are necessary. But a dynamic analysis has to follow a path that identifies on one side the processes that were crucial for the creation of the present situation. On the other side it identifies via which variables these processes can be influenced in such a way that certain objectives can be reached. This explanation of processes of

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importance for the project, the so-called project theory, should be made explicit in the project document;
- design and feasibility study
These studies identify and prepare preliminary designs of technical and institutional alternatives, compare their respective costs and benefits, and investigate in more detail the more promising alternatives until the most satisfactory solution is finally worked out.
As the project cycle is seen as an iterative process, any mistakes made during project identification can be corrected in the design phase and in the following phase of appraisal.

Stage III: Appraisal/Approval
As the project takes shape and studies near completion, the project is scheduled for appraisal. Appraisal is the process of examining the attractiveness of a project. It provides a comprehensive review of all aspects of the project and lays the foundation for implementing the project and evaluating it when completed. Appraisal covers four major aspects of the project: technical, institutional, economic and financial. After the appraisal the project selection and negotiations will take place and afterwards the adjustments can be made. Finally the project has to be approved. The final allocation of scarce resources is a important aspect of the approval process. The complexity of the stage of project approval depends on the numbers of actors involved and the social, political and administrative structures in which they operate.

Stage IV: Implementation
When the project is approved it means that there is a project document or plan of operation available that indicates who has to do what, when and where, with what means in order to realize certain objectives and that the funds necessary for performing their activities are available. So implementation can start now, which is a period of construction and subsequent operation. In this stage one has to cope with a host of practical problems. These problems may stem from difficulties inherent in the development process or from more specific causes such as changes in the economic and political situation, in project management, or even in the weather. As a result, although the development objectives of a project generally remain constant, its implementation path often varies from that which was envisaged.

Stage V: Integration and handover
When projects near their completion, it is important that certain activities take place in order to avoid that the projects end up in an organizational no man's land. The danger that this happens in this stage is even greater than in the activation period. What has to be handed over and how the project has to be integrated into the existing socio-economic and administrative system depends on the nature of the project.

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Stage VI: Evaluation
Evaluation is the investigation of how a project turned out in comparison with what was expected of it.
Because the importance of the final stage in this study evaluation will be further discussed in the next paragraph.

Each stage will be enclosed with a project document, which are important moments of integration. Each document functions as a touchstone for the next stages. The content of the documents is dependent of the stage. The first document will be a kind of project formulation. The identification report gives only a general outline of the project and its expected costs and benefits. It may include the project background, justification, logical framework, organizational structure, activities, means supplied by host-country or by donor and the needed follow-up action.
The second document (project program) describes the requirements and desires governing the project results. The project design describes the chosen and detailed realistic project result.
The realization program consists the way of project execution.
The final stage is a kind of program for the care for follow-up.

3 AN PARTIAL INTEGRATION OF THE PROJECT MANAGEMENT THEORY AND THE WAGENINGEN MODEL

Out of the WM two processes can be distinguished. First what is called a clear execution process, this is a process of transformation, wherein means are contributing towards its carrying out process. Secondly the project controlling itself, can be considered in order to realize the project. As is already said in this annex, the Project Management Theory (PMT) of Wijnen (66), is more concentrated on phasing, deciding and controlling the project progress. Trying to combine and simplify the two models, leads to the following. See next figure 4.

The conditions mentioned under the WM are necessary requisites, needed to control the project. Project monitoring in the PMT mentions 7 areas of interest. In this partial integration, monitoring aspects are reduced to time-, money- and quality control. The other areas of interest are delegated to the conditions from the WM. This means that internal- and external structure and organizational control are forming the condition organizational regulations. Personal quality and co-operating can be found under the condition management personnel. At last information control is allotted to the condition information (60). Philosophy is not considered to be of great importance and not taken into account here.

In this partial integration, two areas of special attention mentioned in the WM as part of the management concerns are highlighted. These are strategic - and logistic management. Out

of these two, many plans and requirements are defined and will
fix needed conditions and ways of monitoring the project as well.
In this integrated approach deciding will bridge the controlling
and phasing part of the project.


