Evaluation of the SIDA supported HESAWA Programme (Health through Sanitation and Water) in the Lake Regions of Tanzania

FINAL REPORT

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EXECUTIVE SUMMARY

Introduction

An external evaluation of the SIDA supported Health through Sanitation and Water (HESAWA) programme in Tanzania was conducted between May and September, 1992, by a team from the IRC International Water and Sanitation Centre, The Hague, The Netherlands, in partnership with the Tanzania and Kenya offices of the African Medical and Research Foundation (AMREF).

A participatory approach was used, involving community members and programme staff at all levels.

The evaluation was to have five focal points:

* *The relevance of the HESAWA approach in meeting programme goals.*
* *The level of goal attainment reached by the programme to date.*
* *The efficiency and effectiveness of the investment made so far.*
* *The long-term sustainability of programme impacts and approach.*
* *The lessons learned from programme implementation.*

In interpreting the terms of reference, the evaluators placed primary emphasis on the principle impacts of the programme on the one hand, and long-term sustainability on the other.

The HESAWA programme is large and complex, and covers a very wide geographic area. An evaluation carried out over a relatively short period of time must inevitably be somewhat selective, and cannot cover all issues in depth. The principal purpose of this evaluation was to review the achievements of the programme to date and map out key issues to be addressed in the next programme period. The Terms of Reference do not require the evaluators to provide detailed formulations for future directions or suggest specific solutions to current problems. The people best placed to work out detailed solutions are those directly working in the programme. This report attempts to provide a broad background for the detailed planning of the next phase of activities, indicating key issues to be addressed.

The HESAWA programme

The HESAWA programme began in 1985 on the basis of a Specific Agreement between Tanzania and Sweden on cooperation concerning rural water supply,

environmental sanitation and health education. The programme area covers the Lake Zone, made up of Kagera, Mara and Mwanza regions, which border Lake Victoria.

The overall aim of the programme is to improve the welfare of the rural population through improved health education, environmental sanitation, drinking water supply, community participation, and capability and capacity building at village and district levels.

The HESAWA cornerstones are active community participation in decision-making, planning and implementation, and human resources development. Development priorities are to be set by the villages, with planning assistance from Maendeleo. District technical departments are to advise and support the villages in making their development goals both achievable and sustainable.

The pillars or principles on which HESAWA activities are to be founded are:

* *Affordability*
* *Sustainability*
* *Replicability*
* *Credibility*
* *Cost-efficiency*

The basic assumption made is that the water, sanitation and health facilities constructed through the programme will be operated and maintained to the fullest possible extent by the villagers themselves, making maximum use of local financial, manpower, and material resources and capacities.

Villages are brought into the HESAWA programme on the basis of requests for assistance made in their own development plans. Once involved, villages are expected to form HESAWA committees and open village HESAWA accounts. Water supply and sanitation needs are identified, and an implementation plan made. Once water supplies have been installed, they are maintained by the district for a one year grace period after completion, and then handed over to the village. The village is then expected to take care of most operation and maintenance, using funds from its HESAWA account to meet the necessary expenses. Training and human resource development inputs help to prepare the committees, and other people at ward and village level, to manage the water systems in the long term.

The programme's technical activities are accompanied by a broad programme of human resource development and health and hygiene education. Activities include support to and training of village HESAWA committees, the training of Village Health Workers (VHWs) and Traditional Birth Attendants (TBAs) to promote improved health and hygiene practices, household and institutional latrine building programmes, and the formation of village study groups to encourage self-help activities.

Of the 15 districts in the Lake zone, seven have so far been designated as "integrated" districts. This means they receive a full resource package through the

programme, including in almost all cases the provision of additional consultant personnel and vehicles to assist in programme development and integration. The remaining eight districts are all involved in the programme, but with a lower level of external assistance and more modest budgets. In principle, all districts will enjoy integrated status at some time or another, through a process of phasing in and phasing out. The phasing in/phasing out principle is also extended to the villages involved in the programme, with assistance being offered for a period of time until basic goals are attained. In theory, this approach should allow all districts and villages to enjoy the full support of the programme for a sufficient period of time, though in practice this may be difficult to achieve.

Achievements of the HESAWA programme

On the basis of the evaluation findings, the major achievements of the HESAWA programme to date can be summarized as follows:

* *The creation of an improved potential for the reduction of diseases and the achievement of general health and hygiene improvement, recognized and acknowledged by the villagers themselves;*
* *Increased coverage of improved water supply in the Lake Zone;*
* *Acceptance by both government workers and villagers of more appropriate, affordable, and sustainable water supply technologies, including rainwater harvesting systems and improved traditional water sources;*
* *Positive steps forward in promoting and operationalizing a community-based approach;*
* *Impacts at village level in terms of greater convenience and quantity of water supply, cleaner and safer water, time gains, reductions in burdens, and opportunities to improve nutrition through garden watering;*
* *Increases in knowledge, skills and capacities at regional, district and village level for planning, implementing and operating and maintaining water supply improvements and, to a lesser extent, hygiene and health activities;*
* *Progress in transferring implementation responsibility from regions to districts, through the use of inter-departmental promotion teams working at village level.*

The HESAWA cornerstones

Progress with the community participation approach has been substantial, but not significant enough as yet to ensure that the legacies of the HESAWA programme will last. While communities are involved far more than in the past, they still have little real choice

in the options offered by the programme. In many respects, the package is offered in a ready made form which only limited scope for negotiation and adaptation. Ways still need to be found to introduce more flexibility and allow communities more power and decision making authority in determining the kind of health, sanitation, and water improvements which they wish to make.

The HRD programme has gathered strength as the programme has developed, and is now in a position of prominence. The effectiveness of many HRD activities is generally hard to assess, however, and it is not certain that real value for money is being obtained in development terms from the investments made. Commitment to the HRD programme needs to be further strengthened and a truly participatory approach established in both its development and execution.

The five focal points

The principle findings in relation to the five focal points of the programme evaluation are as follows:

In terms of relevance in meeting programme goals, the current HESAWA approach has many strengths. The most important of these have been summarized above, and include the adoption of simple water supply technologies and the strengthening of community participation and HRD. From the community point of view, the improvement of the water supply situation is highly relevant to perceived development needs, though with some reservations. These include that programme interventions are not always leading to an even distribution of benefits, that the improvements made are to often of an insufficiently high technical standard and low reliability, and that full account is not taken of all water use needs, particularly in relation to economic uses.

The greatest question mark as far as relevance is concerned relates to the Study Group Programme. Though exciting in concept, the SGP appears to be delivering far less than it promises and does not seem to fit comfortably into the programme as a whole. The future of the latrines programme and the improvement of traditional water sources does not necessarily depend upon the SGP, and it should be seriously asked whether it would be missed if it was simply dropped from the programme.

The relevance of the current approach to sanitation improvement is also questionable. The popular response to the options offered by the programme has been very poor, indicating that the construction of improved latrines is a low priority and may not be worth the investment currently required. Given the importance of the sanitation component for the achievement of health goals, further work must be done to ensure that it fills a far more central role in programme priorities and activities.

The level of goal attainment reached by the programme to date can be said to be mixed. Many basic goals in water supply development and the introduction and establishment of the HESAWA concept and approach are being attained to a very significant degree. The more complex goals such as strengthening capacities at all levels,

increasing the involvement of women and communities in general, encouraging decentralization and self-reliance, and changing health and hygiene behaviours, are understandably proving more difficult to reach. As far as goal attainment is concerned, HESAWA has only recently begun to achieve success and much remains to be done. Given the radical change of approach signalled by HESAWA, however, what has been achieved to date is of great importance.

The efficiency and effectiveness of the investment made so far is very hard to assess. HESAWA is to a very large extent a human and social, rather than a technical, development programme and the returns on the investment made may not be felt for a long time. Few of the qualitative goals of the programme have been closely enough defined to make an analysis on the basis of cost effectiveness possible at this stage. Improvements are also needed in financial monitoring and reporting systems to provide data of sufficient quality to make cost analyses possible. In general terms, however, there is clearly plenty of scope to improve efficiency within the programme as a whole, both in terms of reducing overhead costs and in strengthening management and implementation capacities and procedures.

At this stage the long-term sustainability of programme impacts and approach is very much open to question. Programme impacts have been important and substantial, and the approach is increasingly well understood. At the community level, however, the real prospects for sustainability have yet to be tested. Within the government system, HESAWA still has the character of an external programme with no guarantee as yet that the basic approach will be permanently absorbed.

The lessons learned from programme implementation are too numerous to list here. While it is certainly true that as many lessons have been learned from shortcomings as from successes, the willingness seen by the evaluation team of those involved at all levels to view their actions and achievements in a critical way is an encouraging sign for the future development of the programme.

The single most important lesson learned is the most obvious one: that a community based approach to development which aims at long term sustainability can not be achieved without a great deal of struggle and the overcoming of many complex problems. Many of those involved with HESAWA appear to have learned that new ideas can be successfully introduced, and that people's views and expectations can be changed, but not without considerable commitment and effort.

An important lesson learned from the evaluation is that if an enterprise as ambitious as HESAWA is to successfully undertaken, it is of the greatest importance that the concept itself is thought through as thoroughly as possible in clear operational terms. The greatest shortcoming of the HESAWA programme at present is the simple failure to fully think through the post-construction phases at village level, and ensure that an adequate support structure is in place to allow communities to take on their roles as managers. Similarly, the introduction of the distinction between integrated and non-integrated districts and the concept of phasing in and phasing out at all levels have created many dilemmas. At present, the programme is able to integrate and phase in, but

has not yet learned how to scale down and phase out.

Future directions

The HESAWA programme shows great potential, and promises to make major contributions both to the health and welfare of the nearly five million Tanzanians living around Lake Victoria and to national development as a whole. While the difficulties which lie ahead should not be under-estimated, all of those involved should move forward with confidence and seek to further build on the many achievements they have already made.

The evaluation team recommends that the following issues be given priority in the next programme period:

* *An operational and effective system for supporting community managed operation and maintenance, including the sale and distribution of spare parts, is to be put in place as a matter of the greatest urgency.*

* *The conceptual and operational details of the implementation strategy, particularly in relation to phasing in and out and handing over at village level, and the phasing in and out of districts, should be closely reviewed. The possibility of eliminating the distinction between integrated and non-integrated districts should be investigated.*

* *Efforts should be continued and strengthened to merge the HESAWA programme more effectively into the existing government structure. This should include the scaling down of dependence on non-government staff, beginning with the adoption of a more explicit advisory rather than managerial role for many of the consultants, and a progressive reduction in the dominance of the Zonal Coordination Office. These processes should be undertaken with caution, but with noticeable effect. Closer coordination among involved ministries should also be achieved at the national level.*

* *Efforts should continue in promoting the HESAWA concept and approach at all levels.*

* *The role of women in the HESAWA programme should continue to be strengthened. The gender awareness programme should be closely reviewed to assess its impact, and investigate ways in which it can be both strengthened and made more adaptable to the Tanzanian context and variations in local conditions in the Lake Zone.*

* *Efforts should continue to be made to strengthen management capabilities at all levels, and particularly in the districts and villages. Financial management should be given particularly close attention, with a view to greater decentralization of financial control.*

* *Monitoring and information management systems should be developed and strengthened to support more effective planning, coordination, implementation, and the provision of advice and support to communities.*

* *Development of appropriate water supply and sanitation technologies should continue, and standards of workmanship improved.*

* *Discussion should continue on the possibility of promoting broader uses of water, including economic uses, to more thoroughly meet village felt needs. Where economic use is not feasible, this should be more clearly explained to community members.*

* *Efforts should be made to more closely integrate and consolidate the HRD and health, hygiene and sanitation components of the programme.*

* *Further development of the HRD component should seek to maximize the involvement of operational staff in the overall development of the HRD package and the design and production of supporting materials.*

* *The programme should actively encourage greater involvement from the local private sector in both implementation, and the manufacture and distribution of spare parts.*

* *The trend towards greater local procurement, and the lessening of dependence on foreign goods in the programme, should continue to be strengthened.*

* *Serious consideration should be given to either dropping or radically altering the Study Group Programme. If it is to be retained, every effort should be made to ensure that it produces clear benefits.*

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FINAL REPORT

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The team would also like to thank SIDA for the opportunity to get to know the HESAWA programme, and for the support provided from Stockholm and Dar es Salaam. Thanks are also due to the SIDA officers and consultants, and HESAWA programme staff, who provided detailed comments on the first draft of this report.

ACRONYMS AND ABBREVIATIONS

AFYA	Ministry of Health
AMREF	African Medical and Research Foundation
BCS	Business Care Services
CD	Common department
DAT	District Action Team
DED	District Executive Director
DHC	District HESAWA Coordinator
DHT	District HESAWA Technician
DP	Domestic point
DPO	District Promotion Officer
DTO	District Training Officer
HESAWA	Health through Sanitation and Water
HRD	Human resources development
ITWS	Improved traditional water sources
MAENDELEO	Ministry of Community Development, Women's Affairs and Children
MAJI	Ministry of Water
O&M	Operation and maintenance
PMO	Prime Minister's Office
RAT	Regional Action Team
RDD	Regional Development Director
RHC	Regional HESAWA Coordinator
RWHS	Rain water harvesting systems
SEK	Swedish Kroner
SGP	Study Group Programme
SIDA	Swedish International Development Authority
TAS	Tanzanian Shilling
TBA	Traditional Birth Attendant
TOT	Training of Trainers
VHW	Village Health Worker
VIP	Ventilated improved pit latrine
ZCO	Zonal Coordination Office

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1.0 INTRODUCTION

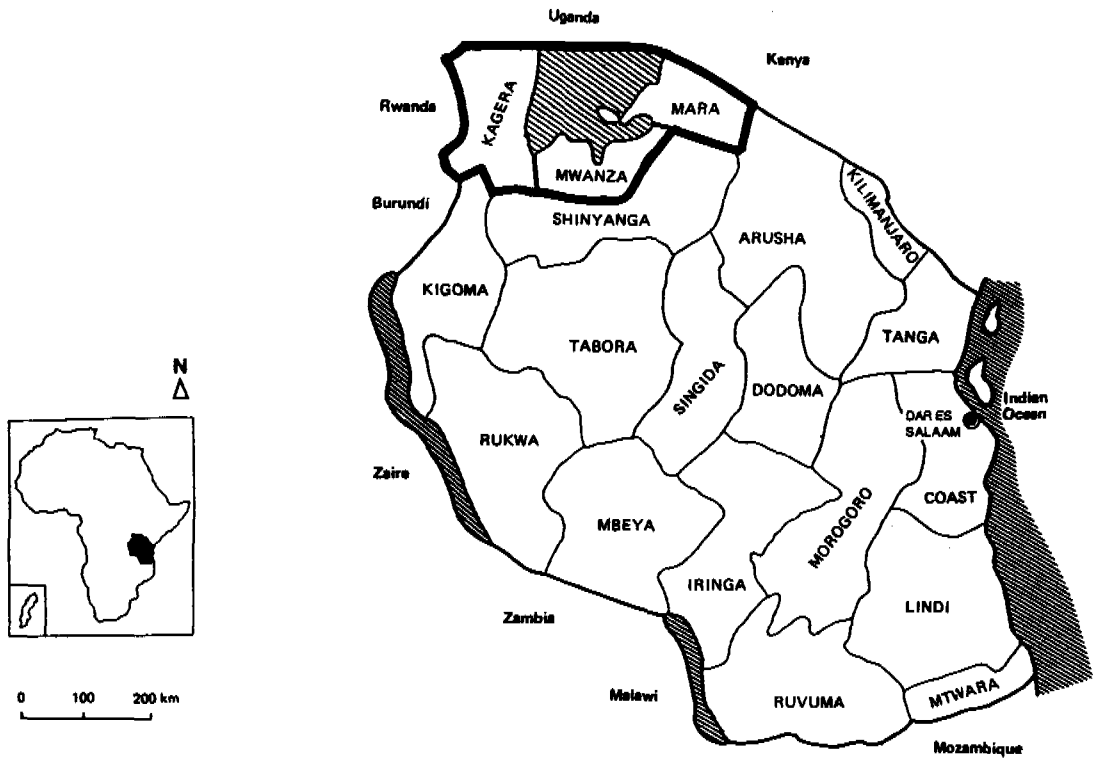
1.1 Why HESAWA was evaluated

In June 1993 the current Specific Agreement between the Government of Tanzania and the Swedish International Development Authority (SIDA) for support to the Health through Sanitation and Water (HESAWA) programme in the three regions surrounding Lake Victoria (see map) comes to an end. Before entering into negotiations for a new agreement, SIDA decided to commission an external evaluation of the programme to assess its impacts, effectiveness, and prospects for long-term sustainability.

1.2 The approach

The evaluation was conducted between May and September, 1992, by a team from the IRC International Water and Sanitation Centre, The Hague, The Netherlands, in partnership with the Tanzania and Kenya offices of the African Medical and Research Foundation (AMREF). The evaluation approach emulated the participatory spirit of the HESAWA programme itself. The team sought to identify, assess, and review HESAWA's strengths and weaknesses through a process of dialogue and participatory investigation, involving individuals and groups at all levels from the village water point to the national directorate and beyond.

Map of Tanzania, showing the HESAWA programme area.



The use of participatory approaches was supplemented with more conventional approaches, involving the review of programme documentation, and meetings and discussions with programme staff, government officers, and SIDA representatives at all levels.

The HESAWA programme is large and complex, and covers a very wide geographic area. An evaluation carried out over a relatively short period of time must inevitably be somewhat selective, and cannot cover all issues in depth. The principal purpose of this evaluation was to review the achievements of the programme to date and map out key issues to be addressed in the next programme period. The Terms of Reference (attached as Appendix 1) do not require the evaluators to provide detailed formulations for future directions or suggest specific solutions to current problems. The people best placed to undertake this kind of work are those directly working in the programme. This report attempts to provide a broad background for the detailed planning of the next phase of activities, indicating key issues to be addressed.

1.3 Focal points of the evaluation

SIDA asked for long-term view of the impacts of the HESAWA programme on the lives of rural Tanzanians living around the shores of Lake Victoria in Kagera, Mwanza, and Mara Regions. The evaluation was to have five focal points:

* The relevance of the HESAWA approach in meeting programme goals.
* The level of goal attainment reached by the programme to date.
* The efficiency and effectiveness of the investment made so far.
* The long-term sustainability of programme impacts and approach.
* The lessons learned from programme implementation.

Swedish assistance to the water sector in Tanzania began in 1965. By the time the HESAWA programme began in earnest in 1985, there was little to show for the investment made over the previous 20 years. SIDA's stake in HESAWA is high. By the end of the current agreement period a total of SEK.266 million will have been allocated to it over an eight year period. Both the government and the donor are anxious that this high level of investment should lead to substantial and sustainable benefits. The terms of reference for the evaluation directly reflect this concern.

In interpreting the terms of reference, the evaluators placed primary emphasis on the principle impacts of the programme on the one hand, and long-term sustainability on the other. The impacts of the programme were investigated within involved communities, and within the government structure through which it is implemented. In the process, questions were asked about the sustainability of the benefits obtained, and of the programme approach itself. If HESAWA is to succeed in its aims, both must be durable enough to last

long after the scaling down of external support. Assessing impacts and benefits necessarily includes a consideration of goal attainment, and both the quality of the benefits obtained and their sustainability depend to a high degree on the relevance and cost effectiveness of programme implementation in terms of both content and strategy.

In assessing impact, certain limitations need to be recognized. Quantitative analyses of programme impacts in terms of health and other benefits were not undertaken, due to the methodological complexity of the studies required to produce meaningful results. Measuring the cost effectiveness of current programme investments also proved to be impractical because of the limitations in the financial data currently available through the programme, the complexity of the programme itself, and the large number of qualitative development goals being pursued by the HESAWA programme which have not been quantified in a way which makes a cost effectiveness analysis possible. More detailed comments on these limitations are made in the relevant chapters of the report.

Given the purposes of the evaluation, and the extensive documentation providing basic information available through the programme, primary emphasis was placed on the evaluation in producing new qualitative insights into the programme's achievements and future prospects, to supplement and enlarge upon what is already known within the programme.

1.4 Evaluation phases

The evaluation was conducted in three main phases, between May and September, 1992. The evaluation programme and staffing schedule are summarized in Appendix 2.

Phase 1 began with a review of programme documents and other literature, followed by a preparatory mission to Tanzania to make detailed plans and arrangements for the evaluation itself. Reconnaissance visits were made to all three regions, and briefing discussions held with involved staff at all levels. A number of brief field visits were also made to orient team members to village conditions. This phase ended with the preparation of an Inception Report which was sent to SIDA for approval.

Phase 2 was the main study phase. Three study teams, made up of evaluation team members and government staff working with HESAWA, visited 24 villages involved in the programme and undertook a series of participatory evaluation exercises with community members. Three other villages not directly involved in the programme were also visited for the purposes of comparison. At the same time, a review was undertaken by the team's economist of the financial and economic aspects of the programme, and related institutional, organizational, and management issues.

Phase 3 was designated as the "formal" evaluation phase. This involved the holding of group and individual meetings and discussions with government and consultant personnel at national, zonal, regional, and district level, and with community members in a number of return visits to the field. Participatory evaluation workshops were held with district staffs in all three regions (see Appendices 5-8). The phase ended with the holding of a review workshop in Mwanza to discuss the team's preliminary findings, attended by management

personnel from all levels, and representatives of SIDA from Dar es Salaam and Stockholm. After debriefing with SIDA and senior government officers in Dar es Salaam, the team returned to office to prepare the evaluation report.

1.5 Note on terminology

Throughout the report, the Tanzanian government ministries involved in the HESAWA programme are referred to by their Swahili names. The Ministry of Water is referred to as Maji, the Ministry of Health as Afya, and the Ministry of Community Development, Women's Affairs and Children as Maendeleo.

2.0 THE HESAWA PROGRAMME

2.1 Background, scope and objectives

The HESAWA programme began in 1985 on the basis of a Specific Agreement between Tanzania and Sweden on cooperation concerning rural water supply, environmental sanitation and health education. The programme area covers the Lake Zone, made up of Kagera, Mara and Mwanza regions, which border Lake Victoria.

The overall aim of the Programme is to improve the welfare of the rural population through improved health education, environmental sanitation, drinking water supply, community participation, and capability and capacity building at village and district levels.

According to the current Plan of Action, covering the period 1990-93, the operative goals of the programme are:

Improved water supply

Water supply should be reliable and continuous, of improved quality, of greater quantity, more accessible, and available for various household purposes;

Improved health and environmental sanitation

This is to be achieved by:

(i) increasing people's awareness as to how to maintain the quality of water from source to consumption,

(ii) increasing popular participation, especially the participation of women,

(iii) health and environmental sanitation education directed towards water and hygiene-related diseases,

(iv) construction of sanitary latrines which are socially and culturally acceptable,

(v) improving drainage and waste disposal,

(vi) vector control.

Capability and capacity building and strengthening at all levels

This is to be done by:

(i) overall human resources development,

(ii) legislative backing for management at village level,

(iii) improving managerial capacities at village and other levels,

(iv) imparting technical skills to the grass roots level.

2.2 The HESAWA approach

The cornerstones of the HESAWA programme are active community participation in decision-making, planning and implementation, and human resources development. Development priorities are to be set by the villages, with planning assistance from Maendeleo. District technical departments are to advise and support the villages in making their development goals both achievable and sustainable.

The pillars or principles on which HESAWA activities are to be founded are:

* Affordability
* Sustainability
* Replicability
* Credibility
* Cost-efficiency

A basic goal is that the water, sanitation and health facilities constructed through the programme should be operated and maintained to the fullest possible extent by the villagers themselves, making maximum use of local financial, manpower, and material resources and capacities.

2.3 Implementation strategy

In theory, villages are brought into the HESAWA programme on the basis of requests for assistance made in their own development plans. Once involved, villages are expected to form HESAWA committees and open village HESAWA accounts. Water supply and sanitation needs are identified, and an implementation plan made. Once water supplies have been installed, they are maintained by the district for one year after completion, and then handed over to the village. The village is then expected to take care of most operation and maintenance, using funds from its HESAWA account to meet the necessary expenses. Training and human resource development inputs help to prepare the committees, and other people at ward and village level, to manage the water systems in the long term.

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Of the 15 districts in the Lake zone, seven have so far been designated as "integrated" districts. This means they receive a full resource package through the programme, including in almost all cases the provision of additional consultant personnel and vehicles to assist in programme development and integration. The remaining eight districts are all involved in the programme, but with a lower level of external assistance and more modest budgets. In principle, all districts will enjoy integrated status at some time or another, through a process of phasing in and phasing out. The phasing in/phasing out principle is also extended to the villages involved in the programme, with assistance being offered for a period of time until basic goals are attained. In theory, this approach should allow all districts and villages to enjoy the full support of the programme for a sufficient period of time.

2.4 Achievements of the HESAWA programme

HESAWA is a large programme, covering a wide area and targeting a population well in excess of four million. The programme operates in difficult circumstances, and within the context of a very depressed national economy and poorly motivated public service. Given this background, many problems are to be expected. Not surprisingly, and in common with all other development programmes in the country, HESAWA is beset with many difficulties. Evaluations necessarily dwell more on the weaker aspects of a programme than the strengths, since their basic purpose is to provide a basis for solving problems. In reviewing the HESAWA programme, the evaluation team found much to comment on in critical terms. At the same time, the achievements of the programme should not be under-estimated. In reading the report, it should be recognized that the basic view of the evaluators is a positive one. HESAWA has achieved a great deal under very difficult circumstances, and should be given full credit for this. In reviewing the more critical comments contained in this report it should be borne in mind that these are made against the background of the programme's own high standards and are offered in the hope that they will provide a platform for further strengthening.

The HESAWA programme has made major steps forward in promoting and operationalizing a community-based approach to the improvement of health in the Lake Zone through water supply, sanitation and health education. It has substantially contributed to new directions and new thinking in the Tanzanian water and sanitation sector as a whole, and is proving to be highly relevant to national sector development. New directions include a greater focus on implementation by districts and villages, the redefining of regional roles and responsibilities, the introduction of simple low-cost water supply technologies, and enhanced regional and district inter-departmental coordination and cooperation in promotion and implementation work.

To date, HESAWA has undertaken activities in more than 600 villages, spread over more than 180 wards. All 15 districts in the Lake Zone are undertaking HESAWA activities to some degree or other. The major achievements of the HESAWA programme can be summarized as follows:

* The creation of an improved potential for the reduction of diseases and the achievement of general health and hygiene improvement, recognized and acknowledged by the villagers themselves;

* Increased coverage of improved water supply in the Lake Zone;

* Acceptance by both government workers and villagers of more appropriate, affordable, and sustainable water supply technologies, including rainwater harvesting systems and improved traditional water sources;

* Positive steps forward in promoting and operationalizing a community-based approach;

* Impacts at village level in terms of greater convenience and quantity of water supply, cleaner and safer water, time gains, reductions in the burdens of women, and opportunities to improve nutrition through garden watering;

* Increases in knowledge, skills and capacities at regional, district and village level for planning, implementing and operating and maintaining water supply improvements and, to a lesser extent, hygiene and health activities;

* Progress in transferring implementation responsibility from regions to districts, through the use of inter-departmental promotion teams working at village level.

2.5 Improvements in water supply output

The water supply technologies developed through the HESAWA programme are shallow wells, with either SWN or NIRA handpumps; improved traditional water sources (ITWS), in most cases wells but also to a lesser extent springs; institutional and household rainwater harvesting systems (RWHS); and, where appropriate or unavoidable, gravity and other piped schemes with standposts, known as domestic points (DPs).

Table 1. Total of rural water systems built through HESAWA, compared with output for the 1991-92 financial year.

Type of water supply system	Total HESAWA output as of July 1992	HESAWA output 1991/92 no.	HESAWA output 1991/92 % of total produced
Shallow wells (new and rehab.)	1417	354	25
Piped supplies:			
.Systems	37	13	35
.DPs	602	81	13
ITWS	547	115	21
RWHS:			
.Household	66	26	39
.Institutional	25	7	28
.Water Jars	372	224	60

Source: HESAWA Programme Implementation Statistics; Cumulative Figures 1985/86 - 1991/92 (Zonal HESAWA Coordination Office, October 1992). The figure for DPs excludes 263 private connections in Muleba Town.

Participants at the districts workshops held during the evaluation saw water supply improvements in both quantitative and qualitative terms as the most outstanding of the programme's achievements. In Kagera the success of the rainwater harvesting technologies was particularly highlighted. Overall approval was expressed of the low-cost technologies offered, indicating general acceptance of these by district staff. The results of the village study show that this opinion is shared by the communities involved in the programme.

Shallow wells are the dominant water supply technology in the programme. In the seven year period 1985-92, the numbers of shallow wells built and rehabilitated through HESAWA are 1,242 and 175 respectively. Since in most cases rehabilitation involves virtual re-construction, it can be said that HESAWA has built a total of 1,417 shallow wells in the Lake Zone. According to a draft shallow wells inventory prepared by the programme in June 1992, the total number of shallow wells in the three regions is 1,651, of which HESAWA has built 86%. The impact of improved shallow wells has been particularly strongly felt in Mara Region, where there was an almost total dependence on engine-driven piped schemes before the HESAWA programme began.

The programme's implementation rates have greatly increased in the current agreement period. Table 1 gives an overview of the total HESAWA water supply output as of July 1992, and puts this alongside output for the 1991-92 financial year alone. More detailed output figures are shown in Appendix 3. Outputs for both shallow wells and improved traditional water sources have increased significantly. The high percentage total for rainwater harvesting systems in 1991-92 is accounted for by their relatively recent introduction.

Table 2. HESAWA rural water supply improvements by type of technology, excluding RWHS, July 1992.

Type of water supply system	No. of HESAWA systems	% of all HESAWA systems
Shallow wells	1417	55
DPs	602	24
ITWS	547	21
Totals	2566	100

Source: HESAWA Programme Implementation Statistics; Cumulative Figures 1985/86 - 1991/92 (Zonal HESAWA Coordination Office, October 1992)

The increased output can be partly accounted for by increases in the number of districts involved in the programme. In the case of shallow wells, high outputs in districts such as Kwimba and Magu with a good potential for shallow well development and very active programmes have also had a very positive impact on the figures.

As Table 2 shows, shallow wells represent 55% of all rural water points introduced so far through HESAWA. It is important to note, however, that the overall figure is heavily influenced by the extremely high number of shallow wells developed in Mwanza Region, where they are a particularly appropriate solution. Table 3. shows the numbers of water supply systems and their relative significance on a region by region basis.

Table 3. HESAWA rural water supply improvements by type of technology, excluding RWHS, by Region, July 1992.

Type of water supply system	Kagera		Mwanza		Mara	
	no.	% of total	no.	% of total	no.	% of total
Shallow wells	316	35	877	81	224	40
DPs	407	44	38	3	157	28
ITWS	192	21	171	16	184	32
Totals	915	100	1086	100	565	100

Source: HESAWA Programme Implementation Statistics; Cumulative Figures 1985/86 - 1991/92 (Zonal HESAWA Coordination Office, October 1992)

The relative importance of improved traditional water sources (ITWS) in relation to other types of water supplies is highly significant. These represent more than one in five of all water points developed. This should be recognized as an important programme achievement. Responsibility for ITWS development lies with Maendeleo rather than Maji. As the findings of the village study suggest, there is room for improvement in technical standards. This should be a focus of attention in the next phase if the impact of the ITWS option is to be further enhanced.

As noted, rainwater harvesting systems have only recently been introduced, and they have not as yet had a very significant impact on coverage overall. Experience so far indicates a high potential for this option. In some places there are few other choices available. This is particularly true in Karagwe District, in Kagera Region, where RWHS have had an immediate impact. The further spread of this option should be encouraged.

2.6 Impact of the HESAWA programme on water supply coverage

To calculate the impact of HESAWA improvements on water supply coverage, the total population of the three regions is estimated to be about 4.7 million, with Kagera having 1.5 million, Mwanza 2.1 million, and Mara 1.1 million. Each well or domestic point is intended to serve 250 people. On this basis, the total number of people reached since 1985 with improved water supply through the HESAWA Programme is about 640,000 (i.e. *2566 wells/DPs/ITWSs x 250).*

Estimating the number of people using HESAWA rainwater harvesting technologies is rather more difficult, and account has to be taken of the fact that many of these do not provide water all the year round. In many cases, they should be assumed to be a supplementary water supply. For the purposes of estimating impact on coverage a rather conservative figure of 3,000 people served is assumed.

Table 4. Number of rural HESAWA water supply systems installed, and percentage coverage increase, by Region, July 1992.

Type of water supply system	Kagera no.	Mwanza no.	Mara no.
Shallow wells	316	877	224
DPs	407	38	157
ITWS	192	171	184
RWHS (all types)	333	8	107
Increased % coverage	19%	16%	16%

Source: HESAWA Programme Implementation Statistics; Cumulative Figures 1985/86 - 1991/92 (Zonal HESAWA Coordination Office, October 1992)

Since in most villages full coverage is not likely to be achieved at present, the design figure is likely to under-represent the number of people actually using HESAWA water supplies. In calculating the number of people served, therefore, a multiplier of 1.25 has been used. On this basis, the actual number of people served by improved water supplies through the HESAWA programme is estimated as 1.25 x 640,000 = 800,000 people. This is equivalent to 17% of the total estimated population in both rural and urban areas. If the urban population is discounted, the true increase in coverage for the rural

areas as a result of the HESAWA programme is probably around 20%. This means that HESAWA has in principle succeeded in bringing access to improved water supplies to one in five of the current rural population in the Lake Zone.

The level of increased coverage achieved so far varies slightly from region to region, as Table 4 shows.

It is very important to note that these figures show the increase in coverage as a result of HESAWA improvements, not the total coverage by improved water supply systems in the Lake Zone as a whole. Since a full inventory of water supply systems in the Lake Zone is not available, it is not possible at present to say what the total coverage level is. The figures also do not take account of the number of HESAWA water supply systems which are currently broken down, and therefore not providing an effective service, since this is also not known with any degree of confidence. The findings of the village study suggest that as many as 30% or so of the water points developed through HESAWA may be out of commission, but a more detailed inventory will be required to verify this.

Assuming an annual population growth rate of 3%, the population in the Lake Zone can be estimated to have increased in 1991-92 by about 140,000. HESAWA output for that year was about 550 water points, providing service to about 172,000 people. In coverage terms this represents a net increase of only 32,000 people served. The obvious conclusion is that the current level of output will have to increase dramatically if anything like full coverage is ever to be achieved. At present, however, it is probably more important that the programme concentrate on developing a sustainable approach before giving priority to increasing output.

2.7 Operation and maintenance

Improvements in coverage have little meaning if they are not sustained, as the history of water supply development in the Lake Zone itself has amply demonstrated. HESAWA has made major steps forward in introducing technology levels which are suitable for a very high degree of self-reliant operation and maintenance within communities. To date, however, it has not been possible to operationalize community-based O&M for the very simple reason that a system for selling spare parts to villages has not yet been put in place. Although plans are now at an advanced stage to establish revolving stores to meet this need, it is a startling omission within a programme which is now more than seven years old.

For the time being, it is intended to sell spares to communities through the government system, but some steps have also been taken to investigate private sector options, for both production and distribution. In the long term, a leading role for the private sector may be the only viable option. This will probably require an initiative at a national level, since the problem of spare parts availability is widespread in Tanzania.

