

half yearly progress report
january-june 1992

tamale
archdiocesan
development
secretariat

village water
reservoirs project
tamale
ghana



cebemo
the netherlands

sawa
tamale, ghana

sawa
beukenlaan 2b
6711 nh ede
the netherlands

HALF YEARLY PROGRESS REPORT

January - June, 1992

VILLAGE WATER RESERVOIRS PROJECT

[Faint, illegible text]
XEN 10547
024 GHTA92

J A Vos
Project manager
Tamale

TABLE OF CONTENTS

1.	<u>PROJECT EXECUTION</u>	1
	1.1 Programme	1
	1.2 Area and population	2
	1.3 Approach and Procedures	3
	1.4 Rural engineering activities	4
	1.4.1 Survey and design	4
	1.4.2 Construction	4
	1.5 Animation activities	10
	1.6 Workshop	15
	1.7 Additional activities	16
2.	<u>RELATION ARCHDIOCESE - VWR PROJECT</u>	18
	2.1 Archdiocesan Development Committee	18
	2.2 Water Steering Committee (WSC)	18
	2.3 Primary Health Care (Holy Cross PHC Unit)	20
	2.4 T.A.S.C.	20
	2.5 National Catholic Service Centre (NCSC)	20
	2.6 TAMADEVS	20
	2.7 Mechanical Training Centre	21
	2.8 DEPSOCOM	21
3.	<u>EXTERNAL CONTACTS</u>	22
	3.1 Ministry of Health	22
	3.2 G W & S C	22
	3.3 Association of Church Development Projects (ACDEP)	22
	3.4 P.N.D.C. Secretaries	22
	3.5 Volta River Authority (VRA)	22
	3.6 Ministry of Agriculture MOA	22
	3.7 NORRIP	22
	3.8 Others	23
4.	<u>PROJECT ORGANISATION</u>	24
	4.1 Management	24
	4.2 Administration	25
	4.3 Animation section	26
	4.4 Technical section	27
	4.5 Workshop	28
	4.6 Infrastructure	28
	4.7 Transport and Equipment	29
5.	<u>OTHER PROJECT INPUTS</u>	30
	5.1 Backstopping from SAWA	30
	5.2 Training	30
	5.3 Special issues	31

6.	<u>PLANNING</u>	32
6.1	Technical section	32
6.2	Animation section	32
	6.2.1 Orientation visits	33
	6.2.2 Social Survey	33
	6.2.3 Water Hygiene Education	33
	6.2.4 Discussion of technical possibilities and labour organisation	33
	6.2.5 Maintenance Programme	33
	6.2.6 Monitoring	34
	6.2.7 Internal organisation of the A.S.	34
	6.2.8 Training	34
6.3	workshop	34
6.4	Administration	34
6.5	Project management	35

INTRODUCTION

This halfyearly report is made to give an account of what activities took place in the Village Water Reservoirs project from 1st January to 31st June 1992. The report is based on the quarterly and halfyearly section reports of the four sections, Animation, Technical, Administration and workshop section. The report is meant for the following organisations and persons;

- 1)The Archdiocese of Tamale by its Archbishop and the interested Archdiocesan Development Committee members as the holder of the project.
- 2)Tamale Archdiocesan Development Secretariat (TAMADEVS) as the coordinating Archdiocesan organ for development projects.
- 3)The Water Steering Committee (WSC) as its board of directors.
- 4)CEBEMO in the Netherlands as the funding agency.
- 5)SAWA consultants for development in its function as monitoring and service giving organ.
- 6)The management staff of the project.
- 7)Interested persons like the Dutch embassy, IRC Den Haag, Ghana Water & Sewerage Corporation, regional and district secretaries, a.o.

I hope that the reader will find most of his/her questions answered whilst going through this document which, as always, has taken its time to be produced along side of the very busy daily schedule of the project manager.

Half yearly report VWR Jan-June 1992

1.