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┌─────────────────────────────────────────────────────────────┐
│                       CONDITIONS                            │
│  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐      │
│  │INFORMATION│  │ORGANIZAT.│  │MANAGEMENT│  │MANAGEMENT│     │
│  │          │  │REGULATIONS│  │PERSONNEL │  │  TOOLS   │     │
│  └──────────┘  └──────────┘  └──────────┘  └──────────┘      │
└─────────────────────────────────────────────────────────────┘
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    ┌───────────────────────────────────────────────┐
    │            PROJECT CONTROLLING                │
    │  ┌─────────┐   ┌─────────┐   ┌─────────┐       │
    │  │  TIME   │   │  MONEY  │   │ QUALITY │       │
    │  └─────────┘   └─────────┘   └─────────┘       │
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    ┌───────────────────────────────────────────────┐
    │                  DECIDING                     │
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┌─────────────────────────────────────────────────────────────┐
│  ┌──────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐   │
│  │IDENTIFI- │→→ │PREPARATION│→→ │IMPLEMEN- │→→ │EVALUATION│  │
│  │  CATION  │   │          │   │  TATION  │   │          │   │
│  └──────────┘   └──────────┘   └──────────┘   └──────────┘   │
│                    PROJECT PHASES                           │
└─────────────────────────────────────────────────────────────┘
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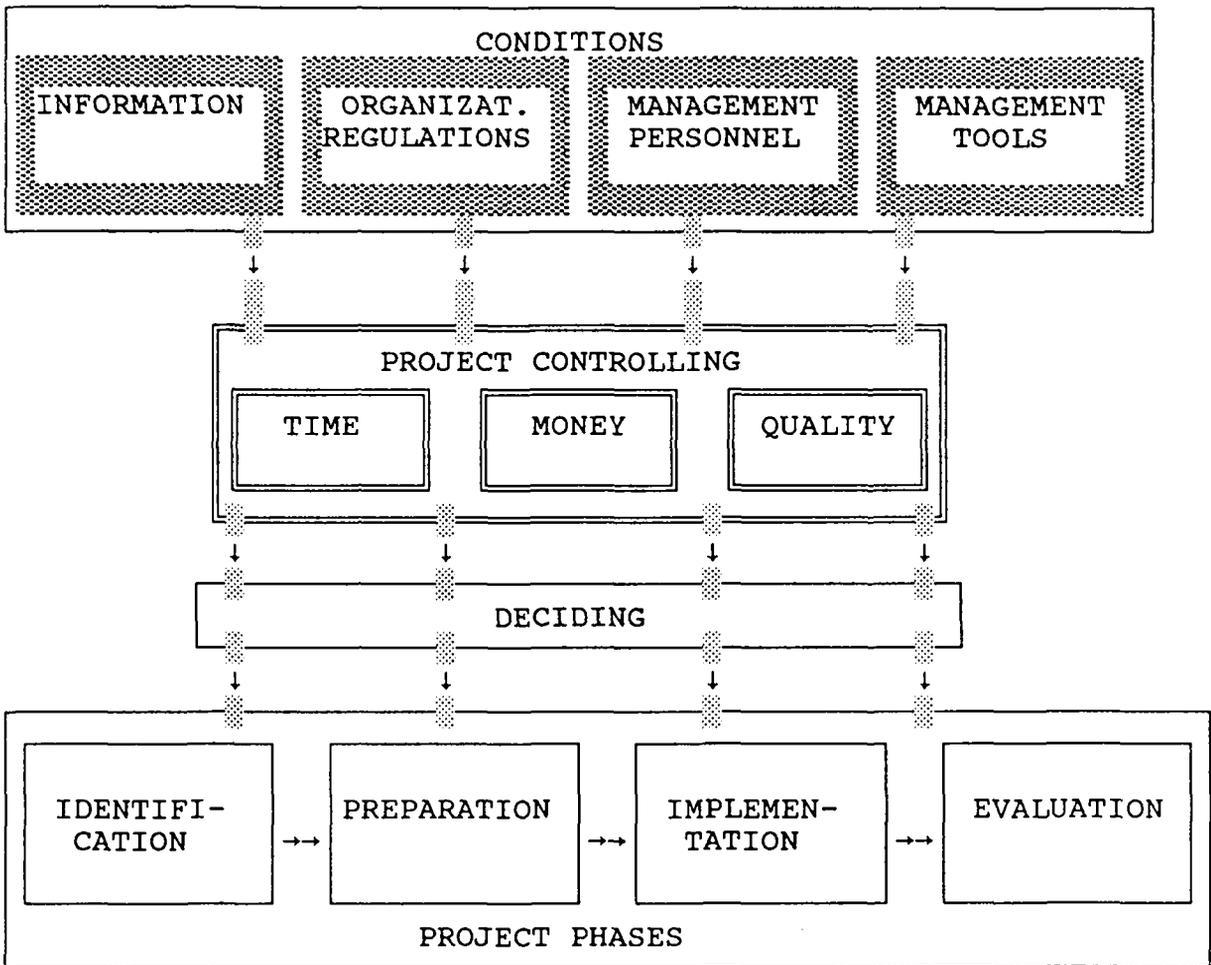
Figure 4: The partial integration model composed out of the
          Project Management Theory and the Wageningen Model

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ANNEX C: LIST OF PRELIMINARY QUESTIONS

1 INTRODUCTION

In this annex a list of preliminary questions used as a prior framework for the evaluation of projects can be found. The basis is formed out of the Wageningen Model (WM) and the Project Theory (PT) (Annex A).

2 LIST OF PRELIMINARY QUESTIONS

2.1 Strategic management and basic information

- What are the project objectives?
    * Are project objectives clear and well defined and are they considered in the project execution?
    * Is the project identified in the course of the national development planning process? If so, what is the policy making character of this process?
    * Did the original project idea relate to problems identified in the national or sectoral or regional plan?
    * Are initial objectives adjusted in project stages later on? If so, in what way?
- What are the project means? (manpower, money, material etc.)
    * Are the set objectives in relation with means to achieve, indicated?
    * Are the necessary means to achieve the set objectives indicated? Are the means available?
    * Have recommendations in earlier stages of the project been taken into account in coming project stages?
- What is the project strategy?
    * Do involved authorities have conflicting philosophies about development? In what way are they conflicting?
    * Were potential problems in the project environment influencing the project result notified (environmental factors of interests are political, economical, social, technical and cultural)?
    * What was the role of external donors or international funding agencies in project identification?
- What is the relation between objectives, means and strategy?
- What is the organizational set-up?
- What is the expected project result?
    * Is the project result roughly described?
    * Are the users of the project result (clients) described?
    * Is indicated what will happen after the project termination, regarding operation and maintenance?
    * Is there a final report produced at the end of this stage?
    * If so, is made clear what the coming activities are?
    * How well did the project result reflict the initial objectives and targets? Did deviations show up and by which factors was it caused and how was the project management dealing with it?