Setting in motion a system for a spare parts sale and distribution is not only indispensable to enable HESAWA water points to be maintained, but is also necessary as a precondition for testing out the effectiveness of a large proportion of the programme's

capacity building investments. The effectiveness of the technical training of ward and village level caretakers and mechanics, the real ability of village HESAWA committees to coordinate the management of community water supplies and take care of village HESAWA accounts, and the real willingness and ability of villagers to both pay for and maintain their improved systems, can not be known until all are put to the test. This remains an impossibility as long as spare parts are not available. Similarly, the true capacity of districts to support communities in these endeavours can not be measured until the real level of assistance required is known. These are major constraints to both sustainability, and to the possibility of realistically assessing the effectiveness of a very large proportion of the programme's activities beyond the actual installation of water supplies.

2.8 Achievements in sanitation improvement

The primary emphasis in the sanitation component of the HESAWA programme is on the introduction of improved household and institutional latrines. It is also intended to cover other issues such as waste disposal, drainage, protection of domestic water points, personal hygiene, and the control vector-related diseases.

In general, coverage with unimproved latrines in the Lake Zone appears to be reasonably high, though recent figures are not available to confirm this. The health authorities estimated latrine coverage in 1984 at 60% for Kagera Region, 75% for Mwanza, and 45% for Mara. Most of the latrines included in these calculations are of a very poor standard, with many being both unsanitary and dangerously built.

The HESAWA programme has made several efforts to find appropriate solutions, mainly following national and international sanitation trends such as the introduction of the ventilated improved pit (VIP) latrine. From the village study it seems clear that the current approach, based on the sale and distribution of concrete squatting slabs, is in many cases proving to be ineffective and of only limited relevance to perceived needs. Many people consider the costs to be too high, and the priority for high quality latrines too low. The Village Revolving Funds for the sale of subsidized latrine slabs have not proven to be successful. The disappointing output figures for household latrines, shown in Table 5., reflect the low level of demand.

A local initiative in Kagera Region has led to the development of the Bwina Latrine, an upgraded local model which does not use any concrete components. This has enjoyed some success, but may not be appropriate for the whole Lake Zone because of its dependence on wooden logs, which are not readily available in many places, to make the flooring.

At present, the sanitation component operates through two main channels: the Study Group Programme (SGP) and the recently developed Schools Health and Sanitation Programme. These complement each other to some degree, but are not well enough integrated as yet to avoid confusion. Each is implemented through different programme staff, with insufficient communication and poor coordination. While the SGP is coordinated through the zonal HRD unit, the schools programme is coordinated by the zonal Health

Adviser. The latter programme, which follows a "problem analysis, learning and solution-finding" approach, has shown a good potential in the pilot testing phase. Its further development should be closely monitored, and steps taken to transfer the lessons learned to the sanitation programme as a whole. The effectiveness of the SGP is very much open to question, and is discussed in more detail below and elsewhere in this report.

Table 5. Improved household latrines built through the HESAWA programme.

Region	Estimated no. of households	Improved latrines built	% increase in improved latrine coverage
Kagera	300,000	601	0.20%
Mwanza	400,000	779	0.19%
Mara	220,000	76	0.04%
TOTAL	920,000	1,456	0.16%

Source: HESAWA Programme Implementation Statistics; Cumulative Figures 1985/86 - 1991/92 (Zonal HESAWA Coordination Office, October 1992). Estimated number of households includes urban population.

Since 1985, a total of 161 institutions have been assisted by the HESAWA programme to build improved latrines. Of these, 41 institutions, or 25% of the total, were assisted during the 1991-92 financial year.

The district evaluation workshops indicated that although some isolated successes have been achieved, in general the latrines component was performing poorly. Commitment to, and belief in, this element of programme activities seems to be low. In general it can be concluded that sanitation improvement has not yet been fully enough integrated into the mainstream of programme operations. It can not be said that the programme goals of improving environmental sanitation conditions by building better latrines, improving drainage and waste disposal, and vector control, are being achieved.

2.9 Improvements in health and hygiene conditions

The impact of the HESAWA programme on health and hygiene conditions is difficult to measure. Although many district staff involved in HESAWA activities indicated that VHWs in particular had greatly contributed to health education and health improvement in the villages, this view was not universally held. The village study indicates that the impact of VHWs may be very uneven, and there is demand for a more extensive and vigorous health and hygiene education programme.

The present approach of training village-based VHWs and Traditional Birth Attendants (TBAs) has great potential, and deserves to be encouraged. The programme has to a very large extent succeeded in sticking to its goal of training two VHWs in every HESAWA village. There are some indications that, in the longer term, TBAs may prove to be the best motivated and most effective of the two cadres.

2.10 Capacity building through human resources development

Staff in the districts workshops clearly recognized the central importance of capacity building and human resources development (HRD) as programme objectives. Many positive achievements were listed in this area, but the need for further strengthening was also acknowledged.

A large part of the HRD component is directed towards building capacity at the village level. An overview of numbers of cadres trained at village level is given in Table 6., and compared with the output for the 1991-92 financial year.

As the table shows, the numbers of TBAs and caretakers trained have increased significantly in the past year or so. This is also true, to a lesser extent, for village fundis and VHWs. At the same time, the number of Study Groups formed has dropped sharply. Districts have been experiencing difficulties in managing large numbers of Study Groups, and the HRD unit has recently recommended that in future no more than three groups be formed in any one village. The SGP has not proven to be a very effective vehicle for HESAWA improvements in general, and the decline in the numbers of groups being formed may also reflect a low level of faith in this approach among implementing staff. The SGP accounts for about one-third of all expenditures on HRD in the programme, and produces very little in the way of concrete outputs. The relevance and cost effectiveness of this approach must be seriously open to question.

For reasons noted above, the effectiveness of village-level training is very hard to assess at present, because many of these cadres have yet to be really put to the test. However, the village study has raised some doubts about the current effectiveness of VHWs, on the one hand, and water point caretakers, on the other. Questions have also been raised about the capability of some village HESAWA committees. The total numbers of village HESAWA committees trained so far is not known, but it can be assumed that virtually every village entering the programme will establish one.

Table 6. Total village HESAWA cadres trained, and training output for 1991/92.

Cadre	Total trained	Total trained, 1991/92	
		no.	% of total
VHWs	655	134	20
TBAs	231	118	51
Caretakers	1914	758	40
Village fundis	893	222	25
Storekeepers	91	12	13
Study Groups	677	11	2

Source: HESAWA Programme Implementation Statistics; Cumulative Figures 1985/86 - 1991/92 (Zonal HESAWA Coordination Office, October 1992)

At district and regional levels, implementors and supervisors are offered many training opportunities through short courses, seminars, and workshops. In general, the evaluation team was impressed by the relatively high levels of understanding of the community-based approach, the acceptance of more appropriate technology choices, and the high level of interest and commitment to the HESAWA programme. At the same time, many weaknesses were also noted, particularly at the district level, which still need to be addressed if further decentralization is to be achieved.

2.11 Gender awareness and the involvement of women

The issue of the involvement of women in the HESAWA programme has sparked off a lively and controversial debate, the full outcome of which has yet to be seen. Of all the programme elements, this is the one which is most often perceived by Tanzanians as having been imposed by SIDA. While many staff clearly recognize the disadvantaged position of women in the Lake Zone as a whole, and accept that special efforts must be made to ensure that women are as fully involved in the programme as possible, a full commitment to supporting an enhanced role for women as a development goal has not yet been achieved.

The issue of women was explored in some detail in the village study. Clear benefits for women as a result of the programme have been identified, but criticisms were also expressed by the women themselves. Within the programme itself, with the notable exception of the national director and some very dynamic women District Promotion Officers (DPOs), women are very poorly represented among decision-making and implementing staff. A good illustration is the attendance at the end-of-evaluation review workshop in Mwanza. Only four women were present at this meeting, out of a total attendance of 35, none of whom were based in the Lake Zone. Two were from Maendeleo head office in Dar es Salaam, and the other two were from SIDA Stockholm.

It quickly became clear to the evaluators that the position on women being advanced through the programme is not well understood by many male staff, and there appears to be a significant degree of resistance to putting the principle of women's involvement into meaningful practice. If further progress is to be made, the programme should closely review the way in which the arguments for women's involvement are being packaged and presented, both to programme staff and in the villages, and set out in more detail the precise goals of women's involvement. Greater attention also needs to be paid to what women in the villages are saying on their own behalf, and how they define their own needs.

2.12 Summary

The achievements of the HESAWA programme have been substantial, as this overview has suggested. Put together, these constitute a platform upon which further progress can be built. There are still many gaps which remain to be filled before it can be said that programme goals are truly being achieved. In the chapters which follow, a critical review is presented of the issues which the evaluation team considers to be of the greatest significance in further strengthening the programme.

3.0 IMPACTS OF THE HESAWA PROGRAMME AT VILLAGE LEVEL

3.1 The village study

3.1.1 Objectives of the village study

The village study was a centrally important component of the evaluation exercise. In assessing the impacts and prospects for sustainability of the HESAWA programme, it was essential that the voice of involved villagers themselves should be heard as clearly as possible. Within the time available, it was considered that the best way to achieve this was to visit a selection of villages spread over all three regions and investigate a number of key issues through the use of a set of participatory, rapid appraisal techniques.

On the basis of the terms of reference for the evaluation, it was decided that the village study should focus on four key areas of programme impact:

* Impacts on the village water supply and sanitation situation.
* Impacts on health and hygiene knowledge and behaviour.
* Impacts on women.
* Impacts on community organization and management capacity.

Alongside these four themes, the study teams also set out to assess with the communities involved the prospects for the long term sustainability of the benefits gained through participation in the HESAWA programme.

Impacts can be measured in both quantitative and qualitative terms. The quantitative impacts of the HESAWA programme on the water and sanitation situation in the Lake zone have been discussed in the previous chapter. The primary emphasis of the village study was on the qualitative effects of the programme at village level, and on the perceptions of the villagers themselves on the benefits which they feel they have gained through participation in the programme. Many of these benefits, such as programme impacts on health status and the benefits of time and labour savings, are extremely hard to quantify without in-depth and methodologically complex studies. Measuring such benefits in the HESAWA programme is made more difficult by the lack of comprehensive baseline data against which changes can be measured. Much of the data collected in the village study is therefore indicative rather than conclusive, but nevertheless sheds a great deal of light on key issues with an important bearing on both the returns at village level as a result of programme investments, and the prospects that any gains achieved will be sustained in the long term.

3.1.2 The study villages

A preliminary selection of study villages was made on the basis of information

provided by the programme during the preparatory mission. This was subsequently reviewed with the zonal office, and a revised list agreed. A total of 24 villages involved in the HESAWA programme, and a further three control villages, were selected. The village list constitutes a selection rather than a statistically valid sample, but was considered adequate for this kind of rapid appraisal exercise.

A number of criteria were used in making the selection. These included that the range of technologies represented should roughly correspond with the proportional output of the programme, villages with and without study groups should be included, both "old" and "new" HESAWA villages should be selected, and there should be a reasonable distribution of the villages among the regions and districts. The final selection made was considered satisfactory by both the evaluation team and the programme management at the zonal office.

A full list of the study villages and the members of the study teams are shown in Appendix 4.

3.1.3 The study teams

Three teams with four members each were formed to carry out the study. The IRC consultant with overall responsibility for the village study led one, and the other two were led by the AMREF members of the evaluation team. The members of the study teams were recruited from among senior programme staff from the districts and regions. Each team had at least one woman member, and contained a person with expertise in water and sanitation technologies, health, and community development.

The teams visited nine villages each. The schedules were planned in such way that no team member visited villages in his or her own district.

Throughout the study phase the teams worked closely together: in learning and practising the techniques during the preliminary workshop; in developing and field-testing the work plan; in carrying out the investigations in the villages; in recording and analyzing the data; and in writing up the preliminary findings. Although the team leaders were responsible for the thorough execution of the study and the drafting of the village reports, all team members were equally involved in the work.

3.1.4 The preliminary workshop

The study phase began with a three day preliminary workshop. This was held in Mwanza to familiarize the study teams with the use of participatory research and rapid appraisal techniques. A work plan was developed for the village visits, including a comprehensive description of the different activities to be carried out, and checklists of issues to be covered. A code book was also prepared, corresponding with the checklists, to sort all the data for easier analysis of the results.

As some of the techniques require the use of illustrations, two local artists attended the workshop. The artists worked closely with the team members, and accompanied them

on the first village visits to test the appropriateness of the illustrations. Some pictures were then modified on the basis of the initial reactions of the villagers involved.

After visiting three villages each, the study teams got together again for two days, to analyze the first sets of field data and review the methodology. Several improvements and additions were made in the work plan and checklists. A common framework for the presentation of the data in village reports was also developed.

3.1.5 Overview of the techniques used

The purpose of a participatory exercise of this kind is to encourage discussions among the villagers themselves, and provide opportunities for them to express themselves as freely and openly as possible. From the many participatory techniques suitable for this purpose, the following were selected:

* Village mapping.
* Pocket charts.
* Puppet play.
* Observations and village walks.
* Focus group discussions and open interviews.

These are briefly described and discussed below.

Village mapping. A group of people in each village was asked to draw a sketch map of the village. The group could not contain any government officials, teachers, or nurses, but should be made up of ordinary villagers only. All important features, such as hills, woods, fields, houses, and public buildings, were asked to be indicated. The groups were also specifically asked to include water sources and water points, latrines, waste disposal sites, and washing slabs. They were also asked to use different colours to illustrate the water supply and sanitation situation before the HESAWA programme began, and the situation now. Comments and questions were encouraged while the maps were being drawn, and the finished maps were then discussed in detail.

This technique proved to be very effective in gathering information and opinions on existing facilities and the new and improved ones built through HESAWA. The drawing of the maps also aroused a lot of interest and discussion among the villagers. In many cases a very informative, comprehensive drawing emerged, of which the makers were justifiably proud.

Pocket charts. A set of pictures was put on display, each with a paper pocket or envelope attached. Small pieces of paper were distributed, with a different colour being given to men and women. Everybody was asked to vote for the pictures of their choice by putting his or her paper in the relevant pocket. The pictures used showed a range of different types of water sources, both traditional and new. Two rounds of voting were held. In the first, people were asked to vote for the source they use most at present. The votes were then counted by one of the participants

and the scores displayed and discussed. In the second round, people voted for the type of source they would most prefer to use and maintain, assuming it were available. These votes were then counted, and the results displayed and discussed.

This technique directly involves people in collecting and analyzing data on their own preferences. The activity was generally much appreciated, and stimulated enthusiastic discussions, both among the villagers themselves and with the study teams.

Puppet play. For this technique a set of paper puppets and props were used, depicting men and women, houses, trees, a water point, etc. The puppet play technique was used in the HESAWA villages, but not in the controls. A cloth was spread out with the puppets and props displayed on it, and a group of villagers asked to act out the work of HESAWA with the help of the puppets.

This technique gives people an opportunity to express feelings and opinions openly, but in a dramatized and less threatening way through the use of the puppets. Although the villagers involved seemed to enjoy the activity very much, and lively discussions were held on many different issues, the technique produced less information than was hoped and it was often difficult to persuade people to confine themselves specifically to HESAWA issues.

Observations and village walks. Observation was a very important tool in the village study. To structure the observations, it was decided to make village walks with the specific purpose of observing the general condition of water points, latrines, standards of cleanliness in the village, and so on. To enable comparisons to be made, a list of observations to be made was drafted during the preparatory workshop, to be used in all villages.

Through these structured observations, valuable information was obtained on general living conditions in the villages, and on the state of the facilities built or improved through HESAWA. The study team members undertaking the village walks were usually accompanied by a number of villagers, often including a member of the HESAWA Committee, a Village Health Worker, and one or more water point caretakers.

Open interviews. Group interviews were held with members of village governments, HESAWA committees, Village Health Workers and Traditional Birth Attendants, and women. All interviews were conducted in an open style and were as unstructured as possible, though study team members used checklists for general guidance. Discussions among participants were encouraged.

The interviews complemented the other activities very well, and provided opportunities to follow up and further discuss issues raised in the participatory activities and village walks.

3.1.6 Strengths and weaknesses of the methodology used

With only a single day to spend in each village, the use of participatory techniques

enables a large quantity of information to be gathered. In addition to meeting village leaders, who are usually the main informants in more conventional village visits, the study teams succeeded in having extensive discussions with a large number of ordinary villagers, both men and women.

The general impression gained by the study teams was that the quality of the information obtained had an extra value because a good part of it came out of spontaneous discussions among the villagers themselves, particularly during the group activities, rather than in response to direct questions.

Another advantage of the approach is the opportunity provided to share the investigation with the villagers themselves. The pocket chart activity usually attracted a large crowd. Smaller numbers of people, ranging from five to 20, participated in the mapping and the puppet play activities. Irrespective of the numbers involved, all these activities provoked much interest and undoubtedly led to further discussions in the villages about the programme after the study team had left.

The methodology also has certain limitations, which need to be recognized. The most obvious is that the bulk of information obtained is qualitative rather than quantitative, and although relatively large numbers of people were involved, the data obtained cannot be considered to be conclusive, or valid on any statistical basis. This is not to say, however, that sound inferences can not be drawn. Deliberate attempts were made, for example through the village walks and interviews, to corroborate the views expressed. The development of a standardized approach to reporting also helped to compare data from different villages and identify common trends.

An important constraint is that the approach requires relatively well-developed skills in leading discussions in an unobtrusive and non-directive way. Note-taking also needs to be done discreetly so as not to break the rhythm of discussions. Open interviews and discussions are much more difficult to record than more structured approaches. Observations are also not easy to record in a way which makes them valuable as research data without a reasonable amount of practice.

An additional difficulty in the Lake zone is the number of different languages spoken. Discussions were usually held in Swahili, but sometimes also in the local language. Where the latter was the case, team members had to translate the discussions into Swahili to note them down, and then again into English for the village reports. In the process, some details must certainly have been lost.

Note-taking was discussed and practised during the preparatory workshop, but it remained a difficult issue for many study team members, some of whom were participating in a research activity for the first time. It is to their credit that, in spite of this, the village reports contain a great deal of good and useful information.

3.1.7 Self-evaluation by the study teams

Self-evaluation by the study teams was a routine part of the village study exercise,

beginning with daily evaluations during the preparatory workshop. Before the first village visits were made, team members frequently expressed concern about the methodology. Some of them did not believe that ordinary villagers would be able to draw a map. Others questioned the pocket chart, and particularly the puppet play, fearing they would be considered too childish by the villagers. There was much concern about how to structure the questions to be asked, and how to record and analyze the data.

After the first three village visits, many of these fears diminished. The advantages of the approach were easier to see. The involvement and enthusiasm of the villagers, and the large amount of useful data gathered, were a great encouragement. The enthusiasm of the study teams increased considerably.

At the end of the study phase, a one day workshop was held to draw up lists of the most important findings and recommendations of the study, and to evaluate the study phase as a whole. A great deal of satisfaction was expressed with the approach. As one team member, a water engineer, said :

> "The most important thing I learned from this exercise is that the opinion of villagers is to be taken very seriously. I always thought that they did not know anything about the technical issues of water supply and siting of water points. Seeing that uneducated people can draw an accurate map made me change my mind."

3.2 Impacts on the water supply and sanitation situation

3.2.1 Importance of water supply and sanitation improvements

The most obvious effect of HESAWA in villages in the Lake zone is the increased numbers of improved water supplies which are built as a result of the programme. Improvement to water supplies provides the programme's most substantial point of entry into involved communities, and meets a very strongly felt need. Community confidence in the ability of the government and donors to provide reliable and sustainable drinking water supplies is understandably low in Tanzania after many years of unsuccessful and over-ambitious water projects. In a very real sense, the success and credibility of the whole programme depends upon the effectiveness of the water supply component.

HESAWA has attempted to tackle this problem by introducing lower cost and simpler water supply technologies. It is hoped that these will be suitable for sustained village level operation and maintenance, provide a more reliable service, and hence provide longer lasting benefits. If communities themselves are expected to take over responsibility for improved water supplies, important preconditions include that basic technical standards should be high enough to provide reliable and suitably designed water sources, and that the options offered correspond sufficiently to the felt needs of the people to ensure their commitment to keep them in good working order. It is also important that the improvements made should constitute a substantial improvement to the general water supply situation, and should be recognized as such by the users.

Improved sanitation is the other major technical improvement which the programme is seeking to introduce. Although demand for improved latrines is far lower than for water, a successful sanitation programme is nevertheless an important precondition for the achievement of the programme's health goals.

3.2.2 Community preferences for water point types

In the past, it was the stated ambition of the Tanzanian government to provide every village with a piped water supply. It has now been realised that meeting this goal under the present circumstances is impossible. HESAWA, along with many other water programmes in the country, has opted for simpler technologies, with a strong preference for shallow wells as the first choice.

In the village study, the pocket chart game was used to obtain information on community preferences for water supply technologies. Villagers were asked to cast votes to indicate the types of water sources they most often use now, and the types they would choose to use in the future given that they would have to meet all or most of the operation and maintenance costs. The options offered in the game were: unimproved traditional water sources; ponds and dams; rivers or lakes; shallow wells; improved traditional water sources; rainwater harvesting systems; and piped supplies.

In some places, villagers did not always find it easy to fully grasp the rules of the game and some confused results were obtained. In all cases, men outnumbered women and the results obtained may therefore under-represent the view of women. In spite of these shortcomings, the game provoked lively interest and some good discussions. Most importantly, the voting pattern indicated a clear preference among both men and women for shallow wells as the principal technology of choice. This outcome was not necessarily to be expected, and can be taken by the programme as a vindication of the decision to give point-source supplies priority over more ambitious schemes. The trends in the voting also indicated that improved traditional water sources and rainwater harvesting systems were considered to be useful additions.

Reasons given by the voters for their preferences included the following:

- Shallow wells provide cleaner water;
- When they are well-constructed, shallow wells are more reliable, because they break down less often than piped systems and can provide water throughout the year;
- Improved traditional water sources provide "softer" water than shallow wells;
- Improved traditional water sources are preferable to shallow wells because they are cheaper, but the improvements should be done to a good technical standard to be useful and efficient;

- Rainwater jars are a good additional water source for households which can afford them.

The preference for shallow wells shows perhaps most clearly in Makongoro village, where a range of different water supply options was offered by HESAWA. Shallow wells, improved traditional water sources, rainwater harvesting systems, and a piped scheme have all been installed. The shallow wells have proved to be the most sustainable, with seven out of the nine installed being in good working order. The piped scheme, on the other hand, soon broke down, and the 14 improved traditional water sources and both rainwater harvesting systems only provide water during the rainy season.

In Kashenye village the voting showed a clear preference for the existing piped system, but it was emphasized that it should be made reliable, with a daily flow of water. Villagers expressed their intention of getting themselves better organized and improving the maintenance of the system:

> "The scheme belongs to all of us here. HESAWA assisted in constructing it, but we have the duty of maintaining it, so that it will serve us longer."

In quite a number of cases unprotected surface sources and unimproved traditional water sources were still being used, but most of these users indicated that they would use shallow wells if they could. As a general point, it should be noted that in all but one of the villages visited people were continuing to use unprotected sources to some degree even after HESAWA improvements had been made. In Bukabwe and Kamgendi villages the people prefer to use a dam "... because it never dries out". This preference is also influenced by their wish to have sufficient and reliable water for cattle. In several other villages, particularly in Mara Region, the need for more water for cattle was mentioned.

3.2.3 Appreciation of HESAWA improvements

From the discussions during and after the village mapping and pocket chart game, and from other interviews, it is clear that in general people are happy with the water supplies they get through HESAWA, provided they work well and are reliable. Water supply is felt to be a problem in all the places visited. Traditional sources are acknowledged to be unclean and many existing sources are dry during part of the year, which makes the hard job of providing water for the household even more difficult.

Everybody seems to be aware of the dangers of using untreated lake water for drinking and domestic purposes. Boiling of water is generally not done, however, because there is a shortage of firewood, and other fuels are expensive.

Women in particular indicate that they have benefitted from the HESAWA programme by getting easier access to water of better quality. On the other hand, the villagers, and again women in particular, also pointed out shortcomings, and suggested improvements.

For most villages the newly constructed or rehabilitated water supplies are appreciated, but considered insufficient, either because not all sub-villages are served, or because some of the wells or schemes have broken down, have run dry, or work only seasonally. Suggestions included:

- Installing a larger number of well-built and properly surveyed shallow wells in convenient locations, with at least one water point in each sub-village.
- Improving more traditional wells, with an appropriate design, ensuring a good cover and easy access.
- Further improving traditional wells which have water the whole year round but which have been improved to an insufficiently high standard.
- Introducing more rainwater harvesting systems, both communal and private, as a supplement to other water supplies.
- Rehabilitating existing gravity schemes, and ensuring a proper organizational structure for management.

Many women indicated that no more money should be wasted on inappropriate structures, and on wells which run dry within one or two years after construction. In several villages "poor technology" was mentioned as a major problem of the HESAWA programme.

All of the major technologies used in the HESAWA programme were reviewed during the village study. Summary findings for each are given below.

3.2.4 Shallow wells

The key problems identified with the shallow wells programme were poor standards of workmanship and reliability on the one hand, and poor siting on the other.

In the 24 HESAWA villages visited, the total number of shallow wells with handpumps built or rehabilitated through HESAWA is 134. Of these, 35 were found to be inoperative, either because they had completely dried up, or because the pump was broken. In two of these cases pumps had been stolen, and in two other cases shallow wells had been abandoned because the water was considered undrinkable because it was bitter or salty. A further six wells were found to be unreliable and not able to provide water throughout the year. The total number of wells found to be unreliable or inoperative was 41, representing 30% of the total in the study villages.

Some wells were said to have dried up within a few months of being completed. When asked why this happens, villagers mentioned poor surveying, digging in a different

place than indicated by the survey, and bad workmanship or "technical errors" as possible reasons.

Observations showed that well superstructures were often poorly built, with inconvenient or faulty provisions for placing buckets, pumps leaning over at strange angles, cracks in the concrete work, and inadequate drainage. In some cases, water point outlets are too large and placed too low, leading to users making improvised funnels or using their hands to channel water into their containers, with associated risks of contamination. Many working pumps were evidently poorly maintained, with no grease, wobbly fastenings, and rusting bodies. Reasons given by community members for poor maintenance included the ineffectiveness of the caretakers, no tools and grease available, and difficulties in obtaining funds from the village HESAWA account.

People said that breakdowns were reported to the government, but repairs on pumps are not executed due to lack of spare parts at the district. In some cases the ward mechanic or ward pump attendant was mentioned when discussing repairs, but there seems to be nowhere a well planned system for dealing with breakdowns. It was evidently completely unclear to the villagers or HESAWA committees how they themselves could pay for specific repairs to be undertaken by the ward pump mechanic. Furthermore, no pump mechanics were encountered in any of the study villages.

People often complained that shallow wells built through HESAWA are not well spaced throughout the villages. They tend to be concentrated in a few sub-villages, and people from other sub-villages must still walk considerable distances to get their water. In some cases several wells were found clustered together within 100 metres or so of each other. People generally did not seem to understand why the wells could not be better spaced out, and this had apparently not been explained to them by the programme. Under such circumstances, people naturally feel reluctant to pay for a service from which they get little or no benefit. In many villages people asked that more shallow wells should be built, with at least one for each sub-village.

The study teams noticed a marked difference between districts in construction and maintenance standards. Kwimba District in particular stands out for good workmanship and properly maintained, reliable wells. Villagers in this district indicated that they were very well supported in planning and construction, and in the maintenance of their wells. No other district was able to match the standards found in Kwimba, however.

3.2.5 Improved traditional water sources

The improvement of traditional water sources is potentially a highly cost effective approach. During the village study, however, it was found that the standard of improvement in the HESAWA programme still leaves much to be desired.

The total number of traditional water sources improved through HESAWA in the 24 study villages is 61. Of these four were found to be completely dry, and one had been abandoned because the water was not considered suitable for drinking. Sixteen did not

provide water throughout the year, and a further 22 were found to be either badly constructed or incomplete. In total, 43 improved traditional water sources were found to be inadequate for one reason or another, representing about 70% of those recorded. Poor design and construction included things like loose stonework and broken cover slabs, and the lack of a lifting device, making the wells both dangerous and inconvenient to use. In some cases, people have to lean down through a narrow hole in the cover slab to reach the water.

Some structures built to protect the wells have loose stones or badly cracked concrete, and some are still only half completed after more than a year. In two villages a wooden windlass had been provided with the concrete cover of the well, but the rope or chain had been removed or stolen, and not replaced. In some cases people claimed that the improved wells give considerably less water than before and dry up more quickly. It was not clear, however, if this was a persistent problem or was due to this year's prolonged drought.

In general, the standard of improvements was found to be low, due to inadequate design or poor workmanship, or both. Management and maintenance seemed to be as bad as for shallow wells. The development of more appropriate designs, closer consultation with users, and a good plan for maintenance of the wells would help to establish more sustainable improvements.

3.2.6 Piped schemes

Four of the study villages had a piped system built or rehabilitated through HESAWA. One works with an electric pump, one with a solar pump, and two were gravity schemes.

Of these, the scheme with the electric pump has not worked for some time, and the solar pump has not worked for more than two years since it was hit by lightning. The study team were told that nobody from the district had been able to repair it. The two gravity systems were said to be working, but do not provide a regular supply. Sometimes there is no water for many days. At the time of the study team's visits, neither scheme was working.

The gravity schemes serve seven and three villages respectively. For both schemes a scheme attendant employed by the District Council is responsible for maintenance of the catchment area, and for distribution of the water to the different villages. There were some doubts expressed about the attendants' effectiveness. One man suggested that the planting of eucalyptus trees to protect the catchment of one of the schemes was probably causing the spring to dry up. People also complained about the distribution of water in one of the schemes, which they thought to be erratic and unfair, favouring one village over others. The villages involved did not have an overall management body through which they could solve these problems.

In Kashenye village possible improvements in the management of the gravity scheme were discussed. To general agreement, a young man suggested: "Let the scheme be handed over to all three villages, but each village should have its own scheme attendant who will maintain the part which belongs to that village. Maintenance of the catchment and the main pipe can be done by the three fundis together, as a team." An additional suggestion concerned the necessity to train villagers for maintenance and repairs of the scheme.

All piped systems seem to suffer from frequent breakdowns, with broken and clogged pipes, and faulty bibcocks, being commonplace. Some schemes are badly constructed, with pipes being left unprotected above ground and standposts being built with inadequate drainage.

Reasons given for poor maintenance included: lack of spare parts; lack of skills in maintenance and repairs; lack of management and proper division of responsibilities.

3.2.7 Rainwater harvesting systems

Rainwater harvesting systems seem to be generally successful, although they do not all provide water during the whole year. Of the 24 study villages, 3 have communal rainwater harvesting systems built through HESAWA, one having two tanks, the others one each.

In Kyaitoke the rainwater storage tank at Igoma primary school has a capacity of 15,000 litres. It is the only water supply in the sub-village where the school is situated and was built there because no other water sources are available and the ground water table is too low for the construction of shallow wells. During the rainy season the tank serves the people of Igoma, but it is too small to meet the total demand.

Rukole village has a communal rainwater catchment system with a 600,000 litre capacity. This was built by Maji in 1972 and rehabilitated through HESAWA. The tank is underground, and filled by runoff from a paved catchment at ground level. Water is lifted out of the tank with two NIRA hand pumps. The water is sold by a caretaker at TAS.10 per 20 litre bucket. The money goes into the village water account. Maintenance of the system is done by the villagers themselves. Households are restricted to only one bucket per day, but even so the tank is usually empty for two to three months during the dry season. Although the villagers consider this a good system, they are not fully satisfied. People from sub-villages have to walk long distances to the tank, which is situated in the main village centre. The catchment area is also said to be too small for the tank, which does not fill up completely during the rainy season.

HESAWA has also attempted to introduce household rainwater jars into this village. A demonstration jar with a capacity of 1,000 litres has been built in the village. During

discussions most people said they preferred a communal system, which is much cheaper on a household by household basis. The cost of buying a household jar from HESAWA is TAS.10,000, which is more than many villagers are prepared to pay.

Rainwater harvesting systems have only recently been vigorously promoted by the HESAWA programme. Initial responses seem to be generally positive, though many villagers do not consider them to be a totally reliable option.

3.2.8 Household latrines

The HESAWA latrine programme has had very limited success so far. Most household latrines found in the study villages are unimproved, and flimsily built. Squat holes are often little more than large openings, sometimes covered with poles, and many appear to be quite dangerous, especially for children. Shelters are often built with very light materials, without roofs or doors. Cleanliness is generally poor; frequently there are faeces on the floor, and many flies around. Although unimproved latrines are often found, only a few households have built latrines promoted by HESAWA. Some of these are left uncompleted for a long time.

Many people felt that the concrete slabs offered by the programme are too expensive, even at a heavily subsidized price. Also, people felt that other improvements to their housing should have priority over building a nice latrine.

More comments are made about the household latrine programme in the section below on health and hygiene knowledge and behaviour.

3.2.9 Public latrines

In 16 of the study villages HESAWA has promoted the building of public latrines. In seven of these the latrines have been left "under construction" for a long time, and the study teams had the impression that these were not really meeting a felt need, but were being built as a gesture to please HESAWA.

Public latrines, particularly those at schools, are generally very dirty with faeces everywhere. Apparently the children do not receive good guidance on how to use them properly.

At the school in Chato, where HESAWA has a latrine programme, one small, reasonably clean latrine, built through HESAWA, is reserved for the teachers. The children must use a collapsed and dangerous unimproved latrine, and the yard behind the school is completely covered with faeces.

3.2.10 Washing slabs

Washing slabs were only found in one of the study villages, where two have been built near shallow wells. The women who use them say they find them very useful and time saving. These two, however, are not sufficient for the whole village because they accommodate only two women at a time. Many more women say they would like to use a washing slab. The women asked for more and larger slabs to be built, with at least one at each shallow well.

In five of the study villages, women said that washing is a big problem, and a good washing place near to a well would be very useful. They are prohibited at present from washing near the wells and domestic water points, and say they must walk long distances to their homes with washing water, or to an unimproved water source for washing. In Kahangara, for example, a special pond is used for clothes washing. This is about 30 minutes walk from the village.

In the dry season, when other surface water sources have dried up, the lake is used for washing by those who live nearby, even though people generally know about the danger of catching bilharzia.

The issue of washing slabs in HESAWA has been controversial, and a detailed study looked into this part of the programme early in 1992. Many problems were identified, many of which were linked to inadequate consultations with village women over siting and design issues. The study recommended that washing slabs should not be imposed by the programme. From the village study, it is evident that there is still an interest in having clothes washing facilities in a number of places.

3.2.11 Waste disposal and drainage

In many villages greater attention needs to be paid to general cleanliness. Surroundings of water points are usually not very clean, with waste water around the structure, and open, bad smelling drainage. An exception are the study villages in Kwimba District, which have generally well-kept water points with good drainage. In some places, particularly in Kwimba District where water is scarce, waste water from water points is used to irrigate small gardens.

3.3 Impacts on health and hygiene knowledge and behaviour

3.3.1 Health goals of the HESAWA programme

The principle justification for the HESAWA programme is that it should lead to significant improvements in community health. In this respect, improvements to water supply and sanitation are not ends in themselves, but the vehicles through which improvements to health can be obtained. These are only likely to be achieved when the technical improvements are accompanied by changes in health and hygiene behaviour. Assessing the impact of water and sanitation improvements on health is a complex and

difficult exercise, and requires a specialist study. In a participatory village study of limited duration, it is not possible to draw clear conclusions. It is, however, possible to gain an insight into the likely health impacts by investigating the effects of the programme on health and hygiene knowledge and behaviour. These were investigated during the village study.

