



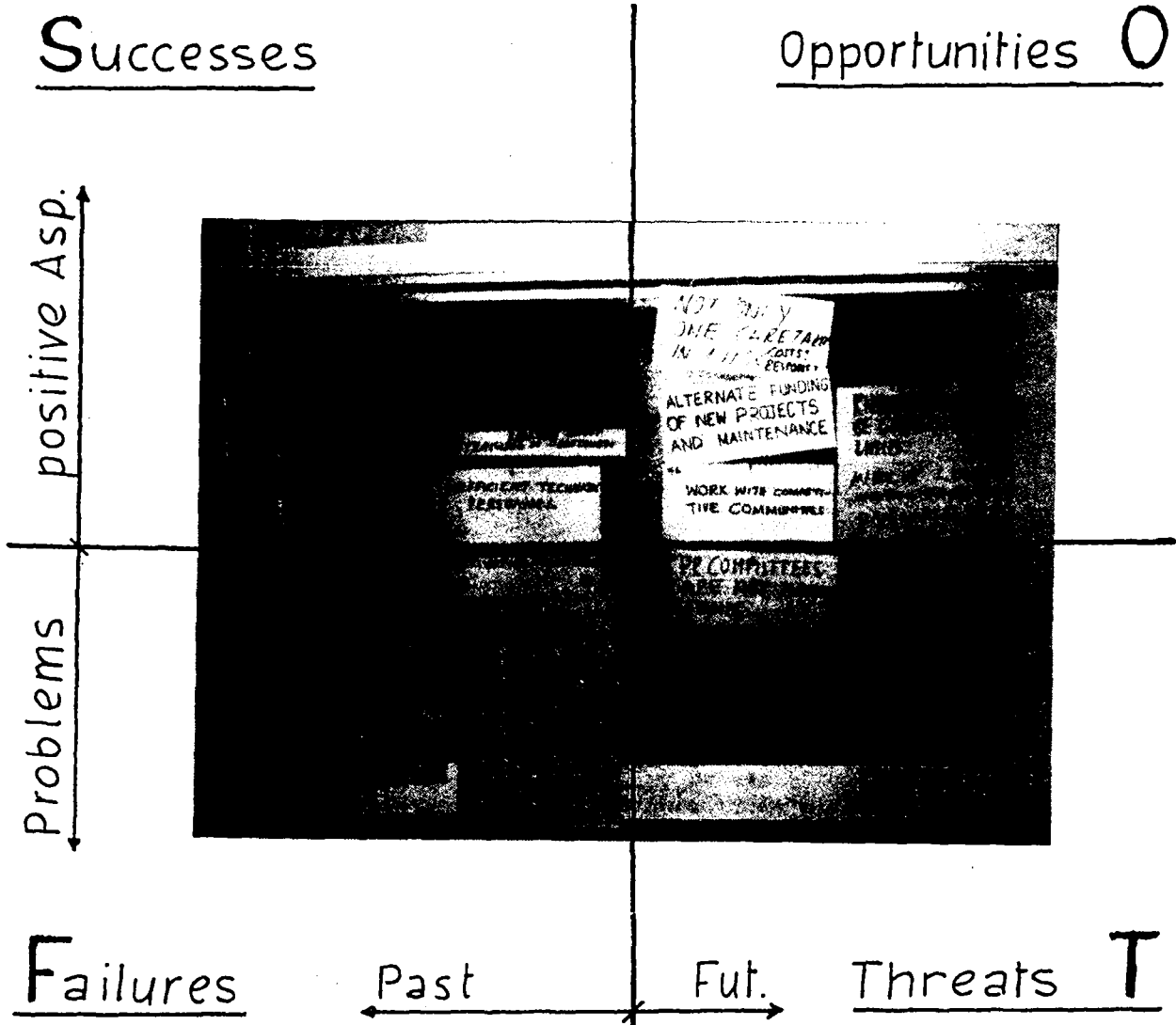
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CAMEROON (NW, SW, W)

MAINTENANCE AND SUSTAINABILITY OF COMMUNITY WATERSUPPLY



WORKSHOP BAMENDA 19./20. NOVEMBER 1990  
Report Urs Fröhlich

Frauenfeld, March 1991  
H 29

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- A Programme Working Session
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## PREFACE AND SUMMARY

Helvetas Zurich asked the author for this summary report to focus his attention during the Cameroon mission in particular to the still unsolved sustainability and maintenance questions. The Bamenda seminar at 19./20. of November was much more than the highly enjoyed opportunity to meet old friends. We shared and discussed views on problems in operating community water supplies.

First I want - in the name of the participants too - to thank Helvetas Bamenda (Martin Epp, Werner Christen and their collaborators) for the excellent preparations. The church center with its infrastructure was a good environment to work successfully. Also the food was fine, and our thanks go to all the helping people in the Presbyterian Church Center Bamenda. I want to express special thanks to the main moderator, Professor Ajaga Nji who gave his advice in the preparations and during the session. He was successful in animating and motivating us and his wise contributions made the discussions so interesting.

The participants, women and men representing various services and institutions brought in their experiences. It was a mutual, interdisciplinary give and take which made all of us richer. In the name of the inviting organization Helvetas I thank all participants for their active participation.

The aim of this meeting was to look into the problems from different angles and to draw possible lines for further, sustainable operation of watersupplies. Helvetas is willing and prepared - if the frame and the conditions are optimal - to contribute to maintenance plans and actions which promise to become successful. We did not hope or expect to develop final working plans which would be suitable for immediate nationwide application. But we listened to and wrote in lists many positive and negative experiences which should be considered in further action plans.

The so called "SOFT" method (Fig. 5) has helped to structure the great number of aspects of the various topics in the past (experiences) and in the future (programms). It has also allowed to distinguish between positive and negative aspects. Through the pinwall system every participant was invited to write her/his contributions on cards which were grouped on these walls. The participation was very intensive.

As already explained in the "25 years report" (Annex F) the social, institutional and financial problems are not of less importance than the technology. The results of the seminar are various catalogues with conditions and recommendations and also checklists. The discussions have proved, that the local capacities and potentials of villages are important and not yet tapped and developed fully. It also became clear that external (long-term) support in institution building and in technical assistance is necessary. The participants of the session have concretized a rough model which was presented by the moderator team; this support structure contains:

- Mobile, adequately equipped Support Team (a technician and a social worker-person)
- "Software package" for training support to the local project committee members and to the caretaker

Direct financial subsidies to the villages are not intended, and the services to be rendered by the Support Team must be paid for at least partially. Villages who want to get this external support must agree to fulfill the necessary conditions (administrative, institutional and technical training, financing of running costs including caretaker, monitoring and other sustainability criteria). In a pilot phase one or two teams should start operation and after a trial period of about 2 - 3 years the system must be optimized according to the experiences (monitoring). If this initial phase is successful and if the villages and the government are interested and engaged in the programme, an extension with local and national resources could be envisaged.

It is not the aim of this report to present a fine paper. Only little time could be invested into it. The aim was to collect the dispersed information and knowledge and to join them in a written document which remains available to the participants and to those who work in this particular field. The text, the lists and the graphs are raw material showing up problems, risks, capacities, opportunities, successes, etc. and what we can learn from them. All this data may serve to the concretization of the next practical steps towards sustainability.

Two days of concentrated work and exchange have not only resulted in a clearer view of certain serious problems, but we have also found new hope and optimism regarding actions in closer cooperation with the rural people concerned.

We were all very sorry to learn that Werner Christen was ill and unable to attend. His profound knowledge and his experience would have been useful, too. But we are thankful that by now he has recovered and we look forward to his future contributions in implementing the project.

*Urs Fröhlich*

Urs Fröhlich

## 1. THE THREE MAIN QUESTIONS

Three questions have been presented to the participants in advance (Annex A).

As organizers we hope that everybody would answer 3 questions (5-10 words each):

1. What is my main expectation with regard to the maintenance workshop?
2. What is in my opinion the greatest failure/problem with regard to one or to several programme-subjects?
3. Which aspect do I consider to be the most positive/hopeful with regard to one or to several programme-subjects?

Fig.1 Individual preparation

The individual answers or questions were written down at the beginning of the workshop session. The cards were put on the pin walls for joint discussion. Fig. 2 shows the individual expectations and in Fig. 3 and 4 answers to the questions concerning failures and positive aspects are noted down.

### MY EXPECTATIONS (to the seminar)

People accept and put in efforts in maintaining water to sustain life	To lay the Base for a <u>sustainable</u> Water Supply - Maint.	Be able to advise <u>rural population</u> on Water Supply - Maint.	- How to raise funds for WS - Maint. ? - Role of Women in Water Supply
Harmonised method of maintenance to include the <u>concerned at all levels</u>	Development of <u>maint. strategies</u> - To ensure self-sustaining water supply projects	NO "Free Water" - Slogans in the initial stages of project	Need to educate or <u>sensitize population</u> on necessity for good water supply
Admit limits of institutional support.	Need for Fulltime technician in charge of maint.	<u>Local councils</u> should assist with maintenance	A <u>workable strategy</u> for rural water supply <u>MAINTENANCE</u>
Completed water projects should be tried before handover	- NEW Ideas - FRANK discussion	<u>Practical inputs</u> for sustainable <u>maintenance</u>	⇒ ● <u>FIRST PRIORITY</u> (plenum discussion)