PROJECT EXECUTION1.1 Programme

The project is implemented for the fifth dry season in the horse shoe around Tamale, making dams for water supply in the rural area. Besides the construction and the necessary animation, a thorough revision of the budget set up and coding has been worked out. As at July the final result was not yet ready.

The SAWA-desk coordinator Mr. Simon Dermijn visited the project in April together with the incoming desk coordinator Mr. Dick Bouman.

The CEBEMO implementation officer visited the project also in April.

Handing over of section responsibilities took place in the Technical Section in February. Mr. Siaw Awuah is now the section head. The expatriate head became the advisor until he left the project in April. In the Animation Section (AS) an expatriate advisor from SAWA ended her contract in May. Miss Mumuni handles the section responsibilities as acting head.

The two new engineers for the Technical Section (TS) have been recommended for confirmation. The post of the second foreman has been filled.

One dam has been built for two villages providing water to 2100 people (Kpendua population after the rainy season 1992) so that presently about 19,100 people and their cattle (+11,400) + small animals (23,100 sheep/goats) can drink cleaner water. A second dam was started in June but would not be finished before the rains start. However if the present low rainfall continues as in June and the start of July, the dam might already store some water. This is not very probable. The total capacity of the dams can provide water to about 26,200 people and their cattle. Changes in the quantity standard has a result that with the present standard, the constructed capacity should be able to cater for 33,000 people and their cattle.

Research in the field of water quality has not been done because of the absence of broth. Water use, presence of guinea worm and use of filter cloth was monitored by the Animation Section.

The well digging activities were still concentrated in the Gushiegu district and attempts were made to integrate these activities in the horse shoe as an addition or in stead of dam construction. The result however was not positive; a well dug in Kalinka was unsuccessful without hope. An evaluation of the well digging programme was done by the Training Network Centre on the UST Kumasi. The study revealed that the well digging programme could not simply be added to the project. The WSC decided to set it up as a separate programme under the future water coordinator.

For the Workshop, a feasibility study is being undertaken.

In this semester 3 new applications for dams came in. 164 applications for employment were filed.

In total 4 persons were employed but 4 people left the project bringing the total staff as at 31-06-'92 to 69 permanent staff (including 2 expatriate staff).

1.2 Area and population

Construction took place in Kpendua and Voggu-Gundaa.

All villages are Dagomba villages and listed in table 1;

Table 1: Project villages and population

Villages where Village Water Reservoirs has built dams in this half year

<u>Villages</u>	<u>POPULATION</u>		<u>description</u>
	<u>1991</u>	<u>2011</u>	
Kpendua & Nyobaliga	1,952	3,514	Construction finished
Voggu Gunda	728	1,545	Construction started
<u>Villages scheduled to be served by Village Water Reservoirs</u>			
1) <u>Kasuliyili</u> Worive	2,392	5,142	Ongoing AS activities & design of dam in progress
2) <u>Zion</u>	2,075	4,547	Social & topographical survey completed, design and soil survey started
3) <u>Kpalun</u>	690	1,484	Social survey well under way
4) <u>Gupanerigu,</u> Limo, Tanshegu	1,872	4,025	no major activities except AS & Top survey
5) <u>Tingolin</u>	1,380	2,974	no major activities except AS
6) <u>Tibogunaa-</u> <u>yili</u>	808	1,737	no major activities except AS
7) <u>Yepalsi</u>	406	890	Health education
8) <u>Lingbung-</u> <u>Gundaa</u>	655	1,435	Social survey started
9) <u>Lingbunga</u>	2,600	5,697	has paid 96% of its contributions
10) <u>Fihini</u>	441	966	no major activities except AS.
11) <u>Zali</u>	1,144	2,460	Social survey completed Top survey made
12) <u>Kalinkaa</u> Awusiyili Dinguanayili	624	1,342	well dug but dry will be proposed for a dam; AS activities
13) <u>Yepeligu</u>	1,209	2,599	at a standstill due to land dispute
14) <u>Nafram</u>	182	400	same as Yepiligu

Note: AS = Animation Section Activities as social survey, health education, monitoring etc.