For the most part, information was obtained through discussions and participatory exercises with community members, supplemented by village walks and inspections of water supply and sanitation facilities. In the time available, it was not possible to undertake detailed observations of health and hygiene behaviours, or do a sufficient number of home visits to thoroughly investigate issues such as water storage and handling, or standards of personal and domestic hygiene. The findings of the study in relation to these issues should therefore be regarded as indicative rather than conclusive.

3.3.2 Village Health Workers and Traditional Birth Attendants

The principal agents for changes in health and hygiene knowledge at village level are community-based Village Health Workers (VHWs) and Traditional Birth Attendants (TBAs). These are trained by the HESAWA programme and expected to pass on information and knowledge to community members.

Most villages have two VHWs, one man and one woman, in accordance with the goals of the programme. These are expected to promote health by suggesting improvements in hygiene behaviour and in general cleanliness in the village, and by encouraging people to build and use improved latrines. Hygiene and environmental sanitation conditions need to be much improved in many villages, and it is clear that VHWs are faced with a difficult task.

Although most VHWs express satisfaction with the training they have received, and take some pride in their role, many appear to be experiencing motivational problems. There is much discussion of the need to pay VHWs, though few of them receive any compensation for their work. In one village VHWs received a regular payment of TAS.1,000 per month, paid from the village HESAWA account, but this was the exception rather than the rule. In another the village government said that money had been set aside to pay both VHWs and water point caretakers, but the VHWs themselves said they had not been paid as yet. A number of HESAWA committees said that they were concerned about the issue of VHW payment and were in the process of discussing the possibilities.

In Kashenye village the two VHWs, a woman and a man, are said not to be working because they are not receiving any payment. There is a plan to give them some incentives, and if they then do not change their behaviour other VHWs will be selected.

From interviews with VHWs and TBAs the study teams got the impression that TBAs are generally better motivated and more enthusiastic. Although they receive no payment from the village government or HESAWA committee for their work, they usually receive gifts from the women they help with health problems and childbirth, and enjoy a significant amount of respect and prestige in the villages. As a new cadre, VHWs are not so well established or so highly respected.

Another impression gained was that although most VHWs seem to be well versed in basic health and hygiene messages, they are less clear about the best methods to use in promoting changes in hygiene behaviour. Many of them are members of the village government and/or the HESAWA Committee, and say that they promote hygiene issues in these organizations. They also make home visits to speak about water storage and general domestic hygiene issues. Not many of them seem to visit the schools, or concern themselves with broader issues such as waste disposal and drainage.

Although intended to focus on preventive measures, many VHWs said they would like to have a more explicit curative role and asked for more comprehensive first aid kits and supplies of medicines which they could prescribe. This suggests that they attach more prestige to curative work, and might perceive the promotion of cleanliness and hygiene as a lesser part of the work they are supposed to do.

The TBAs seemed to be more enthusiastic than the VHWs about the training they receive, particularly as it is given by "official doctors and nurses" which gives them a feeling of status and of being taken seriously. Most VHWs say their training is good, but too short and they would like more frequent refresher courses.

3.3.3 Health and hygiene knowledge and behaviour

In all villages the importance of having safe, clean water for drinking and household use was frequently mentioned to the study teams. General awareness of the risks of using contaminated water seemed to be high, but it was difficult to verify in a series of one-day visits whether this awareness was really reflected in patterns of behaviour.

In Chato village, which is near Lake Victoria, people will use water from the lake, which is infected with bilharzia, when there is no alternative. Villagers said that since shallow wells have been installed in the village, the occurrence of schistosomiasis has sharply declined.

Villagers, like VHWs, seem to be familiar with most of the hygiene messages the programme is trying to promote. This indicates that some basic impact is being achieved. At the same time, community members pointed out the practical difficulties of acting on this knowledge. In several villages people said that cleanliness can not be a first priority when water supplies remain inadequate. Nevertheless, in virtually all study villages, when

the people were asked to indicate improvements in the programme, they mentioned the need for a more developed programme for hygiene education, a programme for sanitation improvement, or both.

The building of improved latrines can be seen as indicator of the impacts of the hygiene education programme. Although the government, and HESAWA, have been promoting the building of latrines for a long time, only very few well-built, well-kept latrines were found in the study villages. According to the villagers, this is a matter of priorities rather than an indication of a lack of desire for a good latrine. People say "why should we build a beautiful latrine, when we need to improve our houses first?". In one village, people specifically requested HESAWA to help them build better houses.

The cost to villagers of building the types of latrine promoted by the programme may also be a problem. In many rural areas, particularly in Mara Region, houses are not built with a view to permanent occupation. Many are built with low-cost, short-lived materials such as reeds and mud. Houses are occupied for a number of years and then abandoned when a new one is built on another site.

In spite of these constraints, the importance of improving sanitary conditions is recognized in most villages. In the past, people were required by law to build latrines, and those who did not do so were liable to be fined. This rule does not seem to be strictly enforced any more, but people still have a tendency to emphasise the existence rather than the quality of latrines as being of primary importance. The study teams saw many old, dirty, collapsed, and unusable latrines.

In encouraging people to improve their latrines, HESAWA could perhaps put less emphasis on a costly superstructure with vent-pipe, and stress more the importance of having a good slab, which is easy to clean and will not collapse easily. Many people assume that if they use a concrete slab, they must make a suitably "modern" structure around it. Their perception of the costs involved thus goes far beyond the relatively modest price of the slab itself.

Concrete slabs are likely to be more popular in places where wood and logs are becoming increasingly scarce. In Muda village, for example, we were told that these days logs for building toilets are no longer available. In Kimuli, one villager said:

> "The most important thing is to have a clean ordinary latrine, before going for a VIP which is too expensive for us. Perhaps HESAWA could reduce the cost of the slabs a bit, so that more people can afford them."

Clothes washing is an important aspect of personal hygiene. In at least five of the villages visited people, and particularly women, said they would like to have washing slabs. These should be built near a reliable water source, and large enough to accommodate several women at a time. Very few washing slabs were seen in the study villages.

As noted, there was inadequate time in the village study to undertake a detailed

investigation of water collection, storage, and handling practices. Informal observations were carried out, however, and some problems noted. A common practice is to place floating objects or vegetation on the top of water containers to prevent the water spilling out as it is carried home. In Kagera Region, for example, banana leaves are particularly favoured. More often than not, people did not rinse or clean these before dropping them in the buckets, and buckets themselves were often not washed out before being filled. In home visits, it was by no means always the case that water containers were kept covered and it appeared relatively easy for drinking water to be contaminated.

In some cases, water point designs make protection of water quality more difficult than necessary. In one case, the outlet pipe from a protected spring was found to be too close to the ground to fit a large plastic jerry can underneath it. The woman who was collecting the water was only able to fill the can by using her hand as a funnel to divert the water into the neck of the can. If the design had taken account of the types of containers used by the local population, this problem could easily have been avoided. Although by no means conclusive, such observations indicate that there is still much to be done to both improve water point design and to strengthen the hygiene education programme.

As far as environmental sanitation conditions are concerned, it was noted that drainage from shallow wells and improved traditional water sources was often poor. In reviewing water point design, HESAWA should pay more attention to these issues. Closer consultation with users may help this process.

3.4 Impacts on women

3.4.1 Women as a target group

Women are an explicit target group of the HESAWA programme, and it is intended that special efforts should be made to ensure that they obtain substantial benefits from programme improvements, and are well represented in the decision-making and community management processes. In the village study particular attention was paid to these issues. In most of the Lake zone, the role of women in public life is highly restricted. This was reflected in the village meetings held by the study teams. In all cases the majority of village participants were men, and special efforts had to be made to involve women and ensure that their voice was heard.

In general terms, the village study found that while women have benefitted significantly from the improvements brought about by the HESAWA programme, they remain under-represented in the decision-making process and frustrated by the poor quality of some of the improvements which have been made so far. Many women expressed the wish to be more closely consulted and more directly involved in programme activities.

3.4.2 Benefits for women

Many of the women consulted in the village study made explicit statements about the benefits they had obtained through the HESAWA programme. In many cases these

were seen as being substantial, and represented significant steps forward. At the same time, quite a number were concerned about the uneven distribution of benefits, and what they considered to be a high level of wasted investment and poor technical standards which meant that the full range of potential benefits could not yet be obtained.

The most obvious benefits identified by women were improvements in both the quality and quantity of water available. These were seen as benefits for the whole community, and ones which should lead to improvements in hygiene and health. As some of the women said:

"Now some people can bathe every day, instead of only once a week",

"We have less diseases in the village than before".

Other benefits which were mentioned by women in a number of villages were time gains, reductions in workload, and the possibility of cultivating small gardens around the wells.

In three of the villages visited, the benefits of receiving hygiene education were specifically mentioned. This, the women said, would lead to cleaner homes, more awareness of health risks, and improvements in the general cleanliness of the village.

Although many women were happy with the improvements made so far, they also pointed out that the uneven distribution and poor reliability of many of the water points meant that the benefits are not yet being shared by everybody:

"Those who live near the functioning shallow wells are benefitting. Those who are far away have still problems",

"So many wells are not functioning now that we gain no time. We must all wait a long time for our turn to fetch water".

Discussions of the quality of construction and reliability of HESAWA water points revealed strong views among many women. They felt that more benefits could be obtained with better organization of HESAWA activities and better use of technology. It was considered a waste of time, effort and money to build or improve wells, or other water supplies, which soon break down, or are badly constructed and poorly designed in the first place.

With the notable exception of Kwimba District, women generally point out that the relationship between HESAWA staff and the community was not well enough established, and that district support for village HESAWA activities was insufficient. In particular, there was inadequate support provided to really enable them to help themselves. In seven of the villages visited, women expressed the view that many problems were caused because programme staff were not visiting the village frequently enough, were failing to give clear enough advice, and were not consulting the community in general and women in particular enough.

3.4.3 Women and community management

In order to ensure that women have a voice in community decision making, the programme has suggested that at least 50% of village HESAWA committee members should be women. In the 24 villages visited, this was found to be true in only nine cases. In only one case did women represent more than half of the membership. In two villages, all members of the HESAWA committee were men. The mean representation of women across the selected villages as a whole was slightly more than 37%, ranging from zero to 63%. A woman was the secretary of the committee in seven cases, and the chairperson in only one.

The number of women represented on the committees gives no clear indication of how active they are, or of the degree of influence they are able to exert on the decision-making process. An impression gained from general interviews with women was that female members of the committees often do not represent a specifically female point of view, or explicitly try to bring forward the wishes of women as a group. Many women felt generally under-represented in village life, in spite of their presence on the HESAWA committees:

> "The village government does not pay attention when we are taking our problems to their office for assistance".

> "It is difficult to speak for women, but we must make an effort to get ourselves heard".

Women's participation in village government is very low. Although one village was found in which a woman was the secretary, the highest number of women found in the village government in the places visited was four, representing 24% of the total membership. In most cases there are either no women members, or the level of representation is nominal.

In many cases women said they are often not informed of elections, and are not given election forms. This makes it impossible for them to get elected into the village government. Village meetings are often a male-only activity. Women say they are frequently not informed of meetings or other special events. When they do get to know about them, the meetings are so time consuming that they often do not have the time to hang around.

The visits of the study teams served to underline this point. In all cases many more men than women were available for interviews and other activities when the study team arrived. Women had to be sought out and specifically invited. When they did come, they felt under a lot of pressure to return to their daily work and tended to remain willingly only when they thought that an activity was going to be very important and interesting for them, or if the time was convenient.

In some villages the village government put pressure on women to come and join our activities. In Chato, for example, some women shopkeepers and market women were rounded up. Many of them drifted away as soon as they could, eager to go back to their business. Only two women VHWs and a woman caretaker stayed on. In the afternoon, when we did the pocket chart game where the importance of women's opinions was stressed, more women came to join in the discussion.

From our discussions with women it became clear that many of them would like to be more involved in decision making. Women said they would like:

"To have more say about improvements in the village".

"To have more influence in defining priorities, particularly concerning women's issues".

"To be more involved in the planning of shallow wells and the improvement of traditional water sources".

They also said:

"More women should be in the village government, where they can support each other and have a better chance to express their wishes and ideas".

"We want to get more leadership and management skills".

Although many expressed the wish for more influence in the HESAWA programme, women often indicated that they did have an important level of involvement. In 11 of the study villages women indicated that they had been involved, or were involved, in planning HESAWA water supply improvements by giving their ideas on what would be needed, and in giving their preferences for sites for new wells. During the construction phase, women said they contribute with labour, including digging work, and by cooking food for labourers.

In meetings with village leaders, members of the evaluation team were often told that contributions towards HESAWA accounts were usually made by men. In 14 of the villages visited, however, women said that they were also involved in paying the household contributions required by the programme. In one case, women stated specifically that they themselves had paid the initial contribution of TAS.100 per household to open the HESAWA account. In one village the women said that had "to encourage their men to pay the contributions to HESAWA". In 10 villages various income generating activities to make payments easier to meet were mentioned by the women as suggestions for further improvements. In two cases they stated explicitly that they would use the money for

further improvement of the village water supply ".. because that is our first priority".

The study teams found quite a number of female caretakers. In three villages in particular it was observed that water points looked after by women were generally in a cleaner and tidier condition than those taken care of by men.

In Kahangara village the possibility of having female caretakers was discussed with a group of women. Opinions differed, some stating that female caretakers would do better because they are directly benefitting from well-maintained water sources. Other thought that women would not have enough authority to enforce rules, or not enough time. As solutions to these constraints the women agreed on the importance of caretakers and VHWs getting support from the village government, and the necessity for them to be paid for their time.

3.4.4 Women's views and priorities

To summarize women's suggestions for improvements and priorities, it can be said that they feel that as primary users they should be more actively involved, particularly in water point siting and design, and management. Many said they would like to have training in management and leadership skills.

As a first and most important priority for further improvement they wanted wells to be more conveniently sited and better built to increase the chances for sustainability and a more even distribution of benefits.

Second, they stressed the need for closer and more thorough support from HESAWA staff to generally improve the programme.

Third, they would welcome support to income generating activities, to increase their ability to pay themselves for desired improvements, including the sinking of more wells.

Finally, a good number of women mentioned the need for an appropriate hygiene education and sanitation programme to help improve general health conditions in the village.

3.5 Impacts on village organization

3.5.1 The HESAWA committees

The focal points for village organization in the programme are the HESAWA committees. These should be elected by the community, with at least half of the members

being women. In the village study, two villages were found which did not as yet have HESAWA committees. As noted in the discussion on the impacts of the programme on women, not all committees are in line with the guideline on women's membership. In most cases, committees were said to have been chosen by the community, but some were said to have been appointed by the Village Government. Although the general trend in HESAWA committee selection and composition is in keeping with the programme's guidelines, these do not seem to be followed in all cases.

In a number of villages, particularly the ones which have been phased in more recently, an effort has been made to ensure that all sub-villages are represented on the committee. In many of the older committees this is not always the case. While no systematic comparison was made between committees established on this principle, and those based on general village representation, it is thought likely that this approach will ensure better planning and coordination of the distribution of water points in the village, and will encourage villagers to take responsibility for contributing to operation and maintenance of their own sub-village water point.

Most HESAWA Committees overlap to some extent with the Village Government, though the relationship between the two is not always clear. In some cases, the HESAWA committee is clearly recognized as a sub-committee of the Village Government, but this is not always true. On the other hand, it is hard to find committees in which members of the Village Government are not involved. In many cases both the chairman and secretary were found to be Village Government members.

Sometimes the HESAWA Committee is seen by people as being more active than the Village Government, and tensions have arisen. In some cases HESAWA committee members are said to have used their position for political gain, and in one case the committee was said to have "taken over" from the Village Government.

The responsibilities of the HESAWA committees were often described in very vague terms, such as "having meetings ... coordinating the activities of VHWs... collecting money... looking at all messages received in the village" and so on. The general impression from the village study was that, particularly in older HESAWA villages, committees are not very active. An obvious reason for this is that operation and maintenance at the village level has not really begun. As a result, many villages have not yet had to establish procedures for operating and making regular contributions to the village HESAWA account.

3.5.2 Village financial management

An important responsibility of the HESAWA committees is to manage the village HESAWA accounts and organize the collection of contributions. In most cases, villages had opened these accounts. Two newly phased-in villages said they were planning to make special arrangements for each sub village to have its own account. Two other villages did not have a special HESAWA account, but said that funds for the water supply would be taken out of the general village funds.

The amounts deposited in the accounts differ considerably from place to place. The

variations do not seem to bear any relationship to the number of shallow wells or other water sources to be maintained. As examples, Kyaitoke and Igogwe have 15 and 11 shallow wells respectively and accounts containing TAS 5,945 and TAS 4,914. By contrast, Malya, with 11 shallow wells, has TAS 117,000, and Salama, with 3 shallow wells, has TAS 58,000.

Equally, contributions differ from one village to the other. Figures for initial contributions were collected in 18 villages. The amounts contributed were found to vary from TAS 100 to TAS 500 per household. In 10 study villages, people said they made regular annual contributions, varying from as little as TAS 25 to as much as TAS 400 per household. Although such figures were given it was not at all clear that regular payments were actually being made. Many of the amounts found in HESAWA accounts are not substantial enough to reflect a regular pattern of payment. In Rukole, as already noted, people pay TAS 10 per bucket for water from the rainwater harvesting system, and in Kashenye the account is said to be replenished through the collection of fines for misuse or damage to water points. In 10 other study villages it was explicitly stated that regular contributions were not being made to HESAWA accounts.

In one village, the study team was told that the government had intervened to try to force people to make deposits in their HESAWA account:

In Kibehe two out of five recently built shallow wells have been closed by order of the district, because the village had not deposited the required financial contribution of TAS.20,000 for each well into their HESAWA account. It was not clear why this particular village was penalized in this way. Many other villages have not fulfilled the requirements either, without any penalty. People in Kibehe said that many households had not yet paid because the programme had not built shallow wells in all sub-villages.

Remarks from some villagers suggested that those responsible for the accounts are not always trusted. In two villages it was said that former village secretaries had misappropriated money from HESAWA contributions. In another village the HESAWA Committee was accused of "using the money as sitting allowances, without the permission of the villagers". In a newly phased-in village, women stated explicitly that they would only contribute when they were sure that the money would be put away securely into a bank account.

In some villages it was said that households did not contribute because they suspected that their sub village would not receive a shallow well, or because they felt they were not benefitting from the new water supply. The uneven distribution of water points in a number of villages has been noted as a problem. People said that those far away from shallow wells or standposts sometimes refused to pay contributions, even though they still may use the water points. In at least one case, serious problems have arisen as a result of perceived injustices in the distribution of water points.

In one village everyone was expected to contribute to the maintenance of a gravity scheme, even though a good number of people lived too far away from the standposts to really benefit from the water supply. The study team were told that the scheme had been deliberately damaged by people who felt bitter because they were not enjoying as good a service as others.

Even though HESAWA accounts are established, no expenditures are reported in most villages. In two villages people said that the procedure, with several signatories, is very complicated and it seems to be almost impossible for the committee to withdraw money from the account, even to buy grease. No system yet exists through which the villages can buy spare parts. In some cases, people did not seem to understand that the accounts were intended as a maintenance fund. In several older villages it was reported that initial contributions had been handed over to a representative of the district "to pay for pumps". After learning that they were not supposed to pay for these, they tried to get the money back but so far with no success.

On many occasions, villagers complained that they did not have enough information from the HESAWA programme on proper procedures, or what was expected of them, and were often at a loss as to what to do. This was particularly true in relation to the procedures for operating HESAWA accounts, the question of payments to VHWs and others, and the purchasing of spare parts. These uncertainties in part help to explain the widespread anxiety among villagers about the idea of being phased out of the HESAWA programme. Not only did they fear that this might mean the end of all further government assistance to water supply development, but they were also uncertain about the future of the water supply improvements they had already gained.

3.5.3 Organization of operation and maintenance

Judging by the condition of many shallow wells and other water points, the impression gained is that operation and maintenance of water supply in the villages is not very well organized. With the exception of Kwimba District, where water points are generally kept in very good condition, the presence of caretakers seems to be no guarantee of adequately operated and maintained water points. Although the principle of village responsibility was often acknowledged, most villages still seem to hold the district responsible for maintenance. When something breaks down, the village reports to the district, or to the ward mechanic if there is one, who then notifies the district. People say it usually takes a long time for the district to send anybody, and often repairs are still not done because spare parts do not seem to be available. Even if they wanted to, the villages are not yet able to use the money in their accounts to purchase their own spare parts.

Caretakers are supposed to work on a voluntary basis, but many seemed to be poorly motivated and, as in the case of VHWs, the question of whether they should be paid was of widespread concern. It should be noted, however, that some of them do a very

good job and proudly showed the study teams their well-kept water points. During the grace period of one year after a system has been installed repairs and maintenance are carried out by the district. This period would provide a good opportunity for further support to be provided to caretakers in encouraging them to undertake routine care of the water points. This opportunity is not taken, however, and there seems to be no regular follow-up support given to caretakers.

In addition to the caretakers, ward and/or division pump mechanics and local fundis have also been trained through the programme to assist in water point construction, maintenance and repairs. None of these people were met by the study teams, and from the discussions in the villages it seems that they are generally inactive or non-existent.

3.6 Findings in the control villages

3.6.1 Selection criteria for control villages

In addition to the 24 HESAWA villages, visits were also made to three villages currently outside of the programme. This was done to provide a basis for comparison and attempt to place the achievements of the HESAWA programme in context. A single control village was selected in each of the three regions.

The criteria used for the selection of these were that they should have some kind of water supply improvement not related to the HESAWA programme, and that they should be conveniently enough located to fit in with the overall schedule of the study programme. The first criterion was established in order to give a valid basis for comparison, and the second for purely practical reasons.

As with the selection of study villages as a whole, the control villages were not expected to produce data of any degree of statistical validity. Visiting a single non-HESAWA village in each region is clearly insufficient to make conclusive comparisons. Having some kind of check is better than having none at all, however, and the visits to these additional villages did provide a basis for making some indicative comparisons.

The control villages selected were Kimuli, in Karagwe District, Kagera Region; Usagara, in Kwimba District, Mwanza Region; and Nakatuba, in Bunda District, Mara Region.

3.6.2 Water supply and sanitation situation in the control villages

Two of the control villages, Kimuli and Usagara, have old piped water supply systems, originally installed in 1963 and 1958 respectively. Both were originally run with diesel pumps, neither of which proved to be sustainable.

In Kimuli the original system completely broke down in 1978, and people had to go to a neighbouring village to collect water from unprotected sources. In 1981 the old distribution network was rehabilitated and connected to a gravity scheme with a source at nearby Kakanga. The source is shared by the two villages, with Kakanga having four

standposts and Kimuli having eight, although five of these were found to be out of order. People in Kimuli said the system frequently broke down, and believed that they were not able to get enough water because the people in Kakanga got it first. In the pocket chart game a preference was expressed for rehabilitation of the gravity system. In view of the lack of traditional sources in the village, and the general unavailability of ground water in this area, this is not surprising. When their standposts are not working, the people of Kimuli go to the standposts and ponds at Kakanga. They said they would also like to build a trough for watering cattle.

In Usagara the piped system has not been working for a long time. Water is drawn from 17 unimproved wells, which provide water the whole year. These wells are unprotected and poorly constructed, and are used for both domestic purposes and watering animals. The village hopes to be taken into the HESAWA programme. They know about HESAWA through neighbouring villages, and have recently prepared themselves for joining the programme by setting up a water committee with three male and three female members. In the pocket chart game all 12 women and 13 men present expressed a strong preference for shallow wells. When asked why, they said that shallow wells provide cleaner and safer water, and are protected against use by animals. They are easy to look after, do not cost too much, and the village can easily provide labour and local materials to help in their construction.

The third village, Nakatuba, had no improved water supplies until very recently. In the dry season people collect water from the lake, 8 kilometres away. At other times of the year they collect water from ponds and three unimproved wells. A few households have their own rainwater tanks, and some people go to a nearby village where there is a gravity system built through HESAWA. Recently the village was offered assistance by the African Development Fund (ADF), an international NGO, which agreed to help in the construction of seven shallow wells. The village's original request had been for 20, distributed among all eight sub-villages. So far three wells have been completed, and those who live nearby say they are very happy to have clean, safe water near their houses. Only men were in attendance to meet the study team. In the pocket chart game two-thirds of them indicated a preference for more shallow wells, explaining that the water would be safe from contamination. Some also thought that those traditional wells which have enough water could be improved as well.

None of the three control villages have an improved latrines programme, though unimproved latrines were seen at a number of homes. In Kimuli two public latrines have been built with slabs which the village purchased from a nearby HESAWA village. In both Kimuli and Nakatuba people asked to be helped with a sanitation programme, and with washing slabs. These were mentioned as additional priorities to the improvement of water supplies.

3.6.3 Community management in the control villages

All three villages have water committees, the one in Usagara being the most recently established. Kimuli and Nakatuba both have water accounts, though it was not clearly established how much, and how regularly, each household contributes. The study

team was told that in Kimuli the money is regularly used to pay for repairs to the gravity system. In Nakatuba the account was opened to meet the requirements of ADF, which follows a similar approach to HESAWA in requiring deposits to be made for each well constructed.

Three well caretakers have been nominated by the people in Nakatuba and these are receiving on-the-job training from ADF. As compensation for their work, people said that the village will cultivate a piece of land for each of them. Adequate supplies of spare parts were seen by the villagers as a crucial issue. They said that they would need support in identifying a local dealer through whom a supply could be organized.

In Kimuli and Usagara no clear arrangements seem to have been made for operation and maintenance. Relations with the neighbouring village over the maintenance of the gravity scheme seem to be a problem in Kimuli. It was said that the people in Kakanga take no responsibility for operation and maintenance of the source and of their own extension, thereby causing water shortages in Kimuli.

3.6.4 Involvement of women

In Kimuli and Nakatuba there are no women in the village government, while in Usagara there are two. The new water committee in Usagara has three male and three female members, although this is probably an effect of the HESAWA programme, which the village hopes to join soon. The men in Nakatuba explicitly said that they did not see any need for women on a water committee because "the activities involved are too difficult." They conceded, however, that there could be room in the village government for a female member, to represent the women's point of view.

Women in the other two villages said it was important that women be represented both in the village government and the water committees, and have a say in operation and maintenance and financing issues. In Kimuli, women's confidence has recently increased. As one woman said:

> "During election times women did not fill in the forms. They were afraid and were not sure of men's acceptance. Now they are sure they will be accepted by all, because one of them is in the water committee and she is a good speaker."

Speaking about general improvements, many women mentioned the need for proper health education and a sanitation programme. They also said they would like to be assisted with income generating projects. The need for more water points and washing slabs was also frequently mentioned.

3.6.5 Health and hygiene knowledge

In relation to health and hygiene knowledge, very few differences were seen between the control and HESAWA villages. As in the HESAWA villages, the villagers were familiar with most of the hygiene messages promoted by the government. They emphasize the importance of safe, clean drinking water and of improved sanitation. General

cleanliness in the three control villages was neither better nor worse than in the HESAWA villages, and water points suffered from similar problems of poor drainage.

Both Kimuli and Nakatuba have Village Health Workers. These were trained some years ago, in Kimuli by UNICEF, and in Nakatuba by a programme supported by the Roman Catholic Church. Villagers were rather unclear about the work of the VHWs. In Nakatuba people said that their main message is about sanitation. In both villages VHWs were said to receive some payment for their work, but not on a regular basis.

The two VHWs (one woman and one man) in Kimuli were interviewed. They said they were placing particular emphasis on sanitation in the village. A number of households were visited and well-built and well-kept latrines were found. Another important issue they were addressing was malnutrition among children, and they reported some success with this work too. They said that they were promised payment from the village of TAS.1,000 per month, but this was irregular. They also indicated that they would appreciate a refresher training course.

3.6.6 General comparisons with HESAWA villages

The information collected from the control villages suggests three important areas in which the HESAWA programme appears to be having a particularly significant impact in the Lake zone.

First, although all three control villages have access to some kind of improved water supply, the situation in the HESAWA villages is generally better. In spite of the shortcomings noted in the quality and accessibility of many of the HESAWA improvements, they nevertheless represent significant progress. Although there is still much room for further improvement, HESAWA villages are generally much better served with simple water supply systems than those visited outside the programme areas. This implies that a number of other benefits, such as time savings, reductions in the burdens on women, and possible benefits to health, are more likely to be achieved in HESAWA villages than in others.

Second, the involvement of women in HESAWA villages is far stronger than was found in the controls.

Third, all three control villages were eager to join the HESAWA programme, indicating that it is well known in the zone and is responding to a strongly felt need.

These are all extremely important findings, and although only valid in broadly indicative terms should be a source of encouragement to all those involved in the HESAWA programme. HESAWA is clearly establishing a number of important strengths in the Lake zone, and should seek to further build on these. At the same time, note should be taken of the areas in which the impacts of the HESAWA programme do not appear to have been so significant.

3.7 Prospects for sustainability at village level

3.7.1 Preconditions for sustainability at village level

On the basis of the findings of the village study, the long-term sustainability of the benefits and improvements brought about through the HESAWA programme will depend on the fulfilment of the following preconditions:

* Adequate coverage with well-built and reliable water sources.
* The establishment of responsible and efficient management organizations at village level.
* An effective and workable system for village level operation and maintenance, including sound financial management.
* Appropriate and effective government support to ensure the achievement and consolidation of the above.

3.7.2 Adequate and reliable water sources

In five of the 24 study villages, improved water supplies have already been, or are about to be, handed over to village care. In all of these villages, people feel that they have been left with an incomplete programme. They all say that phasing out should be postponed until HESAWA has ensured that enough reliable water points have been built to meet the needs of all the villagers. Reluctance to be phased out is also widely expressed in other villages.

Where water supplies have been poorly constructed, have broken down, or have dried up, people feel that the programme should rehabilitate these, or build new ones to replace them. Community confidence does not yet seem to be high enough to ensure the success of village level operation and maintenance.

In Musoma Rural and Magu Districts in particular, villagers say that water availability is becoming an increasing problem. In recent years there has been less rainfall, and each year more wells are drying up. Villagers themselves do not mention environmental problems, and these were not investigated in the study, but it may useful for the programme to investigate possible environmental and ecological factors which may be connected with increasing water supply problems.

3.7.3 Village organization and management capacity

Although HESAWA committees have been established, and accounts opened, community confidence in the local management bodies does not appear to be high. In more than half of the study villages people said that the HESAWA committee and/or the village government was not functioning as it should. Committees were felt to be either not active enough, not completely trustworthy, unsure of what to do, or lacking in competence.

Some HESAWA Committees themselves indicate that they need more guidance, because it is not clear to them how to handle the water accounts, or how to arrange for maintenance. In two villages sharing multi-village gravity systems, the need for a management system to cover the entire scheme was identified.

Where wells and water points are unevenly spread, the sub-village may be a more appropriate level of local organization than the village as a whole. This would ensure that the actual users took a more direct responsibility for their own water points, and that people would not have to pay for services which were of greater benefit to others.

3.7.4 Effectiveness of village level operation and maintenance

The lack of a working system for operation and maintenance was mentioned in all villages as a major constraint. At the present time it is impossible to realistically assess capacity at the village level because it is yet to be tested. Villages are not yet able to purchase hand pump spare parts, have not yet had to put the training of their pump mechanics and caretakers to the test, or face the problem of replenishing and sustaining their HESAWA accounts.

3.7.5 Support from the government

In all the study villages, people complained of a lack of clear information and guidance from the programme on what to do. People feel unsure of what support they can expect now and in the future. The whole issue of maintenance and financing is explained in very vague terms. Even when assistance with breakdowns is offered, it is often slow in coming.

3.7.6 General prospects

HESAWA has made many important steps forward in seeking a sustainable approach to village water and sanitation improvement. The facts that committees are being formed, accounts are being opened, and a relatively high level of satisfaction is being expressed in the villages at the technologies offered and the benefits gained, are all encouraging signs. The failure to operationalize the post-installation phase of activities, however, is a major stumbling block and means that HESAWA's work in the villages is far from complete. The real prospects for sustainability at the village level, and the problems still to be overcome in putting an effective community management system in place, still remain to be seen.

4.0 ORGANIZATIONAL AND INSTITUTIONAL ISSUES

4.1 Organizational structure of the HESAWA programme

The HESAWA programme is large and ambitious, and makes heavy demands of the government structure at all levels. A centrally important development objective of the programme is to strengthen this structure to the extent that it can provide support to community-based water and sanitation improvement on a continuous basis, while external support progressively declines. In its present form, HESAWA relies on extensive external assistance and an elaborate supporting structure. For many of those working within the programme, it is almost impossible to imagine HESAWA continuing without this help. In the long term, this must be slimmed down if sustainability at the government level is to be achieved.

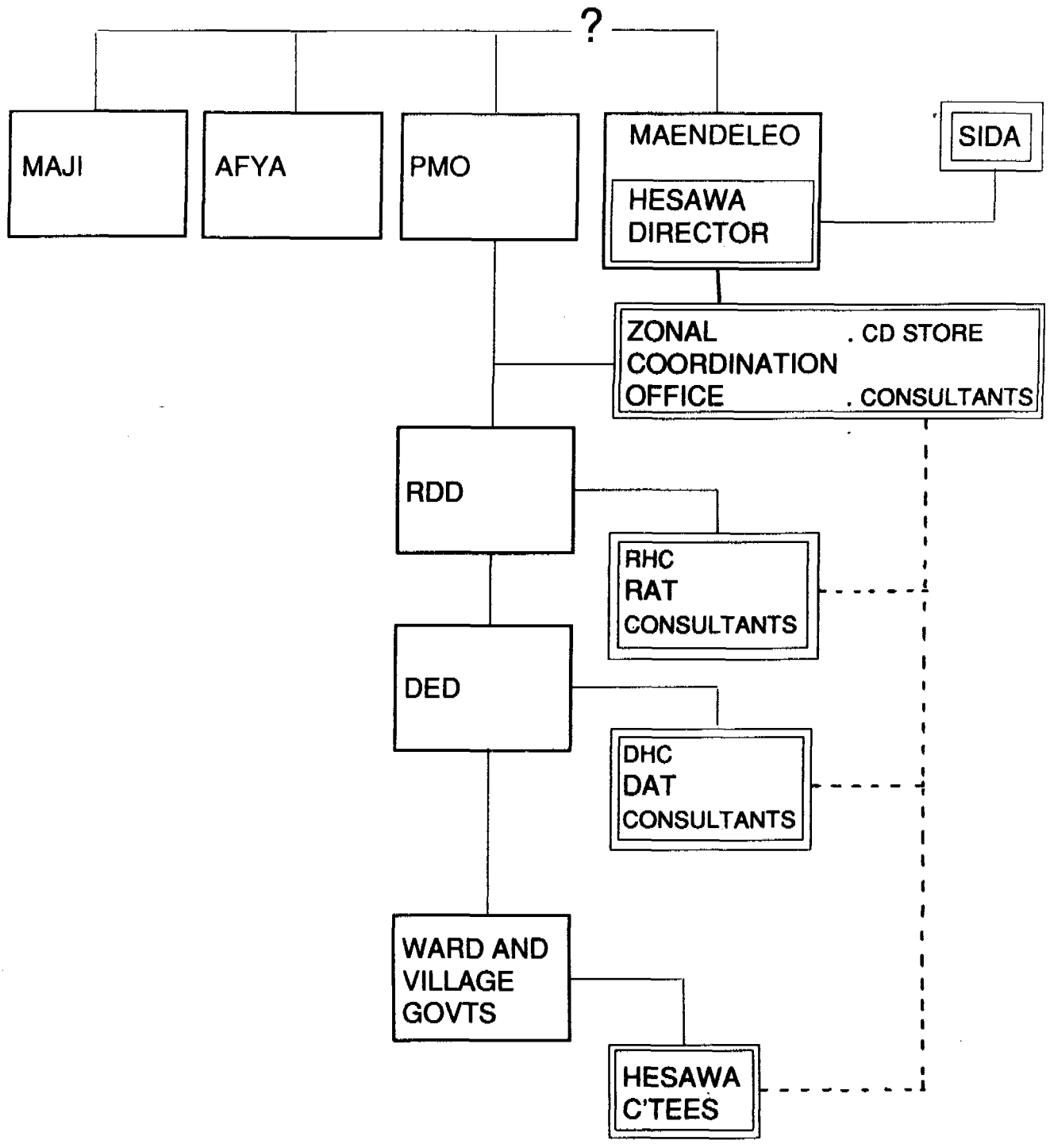
The organizational structure from national to village levels is shown in outline form in Fig.1. The normal government structure, operating from national to village level, is supported by a supporting framework, originating in the office of the national director in Maendeleo head office and running through the Zonal Coordination Office and down to the ward and village HESAWA committees via the Regional and District Action Teams (RATs and DATs). Although all communication is formally channelled through the government structure itself, in day-to-day terms operations are often run directly through the parallel structure, shown on the right-hand side of the chart.