Fig.2 Individual expectations

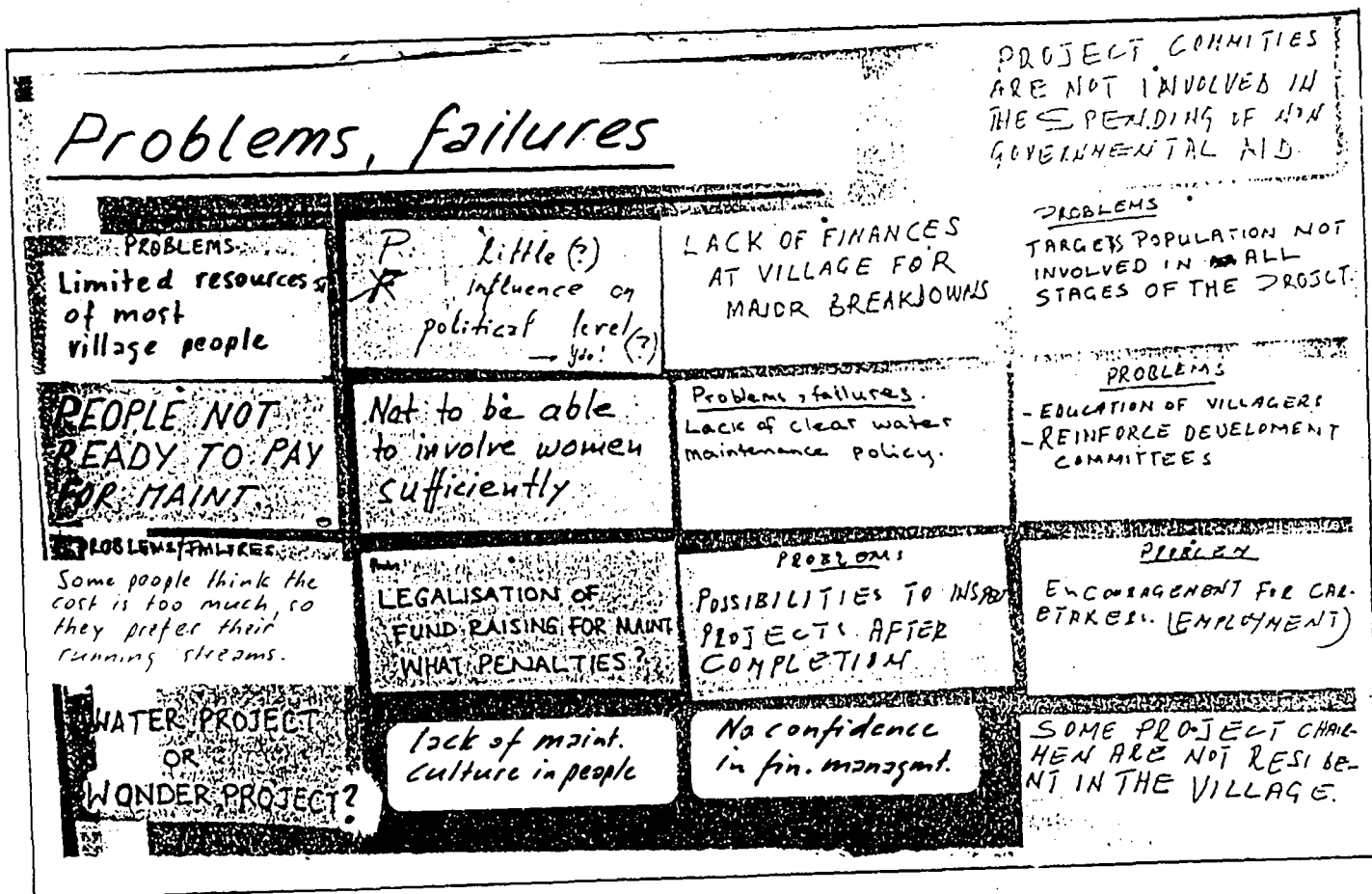


Fig.3 Answers to question No. 2

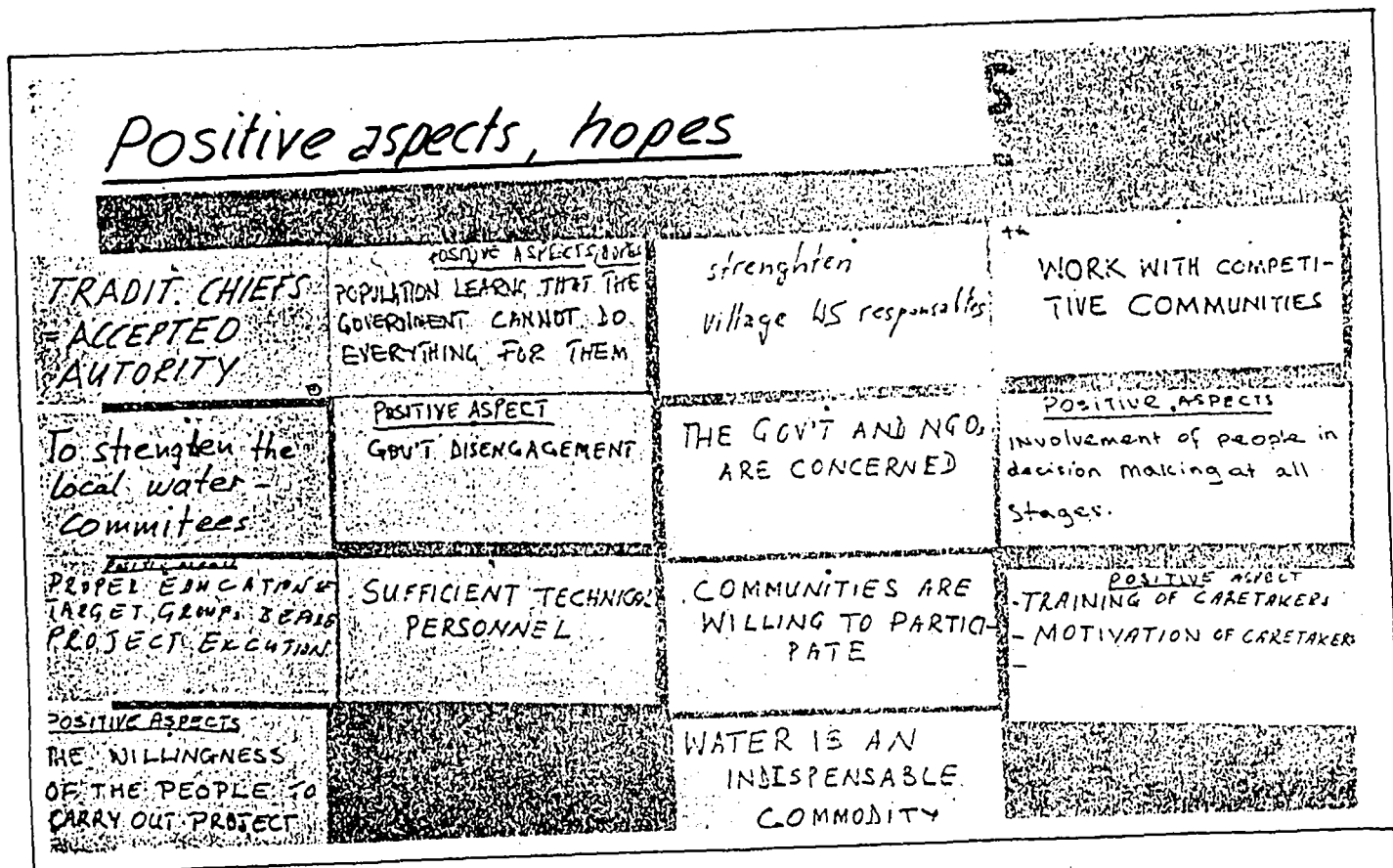


Fig.4 Answers to question No. 3

These three main aspects (expectations, problems and positive experiences/hopes) were the raw material for the workshop. The process of thinking and the discussion were structured in applying what we called the SOFT-method (Fig. 5).

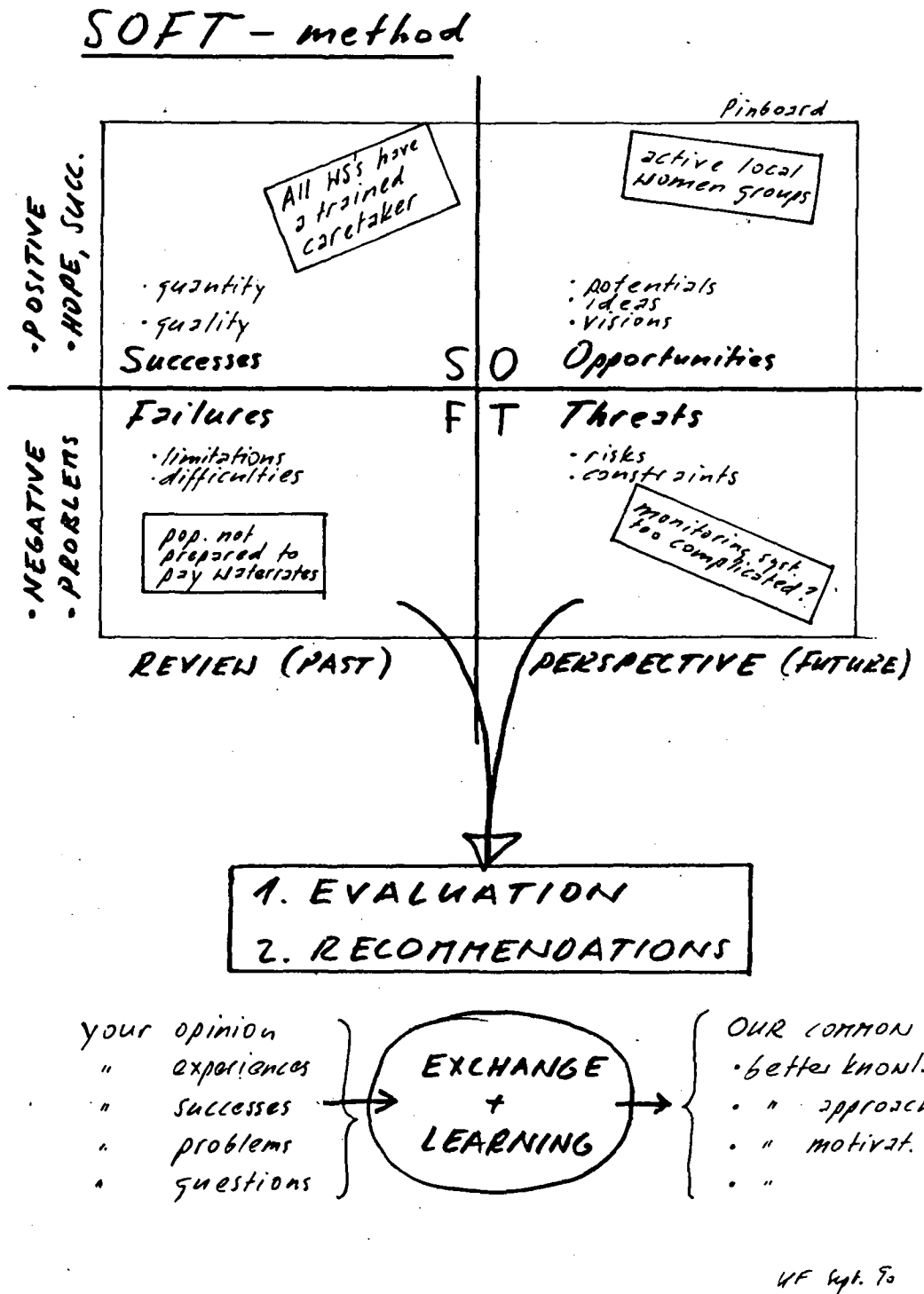


Fig.5 The SOFT method

## 2. STATEMENT OF THE PROBLEMS AND OPPORTUNITIES

In the first part of the workshop Mr. F. Ndonue reported about the maintenance pilot project which was undertaken with the assistance of CARE in the period 1982-85 (see Annex E). The intentions to evaluate the PACT-programme and to develop a national policy for rural WS-maintenance was not continued and with the growth of the economic crisis this important topic seems to have lost priority. The experiences made with the PACT-programme must be considered in future plans.

The moderator Urs Fröhlich gave a brief introduction to the 25 years report (the English summary was handed out to all the participants).

Sustainability is a goal which is not only difficult to achieve in CD/Helvetas-water supplies. Fig. 6 shows that all WS-strategies have their problems. Relative to other systems and approaches only the very simple traditional water systems (when quantity and quality conditions are good) can be more favourable than gravity systems built with CDD- and Helvetas assistance. That means that it is better to put efforts into solving the problems in village water supplies built with CDD/Helvetas assistance than to shift to © or ®. From the answers to the three initial questions and as an extract of the recommendations not disputed in the 25-years report (Annex F) the writer would mention 10 main conditions. (key problems, needs, opportunities):

- Fundamental pre conditions must be fulfilled (felt need, real simple solution)
- Adequate, transparent project realization process (Annex C) and adequate monitoring during and after construction
- Animation, cultivation of awareness of the population, the committee, the caretakers (Information, discussion, democracy, self-reliance)
- Training of caretakers and committee members; creation and maintenance of good relations and an atmosphere of confidence by open and full information, especially in financial matters
- Horizontal cooperation on local level (village, council) between the sectors water, health, agriculture, ecology)
- Technical support to caretakers, ev. by private craftsmen (former BTC-absolvents)
- Appropriate water-rates and willingness to pay (self-supporting operation and maintenance including remuneration of caretakers)
- Help to self-help (and not more). It's the village who must take the initiative and carry the responsibility
- Appropriate maintenance strategies under optimal participation of the users (financial, physical, institutional, social)



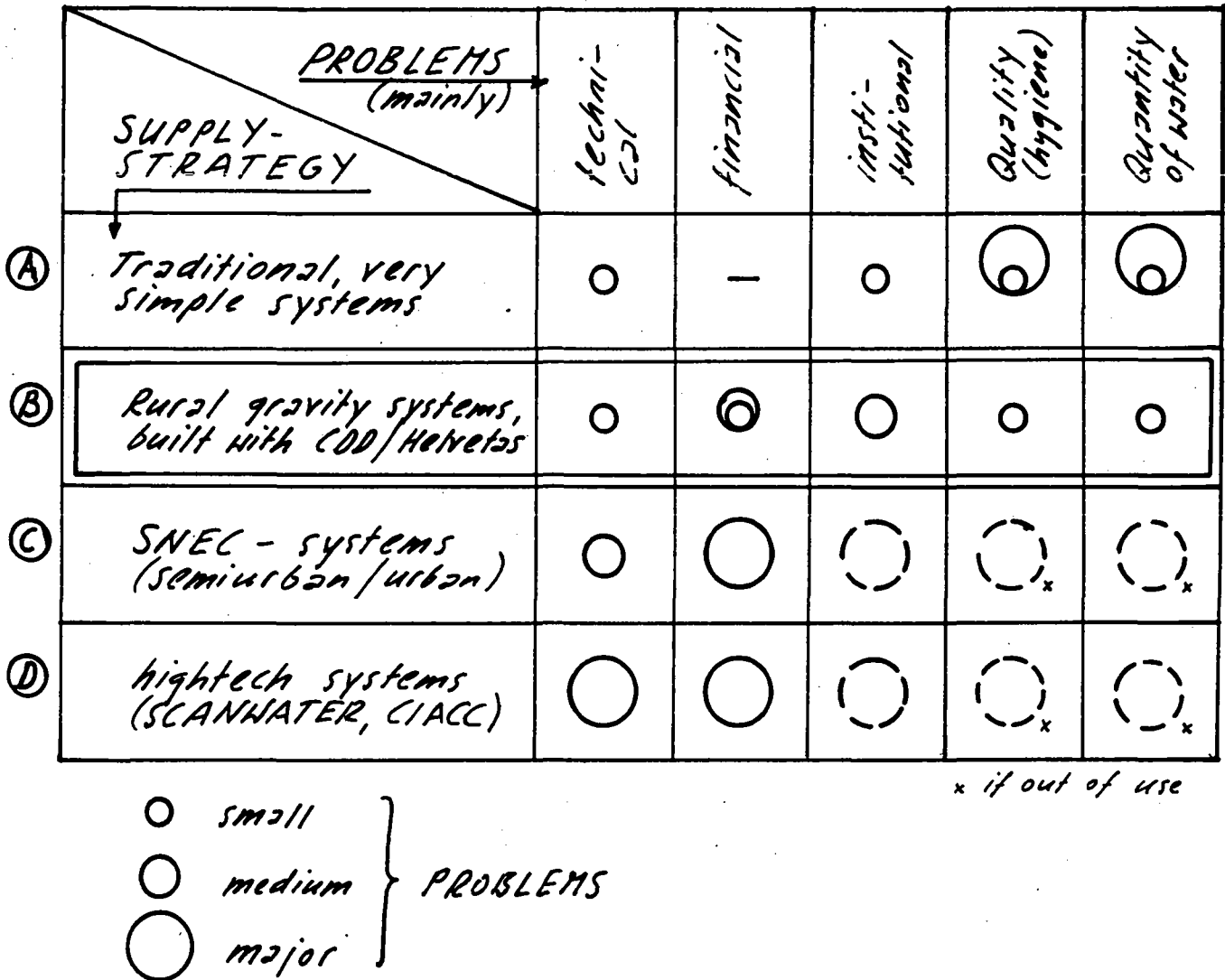


Fig.6 Problem structure in various water supply strategies (tendencies)