Half yearly report VWR Jan-June 1992

This season started in the third week of November '91 with the field work in Kpendua and ended in Voggu Gundaa where thanks to the dry weather, only few days were lost. If this dry spell continues the construction work will be continued until the yearly break or when the rains start coming.

In various villages the animation work consists mainly of the on-going health education but in a extensive way. Also monitoring and education on water filtering and use and maintenance of filters has been an important topic. In various villages from the previous years ongoing Animation work and maintenance activities by the TS were carried out. The final list of villagers that paid is now in the here presented order in table 1.

The selected villages Yoggu and Nyamandu were deleted from the list. Yoggu had paid only 30% and Nyamandu zero.

1.3 Approach and Procedures

The change in the approach concerning the village contributions by which the villages had to pay before March ending had resulted in two villages dropping out; Nyamandu and Yoggu. It enabled the project to draw a more final list and make a sequence in which the villages will be served.

The maintenance policy/procedure has been started to operate for the dams which are more than two years old. The fees to be charged have been paid by the villages.

During this half year, contacts have been made with Africa 2000 for the financing of a part of a dam. A contact will also be made with a dutch organisation assembling different water supply corporations to see if funding possibilities exist. Africa 2000 expressed interest and an idea has been developed to request part financing for the fence and wells of the Kasuliyili dam.

In terms of policy formulation, the following has been achieved;

- 1) Manpower planning, approved by the WSC in '91 and in the ADC it was found not necessary to discuss it again but recognise the approval of the WSC.
- 2) Operationalisation document was finalised in the WSC in January '92 and sent to CEBEMO together with the Manpower planning.

Village involvement

The conclusion drawn last year in a management course in Achimota that higher village activity yields more village attention, influenced the design of the Voggu Gundaa dam. A small cattle trough has been made with a valve in the supply line. It is estimated that this cattle trough has to be filled more often than any other trough built sofar.

A cattle trough is in fact a very small dug-out for cattle watering.

1.4 Rural engineering activities

1.4.1 Survey and design

Four new base surveys have been carried out in the following villages; Zion (52ha), Kpalung (42ha), Gupanerigu (25ha) and Zali (25ha). In various other 'old' villages after construction surveys and a detailed compound survey have been carried out; Kuku, Kpendua, Jakpahi and Kpachiyili. Some more details were gathered in Tibogu Nayili and Kasuliyili.

Water quality

Monitoring resumed in May when the broth -lauryl sulphate- arrived. The water quality report has been discussed in the project. The results were to be worked on by the advisor to the technical section. The revised report is not yet out. A decision was taken that to be able to analyze the results, a further investigation to establish the pollution by untidy buckets is necessary; The idea was to install in Gbirimani and Yong Dakpemyili on some of the wells a hand pump and another with a one-bucket One-rope system. The final results with the maintenance of the sand filter in Gbirimani however compromises this experiment. The opinion now exists that the sand filter system in Gbirimani should be abolished because the population is not willing to maintain it according to requirements. This resulted in the clogging of the lowest part of the filter and disrupted the flow of water in the wells.

1.4.2 Construction

It was only in the first week of December that work could begin in Kpendua to start a new dam. In week 20 work started in Voggu Gundaa with work (surveys) on the access road.