4.2 Integrated and non-integrated districts

The organizational chart reflects the situation in the so-called integrated districts: those which have full scale HESAWA programmes with major budgets, consultancy support, and programme vehicles. In the non-integrated districts, the separation between the organization of HESAWA activities and the normal structure is less sharply defined, as the charts drawn by participants at the districts workshops showed.

The distinction between integrated and non-integrated districts is a controversial one, particularly from the point of view of the non-integrated districts. In principle, it is intended that districts should be phased in and out of the HESAWA programme, operating for a number of years with a fully resourced and integrated programme before being phased out and making room for the next district to gain integrated status. In practice this has proved difficult to implement. While all 15 districts in the Lake zone are involved in the HESAWA programme, only seven are fully integrated and no district has yet been phased out. It has been proposed that Mwanza Municipal should be the first district to be phased out, to make room for a new district to achieve integrated status. This suggestion has caused a great deal of consternation in the district involved, and it certainly can not be said that HESAWA goals have been achieved and it is now ready to continue with less support. At this stage, it is hard to predict the effect on morale in other integrated districts if this one is phased out. The programme has not yet worked out clear criteria to be met before a district is phased out or a coherent strategy on how to continue support to phased out districts. These are both important preconditions for implementing this process.

HESAWA INSTITUTIONAL/ORGANIZATIONAL STRUCTURE



At the districts workshops, almost all participants felt that all districts should be fully involved in the programme and that the distinction between integrated and non-integrated districts should be abolished. In some cases, non-integrated districts feel pessimistic about their chances of ever getting a fully-funded programme. During the workshops with district teams, however, it became clear that few participants could envisage all districts being fully involved without a substantial increase in programme funding. This is unlikely to be feasible, and in any case would be undesirable as it would increase rather than lessen the overall dependence of the programme on external support.

In the next phase, the programme should look closely at the appropriateness of the integrated/non-integrated model. In its present form it creates a divide between the "haves" and the "have nots" and creates anxieties for both: among the former about the risk of being phased out, and among the latter about the possibility of never being phased in. A more flexible approach would distribute resources more evenly among the districts as a whole, and allow each to expand and develop its programme in accordance with its own capacities. Before this can be achieved, however, a number of other issues need to be addressed, not least of which is the current level of dependence of the integrated districts on consultancy support. This is discussed in more detail below.

4.3 National level

At national level, four ministries have an active interest in the programme: Maji, Afya, the Prime Minister's Office (PMO), and Maendeleo. The national programme directorate is located in Maendeleo, having previously been in the PMO. The other involved ministries at national level, especially Maji and Afya, express surprise at this decision, indicating that PMO was thought to be a more appropriate location. In the past both the directorate and the regions were under PMO, while the districts were under Local Government, creating problems of vertical integration and communication. Ironically, at more or less the same moment that the regions and districts came into line under PMO, the directorate moved sideways into Maendeleo - thus integration between the two operational levels was achieved at the same moment that it was broken higher up. Maendeleo, on the other hands, puts up a strong defence for its control of the directorate.

This debate will doubtless continue. More important for the institutionalization of the approach is that all ministries with an interest in HESAWA should feel fully involved in the development of the programme. At present this is not the case, with involvement at national level for all except Maendeleo being limited to participation in the annual and budget reviews. While both had many good things to say about HESAWA, neither Maji nor Afya consider this satisfactory, and say that they would welcome far more direct involvement in the overall policy and strategy direction being developed in the Lake zone, and a more direct reporting structure to keep them routinely in the picture.

The location and coordination of donor supported water and sanitation programmes in Tanzania is generally confusing. Maji's involvement is a case in point. They are currently directly responsible for three of the major donor supported programmes funded by the Danish, Dutch, and Finnish governments, and have a less direct relationship with the Norwegian supported programme, in which their involvement is limited to participating in

quarterly steering committee meetings. From both the Maji and Afya points of view, involvement with HESAWA is the least satisfactory. Without the active support of other head office ministries, and just as important, a feeling among them that the credit will be shared, the prospects for the wholehearted adoption of the HESAWA approach at the national policy level may be compromised, irrespective of its success.

The national directorate plays an important role in giving overall guidance to HESAWA, in coordinating with SIDA, and in promoting and advocating the approach developed through the programme at national level. Steps are currently being taken to start a new HESAWA programme in Arusha Region with support from a multilateral donor. While it is not desirable that management control should be strengthened at the national level, the national directorate is an important channel through which the experiences of the HESAWA programme can be communicated and spread to other programmes in the country, and through which the experiences of other programmes elsewhere in the country can be fed back into HESAWA itself. The location of the directorate within a national ministry also acts as an important counter-weight to the less clearly defined position of the zonal office.

At national level there is a need to strengthen operational and policy coordination, but without compromising the programme's decentralization goals. More frequent official contacts between the national directorate and other interested ministries at national level, and a general improvement in information exchange between the various donor supported water and sanitation programmes in Tanzania should be sought.

4.4 The Zonal Coordination Office

The focal point of the supporting structure in operational terms is the Zonal Coordination Office (ZCO), located in Mwanza. This has its origins in the consultant-led water supply improvement programme which preceded HESAWA in the Lake regions. From a starting point as an expatriate command post, it has evolved into a support and management unit which much closer ties to the national, regional and district levels of government. It nevertheless retains the character of an external and highly powerful institution, superimposed onto the formal structure.

The ZCO is managed by the HESAWA Deputy Director, who is one of three government officers working within it. The other two are a Senior Programme Management Officer and, since September 1992, a Planning Officer. The remaining staff are made up of international and local consultants.

At present the level of dependence on the ZCO as a source of both resources and leadership is very high. In the immediate term, it is hard to imagine the programme surviving without it. In the long term, it must wither away if the programme's institutional development goals are to be met. Dependence on the ZCO varies from region to region. The more self-reliant regions recognize that the ZCO has a continuing role to play, particularly in relation to procurement and coordination with the donor and national government, but would be happy to take more direct control of the running of the programme themselves. For the sake of sustainability, it will be necessary in the long term

to phase out the zonal office, which has no firm rooting in the government structure. How this should best be done should be a major focus of discussion during the next phase of the programme, and steps to diminish its role, particularly in relation to the stronger regions, should be taken as soon as possible.

4.5 Operational levels: regions, districts, and villages.

Below the level of the ZCO, the institutional and operational strategy of the programme can be described as a "task force" approach, built around the creation of Regional and District Action Teams (RATs/DATs) within the government structure, and HESAWA committees in the wards and villages.

On a day-to-day basis, responsibility for the operational coordination of the work of the RATs and DATs is assigned to Regional and District HESAWA Coordinators (RHCs/DHCs). These are appointed by the Regional Development Directors (RDDs) and District Executive Directors (DEDs) from existing government officers. These are drawn from either Maji, Afya, or Maendeleo, or in some cases are planning officers. RDDs and DEDs have a large degree of freedom in making these appointments since they are not tied to any particular department. This freedom helps to support the concept of forming inter-departmental teams which cut across the more vertical structure of normal government operations, by avoiding a situation where one or another department is placed in a position of dominance over the others. The RDDs and DEDs are usually able to select the most capable person available from all the departments involved.

The successful establishment of inter-departmental teams at regional and particularly district levels is an important contribution to institutional strengthening at the operational levels for which HESAWA can take much credit.

Within the regions and districts, the RDDs and DEDs are responsible for coordinating all development activities. At community level, official development activities are coordinated and steered through Ward and Village Governments. As far as formal relationships are concerned, HESAWA sits reasonably well within the existing government system. The delegation by RDDs and DEDs of coordinating functions is a common practice, and does not undermine their own formal coordination role. At the community level, HESAWA committees are formally integrated into the existing grass-roots government structures. In operational terms, however, integration is not so strong and the supporting structure created by HESAWA still has the feeling of being superimposed and semi-autonomous. Two principal features contribute to this:

* The presence and active involvement of non-government staff in operational roles.

* The control and distribution of high levels of programme resources from outside of the official government structure.

4.6 Consultants and non-government staff

Local and international consultants play important roles in the HESAWA programme. While dependence on international consultants has been significantly reduced, the use of local consultants and other non-government staff has increased. Since 1985-86 the number of professional advisers has increased slightly, with 17 expatriate advisers then being replaced with seven expatriates and 12 national consultants now. At district level, the number of external advisers has risen from 11 in 1987-88 to 14 today, all of whom are nationals. The most significant rises have been in the numbers of support staff employed through the local consultant. While the trend towards replacing high-cost expatriates with local personnel is a positive one, questions still need to be asked about the functions and roles being taken by non-governmental personnel in general, and how these impact on the institutional strengthening process.

When HESAWA began in 1985, it was supported by 15 expatriate advisers and a part time liaison officer employed by the Swedish consultant Hifab International. The number of Hifab personnel employed by the programme has now been reduced to five (Financial Controller, Manager of the C.D. store, and three Regional HESAWA Advisers), with continuing part-time support from the liaison officer in Dar es Salaam. In addition, Hifab employs a total of 47 local staff in the C.D. store at Mwanza and the regional stores in Kagera and Mara. SIDA and the African Medical and Research Foundation (AMREF) provide one expatriate adviser each, both attached to the zonal office.

Until recently, Hifab was recruiting additional local personnel through the local consulting company Business Care Services (BCS). BCS now has a direct relationship with the programme and its involvement has significantly increased as the number of Hifab personnel has declined. As of April 1992, BCS was providing a total of 56 staff to the HESAWA programme, ranging from professional advisers at the zonal, regional, and district levels, to watchmen and drivers.

The total number of consultant and non-government personnel working with the HESAWA programme is currently about 110, made up of professional, technical, and support staff. This is a high figure, and indicates that current personnel needs are beyond the level at which they can be sustained through the government system alone. In addition to noting the high degree of dependence of the programme on non-government staff in general, it is also important to be aware of the impacts of external support in terms of the roles being played by these personnel.

At the zonal level, consultants play important roles in financial control, procurement, overall strategy development, technical development, and the development of the HRD and health and hygiene education components. As well as assisting in programme development, many of them play key roles in monitoring and policing activities at the operational levels and influencing decisions on the disbursement of funds and distribution of resources. As long as these roles are being played by non-government staff, the prospects for building greater capacity within the government system itself will remain limited.

At regional level, external assistance is provided by an expatriate Regional

HESAWA Adviser and a local consultant Regional Accountant in each region. The regional advisers appear to play a genuine advisory role, and the evaluators were impressed by the low profile and supportive approach adopted by these personnel. In no case were Regional HESAWA Coordinators seen to be overshadowed by their advisers. The regional accountants play a more operational role, taking care of the HESAWA accounts. These seem to be rather poorly integrated with the government system, and their capacity building role seems ill defined.

At the district level consultancy support is provided to the integrated districts by BCS through a two-person team, made up of a District Promotion Officer (DPO) and a District HESAWA Technician (DHT). The DPO's role is to support the general coordination of HESAWA activities, and play a leading role in building the capacity of both district personnel and communities to implement and sustain programme activities in the field. The DHT works principally through Maendeleo, assisting in the development of improved traditional water sources and rainwater harvesting systems. These personnel play key roles in building and sustaining the high level of momentum needed to implement the HESAWA programme at district level. Although making a very substantial contribution to the running of the programme, the district based consultants appear to be leading in operational terms, rather than explicitly supporting government personnel and playing a capacity building and advisory role.

Although the consultants working at district level appear to very capable, they often come from very similar backgrounds to the government staff with whom they work. Their high degree of motivation is in part a function of their personal commitment to the programme, but must also be influenced by the fact that they are very well paid in local terms, often earning as much as five times more than their counterparts, and are less secure in their positions than civil servants. The disparity between the pay and working conditions enjoyed by the consultants and the situation of government staff must inevitably create tensions, although these are difficult to clearly identify.

In general terms, the current level of dependence on external personnel support is still too high to feel confident about the government's capacity to absorb the programme into the normal structure. Steps will therefore need to be taken to reduce the role of consultants and other non-government staff. This should not be done hastily, but should nevertheless be a focus of attention during the next phase of the programme. At present, rather too much of the operational thinking behind HESAWA is done by consultants at the zonal level. The introduction of more flexible and participatory approaches, allowing a more direct involvement of government staff at all levels in decision-making processes, would be an important first step towards decentralization.

To strengthen the movement towards greater decentralization it will be necessary to further build up the operational capacity at district level, and improve advisory and support capacities at regional level. This would also support moves towards breaking down the current distinction between integrated and non-integrated districts. One way to do this would be to begin to pull back the DPOs and DHTs into purely advisory and capacity-building roles, diminishing their field implementation role as rapidly as possible. Rather than being assigned to specific districts, these consultants could operate from a regional

base and spend periods of time with different districts on the basis of the support requirements of each. The ultimate aim should be to replace them with a more direct advisory role from the regions, as is already practised in non-integrated districts. At the same time, the status of the DHC could be modified somewhat, so that this position sits more comfortably with routine day-to-day coordination by department heads.

Some risks may need to be taken to allow districts and regions to find the level at which they can happily float. Many gaps in management procedures and organization will need to be filled. A clear example, is monitoring and information management, which is weak at many levels. Financial management is another important case in point.

Where gaps persist, and limits are reached, greater efforts could be made to fill these by contracting services from the private sector. This could be a means to reduce the daily operational burden on the structure and allow attention to be focused on strengthening management capacities, and developing back-stopping services to give long-term problem-solving support to communities.

4.7 Control over resources

As noted in the chapter on financial and economic aspects, almost all programme resources are controlled from outside of the government system. With the exception of HRD funds, which are transferred to district HESAWA accounts on a quarterly basis, almost all other funds are directly controlled from the zonal office. While there are many good arguments for maintaining tight control over programme resources, centralization of financial control remains a constraint to decentralization.

4.8 Management capability

From the management point of view, HESAWA has had important impacts in introducing an improvement of general standards, and in getting across the concept of working systematically with coherent strategies towards well-defined goals. Many individuals appear to have been significantly strengthened through their involvement. The overlaid nature of the programme, however, also introduces some limitations and may affect the motivation and commitment of a number of important personnel.

While strong teams are formed at regional and district levels, key office-holders may sometimes be by-passed. In the regions, the RWEs and to a lesser extent the RDDs may feel justifiably marginalized. At district level, the DWE may have the same feeling, particularly if he is not, as is true in many cases designated as District HESAWA Coordinator. The same could be said for other departmental heads with an interest in the programme. The roles of RDDs and DEDs in the programme have been strengthened in the past year or two by the introduction of semi-annual meetings in which issues and problems are discussed with the Deputy Director and others from the zonal office, but their direct control over the development of the programme is still limited.

The DHC has a special status, both because of his strong lines of communication to the regional and zonal levels, which in day to day terms often by-pass the DED and in

some cases the DHC's own head of department, and his control over HESAWA assets, particularly the vehicles. The presence of the DPOs and DHTs in implementing rather than in truly advisory roles, and their own direct control over vehicles and other assets may also contribute to this problem area.

4.9 Monitoring and information management

At all levels of the management structure, monitoring and information management appear to be weak. Monitoring is vital for long-term success, and good systems should be established as early as possible as a capacity building measure. Even very basic data such as the status of village water supplies, breakdown rates, maintenance costs, and so on, is very hard to obtain, and of doubtful reliability. The zonal office has been taking active steps to improve the flow of information within the programme. The introduction over the past two years of village status reports, for example, indicates that this issue is being actively addressed. A detailed investigation of management information needs and strategies should be considered as a priority, and further steps taken to improve the situation.

4.10 Programme planning

In principle, the planning of the HESAWA programme should originate from the village level and work its way up through the system, via the wards and districts and regions to the zone. Although villages prepare annual plans and pass them up through the system, the final plans which are implemented are said to bear little real relationship to the needs originally expressed at the village level. In many cases this is due to resource or capacity limitations, or over-optimistic planning at the village level. The ultimate control over HESAWA plans in formal terms rests with the Annual Review meeting, and in operational terms with the National Directorate and Zonal Coordination Office, which have a major influence in the making of final decisions about budget allocations.

Within the government system, planning at regional and district levels has very little real meaning since final budget allocations are typically far below the level of the original proposals.

A current flaw in the overall planning of the HESAWA programme is that no real consideration has yet been given to the long term need to rehabilitate and replace water supply installations when they finally break down or wear out. If the planned life of a simple handpump is anticipated to be 10 years or so, it will not be so long before pumps installed at the beginning of the programme in 1985 will be due for renovation or replacement.

4.11 Attitudes of government staff

In general terms, and at all levels, HESAWA seems to be perceived as a semi-autonomous programme which has been overlaid onto the existing structure. People talk of "working for HESAWA" or being "seconded to HESAWA". The programme in many places seems to be perceived as a SIDA programme implemented through government, rather than a government programme supported by SIDA. Though a subtle point, this may

have important consequences for the sustainability of the approach.

The direct control of most funds and assets by the zone and management team (perceived to be SIDA rather than government bodies), the use of the HESAWA logo rather than that of the government on many programme documents, the use of private plates on HESAWA vehicles and their independence from government control, and the special status afforded to those "inside" HESAWA in relation to those "outside", and a number of other factors, all add to this. At this stage, HESAWA can not be said to be firmly enough rooted to be sure that the concept itself will survive beyond the life time of the project.

In the districts workshops, participants were asked to prepare organization charts showing how the HESAWA programme is fitted in to the normal government structure. In the case of the integrated districts it was notable that HESAWA was often represented as dominating the government structure, to the extent that District HESAWA Coordinators were sometimes placed above departmental heads in the hierarchy.

5.0 BUILDING CAPACITY THROUGH HUMAN RESOURCES DEVELOPMENT

5.1 Aims of the HESAWA HRD programme

Building capacity through a comprehensive approach to human resources development (HRD) is a central aim of the HESAWA programme. HRD has been described in a programme document as "the cornerstone in all activities".

The stated goal of the HESAWA HRD programme is to go beyond the simple "training of people", and set in motion a process aimed at improving skills and expanding capacities for self-reliant development within communities, and strengthening the capabilities of implementing and supporting personnel, particularly those operating at village level. Through the HRD programme an "enabling framework for self-reliance" and for the achievement of HESAWA objectives is to be created.

The aims of the HESAWA HRD programme are bold and ambitious. The ultimate goal is to bring about fundamental changes in the development thinking and practice of all those involved. This is expressed as being a move from a "top-down" to a "bottom-up" approach through which development needs are no longer defined from above but are identified and addressed at the grass-roots level.

The changes required to achieve this transformation are far-reaching. Within the government system, personnel at all levels from national policy makers to field extension workers face the challenge of re-thinking their role from being providers of service to supporters of village initiatives. This implies a major change in orientation towards rural communities, including a recognition of the expertise of villagers themselves in understanding their own situation and setting their own development priorities. To succeed, this requires more than just a change of heart, but also the development of new skills and capabilities to respond appropriately to community needs. Given the current depressed state of the Tanzanian economy, and the very low incentives received by government workers, building capacity in the public service is an enormous challenge. In many cases, low levels of output are as much to do with the genuine problems faced by government workers in meeting their basic subsistence needs on wholly inadequate salaries as it is to do with competence and levels of skill.

At the village level, important changes are needed too. Community members must realign their expectations and accept a higher level of responsibility for village development, drawing on their own resources and skills. Existing skills and capacities must be further developed for the successful taking up of new roles as planners, implementors and managers of village improvements.

In evaluating the HRD programme, it is important to recognize its scope and ambition. Given the starting point, and the fundamental nature of the changes which it aims to bring about, an overnight success can not be anticipated. HESAWA has set off on an exciting but difficult journey. While important steps forward have already been made, there is still a long way to go.

5.2 Acceptance of the HESAWA approach

HESAWA has made major steps forward in challenging conventional approaches and encouraging new ways of thinking. This is most apparent in the intense debate set in motion at all levels by the programme's promotion of the concept of community self-reliance and the idea of planning from the village level. These have been official policies of the Government of Tanzania for some time, but few programmes have as yet tried to fully grasp their implications and, equally important, translate them into operational terms.

Although it can not be said that the HESAWA concept and philosophy is accepted and practised throughout the programme, many of those involved display a detailed understanding of the approach and a commitment to making it work. The evaluation team had contact with many government officers, at all levels, who clearly recognised the necessity of seeking sustainable approaches to development through closer collaboration at the village level.

5.3 Methods and philosophy

Until recently, the HRD Programme had evolved in a rather piecemeal way. A fully worked out and integrated programme was lacking, and planning, coordination, and implementation of activities at the district and village levels was generally weak. While inter-departmental promotion teams were being formed to support field implementation activities, HRD work was poorly coordinated with each department pursuing its own activities with little reference to the others. In the past year or so, the development of the HRD activities has been more systematically addressed and better resourced.

A team of three local consultants has been established at zonal level to consolidate and rationalize the programme, and 10% of the annual programme budget has been allocated to HRD activities.

The current HRD programme is intended to address the following issues, as listed in the Proposed Guidelines for HRD Planning:

- HESAWA Concept Awareness
- Gender Awareness
- Village Planning and Budgeting
- Skills Training for Implementing Cadres
- Operation and Maintenance
- Health and Hygiene Education
- Management and Organization for Village Leadership
- Programme/Project Monitoring and Evaluation
- Creating an Enabling Environment
- Training of Trainers (TOT) in HESAWA
- Course Files and Job-guides Development

The rationalization of the HRD programme is being built around the development of written and other materials, known as course files. Training skills are built up through a

training of trainers (TOT) programme, which passes skills down to the district level via the regions. In each district, it is planned to appoint a government officer as District Training Officer (DTO) with specific responsibility for coordinating HESAWA HRD activities in the field.

The HRD programme methodology attempts to move away from conventional training and skills-transfer approaches, and develop capacities by building on existing knowledge through processes of "learning by doing" and "learning from experience". Though attractive in concept, such approaches require very skilful implementation and demand in themselves a relatively high level of facilitating capacity among implementors. For reasons which will become clearer below, it can not as yet be said that the necessary facilitating skills have been developed. Though trying to adopt a new methodology and philosophy for capacity building, there seems to be a strong tendency within the HESAWA programme to fall back in operational terms to conventional approaches.

5.4 The course files

An important focal point for the strengthening of the HRD programme is the development of the course files. These are comprehensive and detailed packages of materials, containing course programmes, learning materials and handbooks for participants, guidelines for facilitators, course timetables, and so on. The first course files were developed for the SGP. These have been used as models for the planning and development of a more complete set, though modifications have been made in some cases, particularly in the case of the technical training files for which a more didactic approach has been considered appropriate.

The establishment of an HRD unit in the zonal office, staffed by three local consultants, has considerably accelerated the course files development programme. Judging by the early efforts of this group, a set of course files can be expected of a high standard and quality of production.

Table 7 indicates the current status of course files development. As the table indicates, production of most course files is still at an early stage. The first of the new set to have been produced by the HRD unit is the HESAWA concept course file. This gives an overview of the HESAWA approach at village level, and is intended for use with ward and village governments and community groups. A review of this file gives a good indication of the professionalism of the HRD unit, and bodes well for the likely quality which can be anticipated for the set as a whole. At the same time, certain limitations can already be seen which need to be considered before further work continues.

The concept course file is built around a set of scripted dialogues, intended to be acted out by members of the district promotion team and community members in a series of meetings at ward and village level. After each part of the play has been acted out, the contents are reviewed and discussed by the group and the details of the HESAWA programme approach clarified. The file serves to explain the objectives and contents of the HESAWA programme, and the roles and responsibilities of the government, on the one hand, and the community, on the other.

Table 7. Current status of course files development

COURSE FILE	STATUS
Study Group Programme	
* SGP:1. Wells (ITWS)	in circulation
* SGP:2. Nutrition	in circulation
* SGP:3. Sanitation	in circulation
* SGP:4. Stoves	in circulation
Old files	
* Pump mechanics	under revision
* Village Planning	under revision
* Village Storekeeper	under revision
* Well Caretakers	under revision
* Village Accounts	to be completed
* Tanz.-Sweden Dev. Cooperation	in circulation
New files	
* HESAWA Concept	recently completed
* Gender issues	recently completed
* Craftsman I: Water Technology	under production
* Craftsman II: Env. Sanitation	under production
* Craftsman III: R.W.Harvesting	under production
* Phasing In - Phasing Out	not yet started
* Planning, Budgeting, Reporting	not yet started

Although an innovative and interesting way to introduce the HESAWA approach to a community, the use of a ready-made scripted dialogue immediately introduces limitations. Community members are required to read out scripted roles, rather than being free to devise their own dialogues. This approach is rather inflexible and tends to pre-empt the community's own questions. In some cases, particularly in relation to plans for supporting community-level operation and maintenance, the dialogues give answers to scripted questions which the programme is not yet able to support. The scripting also predetermines the order in which issues are addressed, which on a meeting by meeting basis may lead to frustration among participants. Although this format is not used in all course files, it is an important limitation in the communication of the HESAWA concept and sets the tone for further communications between the programme and the villages once the concept has been explained.

Sustainability at village level will require the strengthening of problem-solving and learning capacities, rather than the just the acceptance and internalization of a ready-made package. A more flexible approach would allow community members to act out their own water supply and sanitation problems, and then try to match these, through a process of negotiation, with what the HESAWA programme has to offer.

To an important extent, these shortcomings reflect a general problem within the HESAWA programme, rather than a difficulty which is unique to the HRD component. As indicated elsewhere in this report, although based on the concept of "bottom-up" planning, the amount of leeway actually given to communities in selecting technical and other solutions is very limited. In this sense, the concept course file reflects the realities of the HESAWA programme as it is currently implemented. If the course files are to be more flexible in their approach, this must be matched with a greater flexibility in the way in which the programme itself operates on a village by village basis.

Flexibility of approach should also be reflected in content terms and allow for differences on a region by region and district by district basis. Many of the technical components of the HRD programme allow little or no room for flexibility, but the more concept based coold be developed in a more open format. An example is the gender file, which has been criticised by some regional and district officers for being too global in approach and failing to take into account the important differences in the position of women among the various ethnic groups living in the Lake zone.

5.5 Course file development

A workshop approach is used for the development of the course files. The consultants work in collaboration with groups drawn from regional and district level government officers and local consultants. The groups work together to map out the required contents and methods for each course file, and work together to produce the first drafts. The consultants are then responsible for the further development of the draft. The course files are very comprehensive, containing a participants' manual, facilitators' handbook, course time table, budget, illustrations, and course and evaluation report formats. Once a full draft is completed, this is pre-tested among the trainers themselves and with some of the target groups. The pre-testing reviews content, methods, and the appropriateness of visual and other materials.

In principle, this is an excellent approach, and should lead to the development of highly appropriate materials, to which trainers at all levels will have a strong commitment. Although there is significant input from the operational levels in the development of the course files, and a programme to test and validate the products, this has not yet been sufficient to foster a genuine feeling of shared authorship and ownership among all those involved. In the case of the concept course file, for example, most of the district-level input was provided by the District Promotion Officers (DPOs), who are local consultants rather than government officers. The HRD programme as a whole is perceived by many as a product of the zonal office and the consultants, rather than something which has been built up by the programme as a whole. Continuing attention needs to be paid to the participatory processes employed both in the development of the course files themselves,

and in the formulation and coordination of the HRD programme as a whole, if this is to be overcome.

5.6 Planning and management of HRD

The day-to-day management and implementation of HRD activities is primarily the responsibility of the district teams, with support from the DPOs. As noted, this has tended to a rather haphazard process, with inter-departmental coordination being very weak. This has been an issue of concern for the zonal HRD unit and steps are now being taken to improve district management and coordination capacity. In the case of Kagera Region, an initiative has also been taken in the Regional HESAWA Coordinator's office to assist districts in more effectively scheduling and coordinating HRD activities.

District HESAWA teams are required to prepare an annual plan for HRD activities for approval at the zonal level. Until the beginning of the current financial year, funds for HRD activities were very tightly controlled from the zonal office. Approval had to be sought for each individual HRD event, with funds being released on an activity-by-activity basis. This has proven to be far too cumbersome and time-consuming a process. A more streamlined approach has now been introduced, with funds being released on a quarterly basis subject to an approved plan and a full accounting for the funds spent in the previous quarter. This is certainly an improvement, but still means that a high degree of control continues to be exercised by the zonal office. As is discussed in the next chapter, capacity at district level to properly account for HESAWA expenditures is currently rather weak. The need to fully account for expenditures on a quarterly basis may lead in some cases to delays in the release of funds.

In view of the current weaknesses in financial management at the district level, the continuing need for close monitoring and control can be well understood. It must nevertheless be recognized that this is unlikely to be sustainable in the long term, and tends to reinforce the perception that the HRD programme belongs to the zone rather than to the districts. In the near future, the programme should consider releasing HRD funds to the districts on an annual basis, with the regions taking on the internal auditing role. In the course of time, the zonal office would then be free to concentrate on playing the overall guiding and supporting role in approach and materials development for which it is best suited, with the management and monitoring roles being decentralized into the regional and district government structures.

To improve coordination in the field, the zonal HRD unit has proposed that each district should appoint a District Training Officer (DTO), with specific responsibility for HESAWA activities. The response by the districts to this suggestion has been slow, with only one district so far nominating an officer for this role. Given that districts already have a training officer within their normal establishment, the additional need for a DTO specifically for HESAWA may need to be reviewed. Involving existing district training officers more fully in HESAWA programme activities is more likely to contribute to the long-term sustainability of the HRD component than creating a new role for this purpose. It may also help in spreading the underlying philosophy of the HESAWA approach to HRD to other district-level capacity building activities.

In general terms, too high a level of management responsibility for the HRD programme remains at the zonal level. This is not only counter to the general principle of decentralization, but also overburdens the consultants and does not allow them to fully concentrate on their central tasks of strengthening the general approach and coordinating the production of the course files.

5.7 Health, hygiene education, and sanitation

Despite its title, HESAWA is principally perceived both by programme staff and community members as a water supply project. Perhaps as a consequence, the health components do not appear to be given a sufficiently high priority, and measurable impacts from this part of the programme have been limited. This syndrome is by no means unique to HESAWA. Indeed, it is very difficult to find integrated projects anywhere in which health and hygiene issues are not overshadowed by water supply activities.

The main aims of the health and hygiene education components are to improve levels of knowledge within communities and to encourage behavioral changes which will lead to better health. From this point of view, they should clearly be considered as parts of the overall HRD programme. As a glance through the list of course files shows, however, health and hygiene education materials development is not included in the mainstream of the HRD programme. The hygiene education and sanitation components seem to operate more as a sideline project. At the zonal level, responsibility for this component has been assigned to a separate consultant, who does not form part of the HRD unit.

The main health, hygiene education and sanitation activities are:

* Development of training skills at regional, district, ward, and village level.
* Development and implementation of a school health and sanitation package.
* Establishment and running of village revolving funds for latrine construction.

Community-based Village Health Workers (VHWs) are seen as the principal agents of change at the village level. HESAWA has been very successful in its VHW training programme, and trained VHWs are to be found in almost all HESAWA villages. According to current policy, all HESAWA villages must have two VHWs, one man and one woman. The results of the village study suggest that their work is often appreciated by the villagers, but their real impact on community knowledge and behaviour remains unclear.

The programme also offers training to Traditional Birth Attendants (TBAs), with a very positive response. TBAs involved in the village study expressed their happiness at the recognition given to them by the programme, and seemed to suffer far less from the motivational problems encountered among VHWs in some places. The issue of payment for VHWs remains controversial and has yet to be solved. Many VHWs would also like to

have a stronger identity as curative, as well as preventive, health workers, and ask for larger and more extensive first aid kits.

HESAWA's health adviser has recently conducted an internal evaluation of the VHW programme, and this should lead to action in the near future to further strengthen the programme. The evaluation team supports the view that a rigid adherence to the rule of two VHWs per village (irrespective of population size) should be dropped, and that the number to be trained should be established in consultation with the villages themselves. The motivation of VHWs needs further investigation, particularly the issue of payment. The latter should be a community responsibility and, as such, requires close community consultation. The initial successes of the TBA training programme should be further built upon and maximum involvement encouraged from traditional community health care providers, whose credibility is already established. The continuing belief evident among VHWs themselves that a curative rather than a preventive approach carries a higher status needs also to be strongly addressed in the training programmes.

Promoting changes in health and hygiene behaviour can be said to be one of the most difficult challenges faced by the programme. Although health awareness can be seen to be fairly strong in many villages, with women participating in the village study often identifying more health information as a need, much still remains to be done. Observations by the village study teams, and by other members of the evaluation team during field visits, suggests that there is still a lot of room for improvement in basic behavioral patterns associated with water collection, storage, and handling, and domestic and environmental sanitation.

Interest in the latrine programme can be viewed as a broad indicator of the impact of the hygiene education programme. So far, this can not be described as a success. With one or two notable exceptions, few villages have responded enthusiastically to the latrine programme, even with the heavy subsidies the programme offers on squatting slabs. This may in part be due to the general affordability of improved latrines, and many questions are currently being raised at village and district level about the appropriateness of the technologies offered. The almost total dependence on designs built around concrete slabs appears to be an important constraint. Initiatives have been taken to develop a low-cost concrete-free design, and the Bwina latrine, developed in Biharamulo District, has already enjoyed some success. Further initiatives of this kind should certainly be encouraged. At this stage, any improvement in the quality of latrines built and used in the programme area may be deemed a success.

The weakness of the sanitation component is by no means unique to HESAWA, but is all too common in integrated water and sanitation programmes of this kind. Improvements to water supply are generally much easier to promote as the benefits offered are often broader and easier to appreciate in the immediate term. Building an improved latrine requires a much deeper commitment and a stronger belief in the long-term health benefits which can be obtained. Success in the long term in part depends on the continuing commitment of the programme itself to this work. This is at present open to doubt, and part of the promotional effort may need to be directed towards the programme staff to

strengthen their determination to continue to promote hygiene and sanitation improvements in spite of limited successes.

HESAWA is currently in the process of developing a hygiene education and sanitation programme specifically aimed at schools. This proposes to use de-worming campaigns at schools to draw the attention of parents to the need for improved latrines at schools and homes and for increased preventive measures to avoid re-infestation. Preliminary pilot testing of the schools programme has produced an encouraging response, and the further development of this programme should be carefully monitored.