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2.2 Conditions

Information

* Is necessary information made available?
a) If not, which information is not available? One can distinguish:
- technical information (product documentation, drawings, bill of quantities, plans and specifications);
- time- and capacity information (schedules and description of progress);
- financial information (budgets, calculations and prices);
- quality information (requirements, standards, data about controlling and measurements);
- organizational information (organizational structures, job- and function descriptions, communication schemes and meeting schedules).

b) What are the reasons why the information is not in the desired form available (quality and quantity)?:
- the organization is structured in such a way, that the information is not streamlined well;
- not well indicated who needs what kind of information and when;
- relevant information is withheld on purpose;
- the given information is not understood or it is not understandable.

c) Has the information been made available to the right person? If not, is somebody responsible for the control of information (registration and protection)?
d) Has the information been documented? If so,
- Is the way of documenting handable?
- How regular are project documents or progress reports written?
- Is the information used by others and what for?

e) If there is a lack of information, is it mentioned?
f) Is the information system with all input and required output well designed in an early stage?

Organizational regulations

* Is the organizational structure clear and well defined? If not, is paid attention to the next issues?
- proceedings are not well classified into functions and tasks of individual employees, working groups and departments;
- decision competences and the interrelationship between employees, working groups and departments are not well assigned;
- communication channels and mechanism, such as procedures and guidelines, are not hemmed in, so that involved groups are not well in touch with each other for the benefit of co-ordination, efficiency and effectivity.

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* With regard to the above one can distil the next questions:
a) Are all tasks and duties fulfilled according to their job- and function descriptions?
b) How is the relative power divided between counterparts and the expatriates? Are there any conflicts in the assignment of decision competences? Idem for the inter relationschip between involved employees, working groups and departments? How are the conflicts solved?
c) Is chosen for such an organizational structure, so that programme managers and field personnel do have an adequate and fast communication (short lines)?
d) How does the project structure fit into the parent structure?
e) How far are external organizations (donor agencies, local government etc.) involved in the project execution? Is this involvement assigned in the documents (authorities, controle possibilities) and linked with that assignment in the organziational structure?

Management personnel

* Is all personnel functioning sufficiently inside the project organization?
a) If not, what are the reasons for this malfunctioning?
   - tasks and responsibilities are not clear specified;
   - the employees are not functioning according to their job- and tasks descriptions;
   - recruited employees don't have the required experience, education or skills to fulfill their duties;
   - some empoyees are not aware of their function- and job- description;
   - nobody is responsible for management personnel, or he/she lacks this responsibility.
b) Are measures taken to achieve fulfilment of duties? Has the responsible person for this achievement, obtained the required means to correct, and does he/she have political power?
c) Has the number of recruited personnel for counterpartnership been sufficient? Do they have the required education and experience? Are there sufficient possibilities for education and training and do they imply the required effects?
d) How is the functioning of the project manager? Are the terms of reference and the choosen project manager attuned to each other? How does the project manager deal with conflicts? Does he control the project in the right way?
e) Are any criteria used in personnel selections for the project team and for the project manager? Are the recruitment methods used effectively and efficiently?
f) If the project is handed over to the community, is all personnel well prepared to take over the project regarding to experience and education? Is personnel recruited for continuing the project? In case they come from outside the project, are there possibilities to settle into the job?

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Management tools

* Are used techniques to control the needed means, functioning
  well regarding time-, budget- and quality control? (e.g.
  networkplanning, costclassification, standardization). If not,
        - Is the right technique allocated for its precise
          purpose? How and when did the selection take place for
          indicating the desired technique?
        - Are means available to maintain the desired techniques
          (knowledge, financial means, manpower)?
        - Is the adaption of detected gaps (well) executed and is
          this monitored?
* Is defined what type of information is needed to evaluate the
  used tools?

2.3 Controlling

Time

* Have all activities been executed on schedule?
a) If not, how many times has the time been overrun? What are the
   reasons for this overrunning:
        - the schedule is not well planned (too optimistic
          expectations);
        - external effects have influenced the schedule
          (environmental factors, such as political and social);
        - nobody is responsible for time management, or he/she lacks
          this responsibility.
b) Has correcting of time control been taken place? If so, in
   what way and what for means are used? Has the adjustment been
   monitored?

Financial resources

* Have there been allocated sufficient financial resources?
  Is the budget available at the right time in the right amounts
  and for the right person?
* Have some off the budgets been overrun?
a) If so, what are the reasons for this overrunning?
        - the budgeting is not well planned (it is not done in
          agreement with the needs);
        - there have been too much unforeseen expenditures (no
          disposal of additional budget);
        - nobody is responsible for financial management, or he/she
          lacks his responsibility.
b) What kind of techniques have been used for controlling the
   budget and are they satisfactory? Are procedures for
   controlling formulated and applied? Has attention been paid to
   standards and margins for budgetary excess?
c) Are expenditures recorded (specificated for each project
   activity) and in what way is this information used in
   budgetary control?

Quality

* Are all quality requirements performed in the project?
a) If not, what are the reasons for not achieving the desired requirements?
    - quality requirements and margins are not (well) formulated and performed;
    - Has the performance of the quality control been satisfactory;
    - Have shortcomings been corrected, if so, in what way and by whom? Is the correction monitored?
b) Is there somebody responsible in controlling the quality of the project result? What kind of means are used?

2.4 Logistical management

Supply of materials

- Do important items of equipment arrive at the planned time? If not: Are there made unrealistic expectations of delivery times or inadequate initial specifications?
- Do the delivered equipment and materials have the expected quality? If not: Are the items damaged during handling/transit or is there talk of inadequate initial specifications?
- Are adequate procedures established for local procurement of materials?
- Are imported items remained blocked in the ports for long periods? (if so, is this due to inadequate systems to follow up and expedite clearance)?

Transport

- Do items get "lost" in transit within the country (inadequate vetting of transporters and/or simple inefficiency)?
- Are there actual or prototype transport contracts arranged? Do managers planning the use of the programme's own trucks/boats?

Infrastructure

- Are adequate transport routes and facilities available to move necessary supplies and personnel to sits in the target areas?
- How/by whom will equipment and supplies be transported and stored at all levels?
- How/by whom will these operations be organized, co-ordinated and supervised?