The SOFT-method was used to describe the following aspects:

- Economy (Fig. 7)
- Technology (Fig. 8)
- Sociology (Fig. 9)
- Ecology (Fig. 10)

The discussions were mainly moderated by Professor Ajaga Nji. He acted as a competent animator. Figures 7 - 10 do not show all the cards which were produced under the respective headings, because many of them were transferred during discussion to other particular SOFT-walls ("Sustainability criteria" or "What kind of external support?"). The discussion about sustainability criteria was very interesting and yielded good results (Fig. 11).

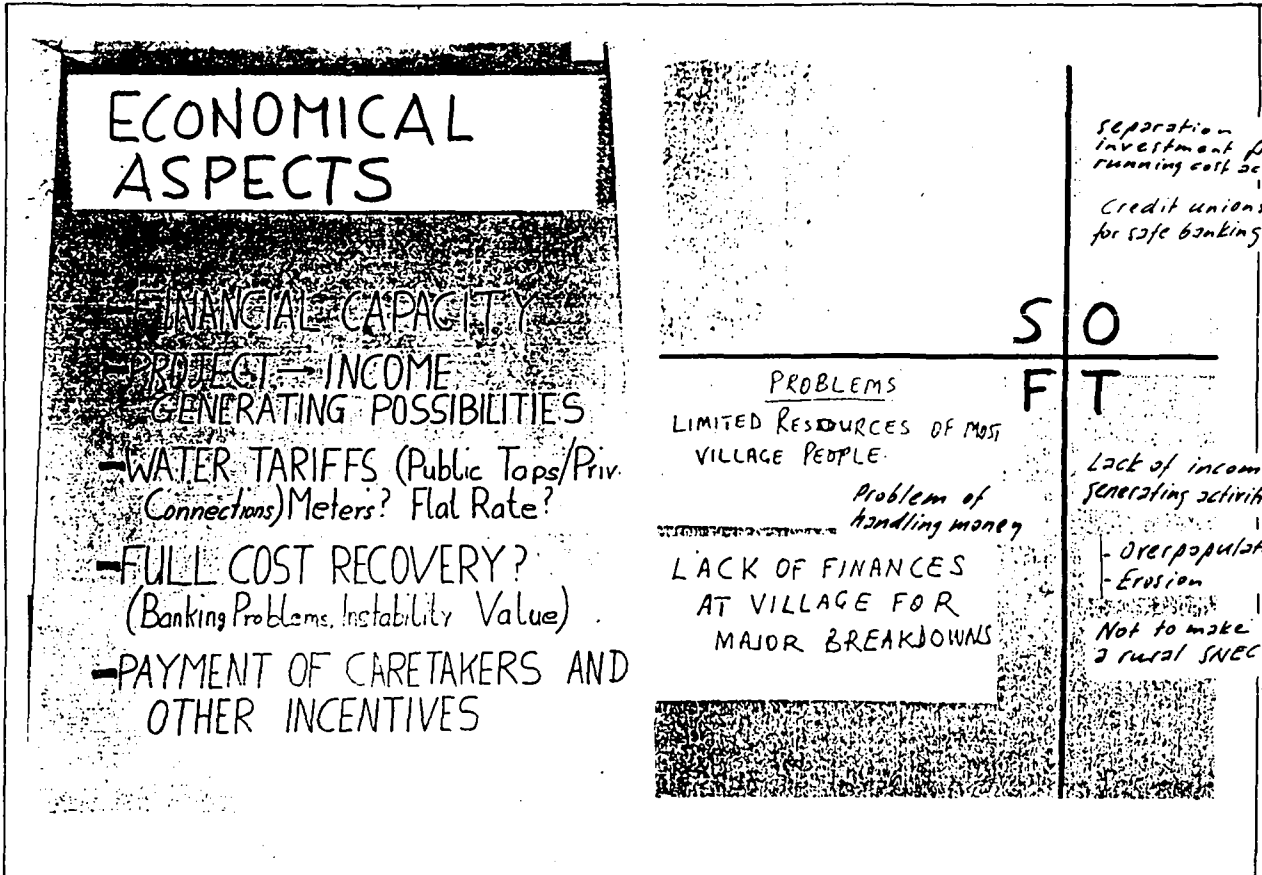


Fig.7 Economical aspects

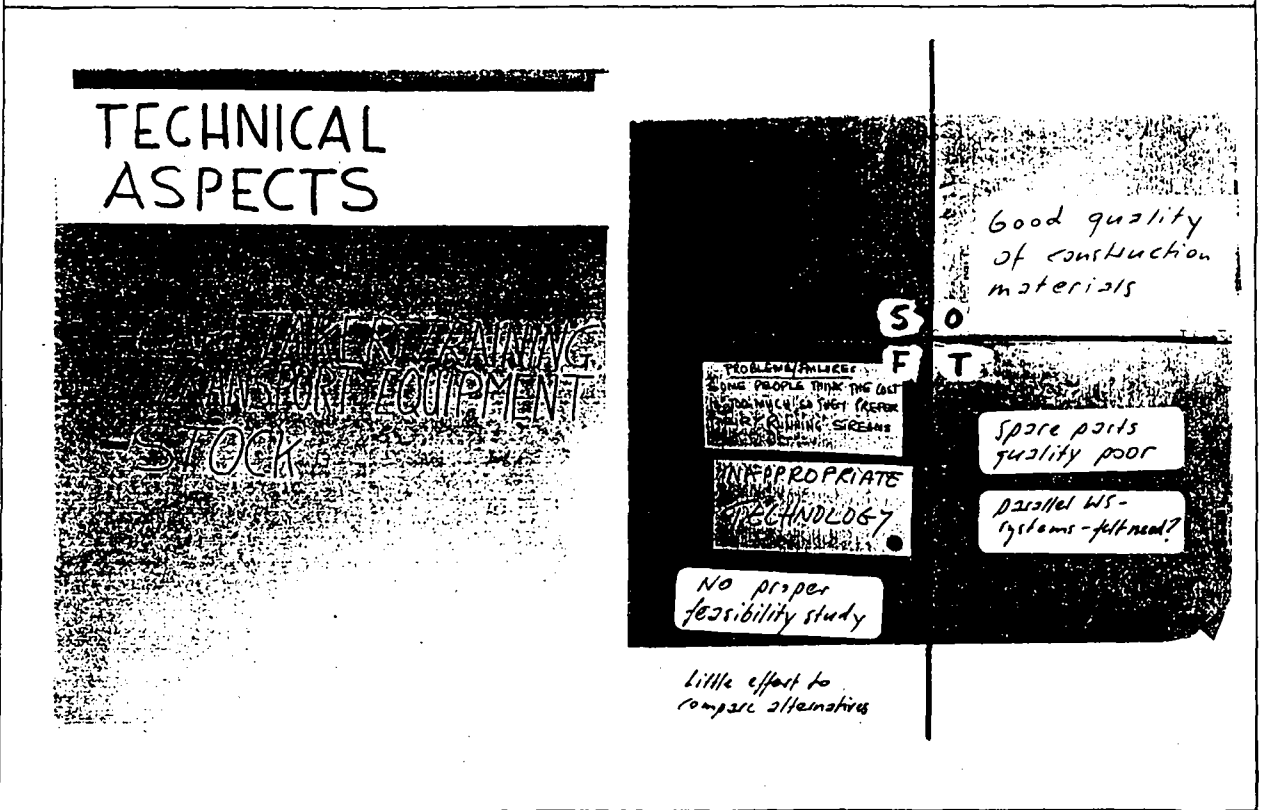


Fig.8 Technical aspects

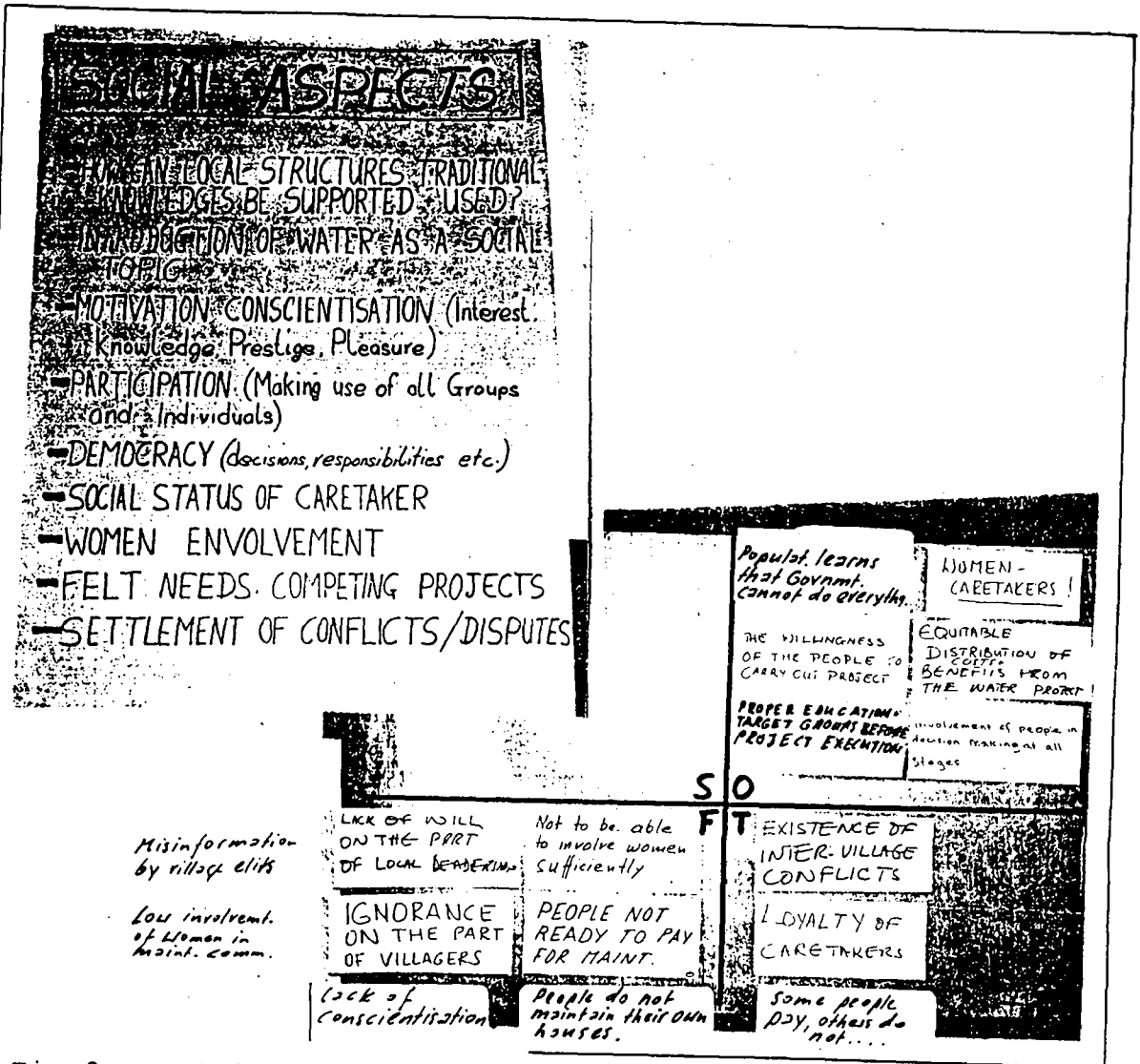


Fig.9 Social aspects

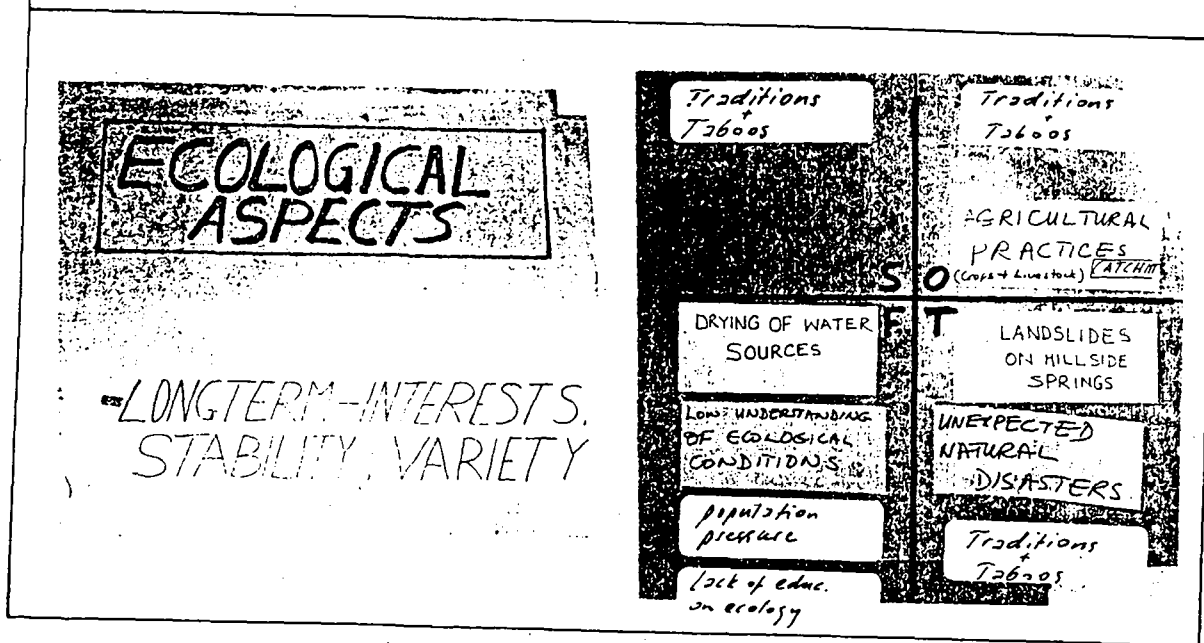
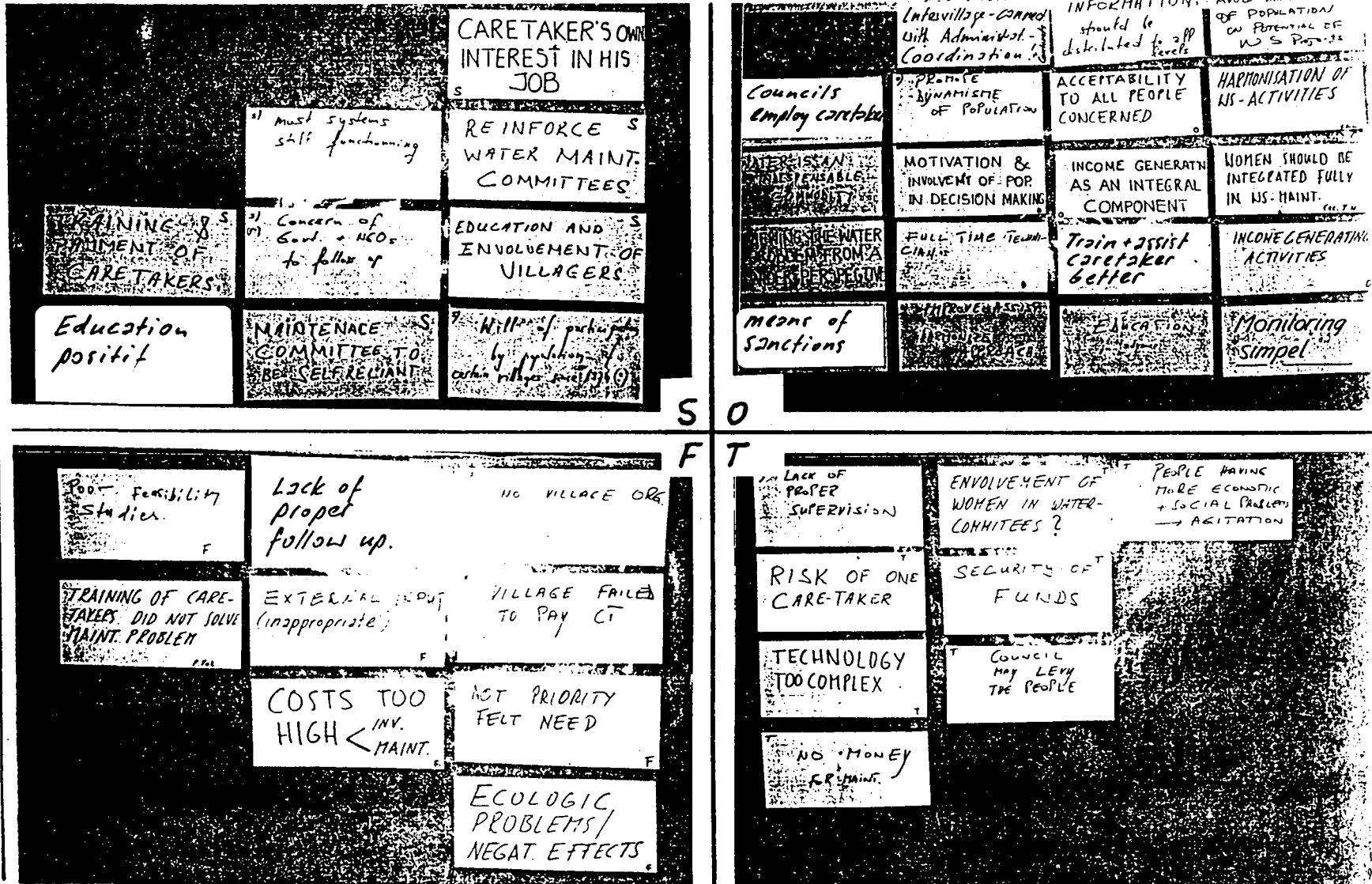


Fig.10 Ecological aspects

Fig. 11 Sustainability criteria

# SUSTAINABILITY CRITERIA



### 3. PARTICULAR CONSTRAINTS

Although the following aspects are mentioned in various figures, the writer brings them to the special attention of the reader, because these topics had a high priority in the workshop discussions:

- Administrative duplications must be avoided or at least minimized:

- Conflicts/negative competition between donor agencies
- Duplications in or between government services (for instance CDD, Ministry of mines and energy, SNEC, etc)

- The activities of SCANWATER and CIACC are disturbing the self-help spirit in many villages and regions. The regrettable frustrations resulting from these highly inappropriate WS-systems are paralyzing people's efforts and binding local, national, and foreign resources. All participants and most of the government officials who were interviewed during the recent project tour do not at all agree with this detrimental programme which is still going on. A new strategy for assistance of rural watersupply maintenance should not include any problems of those hightech schemes.

- To get spareparts of good quality is very difficult today. Many of the imported materials are of poor quality and the prices are high. Taps are the most difficult parts to get. Together with other organizations Helvetas will try to contribute in finding better solutions.

- Sanctions: Wherever people are expected to fulfill duties and obligations in mutual solidarity it is the rule that some individuals do not try to fulfill their tasks. If there are no sanctions, the willingness and preparedness of the majority who cooperate are in danger to deteriorate. Therefore a practicable instrument of sanctions should be developed, through which problems can be treated on a local level (in the first instance).

- The weak financial basis of community water supplies is one of the main obstacles to sustainability. The villagers must be made to understand that a watersupply is a service which cannot be expected to be free. It might be wise not to say that the water has a certain price, but materials, spareparts and tools have to be paid for and that part of the caretaker's work which exceeds the free contribution of every member of the community must be remunerated. Figure 12 "What price for water?" gives some ideas and dimensions which might help to find solutions. With regard to private connections it is the express opinion of most of the participants that a water rate according to the consumption (water meter) is the only way to achieve fair management and taxation of these special taps.