Although the schools programme uses a similar "learner-centred" approach as the mainstream HRD programme, integration of the two is poor with little evidence of close collaboration between the health adviser and the HRD unit. Some overlap is apparent between the sanitation component of the SGP and the newly evolving schools programme. The health adviser has already involved study group members in the piloting of the schools programme, but a clear relationship between the two components appears to be lacking.

As indicated, lack of clarity in coordination with broader HRD activities is evident in the health and hygiene education programme as a whole. The status of health promotion activities needs to be generally improved, and the development of the health and hygiene education programme given far more prominence.

5.8 Building technical capacities

Moving to simpler and lower cost technologies has been an important achievement of the HESAWA programme. Many government staff who have been brought up on piped water schemes have been persuaded of the merits of a simpler approach. By no means all technical personnel are completely happy with this move, but there seems to be a general acceptance that it may be the only way to achieve sustainability.

Given that the complexity of the technologies used by the HESAWA programme has been reduced, it might be expected that a high level of technical competence would be easier to achieve. As the results of the village study indicate, however, this does not seem to be the case. At present, technical standards are not high enough. This is true both in Maji, which has the leading responsibility for water supply development, and Maendeleo, which is responsible for leading the improved traditional water sources part of the programme. The latter appear to be built particularly poorly, even with the assistance of the District Hesawa Technicians. Serious attention should be paid to improving all construction standards within the programme.

Rates of output in the HESAWA programme also need to be more closely examined. Although there have been significant and steady improvements and targets are now being met more regularly than in the past, the implementation rate remains modest and barely matches population growth. This is in part an HRD problem, and it is suggested that the programme take a closer look at the management and efficiency of the technical aspects of water supply development. The HESAWA programme evidently creates very

high expectations in the villages where it works, and the credibility of the programme is at risk when these are not met.

One option for increasing output is to involve the private sector in water supply development. This could be done at a modest level by simply hiring village fundis to undertake well-sinking and spring protection work, or more ambitiously by contracting private drilling firms to sink wells where other technologies are not appropriate. Using the private sector carries some risks, and requires high standards of supervision. Fundis are already involved in the improvement of traditional water sources and the manufacture of rainwater jars, but the village study indicates that training and supervision standards need to be improved. In spite of the risks involved, the programme may wish to investigate these options and assess their efficiency and cost effectiveness in comparison to attempting to improve the output efficiency of the district teams.

Building technical capacities at the village level is an important aim of the HRD programme. This is important both for sound implementation and, most crucially, for effective long-term operation and maintenance. The programme trains village well caretakers, and ward-based pump mechanics. The former are community volunteers responsible for simple care and maintenance of water points, while the latter are intended to undertake repair and maintenance work on behalf of the community and be paid for this work through the village HESAWA accounts.

To date, no system has yet been established to sell and distribute spare parts to communities, and the village-based operation and maintenance system has yet to get off the ground. In a significant number of places visited during the village study, basic care of water points was found to be poor, and ward pump mechanics could often not be found. At the moment it is almost impossible to judge the effectiveness of the community-based technical training programmes since those who have been trained have not been put to the test. Once the O&M system becomes operational, this should be closely monitored.

At present, the programme offers a guarantee period after the construction of water points during which any repairs are carried out free of charge. This is done in a largely improvised manner, with little or no attention being paid to ensuring that simple preventive maintenance procedures are carried out at the water point level. Routine site visits by the officer in charge of O&M at the district level and his staff to encourage well caretakers in their work do not take place, and monitoring of the care of wells is poor. As well as rapidly dealing with the problem of spare parts distribution, the programme should pay closer attention to the follow-up support given to well caretakers and ward pump mechanics to ensure that the full benefits of the training programmes are achieved and to assess the need for any modifications or improvements.

5.9 The Study Group Programme

The introduction of the Study Group Programme (SGP) in 1986 was a major innovation of the HESAWA programme, and an important element in pursuing the goal of decentralization and the growth of self-reliant problem-solving capacities in communities. The SGP was at first conceived as a parallel component to mainstream HESAWA

activities, to stimulate self-help in villages which were not as yet receiving full-scale assistance from the programme. More recently it has undergone an important shift in position, and is now seen as a vehicle for stimulating self-reliance within programme villages themselves. In its current form the SGP is intended to:

(a) mobilize villagers in implementing HESAWA activities,

(b) facilitate community-based activities in villages,

(c) provide a recruitment base for meeting village manpower needs and for further training.

The study group approach is based on the adult-learning theories of Paulo Freire. Groups of villagers meet on a regular basis with a study group leader to discuss and analyze problems, and develop and agree on programmes of action to address them.

The first course files were those developed for the SGP. These cover four issue areas, as follows:

SGP I: Improved Traditional Water Sources.
SGP II: Nutrition.
SGP III: Sanitation and Health.
SGP IV: Fuel saving stoves.

An evaluation of the SGP was carried out in October 1990, but the report is still to be finalized. According to the draft findings, although study group members' knowledge of health, water, and sanitation issues had increased, the impact of their activities on the water supply and sanitation situation in their villages could not be measured as the evaluators were unable to distinguish between those improvements which had been made by the study groups themselves and those produced as a result of direct HESAWA interventions.

The current evaluation exercise also found it very difficult to identify substantial outputs from the SGP, with the exception of a small number of villages in which the programme appeared to have had a lot of success. The SGP was rarely mentioned in either the Districts workshops or the village study unless explicit questions were asked about it. The commitment of both programme staff and community members to this approach must be seriously questioned.

Interest and participation by the villagers seems to vary from topic to topic. Community members have no choice in the subject-matter to be covered by the study groups, and the course file sequence is pre-determined. Study groups are therefore offered a ready-made package which they can either take or leave. This reality is directly in contradiction with the underlying philosophy.

Where the SGP has been active in bringing about improvements, the technical standards achieved are often very low. The generally poor quality of improved traditional water sources is a clear example.

Critics of the SGP within HESAWA say that it is very expensive, consuming about one-third of total HRD funds, and produces little in the way of results. In many respects it has developed as a "programme within a programme" and is too detached from mainstream activities to draw the full commitment of either HESAWA staff or community members. District study group organizers have been very successful in forming literally hundreds of study groups, but the programme's capacity to support these is very limited. The zonal office has recently indicated that no more than three study groups should be formed per village, in order to keep the numbers at a manageable level. Given the more fundamental problems of the programme, however, this is unlikely to do more than put a limit on expenditures.

In its present form, the SGP can be seen as either a good idea which is ahead of its time, or a sub-programme which is out of step with mainstream activities. The results of the 1990 evaluation suggest that in many cases villagers see the SGP as a channel for receiving assistance from the programme, rather than wholeheartedly entering into it as a self-help exercise. Its prospects for success may have been greater in its old form, when it did not have to compete for attention with mainstream HESAWA activities. The SGP consumes a large proportion of HRD funds to only limited noticeable effect. Though appealing in concept, the implementation of such an approach requires a high degree of skill among implementors and at present this is not clearly available. If the programme is to continue with this component it will need substantial revision. A disappointing but more realistic option would be to simply let it die.

6.0 FINANCIAL AND ECONOMIC ASPECTS

6.1 Sources of information

Information on the financial and economic aspects of the HESAWA programme was collected through meetings and discussions with a large number of government staff and HESAWA consultants at zonal, regional, and district levels. Financial and budget documents were also studied, and additional information collected through the village study.

The study of district accounts was largely based on a review of HESAWA accounts books, receipt and payment books, and vouchers for the financial years 1991 and 1992. These sources were not available for previous financial years. As far as the regional and zonal accounts are concerned, financial statistics were reviewed covering the period 1988-89 to 1991-92.

A new accounting and financial management system was introduced in 1990-91, allowing for the first time a global analysis of financial figures. This was not possible in previous financial years, and comparing trends before and after 1990-91 is a cumbersome exercise. Although accounting and financial reporting has considerably improved in recent years, the general quality of available data makes economic analysis extremely difficult. Cost data, for example, are hard to disaggregate to a sufficient level to identify the real costs of different programme outputs. This is particularly true of costs at district level. The implications of this for undertaking a cost effectiveness analysis are discussed towards the end of the chapter.

Efficiency in financial data management varies considerably from one level to the other. The flow of data from the region to the zone is good. This is done on a monthly basis, with computerized feedback from the zonal office. Reporting from the districts. The flow of information from the districts is based on a quarterly reporting system. As noted later in the report, the official district HESAWA accounts are so poorly managed that they are unusable for any meaningful financial analysis. The flow of financial information from the villages to the districts is also rather poor, being largely based on visits by district staff, and on village plans. There is no regular or routine system for collection financial data from the village level. Because of these weaknesses, the figures appearing the reports have to be treated with great caution. Continuing to develop a more efficient overall financial management system will be a major asset to the programme.

6.2 Overview of HESAWA programme funding

The HESAWA Programme is co-funded by the governments of Tanzania and Sweden. Support from Sweden is channelled through the Swedish International Development Authority (SIDA) and is composed of:

- Technical assistance and advisory services.
- Provision of foreign exchange for the international procurement of materials,

equipment, and services.

- Converted foreign funds for the local procurement of materials, equipment, and services, and a large proportion of Human Resource Development activities.

The Tanzanian contribution consists of:

- Salaries of government staff involved in the programme implementation.

- Central and Local Governments funds for the payment of allowances, labour, and local materials.

- Village contributions in the form of unpaid labour, local materials, and cash contributions to HESAWA accounts for operation and maintenance.

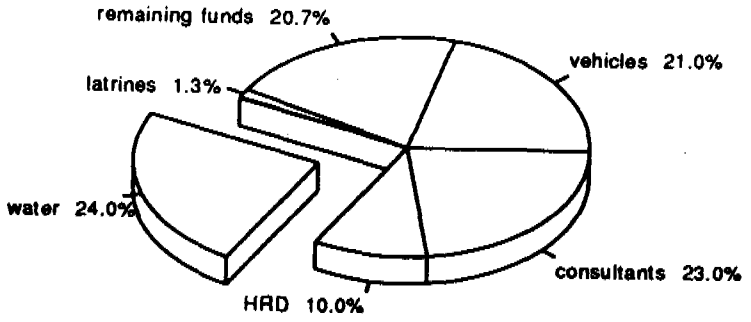
6.3 Level and distribution of donor funds

From 1985 to the end of the 1991-92 financial year, SIDA committed a total of SEK 266 millions (approximately US$ 46 millions) to the HESAWA programme. Since the 1989-90 financial year, the contribution has been steady at SEK 38 millions a year. The proportional distribution of donor funds (D-funds) by general activity area is shown in the chart. This distribution has remained steady in recent years, although the allocations to HRD activities have increased somewhat.

The distribution of D-funds by activity shows that transport, consultancy support, and the planning reserve represent more than half of the total allocation. This indicates that the programme is heavily dependent on a large supporting structure, which is unlikely to be sustainable in the long term.

Water supply is the largest single sector in the programme, with water and sanitation activities accounting for more than a quarter of the D-funds. Only a small proportion is allocated to sanitation, even though this is promoted as one of the main activities.

Fig.2. Global distribution of D-funds by activity, 1990-91



remaining funds include other activities (Health, Mandeleo, Equipment and Planning reserve)
Source: allocation of funds to activities (90/91)

Consultancy support accounts for 23% of D-funds, with the costs of expatriates staff making up more than 80% of this amount, or about 20% of total D-funds. Costs of expatriates are very high in relation to the costs of local consultants. It should be noted, however, that in recent years the number of expatriate consultants in the programme has been cut by more than half to the current level of seven. Table 8 gives a breakdown of advisory and consultancy costs for the 1991-92 financial year.

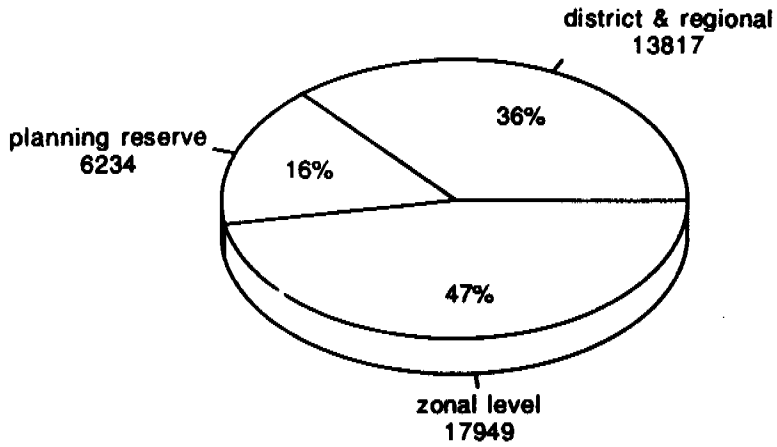
Table 8. Costs of advisory and consultancy support to the HESAWA programme, 1990-91.

	SEK ('000)	%
HESAWA Programme adviser	700	6.8
Short term consultancies	800	7.8
AMREF	400	3.9
Consultancy contract, Hifab	7,068	68.0
Consultancy contract, BCS	1,400	13.5
Total	10,368	100.0

The allocations for vehicles include both procurement and operation and maintenance, including the costs of spare parts. Programme vehicles are managed outside of the government system and bear private number plates. They are kept for a maximum of three to four years and then sold on a tender basis. Revenue from these sales amounted to SEK 710,000 in the 1991-92 financial year, equivalent to 1.8% of D-funds.

The allocation of D-funds by level of activity is shown in the chart.

Fig.3. Allocation of D-funds by level of activity, 1990-91



Source: Approved budgets 90/91, in '000 SEK

6.4 Allocations to the zonal coordination office

At first glance, the allocation to the zonal office seems very high, especially considering that it is not an implementing body. However, the more detailed breakdown shown in Table 9 gives a clearer picture.

A large proportion of the zonal allocation is devoted to consultancy and contracted services and the common department (CD) store. The benefits from these services are distributed throughout the programme, since all consultants and contractors are paid through the zonal allocation and the CD store provides almost all the materials consumed by the programme at all levels. When the costs for these are omitted, the actual costs of the zonal office's own activities represents only about 20% of allocation at this level, or about 7% of the total D-funds.

Table 9. Detailed breakdown of the zonal budget expenditures, 1991-92.

	SEK ('000s)	%
Consultancy and contracted services (Hifab, BCS, AMREF, others)	10368	58.0
Deputy director's office	1054	5.8
Zonal pool vehicles	642	3.5
HRD unit	1284	7.1
Planning/evaluation unit	384	2.1
Financial unit	22	1.2
CD store	4195	23.4
TOTAL	17949	100.0

The large proportion of funds allocated to the zonal office indicates the high level of financial control which is exercised at this level. Allocations to the implementing levels, the regions and the districts, account for less than half of total distribution, and most of these funds are disbursed and controlled at the zonal level. The planning reserve represents a very large contingency fund, which is discussed in more detail below.

6.5 The planning reserve

The percentage of funds allocated to the planning reserve in the period from 1988-89 to 1992-93 has varied from 17% to 33%, which represent very high proportions for what is essentially a contingency fund.

These funds are used for several purposes:

- To pay for activities which have been planned, but not finally approved, during the budget preparation exercise;
- For the implementation of unplanned activities which arise during the course of the year which are considered to be necessary and important;

- For other ad hoc activities and contingencies which may arise, such as study tours, conferences, consultancies and evaluations, and so on.

The procedures for handling the planing reserve have been established by SIDA. Use of the planning reserve is subject to approval at the quarterly meetings of the management team, which is made of up the national director, deputy director, HESAWA adviser, and representatives of SIDA. The management team considers applications submitted by the zonal office on the basis of their own requests and those coming from districts and regions.

In addition to the annual budget allocation made to the planning reserve, this fund also contains the carried over funds accumulated during each agreement period. The allocation made to the planning reserve for the 1992-93 financial year amounts to SEK 6.5 millions, of which about SEK 2 millions has already been earmarked for specific activities. Use of the planning reserve varies from year to year, though there is often an under-utlization of this fund. The exception was the 1990-91 financial year, when virtually the whole planning reserve was used. During the 1991-92 financial year only 31% of the planning reserve was used.

The very large size of the planning reserve, and the procedure for approving allocations from it, underline the extent to which financial control is centralized above the operational levels of the programme. The need for such a large contingency fund may also indicate weaknesses in financial planning and management capacities in regions and districts, which in turn may account for the reluctance to decentralize.

As noted in the discussion of unused funds below, no clear plans have yet been established for how carried-over funds should be used. At present, it seems that these are likely to be lost to the programme at the end of the current agreement period in June 1993, if they are not consumed before then.

6.6 Converted donor funds

Every year a proportion of D-funds is converted into Tanzanian shillings and used for items such as local procurement, office overheads, and a large part of the HRD programme. These are known as C-funds.

The percentage of D-funds converted to C-funds has increased significantly over the years, from only 5% in the 1986-87 financial year to 27% in 1991-92. Of this amount, about 38% is currently used for local procurement, 22% for office running costs (including allowances and travel expenses), 31% for the HRD programme, and 7% for Hifab consultancy services. All of these funds are converted through the programme's own bank account in Mwanza. While office costs remain more or less constant, the amount of local procurement and the allocation of funds to HRD activities have both significantly increased. The increased use of C-funds, made even more significant in local currency terms by the marked devaluation of the Tanzanian shilling against the SEK, is an encouraging trend, and provides a clear benefit to the local and national economy. This trend should be further promoted as the proportion of total funds actually spent in Tanzania still remains low.

6.7 Non-utilized D-funds

In the 1991-92 financial year, 74% of the approved budgets were utilized, compared with 83% in the previous financial year. The accumulated under expenditure from the 1990-91 and 1991-92 financial years amounts to about SEK 11.5 million. If this rate of under expenditure is maintained for the current financial year, it is estimated that there may be in the region of SEK 15 millions left unspent at the end of the 1990-93 agreement period.

The unused funds are largely accounted for by underspending on coordination, the planning reserve, and on transfers to Maji falling below approved budget levels. Reasons include the following:

- Budget requests are made in accordance with the guidelines contained in a standardized budget manual. In some cases, manual guidelines either over or under estimate the actual requirements, and are in any case expressed in SEK, leading to savings in local expenditures due to devaluation.

- Delays in delivery by suppliers.

- Poor follow-up by districts and regions of ordered materials, and/or poor communications between the CD store, regions, and districts on the availability of materials in the store.

- Failure to meet implementation targets.

In order to improve the utilization of approved funds, steps should be taken to improve information flows, and pursue orders more vigorously. The budget manual may also need to be adapted to local circumstances, and in particular to take account of the falling value of the Tanzanian shilling. Implementation capacities should continue to be closely monitored.

Under-expenditure is of course preferable to over-expenditure. At the same time, persistent underspending raises questions both about the efficiency of the programme, and the current capacity of the implementing agencies to effectively utilize the amount of resources offered by the programme. Implementation capacities should continue to be closely monitored and improved.

An important point to note is that the situation with regard to unused funds is not clear, and plans have not been made to try to use the steadily increasing carry-over of funds before the end of the current agreement period. Whether the unused funds remain with SIDA, or are deposited in the Tanzanian Treasury, they will in any case be lost to the programme if they are not consumed by the end of the 1992-93 financial year.

6.8 Contributions from local funds

Contributions to the HESAWA programme from local funds come from the central government, the District Councils, and the villages. These are known as L-funds. According to the agreement between Sweden and Tanzania, the total local contribution to the programme, including that from the villages, should be equal to about 10% of the value of the donor funds.

Central government contributions are based on the annual budget requests of the regions and districts, which are in turn based on regional and district development plans. Requests are made for contributions to both recurrent and development expenditures related to the Hesawa programme. To gain a truer picture of the central government contribution, the costs of salaries paid to government officers involved in the programme should also be added.

The approved financial contribution from central government for HESAWA activities at the regional and district levels for the 1991-92 financial year amounted to TAS.42 million. To this can be added the central government contribution in terms of salaries. Assuming about 650 people are involved, earning an average of TAS.7500 per month, this contribution adds a further TAS.58.5 million to the total. The total central government contribution in the 1991-92 financial year can therefore be estimated at TAS.100 million. At the exchange rate prevailing during that financial year, this is equivalent to SEK.2.5 million, representing about 6.6% of the Swedish contribution. As most of the approved budgets from the central government are actually disbursed and utilized, this figure can be viewed with some degree of confidence.

To the central government contribution, the funding provided by the District Councils should be added. The District Councils experience great difficulties in raising local revenues, and their contributions are typically well below the agreed targets. For the 1990-91 financial year, SIDA offered to encourage the efforts of the districts by providing a topping-up allowance to increase the districts' actual contribution by 25%. This was done in that financial year, but not since. The Specific Agreement for 1990-93 indicates that topping-up payments should be channeled through the Tanzanian Treasury, but as yet no agreement has been reached on how this should be administered.

In the 1991-92 financial year the total amount contributed to the HESAWA programme from district funds amounted to TAS.11 million, equivalent at that time to SEK.0.27 million. Contributions on a district by district basis fluctuated widely, ranging from nothing at all from Tarime District, for example, to TAS.4.4 million from Kwimba District. While the total amount represents a sizeable proportion of total district revenues, it only adds a further 0.7% to the local contribution. The total matching contribution from central and local government to the HESAWA programme in 1991-92 was therefore equivalent to 7.3% of the value of the D-funds.

If the 10% target is to be achieved, the remaining local funds must be found at the village level. The actual value of village contributions is extremely hard to assess. An obvious source of contributions is the money deposited in village HESAWA accounts. On

the basis of available data it is difficult to estimate how much has been deposited in these during any one year. At present, the total funds deposited in village HESAWA accounts amounts to about TAS.10 million. To these figures should be added the value of labour and materials contributions provided by the villages for water supply development, which may account for as much as 30% of the real costs of each water point. No acknowledged value is currently placed on in kind contributions from the villages. If these were costed, and added to the amounts found in HESAWA accounts, the total local contribution may well be at or even in excess of the agreed 10% level.

6.9 The role of the Tanzanian Treasury

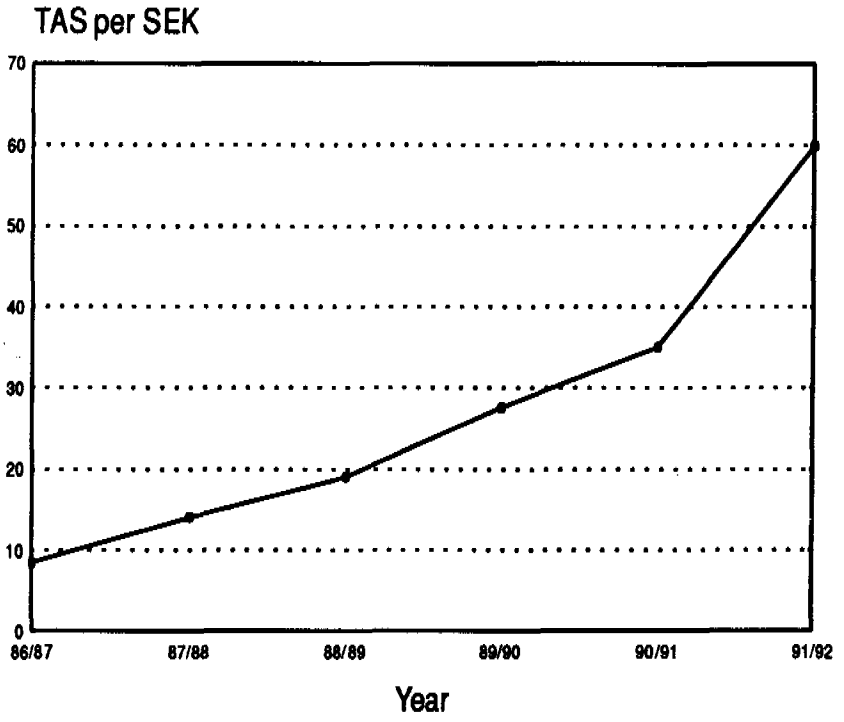
To a very large extent, HESAWA funds are channelled and managed outside of the normal government system. Until the 1991-92 financial year, none of the SIDA funds passed through the Tanzanian Treasury at all. Since 1991-92, payments to the local consultant Business Care Services (BCS) have been made through the Treasury. This amounts to SEK 1.14 millions, which is a very small proportion of the total annual allocation of SEK 38 millions.

In the past, BCS was hired as a sub-contractor and paid directly by HIFAB, the Swedish consulting company responsible for the CD store and the provision of all but one of the expatriate advisers. From July 1991, responsibility for paying BCS was transferred to the Treasury. During 1991-92, BCS experienced difficulties in obtaining their fees on time, but the evaluation team was told that this problem has now been solved. On the basis of this experience, and in view of the programme's intention to channel further funds through the Treasury, care should be taken to ensure that disbursement requirements and procedures are clearly agreed and understood before more funds are put through the official system. At the same time, a much higher level of responsibility for handling funds should be in the hands of the government system and administrative problems should not be seen as a justification in themselves for slowing this process down. HESAWA's influence over the Treasury is limited and improvements in efficiency will require actions at a national level. The programme should continue to put pressure for improvements at the national level, however, most appropriately through the national directorate.

6.10 Effects of devaluation

Since the 1987-88 financial year, the value of the Tanzanian Shilling has dropped dramatically. From an exchange rate of SEK.1 to TAS.14 in 1987, the value of the TAS had dropped to a rate of SEK.1 to TAS.60 by the end of July 1992. The pace of devaluation has been particularly strong during the past year.

Fig.4. Devaluation of the Tanzanian Shilling against the Swedish Kroner, 1986-1992



This trend has an important impact on the programme's financial system. Two examples can be used to illustrate this.

a. All budget planning in relation to both D-funds and C-funds is done in terms of SEK, based on an annually updated budget manual. The rapid devaluation of the TAS, particularly during the past year, quickly invalidates budgeted costs to be consumed as C-funds. Good examples are the costs of local procurement and a large proportion of HRD activities. While international procurement and other D-fund costs remain unaffected, C-fund activities may be fully implemented as planned, but will cost less than budgeted for in SEK terms and will appear in financial reports to be under-implemented. The savings in SEK terms may not immediately be seen, and the opportunity to make use of these within the financial year may be lost. A way to avoid this problem would be to adapt the budget manual to allow C-fund expenditures to be budgeted in the first place in TAS.

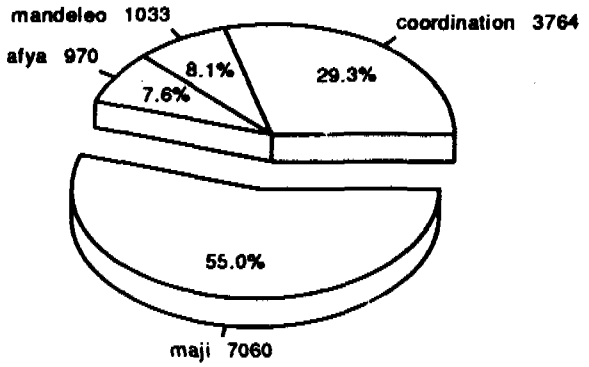
b. All imported goods and materials purchased for the programme have to be paid in foreign currency. While in foreign currency terms prices may remain stable, devaluation makes them increasingly expensive in TAS terms. As long as the donor is paying, there is no problem. In the longer term, however, continued dependence on imported goods will lead to serious problems of sustainability. At present only 15% of procurement through the CD store is done locally. The problem of devaluation serves to underline the long term

risks of continuing with such high levels of dependence on foreign goods.

6.11 Regional allocations

As noted, only about 7% of the total D-funds is allocated directly to the regions. In the current financial year this is distributed as indicated in the chart, with Maji accounting for by far the biggest share, followed by coordination activities. Afya and Maendeleo get relatively modest allocations to fund their supporting role to the districts.

Fig.5. Allocation of funds to regions, by department, 1992-93



Source: approved budgets 92/93, in '000 SEK

The distribution of funds between the three regions is not uniform, but reflects the differences in size and level of implementation in each case.

L-funds at regional level are made up exclusively of central government contributions. Each region receives its L-funds on a quarterly basis, subject to approval by the concerned ministries at central level. At present, on average only 5% of the total central government funding to regions is allocated to HESAWA activities, with some variation from region to region.

Monitoring of regional level expenditures of D-funds is based on a monthly report

to the zonal office, which is processed by computer. A monthly balance sheet is then returned to the regions by the zone. Although the format of this balance sheet could be improved for the purposes of greater clarity, this flow of financial information is both rapid and efficient. The regions know their financial situation on a month by month basis. Districts also receive a monthly statement of their position in regard to use of D-funds.

At present the support of the Regional Accountants to the districts largely consists of planning advice and the collecting of quarterly expenditure reports. An improved system of reporting and feedback between the district and regional levels is an important precondition for the decentralization of financial control.

6.12 District level funding and financial management

The District Councils are empowered to raise revenues through a number of means, including the development levy (TAS.1,000 per year per working adult), business and liquor licences, taxes on livestock, market dues and other fees, and revenues on properties. Very few councils are successful in collecting the revenues they are entitled to. Poverty is a general problem within the Lake Zone, particularly in the rural areas, and the situation has been made worse recently by a prolonged drought.

The allocations of D-funds to the districts varies considerably between integrated and non-integrated districts, as the approved budget allocations and expenditures for the 1990-91 financial year show. In general integrated districts receive far more than non-integrated ones, though in one cases an integrated districts had its allocations severely cut for failing to answers audit enquiries.

In general, 65-70% of district HESAWA financing comes from D-funds, with the balance being made up of L-funds contributions from central government (20-25%) and District Council revenues (5-10%). Disbursement of D-funds is usually prompt, but this is not always the case with the L-funds.

Each district operates an HESAWA account, which is kept separate from the other district accounts. Although receipts and payments are duly recorded, it is hard to distinguish in the cash books the origins of the receipts and for what activities the payments have been made. This can only be checked with a careful and time-consuming scrutiny of payment vouchers. Funds from all origins are mixed into this one account, so it is very hard to clearly identify uses and the balance of each part of the total contribution.

The district cash books are of virtually no value as instruments of financial management. It is impossible, for instance, to know how much money has been spent on fuel or on allowances, without checking every voucher. In most cases, no balance of the account appears in the cash books. The only way to know the balance is from the bank statements.

Table 10. Budget allocations and expenditures by region and district, 1990-91 ('000 SEK)

Region/district	Approved budget	Amount used	% used
KAGERA:			
Region	1243	1115	90
Integrated districts:			
Bukoba Rural	1800	1288	72
Biharamulo	1523	1001	66
Non-integrated districts:			
Karagwe	679	940	138
Ngara	508	399	79
Muleba	367	633	172
Sub total	6120	5376	88
MWANZA:			
Region	752	519	69
Integrated districts:			
Magu	1621	1447	89
Kwimba	1580	1388	86
Mwanza Municipal	1220	1172	96
Non-integrated districts:			
Geita	234	193	82
Ukerewe	223	236	106
Sengerema	189	160	85
Sub total	5819	5115	88
MARA:			
Region	1290	1218	94
Integrated districts:			
Bunda	1155	1050	91
Musoma Rural	531	427	80
Non-integrated districts:			
Serengeti	935	714	76
Tarime	496	612	123
Sub total	4407	4021	91
TOTAL	16346	14512	89

The District Treasurer is responsible for the disbursement and registration of funds, on the basis of requests signed by the DED or the District HESAWA Coordinator. In most cases, the treasurer has no detailed knowledge of HESAWA programme activities and exercises no financial control function.

In some cases, improper payments have been made from district HESAWA accounts. Examples include such things as using funds for the purchase of cement and aggregates, and the payment of labour. Although this is against HESAWA rules, the districts say they are sometimes obliged to use funds from the HESAWA account in order to implement activities in a proper way.

The DED is responsible for the proper use of HESAWA funds. During the evaluation, it was noted that retirements of use of funds are sometimes done very late or, in one or two cases, were not available at all to the financial consultant. It is essential that the DEDs ensure that payments are properly retired. If they are unable to do this, their argument for greater decentralization of financial control to the districts is likely to carry little weight. At present the actual proportion of funds actually transferred into district HESAWA accounts is very small, and consists of the HRD allocations only.

Financial management at the district level is generally very weak. It is strongly recommended that the programme develops a standardized book keeping format for the district HESAWA accounts, based on cash book procedures which allow a proper management of funds. On this basis, a monthly cash statement and balance of expenditures could be sent to the region, in the same way that the region sends one to the zonal office. Treasurers should also be better briefed on HESAWA activities. Improving systems will strengthen the prospects for greater efficiency provided this is matched by a willingness at district level to make full use of them.

An additional problem which should be noted is that the budget calendar of the District Councils does not correspond to that of the programme or the central government. In the latter case, the financial year runs from July to June. The districts, on the other hand, operate on a calendar year basis, from January to December. This makes effective financial analysis even more cumbersome.

6.13 Local and international procurement

According to the purchase orders received during the 1990-91 financial year, only 15% of the materials ordered through the C.D. store were locally procured. The purchase orders reflect all bulk orders placed through the CD store, including those for vehicles, machinery, and equipment. Although the 1990-91 figure was an increase relative to previous years, but still reflects too high a dependence on overseas procurement.

If the total of all purchase orders made through not only the C.D. store but also the zonal office, the regions, and the districts, are considered, however, the ratio of local to foreign procurement is likely to reach a healthier 40% for the current financial year. The

proportion of funds spent on local procurement of material and equipment in relation to the total local and international funds spent on such procurement has risen steadily, from 16% in 1989-90, to 18.5 in 1990-91, and 31% in 1991-92. This is a commendable rate of increase, and this trend should be further pursued.

6.14 The Village HESAWA accounts

Since the beginning of the 1988-89 financial year, all participating villages have been asked to open a village HESAWA account in a local bank before any construction takes place. The current guidelines require villages to deposit TAS.20,000 for each SWN pump to be installed, and 12,000 TAS for each NIRA pump. The accounts are intended to be the basis for village maintenance funds.

To date, the total amount deposited in village HESAWA accounts is estimated at TAS.10 million. This is a significant response, though willingness to pay varies quite considerably from one village to another. Out of the total amount in HESAWA accounts, about 50% is accounted for by Kwimba District, indicating that the response is highly varied between regions and districts.

The peculiar success of Kwimba District is hard to fully account for. The explanation usually offered is that there is a very strongly felt need for water in this district, and that there is a tremendous rivalry between villages which encourages them to try to outdo each other in the amounts of money they are able to raise. In the village study, there was also evidence that the support given to villages by the district was particularly good.

Although accounts have been opened, they are in effect not being used, and a large amount of money is lying idle as a result, much to the dissatisfaction of many villagers. The most obvious reason for this is that no arrangements have yet been made by the programme to make spare parts available for sale to the villages. Since paying for spares is the principle purpose of the accounts, they can not be use for their intended purpose until this condition is satisfied. In addition to this, many HESAWA committees are reluctant to use the accounts because they have not received any clear advice on what else they could use them for. In some districts, and in some "older" HESAWA villages, the District Water Engineer acts as a co-signatory of the accounts, and this makes the release of funds cumbersome and also, of course, limits the village's own autonomy in operating the account.

6.15 Funds reaching the village level

During the evaluation exercise, an attempt was made with assistance from the HESAWA Financial Controller to estimate what percentage of the D-funds can be said to actually reach the village level.

The initial part of this exercise consisted into listing all the different programme activities having a direct and measurable impact at village level, either in terms of physical outputs or HRD and training activities. The following list was drawn up as the basis for

the analysis:

. drilling (regional),
. drilling (district),
. subsidized bicycles,
. promotional activities,
. the study group programme,
. training of VHWs and TBAs,
. HRD activities,
. new shallow wells,
. rehabilitation of existing wells,
. construction and rehabilitation of gravity schemes,
. operation and maintenance,
. construction of institutional and household latrines,
. school health programme,
. water quality testing,
. construction of rain water harvesting systems,
. casting of rainwater jars,
. construction of washing slabs.