Stockkeeping

- Are adequate stores and store-keeping arrangements available at all levels (ports, regional and local)?
- Is there any kind of stock keeping or do the managers establish

controls and record systems to ensure security and accountability?
- Is the use of adequate warehouses at all locations established or obtained?
- Do programme managers, field personnel and storage locations have adequate and fast communications (short lines)?

ANNEX D: FACT SHEET

Project _____

Reviewed on (date) _____

Country _____

Date _____

Type project _____

Callnumber _____

keywords _____

0. Evaluation

objectives

- managerial/ _____

  organizational _____

  _____

- technical/ _____

  social/health _____

  _____

evaluators _____

  _____

  _____

time _____

type _____

1. Basic information

objectives

- long term _____

  _____

  _____

- short term _____

  _____

strategy _____

relation o/m/s _____

set-up _____

  _____

```
means    - manpower  _____
         - money     _____
         - material  _____
         - time      _____

results              _____
```

2. Management Conditions

```
a) information       _____
                     _____
                     _____
                     _____

b) personnel         _____
                     _____
                     _____
                     _____

c) org regulations   _____
                     _____
                     _____
                     _____

d) mg tools          _____
                     _____
                     _____
                     _____
```

3. Management controlling

```
a) time              _____
   .                 _____
                     _____

b) budget            _____
                     _____
                     _____

c) quality           _____
                     _____
                     _____
```