Table 2; Main features of constructed dam and dam under construction;

Village	Kpendua	Voggu Gundaa
dam length	648 meter (designed) 596 mtr (constructed)	478 meter
earth in m ³	15,600	11,220
water volume in m ³	122,000	96,000
consumption capacity	63,840	14,000
maximum water depth		
above surface	2.83 - 3.0	2.0 mtr
from bottom borrow pit	- 3.6	2.5 mtr
water surface area	92,000 m ²	95,000 m ²

In Kpendua the construction work lasted until week 24 (June 18th). The project was considerably delayed which caused difficulties for the villagers to feed the workers in the end. With assistance from the AS this improved. During this period a land dispute with the Daboya chief surfaced and the work had to be stopped for a week. Also the Bomag compactor had a serious problem for which it was immobilised during 15 weeks. An alternative sheepfoot roller was hired from the Ministry of Agriculture and put in use four weeks after, but was not as effective as the Bomag compactor. This caused another delay. However during this period

Half yearly report VWR Jan-June 1992

several other sites were attended to, working away delayed repair/finishing work. The dam has been finished (earth dam, spillway in concrete and emergency spillway, 8 wells, cattle trough and fencing) except for the aprons and drains around the wells. This is for the purpose of allowing settlement of the filling before the final aprons are made.

In **Voggu Gundaa**, the work started with improving the access road over which also the supply of moistening water had to be transported. The expectation was that to enable us to work as long as possible during the early rains this improved road was necessary. Also it was necessary to make by-passes around Tiring and Tibung, else the trucks couldn't pass for easy access to Voggu Gundaa.

The works done at the end of June besides the set up of the camp site were; Stripping, 295 mtr of key trench excavated, excavating the cattle trough and 3 of the wells.

The expectation is that if the rains delay as up to July, the dam will be nearing completion before the construction season ends.

The planning shows that if work can be done uninterruptedly until the third week of August, the project will be completed.

Under what is called **maintenance activities**, often improvements or completion of previous jobs, work was performed in the following villages;

Table 3: Summary of maintenance activities

Site	Description of work
Kpachiyili	<ol style="list-style-type: none"> 1. Excavation to remove old P.E. pipe to wells. 2. Excavation of new trench, laying of new p.e. pipe and backfilling of trench. 3. Breaking of aprons and its re-construction including perimetral gutters 4. Removal of fencing around wells and parts of embankment and its reconstruction.
Gariziegu	<ol style="list-style-type: none"> 1. Provision of steps on concrete spillway leading to embankment to create accessibility to wells for Changnaayili. 2. Widening of spillway crest. 3. Repair of deep erosion gullies in the approach channel to concrete spillway. 4. Provision of 2 gates to embankment and well for Changnaayili
Jekpahi/ Kunkulun	<ol style="list-style-type: none"> 1. Filling of embankment and regraveling of crest 2. Shaping part of downstream slope 3. Levelling at approach channel to emergency spillway 4. Finish fencing 5. Repair of seepage point near concrete spillway 6. Widening of spillway crest to serve as passage 7. Painting of well covers (done by VMT's)
Tolon Cheshegu	<ol style="list-style-type: none"> 1. Construction of aprons 2. Reconstruction of collapsed spillway 3. Levelling of approach to the concrete spillway
Kukuo/ Gizaa	<ol style="list-style-type: none"> 1. Levelling of approach channel to emergency spillway 2. Construction of 98 m long trench with varying depths up to 6 mtr to stop the seepage that had emptied the reservoir at a very early date 3. Extending the embankment. 4. Construction of aprons and other allied works
Dimabi Human drinking dam	<ol style="list-style-type: none"> 1. Reconstruction of aprons by replacing the concrete tiles by reinforced concrete 2. Reshape of gutters
Yong Dakpemyili	<ol style="list-style-type: none"> 1. Repair of longitudinal cracks in crest of embankment plus some spreading of gravel

Half yearly report VWR Jan-June 1992

In terms of finances table 4 shows the cost for the TS field activities;