Using the allocations to all these activities from the approved budgets for the current financial year, 1992-93, the estimation shows that 27% of total D-funds can be said in principle to be reaching the village level. A calculation made on the basis of approved budget figures is rather generous to the programme, however, so a second estimation was made, this time based on the assumption that actual expenditures would probably not exceed 80% of the approved budget figures. This average is in keeping with the average global rate of utilization of D-funds. On this basis, about 21.5% of total D-funds allocations can be said to be reaching directly to the villages.

These estimations underline the high overhead costs of the programme. Out of every SEK.5 allocated by SIDA to the programme, less than SEK.1 can be said to be directly reaching the villages. It should be born in mind, however, that such figures are of only limited meaning if they are not placed in context. If out of the SEK.38 million allocated every year to the programme by SIDA, we deduct all of the foreign components (international procurement, costs of expatriates, and parts of the planning reserve), then it can be said that about 63% of the total D-funds, or about SEK.23.9 million, are being spent in Tanzania, at either the regional, district, or village level. This is equivalent to a rate of SEK.3 for every SEK.5 given by SIDA.

6.16 Cost effectiveness of the Hesawa programme

At the present time, assessing the cost effectiveness of the HESAWA programme is impractical. In the simplest possible terms, a cost effective investment is one which produces the best possible value for money in terms of the return on the investment (i.e. benefits) gained. In the case of HESAWA, a large part of programme investment is devoted to the achievement of long-term benefits, many of which are linked to rather vaguely defined objectives such as building capacity and capability through HRD. Since the

programme has not clearly defined the return it expects on its investment in quantifiable terms, it is more or less impossible to provide a meaningful analysis. If HESAWA is to seriously address the issue of cost effectiveness, steps need to be taken to more clearly identify its goals in these terms, and create a reporting system suitable for undertaking this kind of analysis. This comment is equally valid for other donor-supported water and sanitation programmes in Tanzania.

As noted in the introduction to this chapter, financial reporting in the HESAWA programme has significantly improved in recent years. The principle aims of the current reporting system are accounting and financial control, however, and not financial analysis. Because of this, a number of important preconditions for the undertaking of costs analysis and other types of economic analysis are not yet satisfied.

The HESAWA programme aims to achieve a broad range of health and other benefits, all of which are hard to quantify. These add further complexity to the issue of cost effectiveness, since in the case of a shallow well, for example, the value for money obtained is not only related to the actual cost of the installation, but also to the longer term health and other benefits which might be obtained as a result of building it. If these are not defined and given a value, the long term effectiveness of the investment is even harder to measure.

In addition to improvements in health and well-being, benefits can also be gained in terms of time saving and reductions in work load. The village study shows that women often mention these benefits. Returns in terms of increases in income would be easier to measure, but no substantial income generating activities have been reported, even though some income saving benefits have been reported, such as being able to cultivate gardens and spend more time on domestic activities.

Improved skills and knowledge can also be seen as a return on investments in HRD, which may be susceptible to analysis on the basis of cost effectiveness. In the case of HESAWA, some doubts may be expressed, but in the absence of hard data these are largely conjectural. At present, it is only possible to assess cost effectiveness on the basis of an analysis of the number of people trained, and the relative costs of training, as shown below in the case of VHWs. Such an analysis takes no account of the quality of the training received, and the real benefits gained as a result.

The cost effectiveness of programme investments in goods and materials could be analyzed on the basis of benefits to the local and national economy. The greater the share of procurement which is made locally, the greater the cost effectiveness of the investment from the point of view of the Tanzanian economy, and in principle the greater the prospects are for the sustainability of the programme in so far as this is a function of the strength of the local economy. As noted, there is a need to further increase the level of local procurement in the programme, and increase its cost effectiveness in these terms, but it is hard to express or measure this in quantifable terms.

In order to undertake a cost effectiveness analysis, it is necessary to clearly identify the costs of any particular investment, and to measure and put a value on the returns

gained. These figures must then be out alongside comparable figures, from either inside or outside of the programme, to assess whether the investment is a cost effective way of achieving the desired results or not.

On the basis of the financial information available in the HESAWA programme, it is possible to make only rough estimations of a number of costs on a per unit basis and compare these from region to region. The formats currently used for financial reporting, particularly from the district level, makes this a risky exercise since it is for practical purposes impossible to disaggregate the figures sufficiently to establish the true costs of any particular output. In the case of the construction of shallow wells, for example, both the budgets and expenditure reports make no distinction between materials and labour costs, on the one hand, and the costs of capital investments in tools and equipment, on the other, in any particular year. Vehicle running costs and other overheads are also not reported in sufficient detail to identify which parts of these costs should be attributed to any particular activity. This makes it impossible at present, on the basis of a review of available data, to arrive at the true costs of shallow wells. The same constraints apply to virtually all other quantifiable programme outputs.

Without pretending to be a genuine cost effectiveness analysis, the cost estimations shown below at least pose a few interesting questions. Equally important, they underline how difficult it is to do a realistic cost effectiveness analysis on the basis of currently available data. The figures used are based on expenditures in the 1990-91 financial year, using the available data from :

* The summary of annual progress reports, indicating quantifiable accomplishments.

* Budget follow-up reports on Hesawa activities, indicating the utilization of D-funds.

* The HESAWA budget manual, showing indicative costs.

For the purposes of this exercise, the costs of the following were analyzed:

* Construction of shallow wells.

* Training of village health workers.

* The study group programme.

Comparative costs: shallow wells. In the 1990-91 financial year, HESAWA spent a total of SEK.2.8 million on materials and equipment for the construction of 256 wells, representing an average cost of SEK.11,000 per well. This is somewhat higher than the cost estimation made in the zonal office of SEK.8,670, based on the costs for a well of average depth. Since a good number of wells are likely to be more costly than the "typical" well, for a wide variety of reasons, this variance is not too worrying. More

interesting is the variance to be found between average costs per well on a region by region basis.

* Mara Region: 53 wells at a cost of SEK.409,000, or SEK.7,700 per well.

* Mwanza Region: 141 wells at a cost of SEK.1,566,000, or SEK.11,100 per well.

* Kagera Region: 62 wells at a cost of SEK.838,000, or SEK.13,500 per well.

On the basis of these figures it is tempting to conclude that wells in Kagera Region cost 75% more to produce, and therefore represent a less cost effective investment, than those in Mara Region. Such a conclusion would be very misleading, however, for a number of reasons.

First, shallow well costs can vary quite significantly from place to place depending on geological and hydrogeological conditions, such as the depth of the water table and the hardness of the rock to be excavated. Costs will also vary depending on whether the well is hand augured, dug, or machine drilled. In the case of Kagera Region, the costs recorded are inflated due to the use of funds allocated to shallow wells for the purchase of tools and equipment. If a similar calculation is made for the 1991-92 financial year, according to figures provided by the zonal office, the following results are obtained:

* Mara Region: 65 wells at a cost of SEK.792,000, or SEK.12,185 per well.

* Mwanza Region: 200 wells at a cost of SEK.1,804,000, or SEK.9,020 per well.

* Kagera Region: 91 wells at a cost of SEK.365,000, or SEK.4,010 per well.

From what is known about the reliability of district accounting, there could also be any number of financial management reasons for these cost variations. Even bearing in mind these factors, however, the variation both between regions and from year to year is so great that the programme may want to look into it in more detail.

Comparative costs: VHW training. A wide variation in average costs on region by region basis is also found in relation to recorded expenditures for training Village Health Workers (VHWs). Training costs for VHWs should be far less sensitive to local variations than those for wells, and ought to be more or less uniform throughout the Lake Zone. During 1990-91 the programme spent a total of SEK.323,000 on the training of 124 VHWs, at an average cost of SEK.2,600 per VHW. The regional variation was as follows:

* Mara Region: SEK.3,300 per VHW trained.

* Mwanza Region: SEK.2,700 per VHW trained.

* Kagera Region: SEK.2,000 per VHW trained.

All of these average costs are substantially higher than the indicative figure of SEK.1,000 per VHW trained contained in the budget manual. The regional variation is also significant, with VHWs costing 65% more to train in Mara than in Kagera.

Comparative costs: Study Group Programme. Questions about the cost effectiveness of the SGP have been raised several times in this report. Decisive figures to justify this claim are hard to produce, however, except to say that in 1990-91 it is estimated that the programme spent SEK.1.1 million on the SGP alone, out of a total expenditure on all HRD activities of SEK.3.8 million. On this basis, SGP expenditures in that year represented 31% of all HRD costs. Since the SGP is generally agreed to produce very hard to quantify outputs, the questioning of its cost effectiveness seems well justified.

In common with many other donors, developing country governments, and other support agencies, SIDA has become increasingly concerned in recent times with the issues of both cost efficiency and cost effectiveness. The broader issue of sustainability is importantly linked to these. Greater efficiency and cost effectiveness are likely to be important factors in improving the prospects for sustainability in the long-term. SIDA is currently working with a group of economic advisers in Sweden to develop tools and methods to assess cost effectiveness and undertake other forms of cost analysis in the development programmes it supports. Given the long-term importance of this issue to HESAWA, and to the water sector in Tanzania in general, it would be worthwhile to use this programme as a test case for this work and, at the same time, assist HESAWA to re-define its goals and further refine its financial monitoring and reporting system to allow such analyses to be undertaken.

7.0 LESSONS LEARNED AND FUTURE DIRECTIONS

7.1 Current status of the HESAWA programme

The HESAWA programme is large and complex, with ambitious goals. In evaluating the programme, it is necessary to be aware of the starting point and to acknowledge the substantial change of direction it represents. In a matter of a few years, a major reorientation in thinking has taken place in the water sector in Tanzania, with sustainability through community action rather than free government services becoming the focal point. HESAWA is one of the first programmes in the country to try to operationalize this approach in a comprehensive way.

To achieve its aims, the programme has had to overcome a legacy of more than 20 years of development which has promised rural people high levels of service at little or no cost. HESAWA has had to convince both community members and government workers that real sustainability in the current Tanzanian context is only possible through the use of simpler technologies, and by the maximum possible involvement of rural people themselves in both providing a large share of the necessary resources, and in planning and controlling their own development.

Evaluated from this point of view, HESAWA has achieved considerable success. The principles of simple technology and community participation have been widely accepted throughout the Lake Zone. A more village-centred approach to development is being put into practice. Communities themselves are responding positively by forming local committees to manage water supply and sanitation improvements, and depositing money in bank accounts to pay for operation and maintenance. Substantial contributions in time, labour, and local materials have been made by people who were told in the past that their development needs would be met by others. Hundreds of thousands of people, representing nearly one-fifth of the 4.7 million living around the Tanzanian shores of Lake Victoria, have contributed to and benefited from the programme.

The greatest successes of the programme so far have been in bringing about improvements in basic water supply. The quantity and quality of water available to the rural population has been importantly increased through the construction of new water supply systems and, just as important, through the improvement of existing wells and springs. The need to make improvements to existing sources is often talked about in water programmes but rarely put into practice. The active pursuit of this goal by HESAWA adds to its strength as a programme, and underlines its serious intent to bring about health improvements in the Lake Zone.

As well as developing infrastructure, HESAWA is also aiming to develop community and government capacities and knowledge through its HRD and health and hygiene education activities. These have had important impacts, both in changing ways of thinking and in improving skills at all levels. Many communities are now better informed and better trained, and more capable than before of taking control of their own development. Hundreds of people in the government service have had to challenge old ways in thinking about their role in development, and have had to take on new and wider

responsibilities. For many this has been a struggle, but much has been learned and much positive experience gained. The prospects for more decentralization within the government system are now greater than before. The programme has contributed to the breaking down of a number of barriers. Government workers are now working more closely together in inter-departmental teams. New ideas and approaches are being actively debated. The programme's advocacy of a strengthened role for women in development has had major impacts, both in the government service and the communities.

In the past seven years, the HESAWA programme has established a platform on which further progress can be built. Much still remains to be achieved, and the challenge facing the programme now is to maintain the momentum it has already created and simultaneously to grasp a number of difficult issues which currently stand in the way of the full achievement of its goals.

The most obvious of these is the need to operationalize as quickly as possible the community operation and maintenance system by making spare parts available for sale. Until this is done, it will not be possible to assess the true effectiveness of a very large part of the programme's non-technical work in building capacities, improving knowledge, and changing ideas and attitudes. A new phase of problem solving is likely to follow, and the programme must be prepared to take this on. More systematic support to communities in learning to cope with local management of water supplies will be needed. A good monitoring system will need to be developed to ensure that the necessary support is being given and is having the desired effects.

Potential private sector roles must also be more closely examined, beginning with the serious pursuit of the commercial production and distribution of spares by local industry and entrepreneurs. A national level initiative may be appropriate, given the widespread problem of spare parts availability and distribution in the country as a whole.

The releasing of spare parts into the communities may mark the beginning rather than the end of the programme's work as far as ensuring sustainability is concerned. Many questions still need to be answered about community management capacities and the real extent of both willingness and ability in villages to pay the cost of keeping facilities in good repair. Until these questions are answered, the concepts of handing over and phasing out will continue to be difficult to operationalize and will be causes of anxiety to both communities and districts rather than measures of achievement. General improvements in technical standards will also be required to ensure that communities have the best possible starting point.

The health and sanitation aspects of the programme need greater attention. A more comprehensive and systematic approach will be required to the education aspects of health work, and more support provided to VHWs and TBAs at community level. The latrine programme in particular should be closely examined and the search for acceptable and appropriate technical solutions continued. The wisdom of investing further in the Study Group Programme should be seriously questioned.

The programme's HRD package should continue to be strengthened and developed

at all levels. As a cornerstone activity it is vital that it fully reflects and operationalizes the programme philosophy. Further attention should be paid to the HRD methodology, and to the way in which the programme is designed and developed and supporting materials produced. A stronger commitment to HRD is required at the operational levels. The best way to ensure this is to further increase the involvement of these levels in the planning and development of the whole package.

Within the government service much strengthening is still required. Until this is done, significant levels of further decentralization may be difficult to achieve. Financial management is a particular problem area. Attempts must be made to overcome the programme's reluctance to decentralize all but the minimum amount of control over funds. Experience so far has not been encouraging, but further risks may need to be taken, with the protection of a more thorough accounting system. Morale within the government service could be improved, in part by breaking down the barrier between the "haves" and the "have nots" within the programme. The distinction between integrated and non-integrated districts needs to be broken down, and more opportunities given to districts to grow in accordance with their capacities rather than simply on the basis of whether or not they receive the full HESAWA resource package. A situation must be created where integrated districts no longer fear phasing out, and non-integrated districts cease to fear that they may never be phased in. An obvious way to do this is to question the merit of the phasing in/phasing out approach itself and look for alternative ways to distribute resources among the districts. A precondition for achieving this is the reduction in the weight of the integrated HESAWA package, starting with the pulling back of consultancy support to a more regionally based advisory role.

In general terms, the dependence of the government system on the HESAWA supporting structure should be reduced. HESAWA is too often perceived as being separate from government and needs to be more clearly merged into the permanent system to ensure the sustainability of the concept and approach. The continuing dominance of the Zonal Coordination Office, while adding much strength to the programme in the immediate term, is not supportive of institutional sustainability as a long-term goal. A stronger merging of the programme with the national structure is also required if the HESAWA concept and experience is to substantially contribute to sector development in the country as a whole. All involved ministries at national level should be fully involved in the development of the general programme direction.

7.2 The focal points of the evaluation

As noted in the introduction to this report, the evaluation was to have five focal points:

* The relevance of the HESAWA approach in meeting programme goals.
* The level of goal attainment reached by the programme to date.
* The efficiency and effectiveness of the investment made so far.

* The long-term sustainability of programme impacts and approach.

* The lessons learned from programme implementation.

The principle findings in relation to these five points are summarized below.

In terms of relevance in meeting programme goals, the current HESAWA approach has many strengths. Most of these have been summarized above, and include the adoption of simple water supply technologies and the strengthening of community participation and HRD. From the community point of view, the improvement of the water supply situation is highly relevant to perceived development needs, though with some reservations. These include that programme interventions are not always leading to an even distribution of benefits, that the improvements made are to often of a poor technical standard and low reliability, and that full account is not taken of all water use needs, particularly in relation to economic uses.

The greatest question mark as far as relevance is concerned relates to the Study Group Programme. Though exciting in concept, the SGP is delivering far less than it promises and does not seem to fit comfortably into the programme as a whole. The future of the latrines programme and the improvement of traditional water sources does not necessarily depend upon the SGP, and it should be seriously asked whether it would be missed if it was simply dropped from the programme.

The relevance of the current approach to sanitation improvement is also questionable. The popular response to the options offered by the programme has been very poor, indicating that the construction of improved latrines is a low priority and may not be worth the investment currently required. Given the importance of the sanitation component for the achievement of health goals, further work must be done to ensure that it fills a far more central role in programme priorities and activities.

The level of goal attainment reached by the programme to date can be said to be mixed. Many basic goals in water supply development and the introduction and establishment of the HESAWA concept and approach are being attained to a very significant degree. The more complex goals such as strengthening capacities at all levels, increasing the involvement of women and communities in general, encouraging decentralization and self-reliance, and changing health and hygiene behaviours, are understandably proving more difficult to reach. As far as goal attainment is concerned, HESAWA has only recently begun to achieve success and much remains to be done. Given the radical change of approach signalled by HESAWA, however, what has been achieved to date is of great importance.

The efficiency and effectiveness of the investment made so far is very hard to assess. HESAWA is to a very large extent a human and social, rather than a technical, development programme and the returns on the investment made may not be felt for a long time. Few of the qualitative goals of the programme have been closely enough defined to make an analysis on the basis of cost effectiveness possible at this stage. Improvements are

also needed in financial monitoring and reporting systems to provide data of sufficient quality to make cost analyses possible. In general terms, however, there is clearly plenty of scope to improve efficiency within the programme as a whole, both in terms of reducing overhead costs and in strengthening management and implementation capacities and procedures.

At this stage the long-term sustainability of programme impacts and approach is very much open to question. Programme impacts have been important and substantial, and the approach is increasingly well understood. At the community level, however, the real prospects for sustainability have yet to be tested. Within the government system, HESAWA still has the character of an external programme with no guarantee as yet that the basic approach will be permanently absorbed.

The lessons learned from programme implementation are numerous. While it is certainly true that as many lessons have been learned from shortcomings as from successes, the willingness seen by the evaluation team of those involved at all levels to view their actions and achievements in a critical way is an encouraging sign for the future development of the programme.

The single most important lesson learned is the most obvious one: that a community based approach to development which aims at long term sustainability can not be achieved without a great deal of struggle and the overcoming of many complex problems. Many of those involved with HESAWA appear to have learned that new ideas can be successfully introduced, and that people's views and expectations can be changed, but not without considerable commitment and effort.

An important lesson learned from the evaluation is that if an enterprise as ambitious as HESAWA is to successfully undertaken, it is of the greatest importance that the concept itself is thought through as thoroughly as possible in clear operational terms. The greatest shortcoming of the HESAWA programme at present is the simple failure to fully think through the post-construction phases at village level, and ensure that an adequate support structure is in place in the districts to allow communities to take on their roles as managers. Similarly, the introduction of the distinction between integrated and non-integrated districts and the concept of phasing in and phasing out at all levels have created many dilemmas. At present, the programme is able to integrate and phase in, but has not yet learned how to scale down and phase out.

7.3 The cornerstones of the HESAWA programme

In the terms of reference for this evaluation exercise, community participation and human resources development are described as the "cornerstones" of the programme. These have been fairly well established, but are certainly not strong enough as yet to hold up the whole structure and ensure long term sustainability.

Progress with the community participation approach has been substantial, but not significant enough as yet to ensure that the legacies of the HESAWA programme will last. While communities are involved far more than in the past, they still have little real choice

in the options offered by the programme. In many respects, the package is offered in a ready made form with only limited scope for negotiation and adaptation. Ways still need to be found to introduce more flexibility and allow communities more power and decision making authority in determining the kind of health, sanitation, and water improvements which they wish to make.

The HRD programme has gathered strength as the programme has developed, and is now in a position of prominence. The effectiveness of many HRD activities is hard to assess, however, and it is not at all certain that real value for money is being obtained in development terms from the investments made. Commitment to the HRD programme needs to be further strengthened and a truly participatory approach established in both its development and execution.

7.4 Future directions

The evaluation team was not asked to undertake the detailed formulation of directions and approaches for the next phase of implementation of the HESAWA programme. It is nevertheless clear that particular attention will need to be paid to a number of issues if movement towards the attainment of programme goals is to be further strengthened in the next agreement period. During the evaluation exercise, many discussions were held on the future needs of the programme. A list of the key future directions recommended by the evaluation team is given below.

* An operational and effective system for supporting community managed operation and maintenance, including the sale and distribution of spare parts, is to be put in place as a matter of the greatest urgency.

* The conceptual and operational details of the implementation strategy, particularly in relation to phasing in and out and handing over at village level, and the phasing in and out of districts, should be closely reviewed. The possibility of eliminating the distinction between integrated and non-integrated districts should be investigated.

* Efforts should be continued and strengthened to merge the HESAWA programme more effectively into the existing government structure. This should include the scaling down of dependence on non-government staff, beginning with the adoption of a more explicit advisory rather than managerial role for many of the consultants, and a progressive reduction in the dominance of the Zonal Coordination Office. These processes should be undertaken with caution, but with noticeable effect. Closer coordination among involved ministries should also be achieved at the national level.

* Efforts should continue in promoting the HESAWA concept and approach at all levels.

* The role of women in the HESAWA programme should continue to be strengthened. The gender awareness programme should be closely reviewed

to assess its impact, and investigate ways in which it can be both strengthened and made more adaptable to the Tanzanian context and variations in local conditions in the Lake Zone.

* Efforts should continue to be made to strengthen management capabilities at all levels, and particularly in the districts and villages. Financial management should be given particularly close attention, with a view to greater decentralization of financial control.

* Monitoring and information management systems should be developed and strengthened to support more effective planning, coordination, implementation, and the provision of advice and support to communities.

* Development of appropriate water supply and sanitation technologies should continue, and standards of workmanship improved.

* Discussion should continue on the possibility of promoting broader uses of water, including economic uses, to more thoroughly meet village felt needs. Where economic use is not feasible, this should be more clearly explained to community members.

* Efforts should be made to more closely integrate and consolidate the HRD and health, hygiene and sanitation components of the programme.

* Further development of the HRD component should seek to maximize the involvement of operational staff in the overall development of the HRD package and the design and production of supporting materials.

* The programme should actively encourage greater involvement from the local private sector in both implementation, and the manufacture and distribution of spare parts.

* The trend towards greater local procurement, and the lessening of dependence on foreign goods in the programme, should continue to be strengthened.

* Serious consideration should be given to either dropping or radically altering the Study Group Programme. If it is to be retained, every effort should be made to ensure that it produces clear benefits.

The HESAWA programme shows great potential, and promises to make major contributions both to the health and welfare of the nearly five million Tanzanians living around Lake Victoria and to national development as a whole. While the difficulties which lie ahead should not be under-estimated, the programme should move ahead with confidence and seek to further build on the many achievements already made.

APPENDIX 1.

Terms of Reference

SIDA PROMEMORIA Sid 1

Dossier

1992-01-22 1 TAN 32.15

TERMS OF REFERENCE FOR EVALUATION OF THE HESAWA PROGRAMME, TANZANIA

Background

The "Health through Sanitation and Water Programme", HESAWA, has developed since 1985 when Tanzania and Sweden entered into a Specific Agreement on cooperation concerning rural water supply, environmental sanitation and health education. The present Specific Agreement covers the period June, 1990 - July, 1993. The main guiding documents are the Programme Document of March 25, 1989, and the Plan of Action dated December 20, 1989.

The overriding objective of the Programme is to improve the welfare of the rural population through improved health education, environmental sanitation, water supply, community participation, capability and capacity building at village and district levels.

The Programme implementation include active community participation in decision making, planning and implementation. The Programme activities are based on the concepts of affordability, sustainability, replicability, credibility and cost efficiency. This is to say the activities started within the Programme will rely on the local resource base for their continued functioning.

The activities to reach the above objectives are

- improvement of existing traditional water sources
- construction of wells or appropriate low cost water supplies including gravity schemes
- rehabilitation of existing gravity schemes and completion of ongoing gravity schemes
- rehabilitation of specifically selected schemes where sustained operation and maintenance can be ensured
- promotion of community participation, health education and sanitation through planned integration of community-based activities in collaboration with the Executing Agencies of Maji, Afya and Maendeleo
- strengthening of the technical, administrative and promotional capacity of the Executing Agencies through:

* establishment of a decentralized organization which to the extent possible should be merged into existing government structure

* improving the operation and maintenance function systems and routines at all relevant levels

* introduction of a functional cost control system for the Programme activities

* reinforcing Human Resources Development in a systematic manner

The cornerstones of the HESAWA Programme are community participation and human resources development. Thus it is not only the efficient functioning of the delivery systems (e.g. of safe water, latrines and health education) that should be emphasized, but equally important is the extent to which and how these utilities are actually utilized by the consumers/beneficiaries, and to what extent capacity and capability building have facilitated a sustainability of the concept.

The total allocation to the Programme is up to and including 1991/92 SEK 266 million. Out of that SEK 152 million covers the period from 1988/89.

The target group for HESAWA is the rural village households, with emphasis on women and children, in Kagera, Mara and Mwanza regions.

Reasons for the Evaluation

The present agreement will be finalized June 30, 1993. In order to prepare a possible new agreement period the independent evaluation shall form part of SIDA's consideration for a possible future support.

Objectives of the Evaluation

The purpose of the evaluation is thus to assess the relevance, goal attainment, cost efficiency, sustainability and lessons learned.

Scope and Focus of the Evaluation

The evaluation shall specifically cover the period from 1988 to date, and with a review of the experiences since 1985.

The evaluation shall comprise but not necessarily be limited to the following aspects:

1. The most important part of the evaluation is the assessment of the impact of the Programme at

the village level and the ways it is being implemented, i.e. through participation and mobilization.

2. An analysis of the achievements of Programme targets outlined in the Programme Documents.

3. An assessment of the fulfilment of the objectives of the Programme in relation to the formulation of the Programme concept.

In order to reach its objectives and to cover the scope as described above, the evaluation will have to explain and analyse a number of issues, most of which are described below. The Consultant shall after having made a first analysis of the task (probably after the first field visit) present a method for implementing the evaluation in an inception report, where he will outline the relative importance and priority to be given to the below issues in the evaluation in order to reach its objective. The Consultant may hence give strong emphasis to certain of the issues meanwhile others may be treated as relatively marginal.

Health Education and Sanitation

- the Village Health Worker situation and impact in the villages, including the gender aspect of selection of VHW, one woman and one man

- the change of habits of water storage, personal hygiene, latrinization, etc

- the sanitation impact and domestic environment at household level

Community Participation and Human Resources Development

- the impact of promotion of community participation, health education and sanitation through community-based activities

- remuneration of the different "cadres" of staff introduced by HESAWA in the villages (care takers, VHWs, fundis, committees)

- the Study Group Programme, impact and efficiency

- the capacity of consumers to be responsible for the Operation and Maintenance of facilities

Technical Aspects/Water

- the functioning of water supply facilities as regards:

  * water quantity (maximum hourly capacity, how many people draw water from the well, seasonal changes)
  * water quality (traditional and improved/ constructed sources, changes from collection to consumption)
  * convenience of water supply (traditional wells contra constructed wells, mapping)
  * proportion of households using the facilities (who uses them and who doesn't)
  * volume of water used per capita/household and for what purposes (any increase in water use, by whom)

- the total construction output, number of wells, schemes finalized and ongoing, number of people covered

- the likely environmental impact

- the quality of workmanship

- the appropriateness of the technology used in respect of Operation and Maintenance

- the relevance of the training of construction teams and care takers

- the appropriateness of the rainwater harvesting technology

Gender/Women

- the impact of easing the burden for women and children, if any

- the integration and involvement of women at all levels in planning and decision making

- the involvement of Traditional Birth Attendants, other "traditional women", collaboration with UWT or other women organizations

Organisation and Management

- the capacity, roles and responsibilities of the different actors at all levels

- the local authorities' competence and motivation for executing the programme activities

- the geographical and activity concentration/expansion

- the strategy of phasing in/phasing out districts

- the attitudes among professionals and administrators involved in the Programme, as regards intersectorial collaboration, community involvement, technological reorientation, and project management

- the capacity and capability of fund processing from Donor to end user

Methodology and Time Plan

The preparation for the Evaluation can commence with a preparatory phase including a desk study of available documents, field visits, basic data and other information gathering as deemed necessary.

Upon completion of the preparatory phase the Consultant shall before the start of the main phase present an inception report to the Programme Management and SIDA with a proposed approach, method and outline of the final evaluation. Prior to the start of the final evaluation SIDA shall approve the approach, method and outline proposed.

The main phase of the Evaluation is proposed to be carried out with a focus on villagers and authorities largely through field studies in villages.

Information should be obtained with the help of individual or group interviews with villagers, village committees, people directly involved or engaged in health and sanitation activities and with officials at district and regional levels.

Field studies shall also include interviews with Executing Agencies, consultancy staff (Hifab, Business Care Services) as well as representatives from the Ministry of Community Development, Women Affairs and Children, and SIDA.

The evaluation team shall comprise members with professional knowledge of community based rural development programmes, other relevant knowledge and experience from East Africa and sufficient knowledge in Swahili to be able to carry out the field studies. Specialists may be engaged for covering special/complementary aspects of the Programme.

The final report shall separate the evaluation part from the recommendations.

The total evaluation is estimated to approximately 30-40 man weeks.

Preliminary Time Plan

Preparatory phase	May, 1992
Inception Report	First week of June
Main phase	July (6 weeks)
Draft Final report	Early September

APPENDIX 2.

Evaluation programme and staffing

EVALUATION PROGRAMME AND STAFFING, APRIL-SEPTEMBER, 1992.

April/May	Review of documentation	
	Christine van Wijk	IRC
14-26 May	Preparatory Phase	
	Jo Smet	IRC Teamleader
	Phil Evans	IRC
	Daniel Makerere	AMREF
30 June-29 July	Study Phase	
	Mary Boesveld	IRC
	François Brikké	IRC
	Isaack Oenga	AMREF
	Daniel Makerere	AMREF
23 Aug.-11 Sept.	Formal Evaluation Phase	
	Jo Smet	IRC Teamleader
	Phil Evans	IRC
	Isaack Oenga	AMREF
	2-11 September:	
	François Brikké	IRC
14-30 September	Drafting of evaluation report	

APPENDIX 3.

HESAWA Programme Status

Table 1. HESAWA Programme Status - Summary Outputs 1985-91 (6 years)

Region	District		Pop. (88)	Pop. Rchd.	% Rchd.	Wards	Vills. Rchd.	SWS New & Rehab.	PWS # DPs	ITWS	RWH HH Ins Jars	LATS HH & Ins Slabs	VHW	TBA	VW + DPCT	VF	SK	SG
KAGERA	Biharamulo	Int.	210	186	88.6	15	66	113	3 30	95	1 4 12	140 -	117 1/	-	-	232	26	90
	Bukoba R.	Int.	344	135	39.2	14	53	111	5 125	47	1 1 -	130 -	94	-	392	-	-	114
	Karagwe	N/Int.	293	58	19.8	5	18	9	13 120	6	20 2 112	58 2	15	-	-	8	-	-
	Muleba	N/Int.	274	31	11.3	11	18	7	7 301	7	- - -	30 -	14	-	77	3	-	20
	Ngara	N/Int.	158	15	9.5	5	8	4	3 52	2	- - -	- -	14	-	108	2	1	-
			(1279)	(425)	(33.2)	(50)	(163)	(244)	(31) (528)	(157)	(22) (7) (124)	(358) (2)	(254)	(-)	(577)	(245)	(27)	(224)
MWANZA	Kwimba	Int.	428	210	49.1	29	87	326	- -	12	- - -	103 4	36	37	269	118	20	40
	Magu	Int.	311	110	35.4	17	39	207	- -	63	5 5 -	569 20	78	-	58	50	-	91
	Mwanza (M)	Int.	223	53	23.8	11	25	112	3 33	86	- - -	178 26	34	34	121	170	16	150
	Geita	N/Int.	439	68	15.5	12	12	33	- -	-	- - -	- -	-	-	40	-	-	-
	Sengerema	N/Int.	304	15	4.9	3	6	8	1 35	-	- - -	- -	-	-	16	-	-	-
	Ukerewe	N/Int.	173	83	48.0	11	27	29	- -	17	- - -	- -	-	-	21	8	-	-
			(1878)	(539)	(28.7)	(83)	(196)	(715)	(4) (68)	(178)	(5) (5) (-)	(850) (50)	(148)	(71)	(525)	(346)	(36)	(281)
MARA	Bunda	Int.	201	90	44.8	5	32	117	- -	87	- 3 28	89 46	52	30	125	49	8	88
	Musoma (R)	Int.	247	83	33.6	11	24	24	1 10	27	- - -	6 16	38	12	16	32	8	57
	Serengeti	N/Int.	113	37	32.7	5	19	11	1 10	38	- 1 -	- 1	20	-	-	2	-	36
	Tarime	N/Int.	341	20	5.9	3	10	-	2 76	1	- 1 -	6 5	18	-	-	15	-	-
			(902)	(230)	(25.5)	(24)	(85)	(152)	(4) (96)	(153)	(-) (5) (28)	(101) (168)	(128)	(42)	(141)	(98)	(16)	(181)
TOTAL			4059	1194	29.5	157	444	1111	39 692	488	27 17 (152)	1309 120	530	113	1243	689	79	686

Total Population estimates (1988) inc. urban

Kagera 1,326,183
Mwanza 1,878,271
Mara 920,942

EST POP - Estimated Population; Shallow Wells: New-Hesawa; Reh - Rehabilitated (Non-Hesawa); Piped Water Schemes; No. - Number of Water Schemes; No. DPs - Number of Domestic Points; ITWS - Improved Traditional Water Sources; HH-Household; INST - Institutional; WJ - Water Jars; VHW - Village Health Workers; TBA - Traditional Birth Attendants; VW & DPCT - Village Well & Domestic Point Caretakers; VF - Village Fundis; SK - Storekeepers; SG - Study Groups

1/ Out of which 13 under UNICEF

Table 2. HESAWA Programme Status - Annual Progress/Output 1991-92

Region	District		Pop. (88)	Pop. Rchd.	% Rchd.	Wards	Vills. Rchd.	SWS New & Rehab.	PWS # DPs	ITWS	RWH HH Ins Jars	LATRINES HH & Ins Slabs	VHW	TBA	VW + DPCT	VP	SK	SG
KAGERA	Biharamulo	Int.	210			14	66	14	- 2	6	- - 12	130 7	16	-	82	-	2	-
	Bukoba R.	Int.	344			16	60	34	3 19	12	2 1 -	16 7	8	-	6	-	-	-
	Karagwe	N/Int.	293			11	39	7	- 8	7	34 2 129	17 3	-	-	102	15	-	-
	Muleba	N/Int.	274			12	24	9	- 14	5	- - -	80 5	-	18	23	9	-	-
	Ngara	N/Int.	158			6	14	8	- -	5	- - -	- -	5	-	40	20	-	-
			(1279)			(59)	(203)	(70)	(3) (43)	(35)	(36) (3) (141)	(243) (22)	(29)	(18)	(253)	(44)	(2)	(-)
MWANZA	Kwimba	Int.	428			29	96	69	- -	-	- - -	106 -	-	-	-	-	-	3
	Magu	Int.	311			26	107	43	- -	10	3 - -	- [3/] 1	16	44	28	10	-	1
	Mwanza (M)	Int.	223			10	26	- [1/]	- 5	- [2/]	- 4 -	36 4	22	34	30	85	1	- [4/]
	Geita	N/Int.	439			13	25	23	- -	-	- - -	- -	-	-	70	-	-	-
	Sengerema	N/Int.	304			3	20	12	- -	-	- - -	- -	-	-	16	-	-	-
	Ukerewe	N/Int.	173			12	38	21	- -	5	- - -	- 1	20	-	59	3	-	-
			(1878)			(93)	(312)	(168)	(-) (5)	(15)	(3) (4) (-)	(142) (6)	(58)	(78)	(203)	(98)	(1)	(4)
MARA	Bunda	Int.	201			7	44	28	2 17	18	- 1 79	32 5	12	14	131	14	-	-
	Musoma (R)	Int.	247			12	32	18	1 2	8	- 2 -	19 2	8	8	32	8	10	- [5/]
	Serengeti	N/Int.	113			4	19	18	1 14	6	- - -	- 5	2	-	22	26	-	5
	Tarime	N/Int.	341			8	18	8	3 28	-	- - -	1 -	16	-	30	14	-	-
			(902)			(31)	(113)	(72)	(7) (61)	(32)	(-) (3) (79)	(52) (12)	(38)	(22)	(215)	(62)	(10)	(5)
TOTAL			4059			183	628	310	10 109	80	39 10 220	437 40	125	118	671	204	13	9

Legend and Popul. (1988) as indicated in Table 1.