4. Logistics

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                     _____
```

ANNEX E: GENERAL FINDINGS OF SCREENED EVALUATION REPORTS

1 INTRODUCTION

After screening some 47 evaluation reports, an inventory was made on main findings of information regarding management and organizational aspects. Underneath the most relevant findings are described. The sequence of subjects as is depicted on the fact sheet (Annex D) is used.

2 RESULTS OF THE SCREENING PROCESS

2.0 Evaluation

2.0.1 Objectives

In three cases objectives of the evaluation could not be found at all, not in the main text, summary nor in the annex or was not stated in an any easy detectable paragraph (4,12,32).
Although objectives are formulated it is done in a very vague way, not defining exactly what has to be evaluated, useless to mention no attention is paid to management and organizational aspects. Two examples:
- "The purpose of the evaluation is to investigate the status of project implementation of the water supply and sanitation program, determine its strength and weaknesses, and recommend to improve its effectiveness" (18).
- In another case it is indicated were to pay attention to, just not which variables have to be reviewed: e.g. area of attention are community participation and power supply, however in what respect these fields of interest have to be evaluated is not formulated (34).

In many cases the effectiveness and efficiency have to be evaluated, however no ways to measure indicators are proposed and in almost none of the cases management and organization were mentioned (6,28,33,35).
In one case it was described that the evaluation had to review the training of evaluation techniques (44), no indicators supplied.
In an evaluation study about a rural water supply project in Guinea-Bissau (31), areas of attention were the internal and external structure of the project: " What tasks and responsibilities have to be cared for? How is the planning and utilizing capacity of the team?". The same study also mentioned the influence of the donor organization and the recipient country on the project objectives and project strategy and what need to be the desired influences.

In two cases (5,25) an evaluation model is used. Questions for evaluating can be derived from the proposed evaluation model. It always remains arbitrary what questions are derived out of a proposed model.

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In one case attention was paid to the feedback of information: "The information gained would not only provide feedback to the program, but would also be important in planning for future years" (43).

2.0.2 Evaluators

It is found that on the average evaluation missions are composed out of multidisciplinary teams, varying from public health engineers to sociologists, anthropologists and economists. Exceptionally a management expert was allocated to the team. Most of the time experts were external and approached to be part of the mission.

2.0.3 Time

Duration of evaluations seems to be varying in between 2 weeks to 2 months, depending on the number of evaluators, workload, objectives of evaluation, finances etc.

2.0.4 Type

All reviewed evaluations are ex-post (done by experts). Final- and ongoing evaluations have both been encountered. Sometimes it was not clear when the evaluation was carried out regarding the project stage. The type of evaluation is normally indicated well (efficiency, effectiveness or significance) although sometimes this had to be withdrawn out of between the lines.

2.1 Basic information

2.1.1 Objectives

By reviewing evaluations reports, it can be stated that with some exceptions in the back of the mind (6,13,27,30,32,33), all studies pay attention to project objectives. However there seems to be a varying approach to do so. Evaluation studies can describe the project objectives in a separate paragraph or chapter, however hardly objectives are analyzed and criticized.

Some studies mention the change of objectives during project execution. In a study in Burkina Faso it is said: "...some of the objectives were found to vary from document to document....this resulted in some confusion" (22). Or during 4 years of time emphasis inside the project changed to different areas of interest (7,42). USAID financed projects, using the logical framework, though are easier to verify whether set objectives are reached or not (5,7,8,18,28). Another study says that because of the non-formulation of a logical framework no precise comparison of planned and achieved objectives easily can be made (40).
A reasonable number of studies reports the objectives to achieve and the more specific objectives (indicating number of drilled wells, house connections etc.)(3,9,11,16,17,26,28,40). Some

objectives do sound very technically (16,29,37), not stressing a social component at all.

In a report CARE/Bolivia it is said that CARE, never made designs for proposed systems, although the project was successfully continued (16). In the DANIDA project in Tanzania, it is said that "the most important objectives of rural water programmes are an improvement of health conditions saving time on water fetching thereby indirectly facilitating a general economic development and stimulation of the community spirit" (24). Then the commision continues: "It was also stated that supply of clean water doesn't fulfil these indicators and that a more integrated approach is needed including sanitary improvements, health education, strenghtening of agricultural extension etc."

2.1.2 Strategy

In some evaluation reports explicitly strategies of implementation- or donor agencies can be found (5,7,10). One report mentions that the followed strategy fits well into the Health for All strategy (44). The strategy of the projet should be described in order to clarify the way to follow to achieve the desired results.

The USAID implementation strategy in Latin America is formulated as: "..using that strategy which best responds to there communities' needs and structures as well as the Catholic Relief Service's own local organizational structure there" (37). This strategy mentions the establishment of procedures, planning, organization, construction and community education phases, responsibilities etc.

Priority setting is done in a project in Tanzania (24) pointing at the sequence of the installation of village water supplies, criteria are used for this. Also future strategies are indicated (22,35) in a Zambian project by the evaluators.
Just in a few cases attention is paid to describe and analyze the strategy of the project. If it is done it remains vague and a actual filling in is hardly encountered.

2.1.3 Project results to be achieved

In this paragraph it is meant to describe the results to be achieved at the end of the project. The end of project status is often expressed in technical terms, like pumps/wells to be revised, reduction of diarrhoeal infection rate, etc. (3,9,21). In a project in Haiti it is said: "...the project is either building or rehabilitating approximately 40 communities to serve approximately 160.000 persons, during the four year life of the project" (28).

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2.1.4 Project inputs

<u>Manpower</u>

Besides project objectives the inputs need to be defined. A lot of evaluation studies pay attention to manpower input. Often this is specified at working level (national/regional/local) and function (10,18,27,28,31,35,43) and expressed in person-years/month (29). A WASH study in Swaziland remarks: "Seven person years of academic training are called for in the project paper. The contract only specifies the required level, not the time needed" (26). A project evaluation in Burkina Faso (22) gives an overview of project personnel divided in 3 sectors (water, health, administration, subdivided in men and women).

<u>Financial resources</u>

Remarkable is the fact that in evaluation reports a lot of attention is paid to financial resources. Normally specified in kind of activity, quantity, contributor (donor agency, government (4,5,9,16,18,22,24,28,29,30,31,39,40,41,43,44). Also are financial inputs determined in time to be available in the process of project progression (3,10,13,17,20,24,25,35,36).

<u>Materials</u>

Concerning construction projects, it is specified what kind of materials are needed. E.g. construction material for PIT latrines and vehicles are mentioned (26,28). Responsibilities about material supply and technical assistance are mentioned as well (41,43). In one case (5), one is talking about pretesting visual aids before usage in the field (training programme).

<u>Time</u>

Rather limited information of time can be found in the evaluation reports, describing exactly the planning activities and needed inputs (3,9,16).