# WHAT PRICE FOR WATER ?

OFTEN: No price, water free → PROBLEMS

OFTEN DISCUSSED: 500-1000 CFA / year × man } seems acceptable to population  
200-500 CFA / year × woman }

PRIVATE CONNECTIONS: Pmt. according to consumption (meter reading)

Example: Av. Water Supply (2500 persons)

• Investment: 2500 × 6000 = 15'000'000 CFA cash exp.

• Water rate (assumption): - Income

|| 350 men ≈ 600.- = 210'000 CFA  
450 women ≈ 300.- = 135'000 CFA  
~ 350'000 CFA

• Expenditures:

Caretaker 1/2 time - job  
12 × 12'000 = 144'000 CFA  
Assistant caretaker 1/4 time - job  
12 × 5000 = 60'000 CFA  
~ 200'000 CFA

→ remaining for tools, fittings, spare parts and external support:  
~ CFA 150'000

In this calculat. cost recovery is not included!

→ in future this should be covered too - if we calculate 4% of investment per year = 600'000 CFA/y.

(this means: Water rate of our example × 3)

(to envisage CR is a next step, when self supporting mainten. is operated successfully)

(the free community work is not included in this figures)

Fig.12 What price for water?

If in a later future full cost recovery will be the goal, the water rates would be about:

1'500 - 2'000 CFA per man  
800 - 1'000 CFA per woman

If we compare this with SNEC-prices the water will still be 10-15 times cheaper.

4. POSSIBLE SOLUTIONS

4.1 External assistance

The discussion made clear that the organization/management, the institutional aspects and animation are decisive factors which need more consideration. The results of a brainstorming on this topic are presented in Fig. 13 and 14. What kind of support does a village need? Our findings are grouped on pinwall Fig. 15.

All the discussions have confirmed that the development and the use of local capacities and resources is the most important condition for sustainability. Whatever a village community can do on its own should never be offered from outside. From this point of view the economic crisis could also be seen as a chance for local initiative. But it was also realized and confirmed that external support is unalterable. One possibility of maintenance assistance is shown in chapter 4.2. External support for maintenance should be offered under the same clear conditions as for a new project. A list of preconditions which help to reduce the risks of failures was also discussed and brought to paper (Fig. 16). The project development needs a clear structure, too (Annex C).

During the workshop we could not produce maintenance policies. It is important that the existing drafts (Annex F) are reviewed under consideration of the workshop information. All future assistance plans depend on a good and workable maintenance regulation which must also be legalized by the government.