1/ No. of wells reported 6 less than in 1990/91.
2/ No. of ITWS reported 22 less than in 1990/91.
3/ No. of HH latrines 213 less than in 1990/91.
4/ No. of trained SG reported 1 less than in 1990/91
5/ No. of trained SG reported 17 less than in 1990/91.

Table 3. HESAWA Programme Status - Summary Outputs 1985-92 (7 years)

Region	District		Pop. (88)	Pop. Rchd.	% Rchd.	Wards	Villa. Rchd.	SWS New & Rehab.	PWS # DPs	ITWS	RWH HH Ins Jars	LATS HH & Ins Slabs	VHW	TBA	VW + DPCT	VF	SK	SG
KAGERA	Biharamulo	Int.	210					127	3 32	101	1 4 24	270 7	132	-	82	232	28	90
	Bukoba R.	Int.	344					145	8 144	59	3 2 -	146 7	102	-	398	-	-	114
	Karagwe	N/Int.	293					16	6 128	13	54 4 241	75 5	15	-	102	23	-	-
	Muleba	N/Int.	274					16	3 315	12	- - -	110 5	14	18	100	12	-	20
	Ngara	N/Int.	158					12	3 51	7	- - -	- -	19	-	148	22	-	-
			(1279)					(316)	(23) (670)	(192)	(58) (10) (265)	(601) (24)	(283)	(18)	(830)	(289)	(28)	(224)
MWANZA	Kwimba	Int.	428					395	- -	12	- - -	209 4	36	37	269	118	20	43
	Magu	Int.	311					250	- -	73	8 4 -	356 21	94	44	86	60	-	92
	Mwanza (M)	Int.	223					106	3 38	64	- 4 -	214 30	56	68	151	255	17	149
	Geita	N/Int.	439					56	- -	-	- - -	- -	-	-	110	-	-	-
	Sengerema	N/Int.	304					20	- -	-	- - -	- -	-	-	32	-	-	-
	Ukerewe	N/Int.	173					50	- -	22	- - -	- 1	20	-	80	11	-	-
			(1878)					(877)	(3) (38)	(171)	(8) (8) (-)	(779) (56)	(206)	(149)	(728)	(444)	(37)	(284)
MARA	Banda	Int.	201					145	2 17	105	- 4 107	121 51	64	44	256	63	8	88
	Musoma (R)	Int.	247					42	2 12	35	- 2 -	25 18	46	20	48	40	18	40
	Serengeti	N/Int.	113					29	2 24	44	- 1 -	- 6	22	-	22	28	-	41
	Tarime	N/Int.	341					8	5 104	-	- - -	6 6	34	-	30	29	-	-
			(902)					(224)	(11)(157)	(184)	(-) (7) (107)	(152) (81)	(166)	(64)	(356)	(160)	(26)	(169)
TOTAL			4059					1417	37 865	547	66 25 372	1532 161	655	231	1914	893	91	677

Total Population estimates (1988) inc. urban

Kagera 1,326,183
Mwanza 1,878,271
Mara 920,942

EST POP - Estimated Population; Shallow Wells: New-Hesawa; Reh - Rehabilitated (Non-Hesawa); Piped Water Schemes; No. - Number of Water Schemes; No. DPs - Number of Domestic Points; ITWS - Improved Traditional Water Sources; HH-Household; INST - Institutional; WJ - Water Jars; VHW - Village Health Workers; TBA - Traditional Birth Attendants; VW & DPCT - Village Well & Domestic Point Caretakers; VP - Village Fundis; SK - Storekeepers; SG - Study Groups

APPENDIX 4.

The Village Study:
Study team members and list of study villages.

VILLAGE STUDY TEAM MEMBERS

	Team A	Team B	Team C
Team Leader	Mr Oenga	Ms Boesveld	Mr Makerere
Health specialist	Mr Nyonyo (Mwanza)	Mrs Hassan (Magu)	Mrs Nsubunga (Bukoba)
Water specialist	Mr Migoha (Ngara)	Mr Rweyemamu (Serengeti)	Mr Karugwa (Kwimba)
Comm.Dev. specialist	Mrs Masansa (Bunda)	Mr Kaunda (Mara)	Mr Muganyizi (Bukoba)

STUDY VILLAGES: SUMMARY LIST.

KAGERA REGION

Bukoba Rural District
Izimbya Ward
1.Kyaitoke

Kaibanja Ward
2.Kaibenja

Kanyigo Ward
3.Kashenye

Karagwe District
Bugene Ward
4.Rukole

Nkwenda Ward
5.Kimuli
(CONTROL)

Kaisho Ward
6.Nyabishenge

Biharamulo District
Chato Ward
7.Chato

Ichwankima Ward
8.Mwangaza

Kigongo Ward
9.Kibehe

MWANZA REGION

Kwimba District
Misungwi Ward
10.Iteja

Lyoma Ward
11.Nkungulu

Malya Ward
12.Malya

Igongwa Ward
13.Manguruma

Usagara Ward
14.Usagara
(CONTROL)

Magu District
Nyanguge Ward
15.Matela
16.Muda

Kahangara Ward
17.Kahangara
18.Bundilya

Mwanza District
Buswelu Ward
19.Nyamhongolo

Sangabuye Ward
20.Nyafula

Bugogwa Ward
21.Igogwe

MARA REGION

Bunda District
Nyamusa Ward
22.Makongoro

Hunyari Ward
23.Hunyari

Mugeta Ward
24.Salama A

Kibara Ward
25.Nakatuba
CONTROL

Musoma District
Butuguri Ward
26.Bukabwe

Nyamimange Ward
27.Kamgendi

Hesawa Evaluation. STUDY VILLAGES. Features analysis.

Key: REG Region; PWS Piped water supply; SW Shallow wells; ITWS Improved traditional water sources; RWHS Rainwater harvesting system; LATS Latrines; CTKR Caretakers; VHW Village health workers; TBA Traditional birth attendants; SG Study groups; HO Scheme handed over; FUN Fundis trained; SK Storekeeper; YR Year project started.

NO.	REG	PWS	SW	ITWS	RWHS	LATS	CTKR	VHW	TBA	SG	HO	FUN	SK	YR	
1	KAG		*	*	*	*	*	*		*	*			85	
2	KAG		*	*			*	*							
3	KAG	*					*	*						86	
4	KAG				*	*		*						90	
5	KAG														CONTROL
6	KAG	*	*	*							*			88	
7	KAG	*	*		*			*							
8	KAG		*	*		*		*		*		*	*		
9	KAG		*	*	*		*	*				*			
10	MWA		*				*				*				
11	MWA		*				*	*		*	*	*	*	89	
12	MWA		*			*		*	*			*		90	
13	MWA		*	*	*	*		*	*			*			
14	MWA														CONTROL
15	MWA		*	*		*	*	*				*		85	
16	MWA		*	*	*	*	*	*		*		*			
17	MWA		*						*					91	
18	MWA		*					*	*					91	
19	MWA	*	*	*		*	*	*	*			*	*		
20	MWA		*	*		*	*	*	*			*	*	85	
21	MWA		*	*		*	*	*	*		*	*	*	87	
22	MAR		*	*	*	*	*	*	*			*	*		
23	MAR		*	*		*	*					*			
24	MAR		*	*			*	*				*		91	
25	MAR														CONTROL
26	MAR			*						*					
27	MAR		*	*		*	*	*	*	*		*	*		
TOTAL		4	21	16	7	13	15	19	9	6	5	13	7		

APPENDIX 5.

Methods used in the Districts Workshops.

THE DISTRICTS WORKSHOPS

Objectives of the districts workshops

The participatory workshops for district team members had a number of purposes, and provided a variety of outcomes.

First and foremost, they provided a forum in which those most directly involved in the management of the day-to-day operations of the HESAWA programme could give their own assessment of their achievements to date and map out the key issues which they see as priorities in the next phase.

Second, the workshops created an opportunity for both the evaluation team and the participants to obtain an overview of the districts' own perception and understanding of the aims and objectives of the HESAWA programme.

Third, they provided insights into the understanding of the district-level staff of their position within the overall organizational structure through which the HESAWA programme is implemented.

Fourth, they helped to reveal participants' attitudes towards rural communities, and their perceptions of the relationship between government workers and villagers as expressed through the HESAWA programme.

Finally, the workshops provoked interesting discussions on the sustainability of the benefits achieved at village level and of district capacities to sustain long-term support services.

Workshop methodology

Districts workshops were held in all three regions, and were attended by representatives from both integrated and non-integrated districts. All three workshops followed the same schedule, and produced a series of charts and checklists which were built up by the participants and facilitators through the completion of four simple activities.

Activity 1: Objectives and achievements. The first activity was a simple mapping and self-evaluation exercise in which participants defined the objectives and achievements of the HESAWA programme. All participants were given cards and asked to write down as many objectives as they could think of, each one on a separate card. These were displayed on a large wall chart. Once participants were satisfied that all cards had been completed, they were reviewed and sorted out under a number of different headings. The number of cards on the chart was reduced by removing those which were repetitions of others, until eventually an agreed and sorted list of objectives was arrived at.

As the charts show, there was a high degree of consensus across all three regions on the basic aims of the programme.

After clarifying the objectives, participants were asked to produce two further series of cards, one to show what has been achieved to date, and the other to show the continuing shortcomings of the programme.

Activity 2: District organization charts. For the next activity participants were asked to work in groups to prepare organizational charts showing the way in which the HESAWA programme was related to the formal government structure at district level. Each group then presented its chart and pointed out, from their point of view as implementors, the strengths and weaknesses of the way in which the programme is organized. This activity stimulated a general discussion on the impacts of the HESAWA programme on the government structure, and the effects of this on prospects for the long-term sustainability of the approach.

Activity 3. Preconditions for sustainability. In the third activity participants identified and discussed the preconditions which must be satisfied to ensure the sustainability of both the programme achievements and of the HESAWA approach itself. It was recognized that preconditions will have to be met both in the villages and within the government system.

Activity 4. Future directions. The final activity drew together the outputs of the previous three by analyzing the gaps in current levels of achievement, the problem areas seen in government organization and capacity, and the conditions which still need to be fulfilled in order to improve sustainability, and presented the main lessons learned in the form of a checklist of issues to be addressed in the next phase of programme implementation.

At the end of each workshop, the participants provided feedback to the facilitators through a workshop evaluation exercise. Each participant wrote four cards, two indicating good points of the workshop and two indicating weak points. These were read out and analyzed before the closing of the workshop.

The completed charts and lists are shown in Appendices 6-8.

APPENDIX 6.

District Workshop Outputs: Kagera Region.

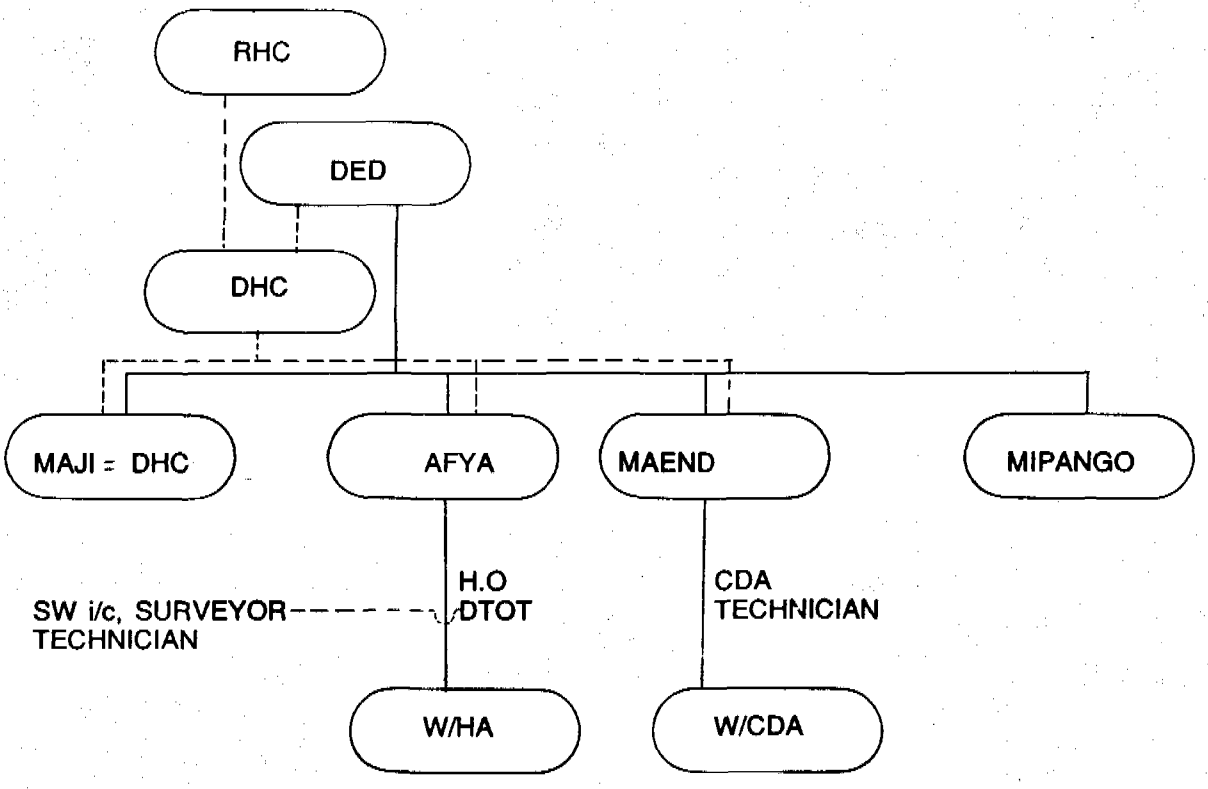
PARTICIPATORY DISTRICT WORKSHOP - KAGERA REGION 27.08.92

1. HESAWA objectives, achievements and gaps

Objectives	Achievements	Gaps
1.1 Better life through self-help 1.2 Educate people to be self-reliant	1.1 Training of village craftsmen on appropriate technology successful 1.2 Success in training under study group 1.3 Training VHW successful 1.4 Water/health/HESAWA committee established 1.5 HESAWA concept known in pilot villages 1.6 Some have discovered the importance of self help 1.7 Water accounts in most villages opened	1.1 The impact of study group is very limited 1.2 Community participation in some areas bottleneck 1.3 Education on self-reliance to village and district leaders not given enough emphasis 1.4 Education on HESAWA concept is narrowed and concentrated on HESAWA staff mainly
2.1 Healthy and able to engage in productive activities 2.2 Raise standard of living by reducing basic problems of health, water and sanitation	2.1 Availability of water has improved life standard of individuals 2.2 Labour time reduced by neamess to water	2.1 Not much change in the standard of living in programme villages (not substantially - not richer)
3.1 To improve health of the whole community 3.2 To improve health in rural population through water supply and sanitation, and health sanitation 3.3 To endeavour to reduce basic problems of health and water 3.4 To attain of longer life span	3.1 HESAWA has given enlightment to rural people in health/sanitation in water in programme areas. 3.2 Water borne diseases have been reduced in some areas.	3.1 Some people do not change behaviour
4.1 To improve access of safe water to the community 4.2 To improve rainwater harvesting	4.1 RWH very successful in some areas 4.2 Access to water improved in programme villages	4.1 RWH technology not yet realized in some areas 4.2 A limited number get water through HESAWA (progress limited!) 4.3 O&M for the finished projects not yet achieved 4.4 Earlier SIDA-supported water projects have become white elephants after HESAWA concept was applied (HESAWA approach disregards previous water improvement efforts)
5.1 To improve water quality 5.2 To ensure that people get enough and safe water	5.1 Traditional water and sanitation improvement achieved	5.1 HESAWA does not do water quality monitoring (only access to water)
6.1 Bring back the status of environment-forest 6.2 Aforestation to improve traditional water sources		6.1 Most TWS are bare with no trees
7.1 To educate people on environmental sanitation 7.2 Sanitation through latrinization	7.1 Health education to communities improved through VHW 7.2 Sanitation through latrinization effected and successful in some places	7.1 Sanitation technology is very costly to community 7.2 Little success in environment sanitation 7.3 Latrinization and sanitation not achieved in some villages 7.4 Customs of people still a problem 7.5 Health education and environment sanitation not given due attention 7.6 Water supply to improve sanitation still a bottleneck
8.1 Reducing the workload of women 8.2 Establishment of economic activities to women groups through Hesawa programme 8.3 To let women participate fully in programme in decision-making	8.1 (Few) women who engage in the activities are very successful 8.2 Reduction of women workload through improvement of access to water	8.1 Very few women are incorporated in decision-making 8.2 Some men are not able to be leaders 8.3 Most women feel shy to participate as leaders

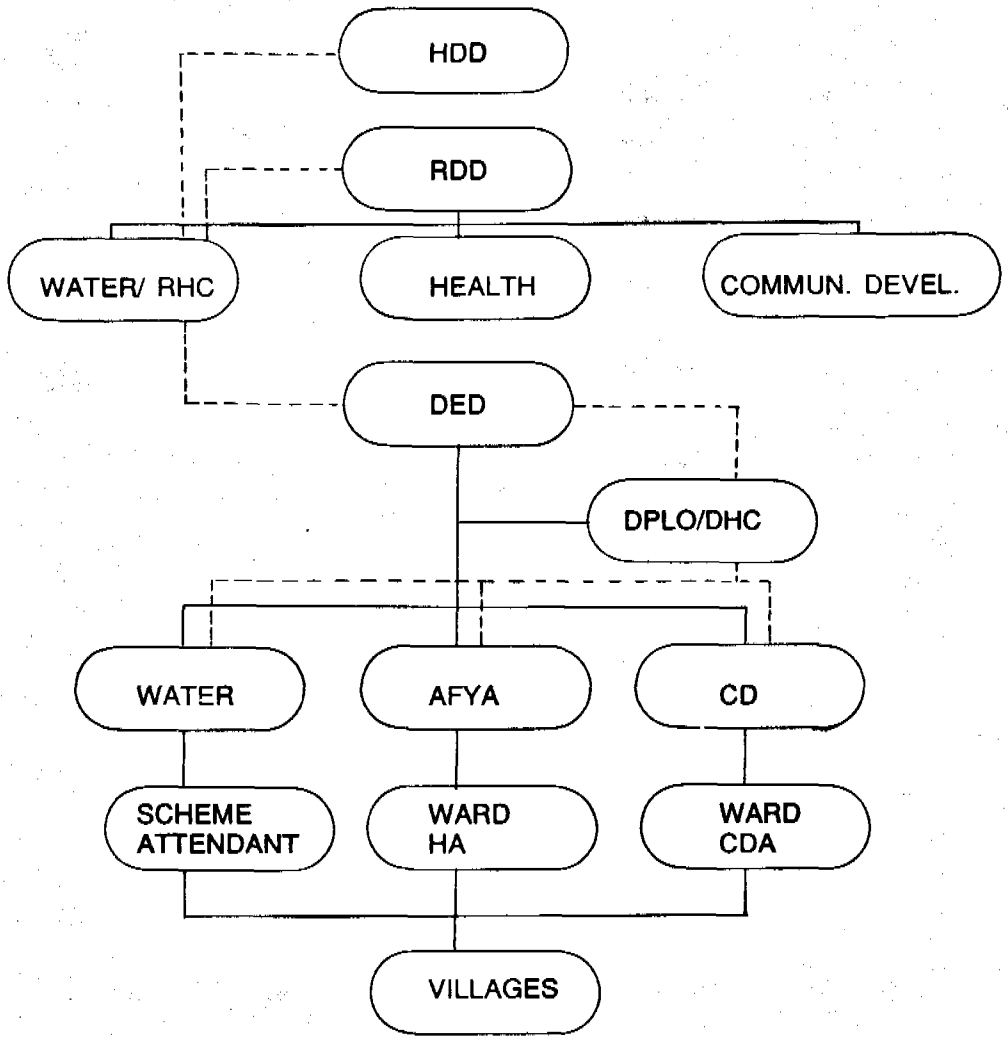
2. Organizational structure of HESAWA, Kagera Region

2.1 Biharamulo District (Integrated)

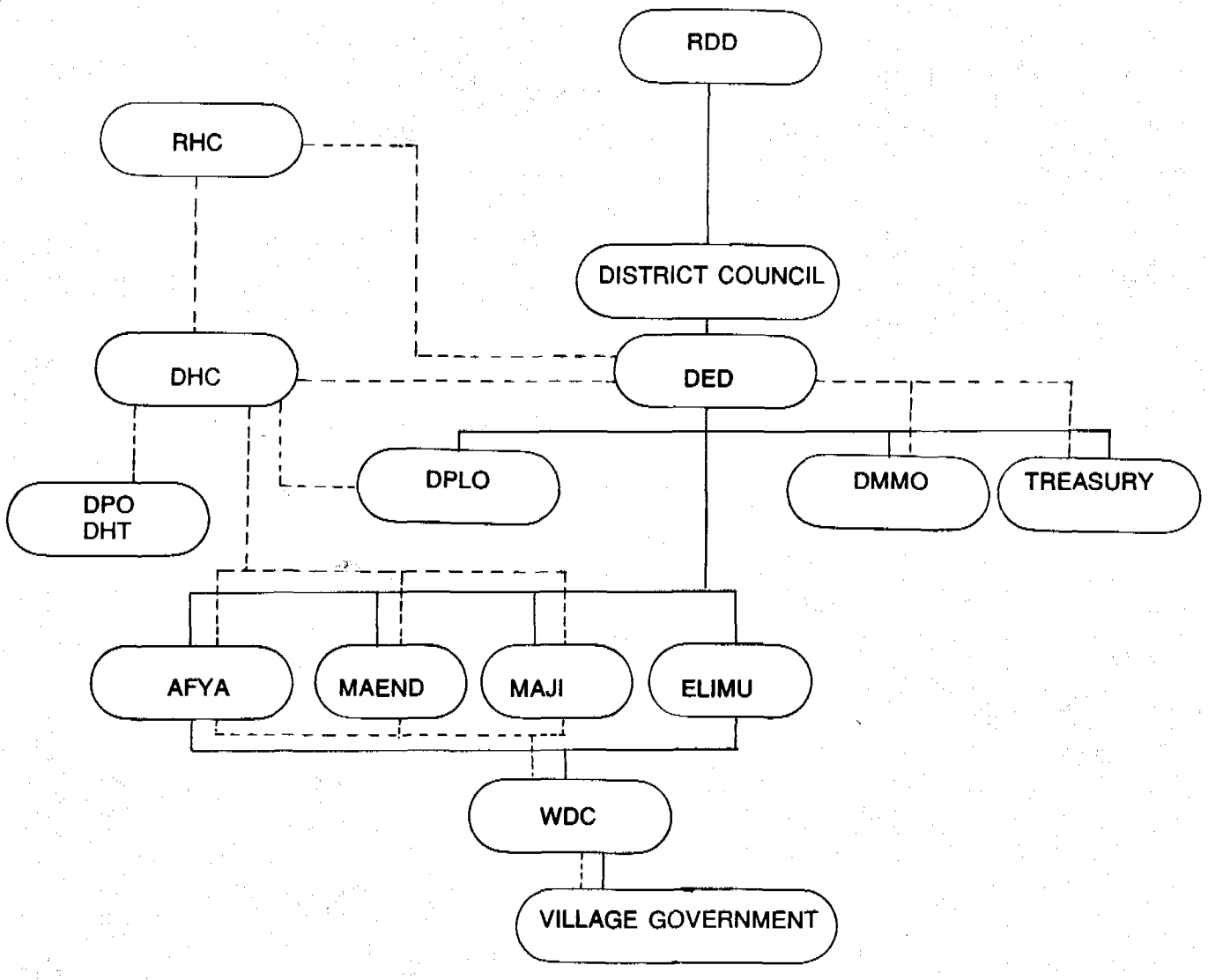


remarks: DMO may designate an officer (e.g. DHO) to do the Hesawa-tasks

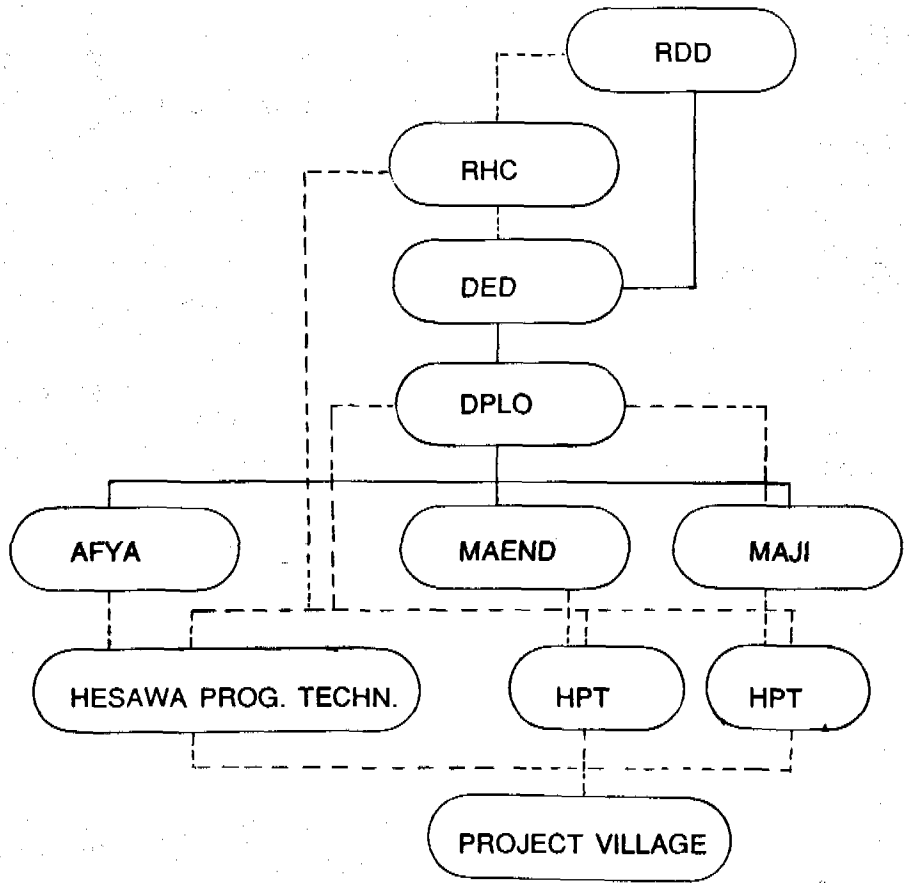
2.2 Muleba District (non-integrated)



2.3 Bukoba Rural District



2.4 Karagwe District (non-integrated)



2.5 Brief analysis of Strengths, Weaknesses, Constraints and Improvements of Mesawa Organization

* non-integrated structure is better

* organizational structure for integrated districts are better (expressed by 3 participants)
  - DHC should be different from DPLO
  - DHC should be appointed by DED
  - DHC poor in project management and administration to be trained / DED to be provided transport
  - DHC - reduced burden of DPLO!
  - The DPLO can now deal with other development programmes
  - DWE cannot be DHC it as: 1. He also has to coordinate then with Maendeleo/AFYA
    2. DWE also has non-Hesawa funded activities
  - because regular follow-up and feed back
  - because more decentralized

* As far as finance is considered integrated but for organization the non-integrated is better

3. Sustainability KAGERA REGION

3.1 Village	Satisfied	Partly Satisfied	Non Satisfied
Committees Established & properly functioning	*		
Effective committees Organization! Financial managements		*	
Village fund/account - continuing contributions (not yet required!)		*	*
Information on costs			*
Attitude of self-reliance (Awareness/motivation)		*	
Availability of spares			*
Affordability of spares (not known prices)			*
Technical skills (trained but not used ward mechanic)		*	
Availability of tools Some got tools/some lost		*	
Awareness of goals Felt need - appreciation		*	
Technology appropriate to village circumstances		*	
Presence of village stores		*	
Well motivated caretakers (of WSS)		*	
Sustainable revolving funds for latrines slabs			*
Sustainable revolving funds for water jars			*
Well motivated VHWS			*
Open channels of communication		*	

3. Sustainability (continued) KAGERA REGION

3.2 District	Satisfied	Partly Satisfied	Non Satisfied
Well trained staff (effective HRD programme not always relevant!)		*	
Commitment to community-based approach		*	
Local political support (through information/involvement local politicians/leaders			*
Adequate funds available		*	
Good coordination of integration HESAWA		*	
Sustainable revolving store (legal support is available!)			*
Adequate transport			*
Open communication channel to villages		*	
Effective monitoring system and info management			*

4. Future Directions KAGERA REGION

- To intensify training at village level.

  Village committee:

  a. Management of revolving fund for - jars
     - slabs
  b. Management and communication
  c. Financial aspects
  d. Planning/budgeting
  e. Info concept-orientation

- Review, establish and strengthen monitoring at all levels:

  a. water quality
  b. cost of installations
  c. cost of O&M
  d. availability of spares
  e. community maintenance (incl. caretakers)
  f. community satisfaction on technology

- Review and adapt implementing technologies to meet the needs of people.
- Establish effective distribution of spares/tools.
- Study (application) possible economic benefits from programme.
- Intensify/speed up handing over of completed water points (incl. spares, tools, trained caretakers).
- To spread RWH-jar technologies to new areas.
- Review and intensify latrine programme.
- To study/test/introduce ways to improve motivation VHWs/caretakers!
- To strengthen Hyg. Ed. in programme.
- To study the need for environmental protection/considerations for implementation.
- To review and strengthen study group programme.
- To strengthen district support capacitites for sustainability (funds, staff, transportation).

5. List of Participants Kagera District Workshop

Name	Position	District
H.H. Nyamugali	DED	Ngara
Dr. C. Mutabuzi	DMO	Ngara
A.M. Nsubuga	D. VHWP Coord.	Bukoba (R)
A.M. Kisili	DPO (Promotion Officer)	Bukoba (R)
E. Basasingihe	CD Technician	Ngara
D.K. Mulokozi	DPLO	Ngara
O.K. Mwasha	DED	Karagwe
J.A. Ndyetagura	DV HWP Coord.	Karagwe
I.B. Mashulano	DPLO	Karagwe
Y. Abdulkarim	DHO	Muleba
I.M. Kaura	DPLO	Muleba
T.B.F. Kwatilao	DWE	Muleba
C.H.M. Minja	DED	Muleba
S.Majiba	DPO	Bimulo
S.Rwegoshora	CDT	Biharamulo
A.K.S. Byejwe	DED	Bukoba Rural
G.A. Nyongoli	H.O.	Biharamulo
G. E. Kagaruki	DED	Biharamulo
M. Marwa	DPLO	Biharamulo

APPENDIX 7.

District Workshop Outputs: Mara Region.