2.1.5 Relation objectives/means/strategy

Limited information about the relation between objectives means and strategy is revealed in the screening process. In one study it is reported that because of the intersectoral relationship (water/health/sanitation) the success of the project could be explained (21).

2.1.6 Project set-up

Information about the organizational set-up of the project is encountered regularly, describing organizations at different levels (e.g.21,43). Mostly accompanied with organigrams it gives a good view of the actual structure how the project is organized. Out of the organigrams working relations and clusters of power can be analyzed and if so predicted. In this way also an interministrial project management committee may be mentioned in one study (44), dealing with responsibilities.

2.1.7 Project history/background

The moment of the evaluation of projects (mid-term, on-going, final evaluation) is differing. Depending on the use of the evaluation, it is essential that the project history/background is to be found in the evaluation document. It describes what happened before the evaluation started. Many screened reports describe the project history (5,6,7,11,12,15,16,19,21,22,24,25, 29,30,31,35,36).

2.2 Management conditions

2.2.1 Information

Availability of information

Written information
Evaluation reports do pay attention to the monitoring of projects. Often it is found by means of progress reports, describing the actual status of the project. Inhere bottlenecks are indicated and working plans for the future suggested (4,5,7,12,29,33). In a project in New Guinea progress reports are submitted to higher authorities, however nothing is said about the quality of achieved results (18). If there is no information available, evaluation teams logically suggest the production of progress reports (33). Like monthly progress reports, also annual- and quarterly reports are being sent to e.g. ministries (17,20,25).

Lack of availability of base-line data about the prevalence of water related diseases or water supply systems are encountered several times in evaluation reports (4,17,18,30,33, 45).

Also a lack of available information regarding the operation of treatment plants is mentioned in one study (9). Another report indicates that because of the high turnover rate of managers in the project, no "experienced data" were made available anymore (29). Although ways to monitor the project are formulated well, one study revealed that forms to do the reporting are often ignored (8).

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None-written information
In a SNV project in Nepal, the women did not know they were part
of a drinking water committee, while they never had been involved
in discussions and meetings (4). Care should be taken with
illiteracy.

Information systems
In some reports where one can speak of a lack of information, the
installing of a Management Information System (MIS) is suggested
(27). One study describes the information system and although
formed on a informal base, it turned out to work effective (37).

Exchange of information

Evaluation reports show a tendency that a lot of information is
not exchanged to other agencies, ministries or persons etc. At
headquarter level of a project in Malawi there was neither
technical backstopping nor assistants to help with the review of
field reports (21). In Yemen: "..the contacts between actors of
the project and national or bilateral or international agencies
are of an informal nature and as yet not productive to a regular
exchange of information.." (36). The lack of communication canals
is mentioned in a few studies. E.g. all contacts between UNEP and
the project management staff at the ministry only passed through
via the UNICEF agency present in the country, while the last one
was not involved in project execution or monitoring (45). A
reason for bad communication inside the organization can be the
long lines of commands as is mentioned in an evaluation of a
Tanzanian project (20).

Regarding the flow of information, the SNV-headquarter (Zambia)
required improvement of the financial reporting system. To
promote information exchange a special committee was formed to
ensure the dissemination and interministerial cooperation (12).

In a DANIDA report it is revealed that there is an insufficient
exchange of information on experiences and achievements in
certain regions (24). Flows of information are indicated at
different levels for a handpump maintenance system (19). Passing
on of progress reports between agencies and other actors is found
in several reports (35,42).

Examples which prove that there was an adequate exchange of
information are withdrawn out the literature as well. For example
the multinational project (PSWS) which mentions that the info
exchange is disseminated fairly well (yearly progress reports and
news of activities in the various countries are exchanged) (44).
Modern telecommunication tools are seen as the instruments which
stimulated the well managing of a project in Swaziland (26).
There was a good weekly telephone contact between the project
management in Swaziland and the overseas staff in the U.S.A.
(Washington, D.C.).

Application of information

Rather limited data could be collected about the application of information. The use of information is mentioned in a few reports. In Yemen information which was made available in previous evaluation studies was indeed taken into account (lacks due to poor management were solved) (29). More about the application of information: "...information is continually being gathered by repair teams, monitoring assistants and project supervisors, all of whom have responsibilities for undertaking corrective action at the first sign of trouble in the water system (21). Another report revealed that the book keeping system seemed to be too complicated to base management decisions on (32). Information out of progress/annual reports is often applied or in project monitoring itself (42) or in decision making in general (17). Examples of a well used info system of ministries is encountered in one report (21).

2.2.2 Manpower

Manpower plan

In none of the screened reports there is a clear manpower plan described. In a few reports attention is paid to the evalaution of the planning of personnel in the sense of indicating the number of employees (1,4,5,19,31,42). Sometimes it is not made clear whether the number of persons involved in the project is sufficient or not (1,19,42).
Some of these report give an overview of existing/required and the deficit number of engineers/supervisors, technicians and/or skilled labor (5,9,21,39). Lacking skilled or qualified personnel is also mentioned in quite a few other evaluation reports (3,8,10,20,22,25,33,36,41). Especially, the vacant posts at the middle- and top management level have to be filled (9,25). Also it is found that no counterpart personnel are assigned to the project (41).

Quality of personnel
Although in for instance the instruction of DGIS, explicitly is recorded that it is not meant to evaluate personnel in particular, in some reports several times attention has been paid to the quality of personnel. This can take place in a more tactical or diplomatic way, like mentioned in the next example (32) or in a directive way like in 8 is found. In Indonesia (32): "..training alone, is not sufficiently effective to raise managers. Too many personality factors are involved to become a competent manager". In a project in the Philippines (8) the team speaks of poorly selected, poorly trained and poorly motivated personnel. "Few, if any, of the project management staff have the required qualifications for their positions. Their lack of knowledge, skills, confidence and sense of authority have filtered down to the provincial and local levels, jeopardizing the entire water project". So again this is an argument for the evaluation of managerial and organizational aspects.

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Training

Besides a clear personnel plan often a good education plan is required in WSS projects. In more than 30 reports more or less one is focused on training. In 5 cases (1,3,29,40,43) specific objectives are dedicated to training, in two cases of them set objectives were not achieved.
In one study (29) the cause from this failing has been that more than 58 percent of the training budget has been used for types of training that are not included in the approved project proposal.