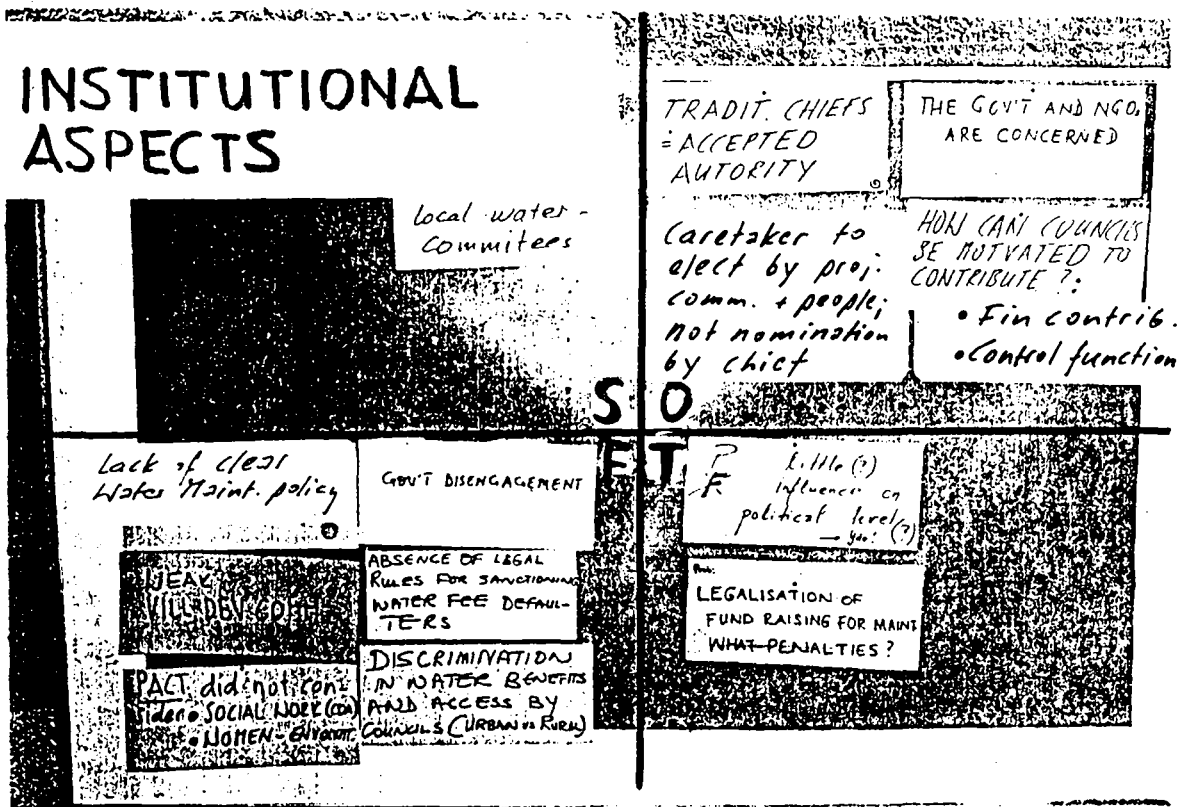
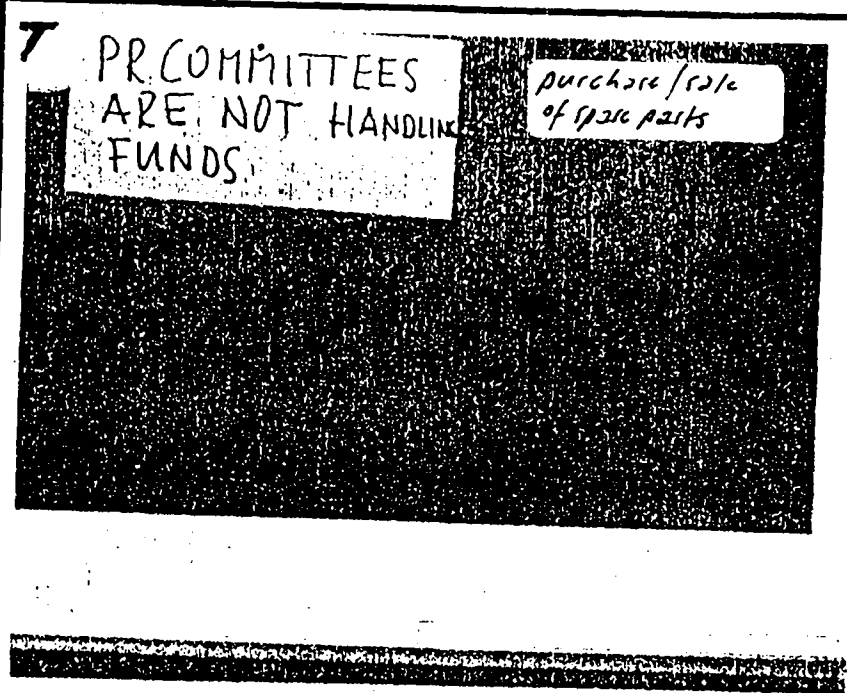
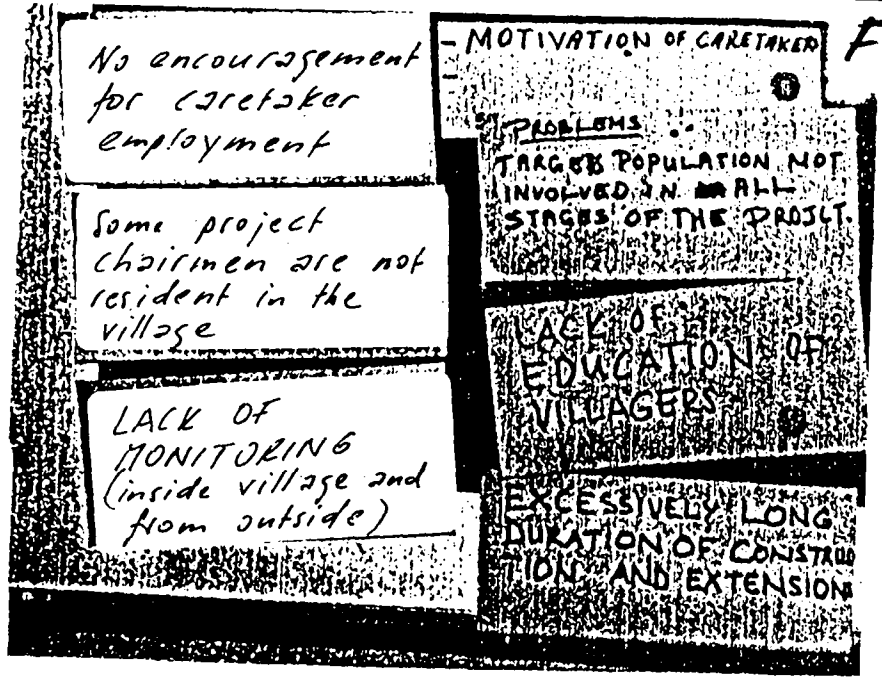
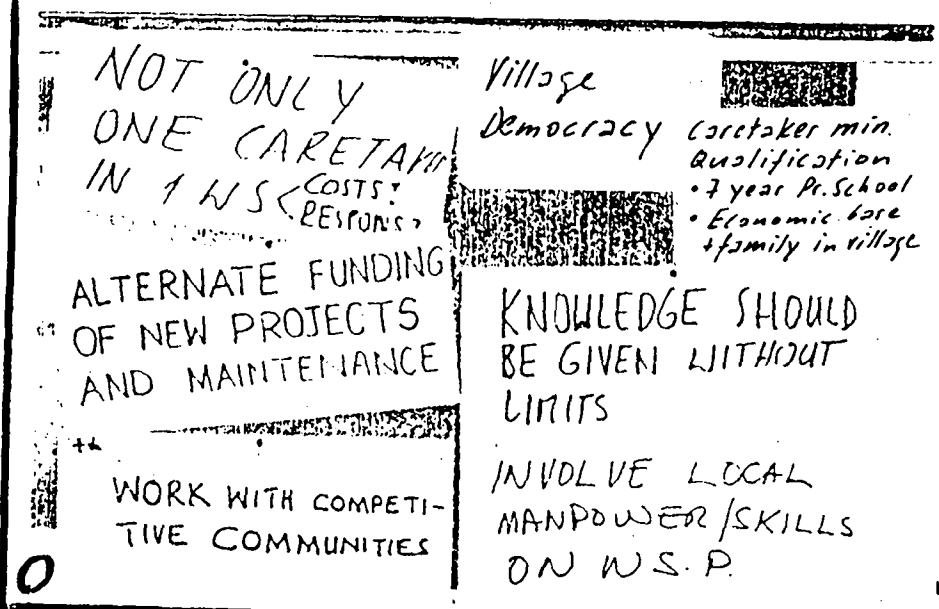
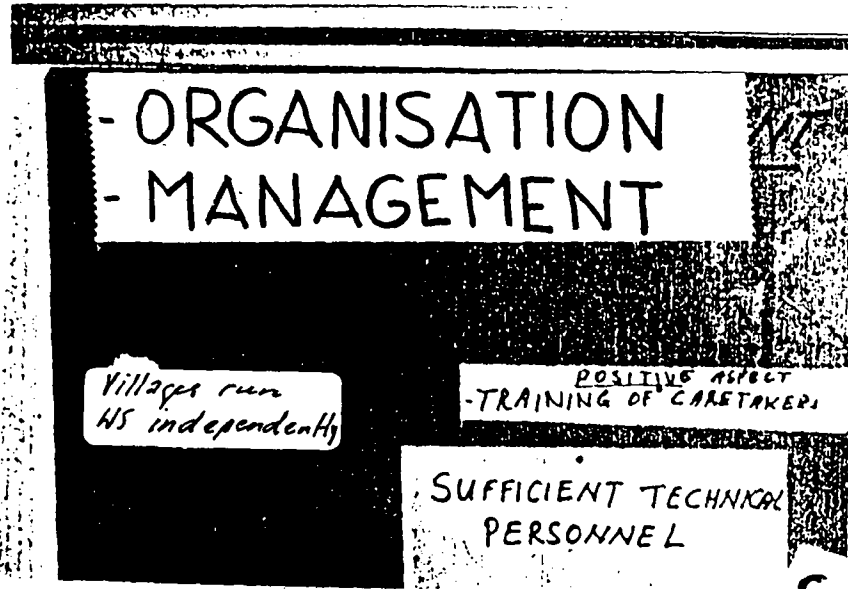


Fig.13 Institutional aspects

Fig. 14 Organization/management





# WHAT SUPPORT TO VILLAGE ?

SPECIAL COURSES

MANAGEMENT / INSTITUTION (Project committee)		TECHNICAL SUPPORT (Caretaker)		ANIMATION (Population)	
Flow of Informat. both way from top general level.	Insist on Account ability	Ensure res. maint.	Provision of equipment.	Do not force any idea on them (DEMOCRACY)	Tell the truth to the villagers
Training of executives - chairm. - secret. - treasur.	Book-keeping - simple accounts.	Training for simple repairs	Training for Assistance to major repairs	WATER DAY (in connect. with fund raising)	Clean Water means HEALTH
Organis. of Maint. Committee	Filing records, system + reports	MONITORING SYSTEM	STOCK management	Sense for solidarity + responsibility	To get identification
Org. Motiv. village for project. maint. + fund raising.	Fix rules and regulat.	Provision of approx. TOOLS	Training sent for approx. TECHNOLOGY	Active particip. of WOMEN	Dynamic local leadership
COOPERATION - Proj. Comm. - Caretaker - Populat.	Training in Resource management. - Human - Finance - Materials	Refresher training	Provide good quality SPARE PARTS	CO-TV Mass-media	Pize for best maintained project
How to apply sanctions	FUND RAISING			Info-meetings	Mobilisat. of Populat. f. maint.
TRANSPARENCY	Project Integration			Format. of WOMEN GROUPS	Exchange visits
Contacts to other techn. Services	Evaluation of Administ. + Management.			DEMOCRACY (election of Pr. Comm.)	INADES Formation
INADES FORMATION	Engagemt. of individ. retired people - students - experts	Supervision by CO-staff	Caretaker COURSES	PHC Health	
INEEK COURSES		Assistance COD			

To all courses the villages have to pay at least a small amount!

Fig.15 What support do villages need?

# CONDITIONS FAVOURABLE FOR EXTERNAL SUPPORT

<u>Socio-cultural Criteria</u>	<u>Technological/ natural factors</u>	<u>Policy Criteria</u>	<u>Economic Criteria</u>
Women involved + active particip.	Appropriate technology	NO OTHER EXT. SUPPORT COMPETING <small>own project</small>	W.S.P. must be benefitting majority of people
Acceptance of training for Maint. comm. + CT		Water committee with rules and regulations	Population initiates other activities of economic interest
Dynamic local leadership	Trained caretaker in the village	legalised sanctioning by Water committee	Efficient Maintenance Committee
<p>New projects: Comm. must show commitment (money and labour contribut.)</p> <p>Old Projects: Willingness to contribute for maint. costs (continuously)</p> <p><b>WATER IS 1st PRIORITY for village</b></p>	Preparedness for rehabilitat. resulting from positive construct. experience	Existence of rules and regulations to sanction defaulters	Well structured Maint. committee ⇒ Well kept accounts
Villages must be prepared to give their own full contribution		Fixed maintenance rates per resident	<b>WATER Maint. RATE fee</b>
		NO SUPPORT WHERE AND TO PROJECTS A LA SCANWATER.	<b>REMUNERAT. OF CARETAKER</b>
		WS - Maintenance on self-help basis	
		<b>THE SUSTAINABILITY CRITERIA FULFILLED</b>	
		The conditions to get ext. support* are the same as for a new project (*FOR MAINTENANCE)	7/1/01

Fig.16 Conditions favourable for external support

Support to the villages means to a good part training of local project holders. Courses for local committee members and caretakers have to cover a number of subjects (Fig. 17):

Subject	Chairman	Secretary	Treasurer	Caretaker	Remarks
Community organization	(X)	x		x	
Confidence building	(X)	x	x	x	
Committee organization	(X)	x	x		
Reportwriting/inform.	x	(X)		x	
Fund raising/water rate	(X)	x	(X)		
Accounting, financial management	x	x	(X)	x	
Filing, documentation	x	(X)		x	courses 1 - 2 weeks
Application of sanctions	(X)				
Monitoring/Evaluation	(X)			(X)	
Cooperation with Government and NGO's	(X)	x		(X)	
Integration of projects; horizontal co-operation	(X)	x	x	x	
To make water a topic in daily life	(X)	x	x	x	
Technical training (plumbing, masonry, stock management, quality control water and buildings)	x			(X)	*

\* Course 3 - 4 weeks (after participation in construction less)

Fig.17 Subjects for local capacity building

Teaching aids must be worked out in detail before the necessary knowledge can be transmitted to the local function holders in appropriate courses: for instance a basic education of one or two weeks in a center like CDD Santa or Inades Bamenda. These basic

courses should introduce and apply the practical material which is meant for the daily work (administrative and technical knowledge and checklists, forms for monitoring and (auto) evaluation, reporting, information, bookkeeping, filing plan, programmes of operation, etc.). It is strongly recommended that all these materials and books should be simple, in a logical, good and attractive presentation in order to be of real help in the daily work. People must be attracted and pleased to attend such courses and it should bring them some prestige, too. Stimulating competitions between participating villages could probably increase the positive effects of the programme. - Periodic refresher courses serve as exchange of experiences and for discussion of actual problems.