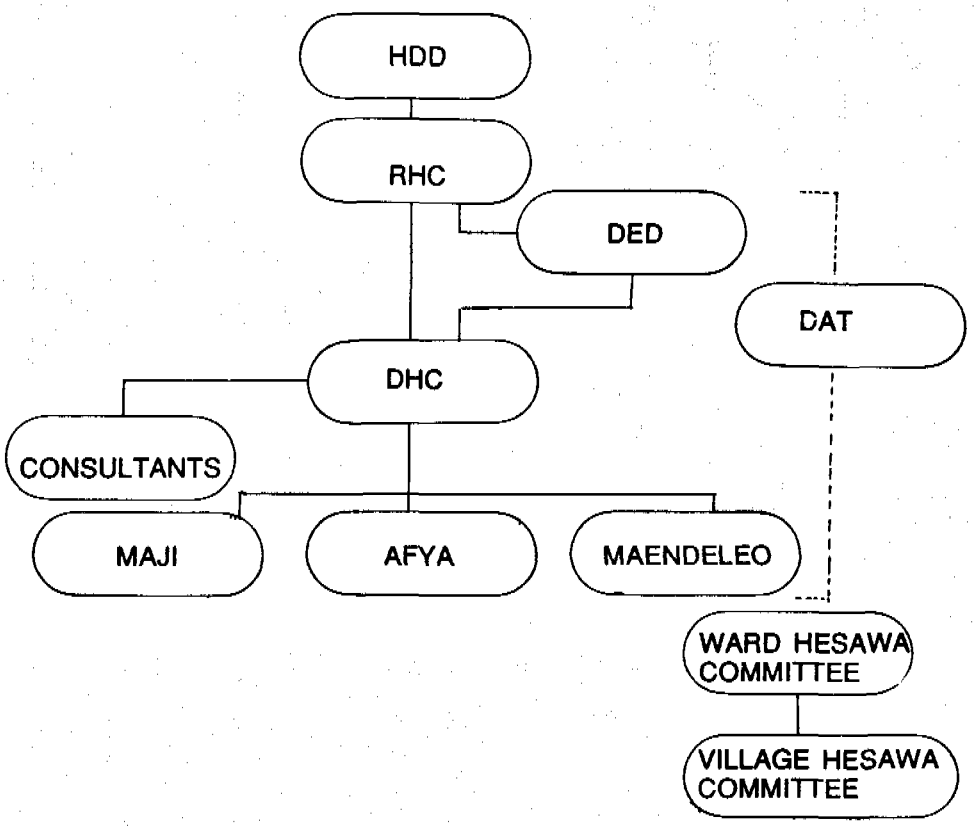
PARTICIPATORY DISTRICT WORKSHOP - MARA REGION 01.09.92

1. HESAWA objectives, achievements and gaps

Objective	Achievements	Gaps
1.1 To improve health in rural areas 1.1 To improve health facilities to the people	1.1 Health improved in most villages 1.2 HESAWA wells improved health of people in HESAWA areas 1.3 Diseases decreased 1.4 People with good health participate in more activities 1.5 Water-borne diseases cut	
2.1 To improve water supply quantity 2.2 To improve water supply in quality 2.3 To provide clean and safe water through : well construction, tranditional water sources construction 2.4 Rehabilitation of existing water supplies 2.5 to supply ruraly w.s. by: digging s/w, gravity schemes, piped schemes 2.6 To apply RWH through: household tanks/jars	2.1 Gravity schemes constructed in Bunda are working well 2.2 Water supply quantity improved 2.3 SW construction/piped gravity improved quality & quantity of water 2.4 Improvement of water supply in many villages 2.5 Rehabilitation of most w.s. schemes 2.6 Numerous TWS improved	1.1 Rainwater harvesting not been done 1.2 Some drilled wells (medium deep) are dry 1.3 More SWs to be constructed to meet demand 1.4 Non availability of spare parts for SWs 1.5 Most SWs run dry during dry season 1.6 Construction household tanks not done 1.7 Lack of modern tools for survey and drilling
3.1 Improve sanitation 3.2 To construct HH latrines 3.3 To construct inst. latrines 3.4 To improve hygiene 3.5 To give public health education 3.6 To give school health package	3.1 Sanitation in villages to some extent improved 3.2 Health education performed 3.3 Household latrinization accepted by community 3.4 Public health education taught to most communities	3.1 Household latrine slabs too expensive
4.1 HRD capacity building 4.2 To improve community capacities on management on O&M 4.3 Through HRD communities will be able to carry out their activities on their own 4.4 Encourage women participation in management 4.5 Women involvement right from decision making to O&M 4.6 Training VHWs 4.7 To improve CP 4.8 To build capacities of executive agencies	4.1 Women in HESAWA areas have gained time for other activities incl. general cleanliness 4.2 Community Participation improved 4.3 All HESAWA villages have VHWs 4.4 VHW training successful 4.5 Village fundis trained 4.6 Manpower improved in villages 4.7 Villages capacities improved in planning and budgetting 4.8 Employment Tanzanian staff increased 4.9 Executing staff HESAWA programme trained 4.10 Some villages opened HESAWA accounts 4.11 O&M funds for piped schemes requested from DC	4.1 No incentives to VHWs from village councils 4.2 Contribution of village HESAWA accounts inadequate 4.3 Community Participation needs strengthening 4.4 Women involvement in decision-making needs regular promotion 4.5 Limiting purchasing power of villagers hinders active progress of HH R.F. systems 4.6 District Council contribution for O&M inadequate 4.7 Drop out of village fundis continues 4.8 HRD for dept. heads is insufficient 4.9 Offices for HESAWA staff not enough 4.10 No defined incentive for executing staff at all levels 4.11 Village fundis do not get same terms for transport provision as VHWs 4.12 Transportation to go to remote areas insufficient 4.13 HESAWA does not provide same transport for non-integrated districts
5.1 To assist animals for health water 5.2 To have enough water for building activities		
6.1 To assist aforestation 6.2 To make environmental beauty and conservation		6.1 Environmental beauty and conservation very minimal

2. Organizational structure of HESAWA Mara Region

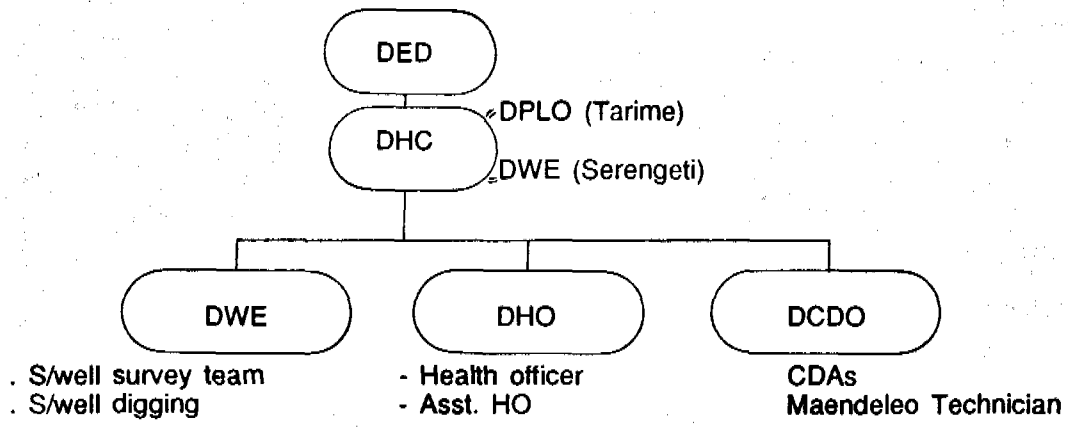
2.1 Organizational structure as drawn by staff from integrated districts



Duties and resources of different HESAWA-involved offices

Office	Duties	Resources
DAT	- decision making body to district	none
DED	- accounting officer/DAT chairman	none
DHC	- supervising support and coordination of day-to-day activities of the programme on behalf of DED	- training (limited) - vehicle (pool cars) - motorcycles
Executing agencies MAJI AFYA MAENDELEO	- implementation of departmental activities of the programme	- training (limited) - motor cycles (not all) - working tools
Consultants	- provision of consultancy services to executing agencies	- transport
Ward Hesawa committee	- coordinating body of Hesawa activities	- training - bicyclette - transport
Village Hesawa committee	- a supervising body for Hesawa activities	- training - transport (bicyclettes)

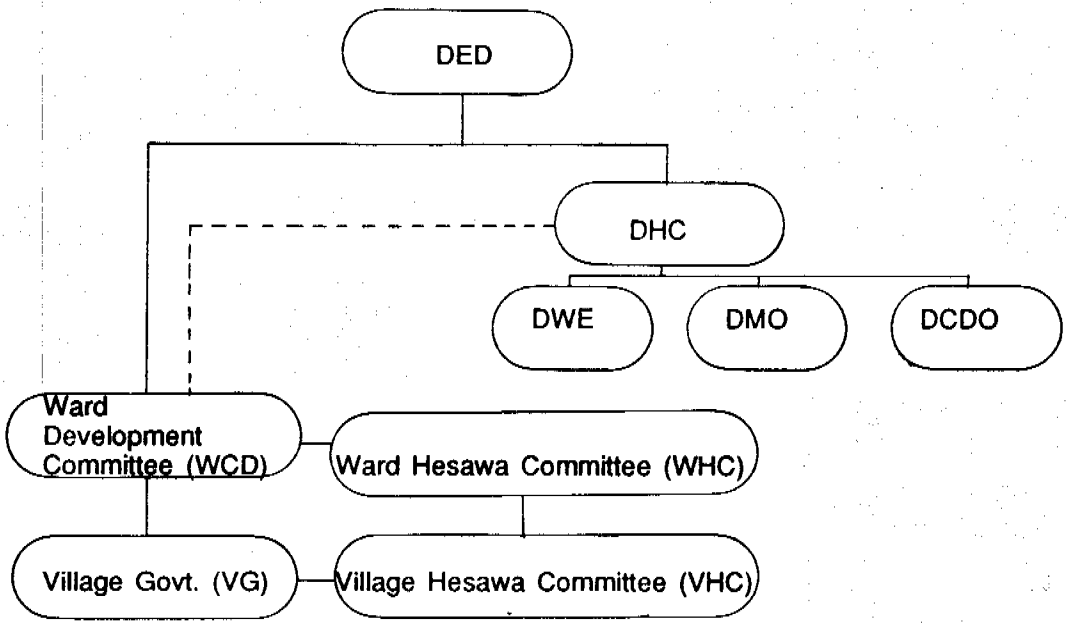
2.2 Organizational strucutre as drawn up by staff from non-integrated districts



Duties and resources different Hesawa-involved offices

Office	Duties	Resources
DHC	- Coordination between executing agencies and DED - Inspection of the activities - Compiling monthly quarterly and annual reports	- lorry - motorcycle for Serengeti - motorcycle for Tarime
DCDO	- Budgets, Estimates - Supervision of Maendeleo activities	- motorcycle (Serengeti) - DCDO TAE no motorcycles and CDAs & Maendeleo Tech.
DHO	- Budgets, Estimates - Supervision of AFYA activities	- motorcyle (Serengeti) - non Tarime - HO, AHO have no motorcycle both Tarime and Serengeti
DWE	- Budget, estimates - Supervision of MAYI activities	- motorcycle (Tarime and Serengeti - no motorcycle for S/W technician in Tarime - Motorcycle for S/W technician in Serengeti

2.3 Organizational strucutre of Hesawa drawn up by DPOs Mara Region



Duties and resources of different Hwsawa-involved offices

DED	- overseer of the programme in the district	- transport - office equipment - materials & tools - spare parts
WDC,WHC VG, VHE	- monitor programme activities training - planning of activities - promoter of activities - report on program - evaluate progress	
DWE	- head water construction activities and supervise - budgets - reports progress	transport (pool)
DCDO	- supervise, report, budget ITWS & latrines	transport (pool)
DMO/DHO	- in charge of health and sanitation activities - reports, budgets	transport (pool)
VHC	- promoter, supervise, reports	training transport (bicycle)
DHC	- coordinator ded & ex. Agencies - coordinator activities of program - reports	transport (mb) experts

3. Sustainability MARA REGION

Village level conditions for sustainability

Elements	Satisfactory	Partly Satisfied	Not Satisfied
Enough trained fundis		*	
Village HESAWA committees	*		
- Effective H. committees		*	
Strong HESAWA accounts			*
Trained VHWs	*		
Adequate spares			*
Spare distribution system			*
Adequate tools			*
Commitment of community		*	
Good leadership		*	
Latrinization capacity in community		*	
Affordable technical opitons		*	
Strong involvement of women (decision-making)		*	
Adequate coverage			*
Decision-making by women as well as men			*
Back-up support			
- Technical skills		*	
- Management advice		*	
- Water quality monitoring		*	

4. Future Directions MARA REGION

The HESAWA Programme has to emphasize:

- To strengthen the training of people involved in HESAWA programme at all levels.

  The formulations on the participants' cards were:

  a. Training of field workers
  b. To have trained staff who could perform the HESAWA Dept. with less supervision
  c. Continue training programmes at all levels (district-village) personal
  d. Training HESAWA personnel and committees
  e. Training of community staff
  f. HESAWA to offer also long-term courses.
  g. To have enough number of staff who should perform HESAWA programme according to agreement
  h. To give equal training opportunities to all staff with local consultants as well

- To provide required transport to HESAWA district/regions.

  The formulations on the participants' cards were:

  a. Provision of transport facilities
  b. Provision of transport to executing agencies
  c. Adequate transport facilities to HESAWA personnel
  d. More equipment and transport
  e. Better way of provision transport facilities

- To fairly distribute transport over district and regions
- Fairness in distribution of transport in all regions/district
- To continue HESAWA programme (to continue assistance in HESAWA programme) [1]/
- To revise implementation strategy (phasing in/out to be revised) (preliminary feasibility studies to be taken care of)
- To make available spares, tools and equipment (to make adequate spares available) (procurement of working tools and equipment)
- To strengthen HH latrine programme (subsidy on household latrinization system)
- To revise budget and system (yearly budget cuts should not continue)
- To introduce an incentive system for all HESAWA staff (provide incentives to executing personnel)
- To include provision for cattle watering (possibility to provide water to cattle herders)

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[1]/ Phrases between brackets are the formulations on the cards.

5. Evaluation of Mara District Workshop Evaluation By Participants

Good		Scores
1.	Work well prepared	5
2.	Facilitators did their job as intended	4
3.	Good suggestions shared by seminar	4
4.	Good food	2
5.	Good methodology	3

Bad		
1.	Workshop started late	1
2.	Lack of prior information on timetable	1
3.	No allowances provided	4
4.	Too long	2
5.	Time short	1
6.	No bad thing	3

List of participants

Name		Title	District
1.	D.F. Dondidondi	DPO	Bunda
2.	M.K.A. Magohe	DHC	Bunda
3.	S.S.Z. Lugira	DCDO	Bunda
4.	D.R.N. Msaki	DCDO	Serengeti
5.	Georgina Mutungi	CDA	Musoma Rural
6.	George Nyabiro	Ag. DWE	Musoma Rural
7.	Deusdedit K. Kabhate	DHC	Musoma Rural
8.	Salehe N. Kamota	(MMO) for DED	Musoma Rural
9.	C.V. Rugakiza	DPO	Musoma Rural
10.	Joseph Canisius	DWE	Tarime
11.	Tingirawaniuma K.M.C [1]/	DED	Musoma Rural

[1]/ Did not attend workshop - sent some notes

APPENDIX 8.

District Workshop Outputs: Mwanza Region.

PARTICIPATORY DISTRICT WORKSHOP - MWANZA REGION 03.09.92

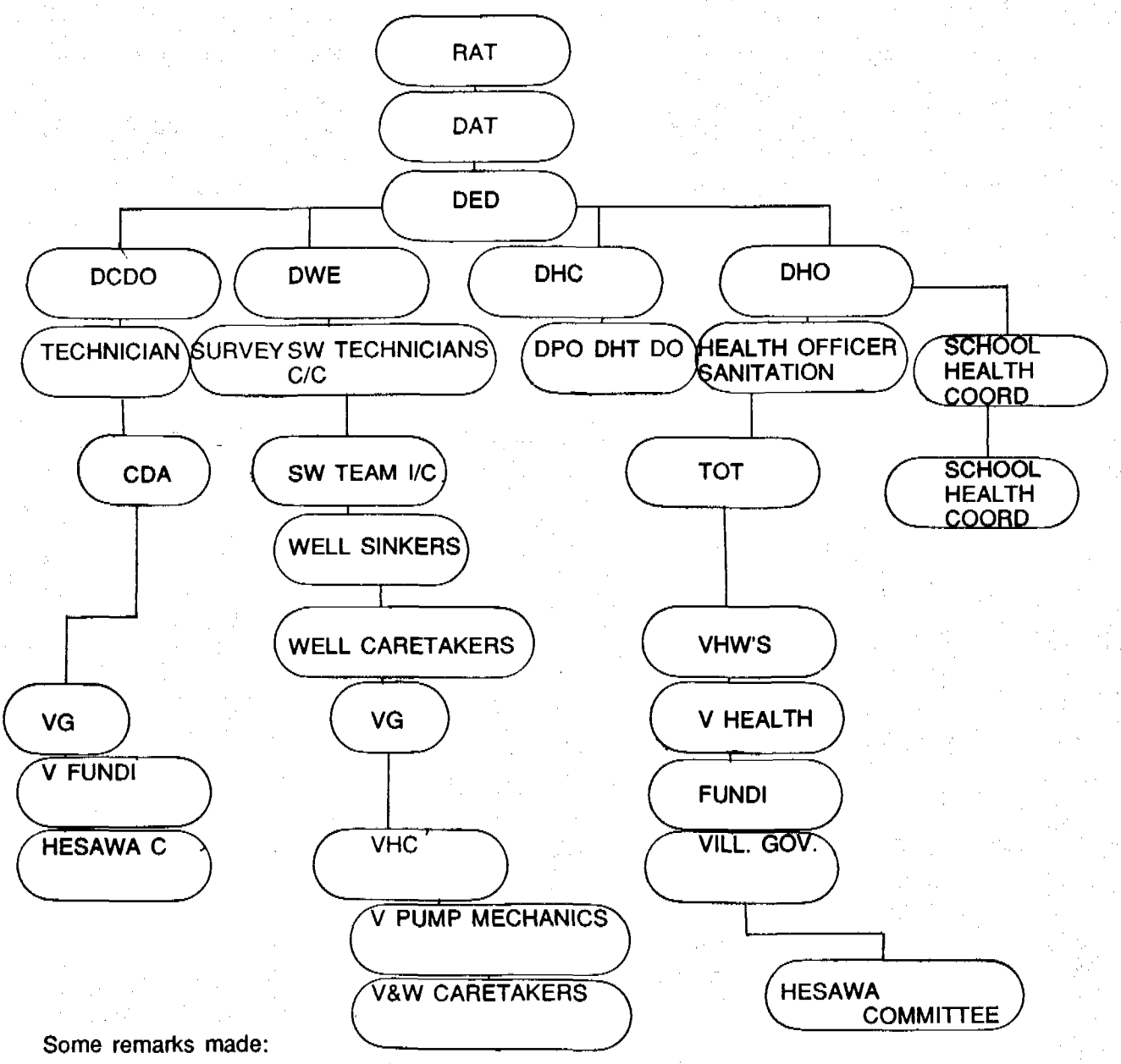
1. HESAWA objectives, achievements and gaps

Objectives	Achievements	Gaps
1.1 To improve the health of the people in rural areas 1.2 Promote health standard of people 1.3 To improve hygiene of people 1.4 To reduce incidence of water-borne diseases	1.1 In some integrated villages health of people improved 1.2 People use water from improved water sources	Health standard is still low
2.1 To assist villages to get reliable water for domestic uses 2.2 To provide clean water 2.3 To improve water supply quantity	2.1 Water supply (incl. sw) improved 2.2 People provided with clean water in HESAWA pilot areas 2.3 Over 40,000 people in most areas provided with water 2.4 Traditional and water sources improved 2.5 Villages without water before, have water now 2.6 Water supply services encouraged 2.7 Few villages have enough reliable water sources	2.1 More water sources to be improved 2.2 Many villages still need water 2.3 Finishing (workmanship) of projects to be improved 2.4 Most primary schools have not yet been provided with water by HESAWA
3.1 To promote the CP fully so that the programme is sustained 3.2 To enable people to be involved in identification and project implementation 3.3 To educate villagers in identifying their own needs	3.1 People in rural areas are now participating more in decision-making and project implementation 3.2 Importance of CP understood and implemented	3.1 Involving people in digging more wells on self-help schemes 3.2 To give wider choice of technology to villagers 3.3 More people's participation needed 3.4 Need to promote people in non-integrated areas or villages on their responsibilities 3.5 Not enough people contribute money for SWS 3.6 More education to the people on HESAWA concept
4.1 To help rural women to participate in productive activities 4.2 To involve women and reduce their workload 4.3 To involve women in decision-making and implementation	4.1 Villagers are contributing to HESAWA accounts 4.2 Women are now participating more in other economic activities rather than looking for water most of their time 4.3 Women participation achieved	4.1 Women participation still poor
5.1 To improve Tanzania on gender awareness		5.1 Gender awareness to be based on Tanzanian stiuation (more research) 5.2 Gender issue is not known to many people
6.1 To improve health education at village level 6.2 To promote attitude transformation of the community towards clean and safe water	6.1 Health education done in integrated villages 6.2 Health education to the people 6.3 A number of worm infections due to hygiene practices reduced 6.4 Continous education 6.5 VHWs are being trained	6.1 Promotion still needed to number of villages to improve health education 6.2 To improve training of VHW's
7.1. To introduce appropriate technologies	7.1 Appropriate technology introduced	7.1 Improve appropriate technology
8.1 To improve sanitation of the people 8.2 To enable villagers to build good latrines 8.3 To provide cheap toilets	8.1 To some extent latrinization has been improved 8.2 Same institutions provided with latrines	8.1 Still need to educate rural population the importance of using latrine 8.2 More institutions to be provided with latrines
9.1 To improve quality of life of the people 9.2 To improve economic situation of people 9.3 To make people richer	9.1 Garden at/around SW 9.2 Improvement of living conditions of people	
10.1 To develop sustainable approach of the programme	10.1 The programme becoming a concept to be used everywhere	

11.1 To build government capacities	11.1 Many cars 11.2 Local government recognizing their responsibilities 11.3 Materials are adequate	11.1 Provide trasport to the implementors and their facilitators (DED) 11.2 Useless cars instead of lorries for working 11.3 HRD is not well- organized on the other side 11.4 Field staff were forgotten 11.5 Improve accountability 11.6 Policy makers to be more educated on situation in villages 11.7 HRD funds to be increased 11.8 HESAWA should give incentives to employees working in HESAWA Programme 11.9 To improve training and facilities for extension workers 11.10 Expand implementation area of the programme 11.11 Reduce the role of land officer
12.1 To train village personnel	12.1 Training well-care takers 12.2 Training pump mechanics	12.1 Train well-care takers 12.2 Training pump mechanic
13.1 To protect the environment		13.1 Environment have not improved yet 13.2 To have more on environment (tree planting)
14.1 To improve the lot of the children	14.1 Schools provided with latrines 14.2 Health education in schools through VHWs	14.1 School health education

2. Organizational structure of Hesawa, Mwanza Region

2.1 Organizational structure



Some remarks made:

Hesawa is a completely separate structure outside the TZ government, which makes it more effective! (Not all agreed!!)

2.2 Analysis on strneghts, weaknesses, roles and responsibilities and means of Hesawa implementors

The strength of current organization

* The organization structure is simple and clear therefore it enables the programme smooth implementation

The weak points:

* integration from district level is not complete
* incorporate other heads of departments

Roles and responsibilities of main actors

1. DED (District Executive Director)
   - Overall in-charge of Hesawa Activities
   - Accounting Officer

2. District Hesawa Coordinator
   - Supervises day to day Hesawa activities
   - Coordinates executing agencies
   - Report writing
   - Planning and budgeting

3. Agencies
   DWE Supervision of water works
   DCDO Supervision of Maendeleo activities
   DHO Supervision of AFYA activities

4. DPO - Promotion

5. Hesawa Technician: advises

6. Village Council: Supervises Hesawa activities at village level

7. Village Hesawa Committee: Day to day supervision and implementation

8. VHW: Educate people on Health Programmes

9. Pump attendants: maintain pump

10. Village well caretaker
    - keeps well surroundings clean
    - greasing of pumps

11. Village fundis: construction work

Needed and present means

ACTORS	RESOURCES NEEDED	RESOURCES PROVIDED
a) Village users	Information Training facilities, funds	Information Hesawa A/C's
	Construction material	Construction material
b) Personnel	Training, facilities working tools, funds, teaching aids, transport	Training, some facilities Transport (unreliable)
c) Leaders	Information Training Transport	Information Training
DISTRICT LEVEL		
Executing agencies - coordination - MAJI - AFYA - Maendeleo - Consultancy - DED - Conslusions	Funds, training Facilities Transport, stationary Audio Visual Aids	Funds (not enough) Transport (inadequate) stationary Training (not enough) Field facilities (not enough)
Councillors Members of the Council	Indoctrination	

3. Conditions for sustainability MWANZA REGION

Village level

	Satisfied	Partly Satisfied	Not Satisfied
Acceptance and commitment/felt need		*	
Good information flow		*	
Good economic situation		*	
Financial management system			*
Willingness to pay		*	
Technical skills		**	
Management skills			*
Availability of spares			*
Availability of tools		*	
Extension services		*	
Extension services by VHWs	*		
Effective VHWs		*	
HESAWA/Management Committees established	*		
HESAWA/Management Committees effective		*	
Skills transfer in villages		*	
Clear definition of roles & responsibilities			*
Appropriate technologies		*	
Women involvement		*	
Affordable technologies		*	

4. Future Directions MWANZA REGION

HESAWA programme should put the following priorities:

Water

- To continue water programme and extend technologies (appropriate)
- To provide full coverage in programme/and outside programme area
- To give all districts the status "integrated"
- To extend programme to district towns (piped schemes)
- To improve availability of parts, effective O&M system
- To operationalize the O&M system
- To support local production of spare parts
- To assist in the provision of water for livestock

Community Participation

- To strengthen the promotion of community participation based on felt needs

Capacity Building

- To strengthen training for skills at all levels
- To strengthen training for change of attitude
- To provide adequate transport for all involved
- To facilitate the transfer of used transport from HESAWA programmes to district departments
- To improve the incentives for implementation staff

Health and Sanitation

- To strengthen latrinization
- To improve and operationalize the household latrine programmes
- To strengthen school health programme

Other

- To review staffing at all levels, starting with zonal level

- To broaden the scope and increase flexibility of women's involvement

Formulation on future directions on priorities from cards:

- Construction of shallow wells
- Integrated water schemes: shallow wells, boreholes and rainwater jars
- Shallow wells
- Traditional water sources
- Provision of water supply for domestic use
- Water facilities
- All villages be covered with water supplies through shallow wells
- Complete village shallow wells which are not in order and those uncompleted

- Provide full coverage of all villages in each district
- Wider choice of technology
- Extend fully to all districts

- Provision of piped water schemes at district headquarters

- Support to the local production of spare parts
- Establishment of spare parts system for O&M
- Establish spare parts shops at districts
- Provision of spare parts to most areas
- District bulk pump spare parts shop

- Dams for cattle
- Provision of water for other uses e.g. cattle

- Community participation
- Assistance to villagers in sustainability
- Promotion
- Promotion
- Participation of villagers on HESAWA programme in most areas
- Base programme on the people's felt need

- Capacity building
- Training of villagers involved in the day-to-day activities of the programme
- Impact technical skills

- All directives to districts or villages
- Educating the beneficiaries/villagers concerning the programme objectives
- Continuous education and information to villagers
- Training for both government employees and villagers
- More local fundis in all departments involved should be trained
- Implementors to undergo professional courses for appropritate technology
- Emphasis on human resources development

- Training of new VHWs and refresher courses to VHWs
- Field staff training and proper allowances

- Transport facilities
- Availablity of transport
- Provide lorry for each agency

- Give executing agencies motivation
- Sell old cars of the programme to HESAWA employees (incentives)
- Give loans to HESAWA employees so that they can build houses (incentives)
- Take equal respect to those who are producing

- Emphasize latrinization
- Health education on latrinization and sanitation
- Latrinization
- Coverage of latrinization to the villagers and institutions like primary schools
- Institutional latrinization

- Health education
- School health programme

- To eliminate unnecessary staff at zonal office

- To be flexible on women involvement

5. Workshop Evaluation

Good

1.	Good participation from both sides	3
2.	Participatory workshop/methodology good	4
3.	Facilitators were clear and well prepared	5
4.	Good organization	3
5.	Lessons were good	1
6.	Excellent food	1

Bad

1.	Too many cards	1
2.	Short notice	3
3.	Little allowances	8
4.	No time for break	3
5.	Lunch not good	7
6.	No timetable	1
7.	Too much time for discussion	2

6. List of Participants

District workshop HESAWA-Mwanza

Name	Title	District
S.L. Tofiki	AG DHC	Mwanza
G.P. Chale	Municipal Director	"
S.S. Buluba	S/well i/c	"
S.D.Mwalimban	Surveyor	"
Theonest Kishenyi	D.E.D.	Ukerewe
E.M.Kato	DWE	Ukerewe
J.A.Mwakasege	DCDU	Ukerewe
T.S.Maganga	DHO	Ilerewe
Madaha T.B.	DWE	Geita
J.W. Mwanganda	Ag. DCDO	Geita
J.Mgalula	DED	Geita
F.S. Massota	DHO	Geita
J.C. Mwaihojo	DWE	Sengerema
R.M.Itendelebanya	DWE	MAGU
A.B.Dongwe	DHC	MAGU
P.Ngassa	DED	MAGU
N.Mwakile	DPO	MAGU
S.A. Masso	DED	Kwimba
Karugwa R.H.G	DHC	Kwimba
E.J.Kahembe	DPO	
C.N.Gisema	DHO	Sengerema
G.E. Kisusi	AG.DEO (DED)	Sengerema

APPENDIX 9.

List of persons met during formal evaluation phase.

List of People Met

HESAWA Evaluation Mission, Phase III

SIDA - Dar es Salaam
Mr. Lars Norvik — Programme Officer Water and Health

Ministry of Health - Dar es Salaam
Mr. Andrew Y. Kahesa — Senior Health Officer

Ministry of Water - Dar es Salaam
Mr. Senguro — Ag. Dir. of Planning

Min. of Community Development, Women Affairs and Children
Mrs. Kimei — Ass. Commissioner Community Development

Zonal HESAWA Coordination Office

M.U. Mtui	HDD
P. Brandström	H.P. Adviser
T.M. Mtandu	Adm. Officer
B. Eriksson	Financial Controller
E. Mwasha	Health Adviser
D. Bihamungu	ZTO

Meeting Mwanza Municipality

Name	Position	Department
A.B. Bunduki	CDO	Maendeleo/region
E.E. Sinkala	DCDO	Mwanza Municipality
S.L. Tofiki	CDO/Ag. DHC	Mwanza "
S.D. Mwalimbani	HG/Surveyor	Mwanza "
S. Buluba	Ag. DWE	Mwanza "
V. Nyonyo	DVHW Coordinator	Mwanza "
S. Kunaga	H/O (DTOT)	Mwanza "
J.M. Molai	Ag. MEPO	Mwanza "
D. Manoko	Ag. Municipal Planner	Mwanza "

Meeting Mwanza Region

Name	Position	Department
E.G. Mahawi	RHC	Regional HESAWA Coordination Office
J.K. Kyambwa	RDD	Mwanza Region
E. Lyipa (Mrs.)	Accountant	Hesawa "
M. Sadataley	Health Officer (RTOT)	Mwanza "
D.M.K. Misinde	Regional Health Officer	Mwanza "
A.B. Bunduki	CDO	Regional HESAWA Coordination Office
T.A. Kyamba	Ag. RPLO	Planning - Mwanza Region
J.L. Sisso	RH Storekeeper	Regional HESAWA Coordination Office
S.N. Shoo	Ag. RWE	Mwanza Region

Meeting Kagera Region

Name	Position	Department
L.D.Y. Mutani	Ag. RDD (RAO)	Administration
L.N.R. Tibaitirwa	CDO	Maendeleo
K. Mutabasibwa	Engineer Maji (R)	Maji
C.M. Buzoya	Principal Planning Officer	
E.Anyosisye	Ag. RPLO	Planning
P.M. Faiko	RHO	AFYA
G.K. Mugenyi	RHC	Regional Office
Dr. M. Katangaza	Ag. RMO	AFYA

Pre-meeting with DEDs Kagera

Name	Position	Department
C.H. M. Minja	Muleba	DED
O.K. Mwasha	DED	Karagwe
A.K.S. Byejwe	DED	Bukoba Rural
G. E. Kagaruki	DED	Biharamulo
H. Nyamugali	DED	Ngara

Others in Kagera Region

Mr. Roger Göthe Regional Hesawa Adviser Kagera

Kagera Region - District Workshop

Name	Position	District
H.H. Nyamugali	DED	Ngara
Dr. C. Mutabuzi	DMO	Ngara
A.M. Nsubuga	D. VHWP Coord.	Bukoba (R)
A.M. Kisili	DPO (Promotion Officer)	Bukoba (R)
E. Basasingihe	CD Technician	Ngara
D.K. Mulokozi	DPLO	Ngara
O.K. Mwasha	DED	Karagwe
J.A. Ndyetagura	DV HWP Coord.	Karagwe
I.B. Mashulano	DPLO	Karagwe
Y. Abdulkarim	DHO	Muleba
I.M. Kaura	DPLO	Muleba
T.B.F. Kwatilao	DWE	Muleba
C.H.M. Minja	DED	Muleba
S.Majiba	DPO	Bimulo
S.Rwegoshora	CDT	Biharamulo
A.K.S. Byejwe	DED	Bukoba Rural
G.A. Nyongoli	H.O.	Biharamulo
G. E. Kagaruki	DED	Biharamulo
M. Marwa	DPLO	Biharamulo

Mara Region - Regional Level

Name	Position	District
Mr. F.M. Chacha	Regional Hesawa Coordinator	Regional HESAWA Coordination Office
Mr. J.A. Mukumwa	RWE	Mara Region
Mr. A.M.S. Byemerwa	Water Engineer Hesawa	Regional HESAWA Coordination Office
Mr. R.M. Kaunda	CDO - Hesawa	"
Mr. Kalimanzila	RHO	Mara
Mr. M.M. Kishumba	H.O.	Mesawa

Mara District Workshop

Name	Position	District
D.F. Dondidondi	DPO	Bunda
M.K.A. Magohe	DHC	Bunda
S.S.Z. Lugira	DCDO	Bunda
D.R.N. Msaki	DCDO	Serengeti
Georgina Mutungi	CDA	Musoma Rural
George Nyabiro	Ag. DWE	Musoma Rural
Deusdedit K.Kabhate	DHC	Musoma Rural
Salehe N. Kamota	(MMO) for DED	Musoma Rural
C.V. Rugakiza	DPO	Musoma Rural
Joseph Canisius	DWE	Tarime
K.M.C.Tingirawaniuma	DED	Musoma Rural

Mwanza District Workshop

Name	Title	District
S.L. Tofiki	AG DHC	Mwanza
G.P. Chale	Municipal Director	"
S.S. Buluba	S/well i/c	"
S.D.Mwalimban	Surveyor	"
Theonest Kishenyi	D.E.D.	Ukerewe
E.M.Kato	DWE	Ukerewe
J.A.Mwakasege	DCDU	Ukerewe
T.S.Maganga	DHO	Ilerewe
Madaha T.B.	DWE	Geita
J.W. Mwanganda	Ag. DCDO	Geita
J.Mgalula	DED	Geita
F.S. Massota	DHO	Geita
J.C. Mwaihojo	DWE	Sengerema
R.M.Itendelebanya	DWE	MAGU
A.B.Dongwe	DHC	MAGU
P.Ngassa	DED	MAGU
N.Mwakile	DPO	MAGU
S.A. Masso	DED	Kwimba
Karugwa R.H.G	DHC	Kwimba
E.J.Kahembe	DPO	
C.N.Gisema	DHO	Sengerema
G.E. Kisusi	AG.DEO (DED)	Sengerema

Review Workshop - Mwanza

Name	**Position**	**Department**
M.U. Mtui	HDD	Mwanza ZHCO
P. Brandstorm	HPA	Mwanza "
T. M. Mtandu	Admin. Officer	Mwanza "
B. Eriksson	FC	Mwanza "
E. Mwasha	Health Advisor	Mwanza "
D. Binamungu	ZTO	Mwanza

Name	Position	District
A. Idemalm (Mrs.)	Senior Evaluation Officer	SIDA, Hq.
M. Sundgren (Mrs.)	Senior Programme Officer	SIDA, Hq.
L.H. Norvik	Programme Officer Water & Health	SIDA, Dar es Salaam

M.O. Nicolao	RDD	Kagera
G. K. Mugenyi	RHC	Kagera
O.K. Mwasha	DED	Karagwe
L. S.K. Rweyemamu	DHC	Biharamulo
H. Nyamugali	DED	Ngara
G. E. Kagaruki	DED	Biharamulo
Ch. M. Kiberenge	DHC	Bukoba (R)
C.H.M. Minja	DED	Muleba
A.K.S. Byejwe	DED	Bukoba
M. Marwa	DPLO	Biharamulo

J. Masanja (Mrs.)	CDO	Maendeleo Dar es Salaam
J. D. Kizenga (Mrs.)	DCO	"

A. Lugome	Ag. RDD	Mara Region
L.M. Buremo	DED	Bunda
K.M.L. Tindirawanyuma	DED	Musoma
D.K. Kabhate	DHC	Musoma (R)
M.K.A. Magohe	DHC	Bunda
F.M. Chacha	RHC	Mara

Name	Position	Department
J.K. Kyambwa	RDD	Mwanza
S.A. Masso	DED	Kwimba
S. O. Wallerang	RHA	Mwanza
F. Ngassa	DED	Magu
A.B. Dongwe	DHC	Magu
Th. Kishanyi	DED	Ukerewe
S. A. Rwebangira	DED	Sengerema
S. L. Tofiki	DHC	Mwanza Muncipality
E.E. Mahawi	RHC	Mwanza

Debriefing in Dar es Salaam

Name	Position	Ministry
B.S. Mchowvu	Deputy Principal Secretary	PMO
A.L.R. Kabagire	Senior Project Management Officer	PMO
J.M. Kobalyenda	Ag. D/Planning	Ministry of Water, Energy and Minerals
M.J. Ngomeini	Economist	"
B. Lindhe	Dep. Head	DCO/TAN
B. Westman	Head	DCO/TAN