Twice an overview of training activities is given (1,47). In several reports the training courses (5,11,15,34,39) or the training programs (19,22,25,26,42) are described. In these programs often is indicated how many people followed a certain course and for how long. In some reports one can speak of a lack of appropriate training (8,9,10,18,21) or problems with the training itself (16,31). In Kenya there has been little or no training of water committee members in the management, maintenance, and financial aspects of the system. There has been very little follow-up in these same areas once the project has been operational (10).

Job descriptions

For a good project execution it is of importance that all employees are familiar with his/her activities. Often this is failing and so it can be declared that a lot of reports go into job description and responsibilities. In a project in Nepal (4) the duties and responsibilities of the volunteers, the working situation and the supervision are described. In a project in Sudan (9) the job descriptions of the chief instructor/ mechanic is stated, while in a project in Tanzania (24) a good job description of the expatriate staff is missing.

Other factors

In general, the evaluation teams are limited to global descriptions of the problems. In one report (12) the team mentioned that the management and administration has improved, but how it happened and if it is sufficient, they do not commend. In 16 one can speak of "consistent and significant problems in training and operation and maintenance". In which way and what have they done to avoid this situation?
In a project in Tanzania (42) one is suffering with a high turn-over of Finnish expatriate staff, with just very few staying more than 1 to 2 years. The negative consequences are the loss of productive staff time, lack of continuity and increased costs of recruitment, travel and overheads. The only explanation they have for this situation is the difficult assignment, which is a feeble excuse.

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2.2.3 Organizational regulations

External relations

Roughly, one third of the reports paid attention to external relations.
In a project in Nepal a good relationship is mentioned between UNICEF and other voluntary organizations (4). The collaboration with the guest organization passed off more difficult because of the defective financial management and manpower planning. Too much attention has been paid to efficiency and too little on the institutional framework of the organization (reason: too much time and energy consuming). The contacts between the project in Yemen and national, bilateral and international organizations are of an informal nature and as such not yet productive to a regular exchange of information, cooperation and coordination between the various involved organizations (36).

Almost all the screened reports noticed the relations with the involved ministries (e.g. 35,42,43). In Nigeria, integrated activities among ministries are virtually unknown. Coordination even among divisions of the same ministry is rare (11). In Burkina Faso, the coordination of the activities of several ministries is also cumbersome. Therefore, a control committee composed of Ministry of Health and Water, Plan & Development was established. In fact, a good initiative, however, during the implementation there was only one meeting (22). In a project in Botswana the intersectoral coordination is very difficult, although there is not explained why. In Swaziland, there is no integration of the project organization into the mother organization. There is an undefined relationship between the Control Unit and the Ministry of Health (no clear line of authority)(26).

Internal project organization - organizational structure

Some reports do not pay much attention to the internal project organization at all (33,34,45).
However, far the majority of the reports are describing the internal project organization. Mentioned are for instance the organizational structure, the involved ministries, departments, institutes and agencies. Some evaluations are limited to the description (of the responsibilities) of the involved ministries, district councils and departments (12,30,35,47). In Botswana, these responsibilities are not recorded in a structure with all sort of consequences (12).
However, in many reports these descriptions are clarified with organizational charts on national, regional and/or local level (17,21,28). In Malawi and Burundi, the committee relationship at community level is also indicated (5,21,25).
The evaluation reports about projects in Bangladesh, Yemen and Guinee Bissau bestow much care on the internal project structure (3,29,31). In the organizational set-up, per division the functions and the number of employees is mentioned (3,23,29,31).

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In the screened project in Indonesia, the internal and external organizational structure are not clear (there is no charts included in the report). Lack of clarity and certainty about the formal status of the staff provided heavy preoccupation in the minds of the people concerned (32).
In Tanzania the evaluation team had given a difficult recommendation: "A stepwise approach is needed to develop a clearer and recognized organizational structure for the project defining roles and responsibilities of all parties involved in the project".
In a few reports (15,18,19,33) the responsibilities for operation and maintenance are not clear defined (or recorded in the organizational structure).

Internal project organization - procedures

In a lot of the reports a lack of procedures is mentioned (12, 13,29), such as a not well unified maintenance procedure (19,25,30) and a lack of flexibility in administration and financial procedures (46). To be efficient, the way of working of UNICEF in a project in Nepal, mainly concerning development of uniform solutions and procedures, does not take sufficiently the local differences into account (4).

In several reports is paid explicitly attention to decision making processes (1,20,24,31,47). In a project in Java not every person could be involved in the processes but the consensus must be strong enough to initiate a programme for action that meets the approval of the majority of those combined in the action (1).

Because of the too centralized management of a water project in the Philippines, the various consultants have no authority to take action when they see problems in the field. There is no system of follow-up to the recommendations (8). One of the main factors that deters the achievement of project goals is the high degree of centralization of decision making and activities in a Caribbean project (47).
Some projects refer to consultation. For example a project in Sudan: dicussions were held with the headman of each village, however sometimes it was not always possible to complete these formalities before the drilling team arrived and drilling had to start (15). The continuous communication between the major parties of the project in Bolivia, was central to the success (16).

Internal project organization and community participation

Counterparts and expatriates
The intensive companionship can result in a good relationship between expatriates and counterparts, like in Guinee Bissau (31). The relationship between expatriates and counterparts is also mentioned in a project in Sudan (40).

Project staff and beneficiaries/community
The DANIDA project in Tanzania has a disposal of a Regional Steering Committee (decision making body for the project), which includes a village participation co-ordinator (24).

Sometimes co-operators maintain inadequate communications with other offices, like the Office of Regional Training Coordination (47). Another example are the inhabitants of a village in Tanzania, who are not fully involved in the decision of the type of water supply, and particular the women do not have a say (20).

2.3 Management monitoring

2.3.1 Time

Although monitoring the project in terms of time is indispensable, not in all evaluation studies attention is paid to this requisite. No information on time management at all could be found in a reasonable number of reports (3,4,7,8,10,22,26). It appeared to be that in one case, one could speak of poor planning and incompetent implementation (20) or not planned in enough detail (34) or what is even more worse no planning at all (40). In the case time progress is evaluated, it is done by:
- reviewing available bar charts (1,5,21) indicating persons, period, duration and overlap;
- indicating time needed for drilling wells (running hours, hours/well, well depth, total hours) (6);
- display of completed wells (13,28,35), however in one case (13) is not described where to compare it with (standardization);
- overview of spent time of involved consultancies on different categorized activities (32).