To develop the training and working material (subjects, teaching contents and aids, booklets etc.) it would be good to form an action group of people who know the matters and who represent or understand the village groups concerned. First of all a clear concept must be developed, before particular jobs can be distributed to individuals. Professor Nji and the author of this report would be prepared to contribute, together with others who attended the workshop and with Werner Christen. Drafted proposals should be given to a key group for compilation. Then the harmonized dossier can be presented to interested people as well as to governmental and nongovernmental institutions for consideration and comments. After such a consultation the final form has to be found before the material can be printed and used in regular programmes by regional bodies.

#### 4.2 Support teams

The seminar came to the conclusion that mobile support teams would be an adequate model for external assistance to local project holders. Such a team should be formed by two people, one a technician/plumber, the other one a social worker-person. The idea is shown schematized in Fig. 18. It needs calculations and testings to find out in what size of region and for how many water supplies a team can take charge. Means of transport are of great importance for such a team, because the technician needs to take along tools and materials. The vehicle has to serve as a simple "flying workshop". The team accompagnies the villages in solving their problems of technical, institutional and social nature. In frequent visits (about once a month) emerging questions can be discussed in the field. In cases of emergency the team can be called for immediate action. But the service which could be governmental or nongovernmental has to remain a help to selfhelp. The services cannot be offered and rendered to villages "automatically". Only those can count on this support who fulfill the conditions:

- Sustainability criteria
- Acceptance of training package for local capacity building
- Installation of water rate system including remuneration of caretaker
- Payment for external assistance (to manifest real interests)

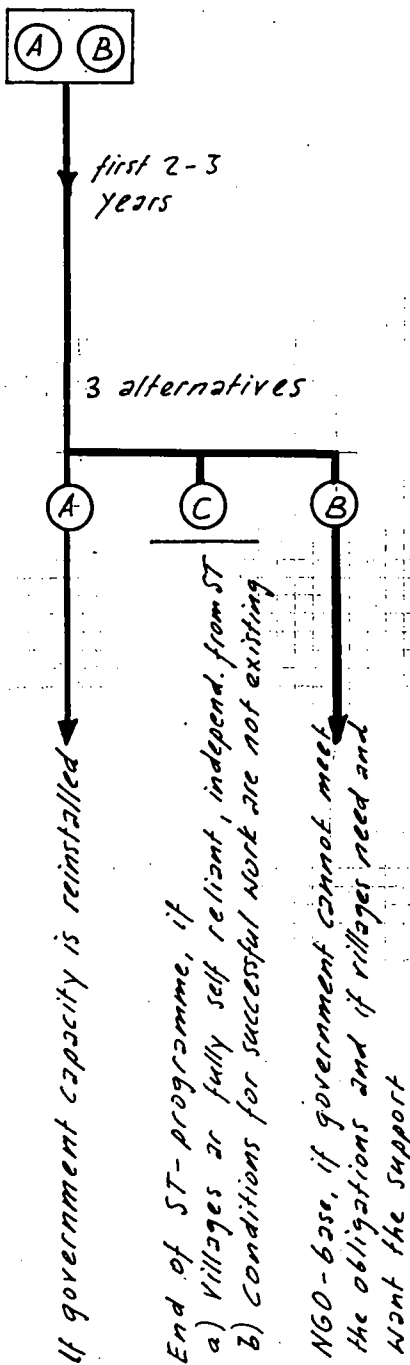
This has to be confirmed in a sort of official agreement.

# THE EXTERNAL SUPPORT TEAM(S)

- (A) Based on Government
- (B) Based on informal Sector (NGO)

Support Team (ST)  
 1 Technician (plumber/mason)  
 1 Animator (social worker),  
 if possible 2. woman

1 ST for 1 Division? } has to be  
 1 ST for 1 Province? } experimented



INPUTS		
Government assistance (staff, direct subsidies)	Transport	initial and refreshing training of ST
Foreign aid	Tools	
Cash revenues from stock sales	Stationary	
	Spares + Stock	

DUTIES, OBLIGATIONS		
Advice to and training caretaker	purchase + sale of mat.	Techn. advice to small extensions
Advice to committee	Assistance to major repairs	Advice to safe money for major repairs (later cost recovery)
Monitoring advice	Regular visits to villages with syst. in operat.	Training of new supporters (ST's)

PARTICULAR PROBLEMS		
Communication is difficult	Government interests do not meet village interests	If ST would operate on private base: Priv. Maint. unit may not have the same priorities as villoges Priv. unit may be reluctant to spend time/money for routine visits Priv. unit or not interested in preventive maintenance
Implications with const. activities COD		

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Fig.18 The external support team

It seems that support teams of this nature can hardly function without financial assistance. That means that an operation on a purely private contractor basis would probably not be a realistic model. Financial independence and self supporting conditions could make the services too expensive for villages. One of the reasons are the high transport costs (long distances on bad roads). Without financial assistance the danger might arise that such teams would do more new constructions and installations for villages and individuals, and their interest for maintenance and operational consultation would decline, and actions would become limited to technical matters once more. Full financial dependence on the villages could lead the supporters to the wrong conception of being more interested in "creating" and execution of major repair jobs instead of preventing breakdowns. In the pilot phase and during the existing economic crisis Helvetas, eventually together with other organizations would have to cover the financial needs (first equipment and covering the running deficit). The costs have to be calculated in detail and continuous financial recording must be a matter of course. Otherwise sustainability for this support structure could never be achieved. In this programme the local contribution has also to be adequate and high enough in order to make obvious the villagers' interest. In cases where a village does not need or not want the service it should not be obtruded upon it. - The success of such a programme depends mainly on the personal qualification and motivation of the support team. Therefore highly qualified people should be appointed for this challenge-job. Continuation is an important requirement, too. - Therefore rotations should be avoided. Helvetas as a main doner and organizer would claim the right of co-determination in staff matters. The support teams would have to be free from other duties in order to concentrate fully on their obligations according to particular duty plans.

The members of mobile teams need proper training and introduction to their work. They must be responsible to a governmental or non-governmental (or parastatal) authority. If positive developments and experiences make it possible that more of such teams are formed, periodical meetings will allow the analysis of experiences and learning from each other; all this to the benefit of villages and their water supplies.

5. TRANSLATION AND FINAL REMARKS

The raw material resulting from the seminar has to be conditioned so far that successful actions can follow. Based on the seminar discussions the author suggests that very soon one first support team should be operating to assure that practical experiences can be considered in the development of the support service. It is important that such new activities do not duplicate or compete other programmes; harmonization and coordination with CDD and other development programmes must be assured.

The rough plan of action (Fig. 19) also depends on the future general development of Cameroon and on the conditions for the work of Helvetas. It is based on the expectation and hope that the frame for selfhelp projects can be developed successfully.

PLAN OF ACTION / MAINTENANCE STRATEGY (proposal UK)

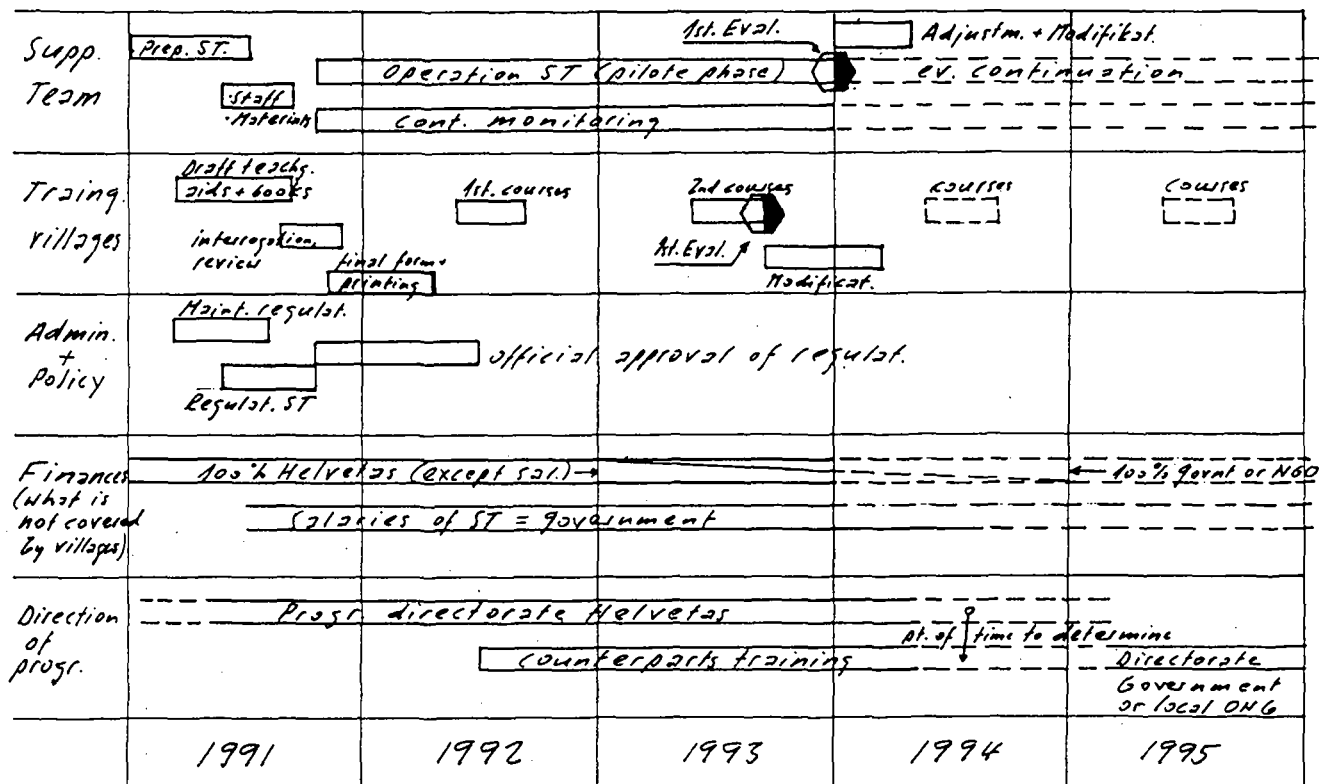


Fig.19 Proposed plan of action

The workshop was an excellent opportunity to discuss the great concern of sustainability of community water supplies. We have not solved the problems but in open and good discussions we have succeeded in showing directions and ways how to overcome (or avoid) difficulties. - Although the author was anxious to express real the opinions of the seminar it might be that in the last two chapters (3 + 4) a certain subjectivity might have crept into the text. But I am convinced that - if necessary - this can be corrected in the phase of concretisation. I regret and apologize for having needed so much time to produce this report. Let's start work now without further delay profiting from the enthusiasm received during the seminar in Bamenda. In his closing remark Ajaga Nji said: "If the results of this our seminar are applied to 60 % the problems are solved to 95 %."

*Urs Fröhlich*

Urs Fröhlich



PROGRAMME WORKING SESSION

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Swiss Association for  
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Republic of Cameroon

New Phone No. 36 17 30

### Individual Preparation

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The personal, active participation of the individual woman and man in the workshop is most useful. The effectiveness can be even better if we try to reflect the topics already in advance.

As organizers we hope that everybody would answer 3 questions (5-10 words each):

1. What is my main expectation with regard to the maintenance workshop?
2. What is in my opinion the greatest failure/problem with regard to one or to several programme-subjects?
3. Which aspect do I consider to be the most positive/hopeful with regard to one or to several programme-subjects?

The previous informations to this meeting (18.8.90) and the extensive catalogues in the enclosed 25-years report shall be read as a preparatory introduction to the vast topics. The programme is an attempt to structure them, however it shall be open and situation specific, the participants can and should contribute new aspects.

In chapters 4.3.1 and 4.6 (p. 9-18 english summary) of the 25-years report, recommendations are made. Your comments - if possible in written form - and addings are helpful and most welcome.

Bamenda, 16.10.1990

For the workshop team:

Martin Epp

Prof. Ajaga Nji

Urs Fröhlich

Tuesday morning, 20.11.1990

#### MAINTENANCE STRATEGIES

- 0800-0945h
- Criteria which exclude external support
  - Strategy with heavy external support (mainly from government)
  - Strategy mainly based on local resources
    - minimum external support
    - informal support (NGO, private sector)
  - Main conditions and questions to local and external support for caretakers
    - help, training, refreshing, monitoring
    - remuneration of caretakers
    - women-caretakers
    - role of councils, dev. committees
  - maintenance programme=new project
- 0945h
- Coffee time
- 1000-1230h
- New external support
    - CD technician especially for maint. (techn. & soc. advice, with logistic support from Helvetas/other NGOs)
    - Reactivation of BTC/REDSTS-absolvents (as private contractors)
    - Conditions for well-functioning of private repair services
  - Other new approaches

#### FINDINGS, CONCLUSIONS

- 1215h
- Common lunch
-

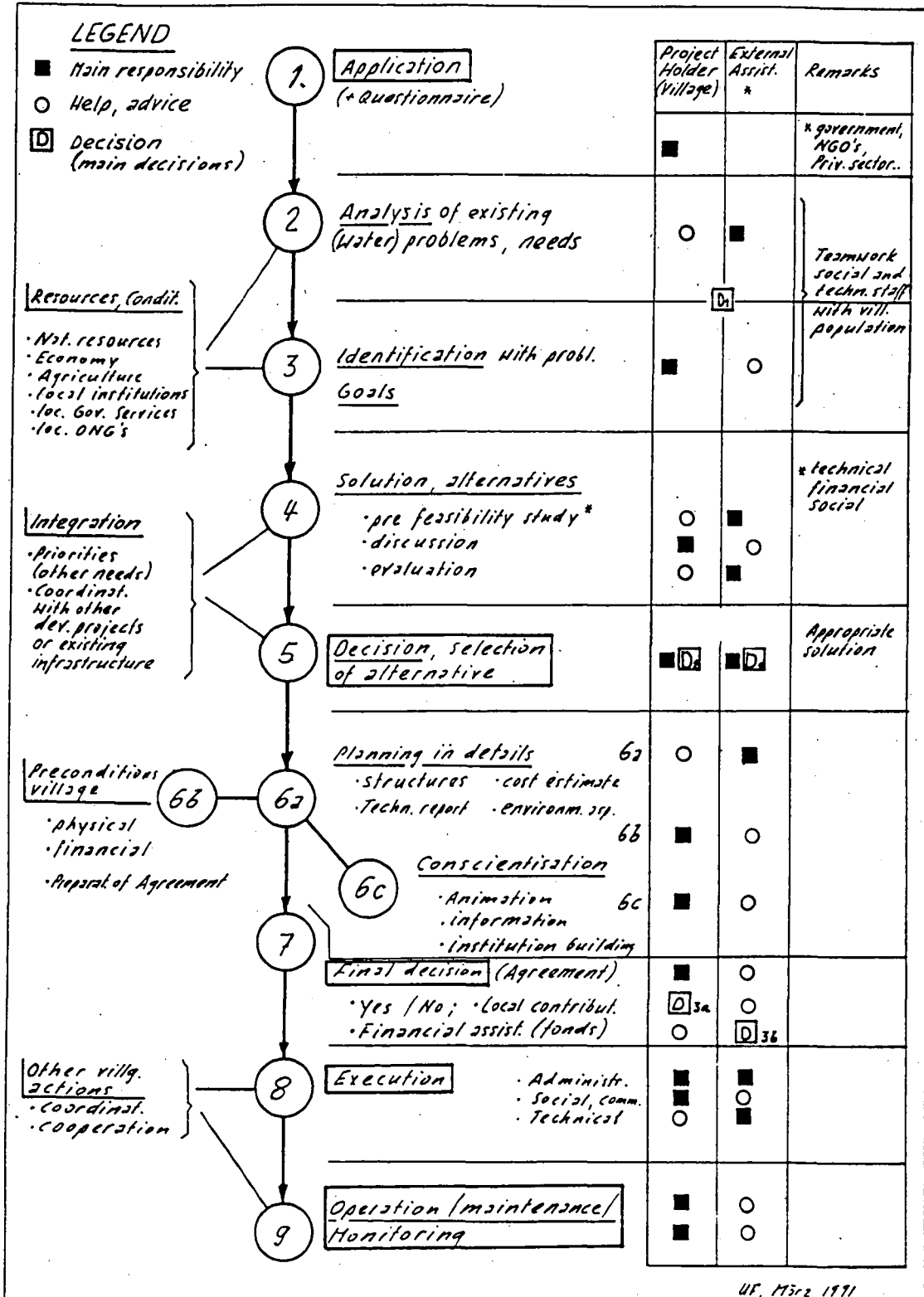
LIST OF PARTICIPANTS

Ajaga Nji, Ph.D., (Moderator)	Rural Development Consultant Dschang
Buam Joseph	CD NW Provincial Chief Bamenda
Bürgin Heinz	Helvetas Project Coordinator Cameroon Zurich
Christen Werner	Helvetas Technical Adviser Bamenda <i>(unfortunately HCh. was sick)</i>
Epp Martin	Helvetas Director Cameroon Bamenda
Fröhlich Urs	Consultant/former Helvetas Director Zurich
Fru Peter	Contractor Wum
Gamnje Emmanuel	Provincial Delegate of Mines, Water & Power, Bamenda
Ghanla Martha	Inades Formation Bamenda
Kilo Regina	CD Assistant Director Yaoundé <i>(1st. day only)</i>
Ndamukong Stephen M.F.	Provincial Chief of Local Councils Bamenda
Ndonue Takwih Frederick	CD/Co-ordinator former PACT programme Bamenda
Tafrey Peter Foncham	CD Divisional Chief Kumbo
Teh Peter Muh	REDSTS/caretaker training specialist Kumba
Tumasang Cecilia Nwasa	CD supervisor women's agric-projects Mezam-Division, Bamenda

Bamenda, 13.11.1990

PROJECT DEVELOPMENT SCHEME (DRAFT)

Scheme Project Development (new projects, extensions, maintenance)  
Duties - Responsibilities



PHOTOS PROJECT TOUR NOVEMBER 1990



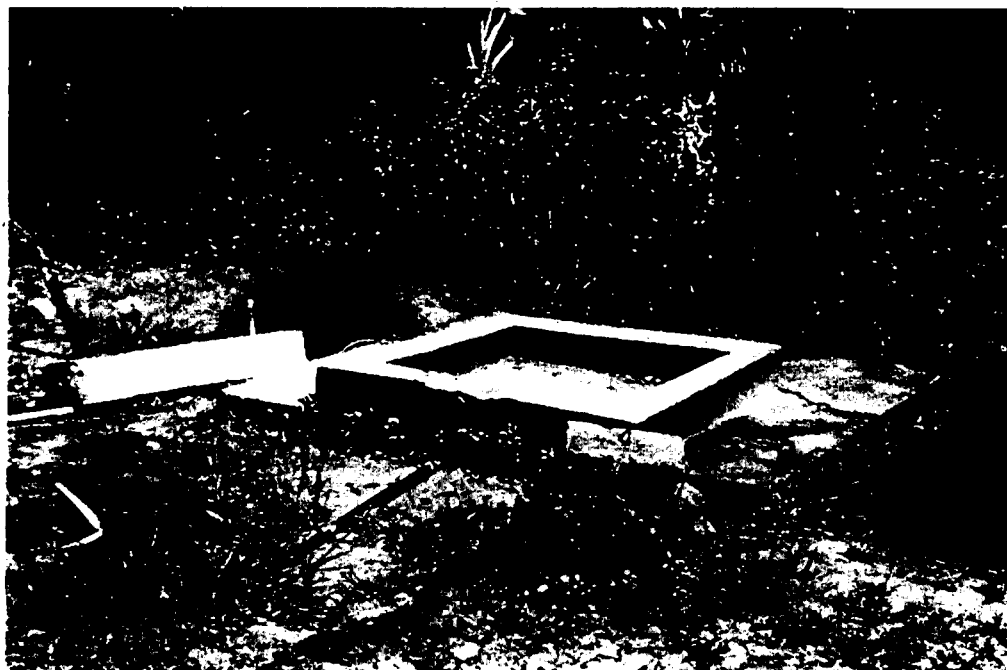
*Workshop impressions*



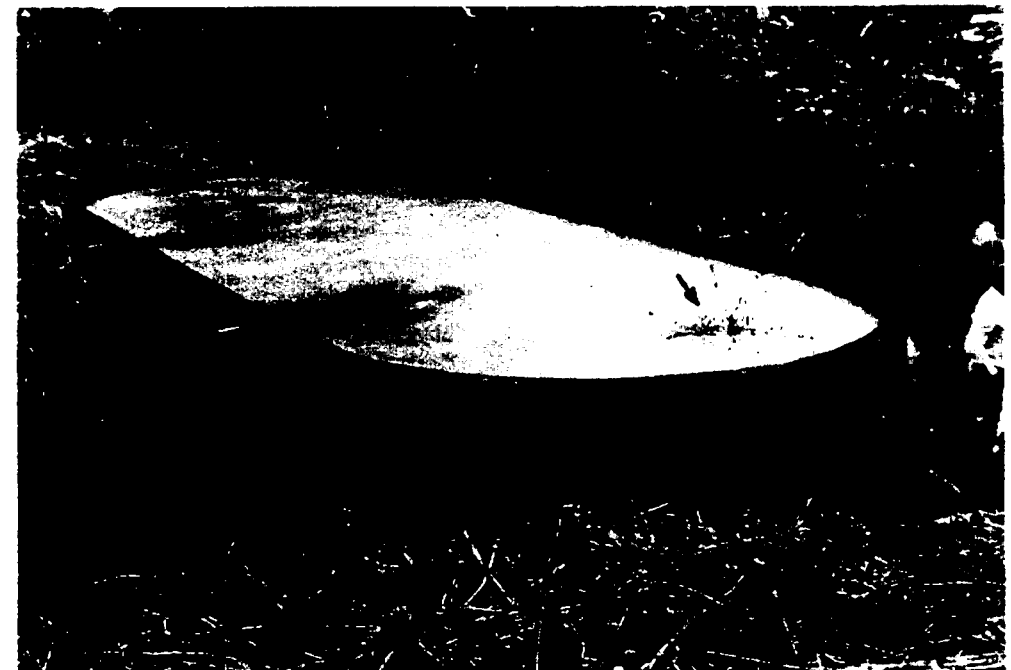
*poor standpipe constructions (drainage pipes)*