If time overrunning is remarked, no attempt is undertaken to recover why time is extended (28,41). In one case (28), slow implementation is observed, one reason for this was the time scheduling of personnel. Because of long travelling, it was decided to work 3 united weeks and having 1 week of. This turned out not to work well. In a combined rural water supply and sanitation project, the water project part was making progress, as is said, however the sanitation sector lagged far behind (12). However, delays in time due to technical problems are much easier to identify. Especially the construction of boreholes is a subject extremely sufficient to evaluate time consumption (11, 35,44) often to be expressed as a percentage of the proposed number of boreholes. In some cases it is tried to reveal information of the time delay. Often bad logistics are the cause of the fact that progress is fallen behind schedule (34).

2.3.2 Financial resources

Financial monitoring is of extreme importance for project progress. Therefore in some evaluations studies the finding of no information or base line data about this subject is rather to be called strange (3,7,22). Evaluated information can be summarized as follows:
In 5 studies financial project progress was expressed as a percentage of spent money (5,13,27,36,41). A financial overview was given specified in running costs, investments, personnel etc. (18,19,28,36,42,43). In some studies it was indicated that the budget was not balanced (6,41) because of lack of external donors or because of inflation (6). In some studies even a specific detailed cost-estimation of a water supply system was found, distinguished were running costs, investments, interest and overhead (1,11,22,25,27).

Cost overrun was mentioned, however not told why it happened and what was done to correct this (5,18,24,29). In one study (22) a financial analysis was made, and expressed as a percentage spent on technical assistance, material and equipment costs, even was indicated what percentage was too high and what had to be done to correct.

Inflation in general is always a black sheep: "the high rate of inflation reduced available funds of the government to support personnel and transportation requirements, according to agreements (16,34). Close to this subject the fixed exchange rate of money is expressed to be important (31,24). In other cases it is revealed that budgets were not available at the right time (34) which induced time overrunning of the project (39,44,46).
Also it is encountered that a budget was not adequate for training (8), however no indication is given for this deficiency. On the other hand in another study the allocated budget is said to be adequate in quantity (25). Other studies recommended to shift budget allocations (17,29). The flexibility of budgets seemed to be a problem in another study, a high degree of centralization was due to this problem.

2.3.3 Quality

Screening the literature regarding qualitative aspects has been sometimes a nasty job, while often information about quality is hidden in between the lines and so hard to withdraw.

In terms of technical quality achievements, many evaluation studies pay attention to this. Expressed in quality standards like reliability of a water supply system (1,5,18,21,28,33,34), but also accessibility of wells can be quoted (20,21,34).

Due to low water pressure in the water network one study reports that quality standards in terms of capacities to be delivered, couldn't be reached (32).

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The performance of water handpumps is highlighted in the literature. Many references could be found (6,14,43), paying attention to field performance and up-grading quality of pump parts. In the last mentioned study the distance wells- latrines is used as a quality standard. In a study about a project in Tanzania a check list of quality standards was encountered (20).

2.4 Logistics

Considering the fact that in 29 out of 47 evaluation reports attention is paid to logistical problems, it is made clear this can be a difficult issue in managing projects. Often the evaluation teams have restricted themselves to the description of logistical problems and is not indicated how the project manager has dealed herewith.
Only a few times, some recommendations are suggested. Also the evaluation teams are not wondering themselves enough, whether logistics are adequate in relation to planned activities or not. Has one not too high expectations regarding the possibilities of the country?

Regarding logistics some remarks can be made. The first remarks concerns the quality of the wagon park in a project in Botswana: "Privately owned vehicles travelling under similar conditions generally have a much longer economic life than government vehicles". Suggested was to set up an incentive scheme for drivers to look after their vehicles, something which might improve the situation (13). Good logistical management needs a control system, this was lacking in one case describing a project in an UNICEF financed programme in Sudan (19). Reviewing the performance of stock management in a project in Burkina Faso learned that it was malfunctioning and many errors were made (22). An aselect sample was taken to verify how accurate stock management was executed.

Supply of materials

Problems concerned with the supply of material (13 cases):
  a) long delivery delays (9, 34, 41, 43)
     Procedures followed by UNICEF, caused a delay regarding the supply of materials, resulting in the inadequately equipment of the Ministry of Natural Resources in Belize (41);
  b) worse physical access of the project (4,17)
     For instance on the Solomon Islands the roads are so poor, that many places are accessible only by canoe (17);
  c) lack of transportation vehicles (16);
  d) lack of foreign exchange, scarcity of funds or materials are not budgeted (17,20,34);
  e) damages of valuable supplies (9);
  f) the required materials are not well planned
     In Zambia a construction unit is able to build 47 wells a year, however, only materials for the construction of 20 wells a year is planned (35).

Often the evaluation teams do not retrieve the cause of the problems with the supply of materials (6, 16,42).

Means of transport

A second problem is the means of transport (12 cases). These problems are varying from a lack of the number of vehicles, lack of fuel (15,20,22) and spare-parts to the problem of skilled labor and technicians to repair and maintain the vehicles (6, 9). The overall shortage of vehicles is often exacerbated by low availability due to poor maintenance (43,46).

Infrastructure

In connection to the latter areas of problems, another mentioned problem is the infrastructure (7 cases), which influences the physical access of the projects. Because the lack of roads in the surroundings of the project in Nepal, the material supply took place by air transport. On account of the high cost price they switched over to the transport by porters (time consuming and practical difficult to realize) (4).

Stock keeping

In two cases there are some problems with stock keeping. In a project in Sudan the stores built area is less than stocking capacity required. These shortage lead to stocking some of the handpumps components in open space, being exposed to rust and corrosion as well as being subjected to bending. The project team has invited a coding system to organize the stores. But this is only theoretical (19). In a project in Burkina Faso they have a stock inventory system that has not been applied very satisfactorily. This judgement is based on a small sample of stock cards reviewed by the evaluation team (22).

ANNEX F: LIST OF CONSULTED EXPERTS

Consulted staff members of IRC

T.F. Bastemeijer
M.T. Boot
M. Seager
J.E.M. Smet
J.T. Visscher

Consulted experts of other agencies

H. ter Avest	External expert-Bennekom
M.W. Blokland	IHE-Delft
J. Harnemeijer	ETC-Leusden
A.G.N. Jansen	RIVM-Bilthoven
J.H.C.M. Oomen	DHV-Amersfoort
M.A. Oomen-Myin	MATRIX-Consultants-Utrecht
L.Razoux Schultz	IAC-Wageningen

ANNEX G: LIST OF QUESTIONS USED FOR INTERVIEWING EXTERNAL EXPERTS

1 Heeft u zelf evaluaties verricht? Zo ja, in welke sector en in welke landen?

2 Heeft u daarin aandacht besteed aan organisatorische en management aspecten?

3 Op welke manier is dit gebeurd?
Welke vragen heeft u zich daar bij gesteld?

4 Welke onderwerpen op het gebied van organisatie en management vindt U belangrijk? Waarom?

5 Heeft u hulpmiddelen gebruikt tijdens het aandacht besteden aan organisatorische en management aspecten (bijv. reference document, lijstje met aandachtspunten, modellen)? Zo ja, welke?

6 Wordt er volgens u (voldoende) aandacht besteed aan organisatorische en management aspecten in evaluaties? Zo nee, hoe zou dit verbeterd kunnen worden?

7 Is de bijgevoegde lijst met aandachtspunten toegankelijk?

8 Heeft u suggesties voor veranderingen/vermeerdering en/of vermindering?