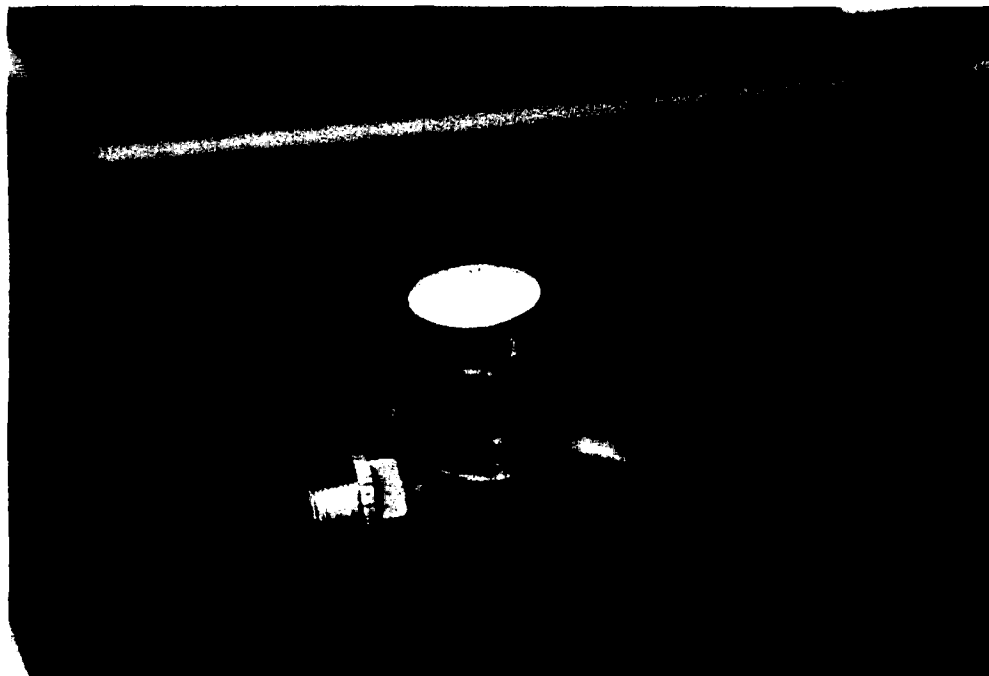
*Small repairs.... door?*



*Frustration! (this is not a CDD/Helvetas proj.)*



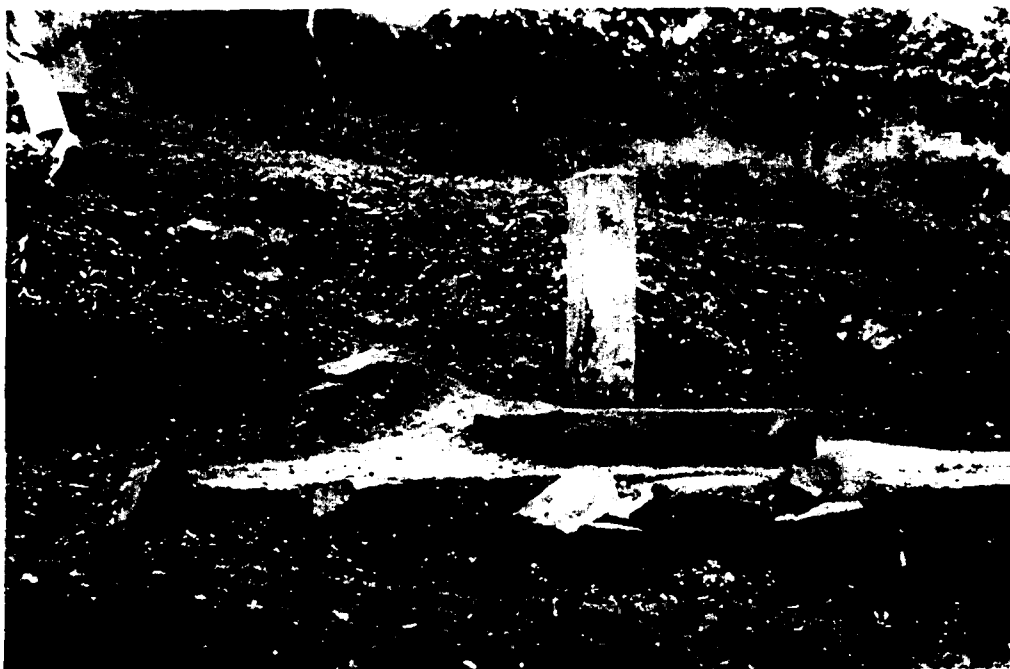
*The problems can start with small plants...*



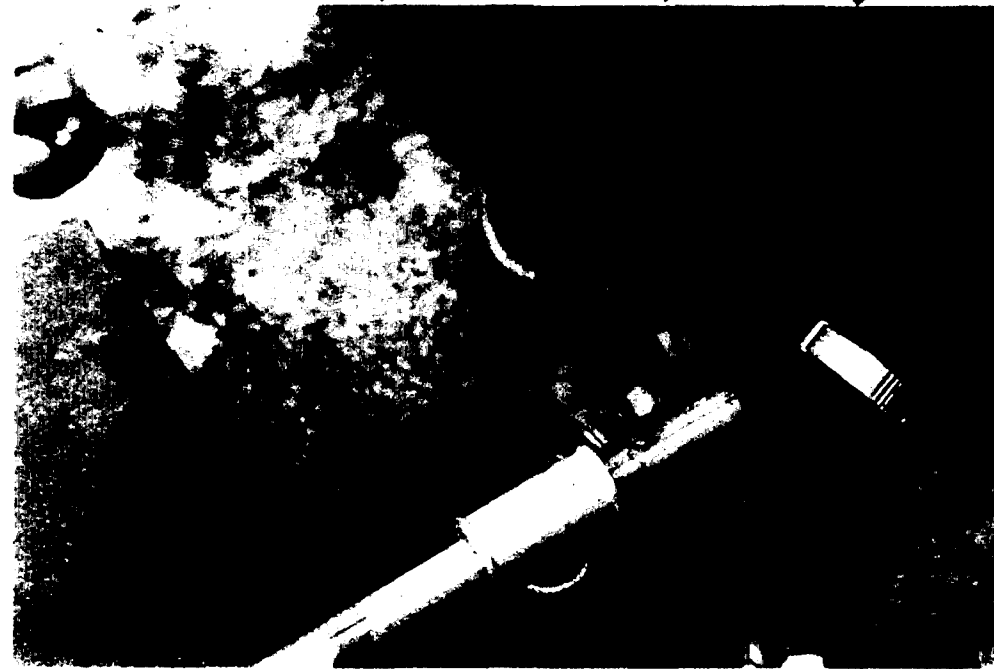
*The unsolved tap problem*



*What is the appropriate lock system?*



*Poor construction - poor maintenance*



EXTRACT OF "PACT-REPORT" F. NDONUE, 1987A.3.0 THE WATER SUPPLIES MAINTENANCE PROBLEM.

The expansion of the activities of the CDD over the whole country led to a sharp increase in the number of both old and new projects the CDD was handling with no corresponding proportional increase in the means of the CDD (personnel, equipment, funds), to handle the projects. Water Supply Projects are highest amongst the types of rural projects undertaken by the CDD. The CDD staff who had before been placed to organise the villages on the running and maintaining of their Water schemes, were reduced and placed in new areas. The CDD and SATA-Helvetas put up proposals on Maintenance and submitted to the Government for approval. The proposals would have enabled the villages to institute legalised fund raising schemes to have the villagers to properly carry out maintenance on their projects. But unfortunately the proposals were rejected. Consequently the completed projects deteriorated faster and faster as the CDD's attention on them became even less.

A.4.0 SATA-Helvetas/PACT Contacts.

SATA-Helvetas, worried about this trend, and considering also her eventual withdrawal (as the pioneer Technical partner) from the CDD in Cameroon, sought financial assistance from the American based organisation known as PRIVATE AGENCIES COLLABORATING TOGETHER (PACT) with headquarters in New York, to enable The CDD and SATA-Helvetas understudy the problems related with the Completed Water Schemes Maintenance, and to develop suitable solutions to them. This study was to be confined to some selected CDD/SATA-built projects in the South-West and North-West Provinces where some of the oldest Rural Water Supply projects are found. The list of projects originally foreseen in this programme is found on page 3.

A.5.0 PACT'S APPROVAL.

PACT approved the SATA-Helvetas request, making an initial financial grant of 30,037, US dollars for the financing of the first year of the programme. The SATA-Helvetas was expected to contribute the equivalent of 12,364 dollars in cash and kind. The financial contribution expected from the CDD was to be determined later, based on an evaluation of the cost of actual repairs and renovations to be carried out on the selected projects. The Programme came to be popularly known within the CDD as "The PACT Programme". The duration of the Programme was 3 years (1982 to 1985). For the other 2 years of the programme PACT granted a total of US dollars.



#### E.1.0 PROBLEMS ENCOUNTERED

Apart from the set backs listed in the opening paragraphs and above, there were also problems which directly impaired greater success which would have been had in the programme. Some of the problems were:-

- Staff changes and transfers (Directors, Engineers, Co-ordinator, CDD, s).
  - Internal conflicts in some within some of the Maintenance Committees.
  - The non-payment of the Caretakers' wages by some of the projects.
  - The co-existence of other Rural Water Services rendering complete free services (construction and maintenance) to villages neighbouring on some of the projects under this programme.
  - The non provision of the tool boxes as were foreseen during the conception of the programme. Until now the tool boxes have still not been supplied by the Training School, EDSTS or BTC-Kumba, to whom the SATA Helvetas entrusted the responsibility of training and equipping the caretakers.
  - The lack of suitable means of transport particularly in Momo Division and Donga-Mantung throughout the programme. Also the case of the CDA, s has already been mentioned.
  - The extremely bad condition of the laterite road particularly in Meme and Donga-Mantung made the supply of materials to the sites very hard. In Momo Division, much reliance on public transport brought in unforeseen and expensive expenditure in the programme.
  - The late arrival of the Government grants to the Divisions always did affect the programme particularly as concerned the seasons.
  - The technical nature of some of the problems noticed on the projects rendered their immediate solution within this programme not possible; examples of some of the problems are:-
    - §-The collapsed catchment in the Nyen W.S. project in Momo Division due to a landslide
    - §-The drying spring sources in the Ambo and Oshum projects in Momo Division.
    - §-The underseeping source in the Mpacko project in Meme Division.
- These are difficult and expensive problems which require special financing to solve them.

#### E.2.0 TECHNICAL PROBLEMS

During the demonstrations on routine and preventive maintenance in the villages, a number of problems were encountered and solved. A summarised list of the various problems encountered, their probable causes, and suitable remedial measures, is given on pages 10 and 11.

#### E.3.0 CONCLUSION.

The points raised above in the last paragraphs which favour the commencement of the competitive strategy, have been developed in consultation with the field Engineers and the CD Officials and Technicians who handled the Maintenance Programme up to this stage. The implementation of any regulations on Maintenance immediately after the "PACT Programme"

seems still too ambitious, especially because the CDD itself requires some internal re organisation. It can only be hoped that such a re organisation is done soon, and that in doing it, the place of MAINTENANCE be clearly depicted. It is worth noting here that the "PACT Programme" dealt mainly with gravity-run Water Systems, and that if the pump-operated systems installed by the CDD in other parts of the country were to be considered, the CDD would have quite an unpleasant situation to overcome.

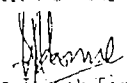
If the CDD does not take the initial step to find suitable solutions to this problem, neither PACT's funds nor even SATA Helvetas's prolongation of her stay will do it. While not ruling out the possibility of the same or other Foreign Aid donors participating to find these solutions, it would be important that the CDD negotiate directly with such donors. In this way the CDD could be committed to honour its engagement. It can be shown that if the convention on the Maintenance Programme had been signed directly between the PACT and the CDD, the latter would have had it easier to obtain the funds with which to finance the programme.

From what has been observed on the CDD/Village Water Schemes, it is difficult or even impossible for the village community to wholly bear the cost of operating and maintaining the water scheme. Therefore any useful strategy on the maintenance of community water schemes should aim at "Joint Participation" between the Government (CDD) and the village concerned, similar to the same type of participation that served during the construction of the project. It should aim at tapping out those resources that the villagers can enthusiastically afford.

The main resources that a typical rural community in Cameroon can offer are unskilled labour, some local materials, and possibly some minimal financial contributions. During this programme some projects have been seen to have problems arising from technical errors made during construction, and also from natural disturbances such as landslides, thunder storms, etc, which require reasonable money to re-instate them, and which the villages concerned cannot raise from their

own proper resources. These are examples which go to show why the CDD and the village concerned should be bound for better or for worse throughout the useful life of each joint project. What the CDD should do is to increase the percentage of the village's participation in the project maintenance, particularly during the first few years following the completion and inauguration of the project.

30th September, 1987

  
Ndumbe Frederick  
(Out-gone Co-ordinator of  
the Programme)

LISTE OF DOCUMENTS CONCERNING MAINTENANCE (incomplete)

- 01 Caretaker courses/manuals
- 03 Ethnological evaluation H.P. Müller, Febr. 1978 (Proposals for maintenance)
- 05 Maintenance-Regulations; Draft proposals Feb. 1978/Oct.78/Nov.79 (Helvetas file 615.8)
- 07 "PACT-Finalreport", F. Ndonue, 30.09.87 (Summary Annex E)
- 09 General guidelines on the duties and responsibilities of the caretaker and the village water maintenance committee (July 1987)
- 11 Maintenance manual for rural areas (Draft), Kumba, October 1987
- 13 Etudes de la création d'une structure de gestion, d'entretien et de maintenance des systèmes d'adduction d'eau en zones rural du Cameroun, CIC-Copenhagen Internat. Consultants, Jan. 1988
- 15 25 years of project-cooperation in Cameroon (english summary) April 1990. (This document has been distributed to the participants)
- 17 Unterhalt (Discussion paper W. Christen) Oct. 90
- 19 Guidelines for the reorganization of the Bolifamba WS maintenance committee, Draft Oct.90 (including Annex concerning particular problems of FAKO Division).