TABLE 4; SUMMARY OF SUMMARY SHEETS FOR MAIN CONSTRUCTION, TOPOSURVEY AND MAINTENANCE ACTIVITIES
FOR THE 1ST HALF-YEAR

source: TS halfyearly report

Site	Summary Sheets				Total a + b + c	50% overhead cost of (5)	Total for 2nd quarter 6 + 4 + 5	Total for 1st half year
	A	B	C	D				
0	1	2	3	4	5	6	7	8
Kpendua	17,526,100	1,484,288		221,100	19,010,388	9,505,194	28,736,682	57,285,909
Jekpahi	-	31,800		1,800	31,800	15,900	49,500	5,058,754
Tolon-Cheshegu	-	-	-	-	-	-	-	1,736,567
Kukuo-Gizaa	249,150	-	-	3,000	249,150	124,575	376,725	2,968,050
Dimabi	-	5,500		-	5,500	2,750	8,250	428,221
Voggu-Gundaa	5,865,300	437,385		91,500	6,302,685	3,151,342	9,545,527.5	9,545,527.5
Kpachiyili	564,550	170,512	259,702	68,400	994,764	497,382	1,560,146	1,560,146
Gariziegu	-	376,568		-	376,568	188,284	564,852	564,852
Zion	-	2,750	-	121,500	2,750	1,375	125,625	125,625
Kpalun	-	5,500		36,000	5,500	2,750	44,250	44,250
Kalinka	-	110,000	129,851	-	129,961	-	129,961	129,961
Compound	-	1,176,745		-	1,176,745	588,372.5	1,765,117	1,765,117 ¹
Gupanerigu	-	-	-	15,000	-	-	15,000	15,000
Kasuliyili	-	-	-	600	-	-	600	600
Zali	-	-	-	12,000	-	-	1,200	1,200

Total value of works in the villages € 79,464,652.5

1: Not an investment in the village but will come back in sheet B

A: Summary of machine hours spent at a specific site

B: Summary of all construction materials through project store at a site

C: Summary of all expenditure for a site not included in sheets A and B

D: Summary of village labour input at a specific site

A special remark has to be made on the total cost of the Kpendua dam. The calculated cost for this dam were about €32 million whilst the table gives a result of €57,285,909. This implies that the cost have been under-rated. The TS expects that the reason for the extra cost could be the inefficient use of machines on the site. In the next report the results of further analyses will spell out the real reason.

The use of the project equipment in the past half year is shown in table 5.

TABLE 5 MACHINE - USE

Machine No.	Type of Machine	Price/ Hour ₹	1st Quarter		2nd Quarter		Total hours run for half-year	Average Machine Utilized for Half-year (%)
			Hours used	Mech. Utilization %	Hours used	Mech. Utilization %		
1	Wheelloader	9,750	356	68.1	366	63.7	722	65.9
2	Bulldozer D6	17,300	237	49.2	236	53.8	473	51.5
3	Bulldozer D6	17,300	228	44	250	46.9	478	45.5
4	Excavator	11,050	361	70.6	461	82.8	822	76.7
5	Bomag Compactor	6,050	147	48.5	60	12	207	30.3
6	DAF Tipper Truck	8,400	115	23.3	166	33.7	281	28.5
7	DAF - M.P.T.	9,400	240	47	283	52	523	49.5
8	DAF - M.P.T.	9,400	175	37	250	46.5	425	41.8
9	Big Pump	3,300	-	-	-	-	-	-
10	Small Pump	1,300	25.5	5.3	61	11.8	86.5	8.6
11	Compressor	3,650	48	9.7	77	14.4	125	12.1
12	Compressor	3,650	72	16.2	43	8.3	115	12.3
13	Lowloader	7,950	40	8.4	43	7.9	83	8.2
14	Plate compactor	2,350	19	3.9	5	1.4	24	2.7
15	Small Pump	1,300	28	5.9	25	1.4	53	3.7
19	Case Vibromax (Compactor)	3,500	31	6.4	2	0.4	33	3.4

Notes;

The Tipper Truck is not used very much. It once broke down and two tippers were hired for a total of five days. The Multi purpose trucks are use for not only transport of earth but also for carrying water and fuel. The figures for the DAF trucks are expected to be half of the real n' of working hours. These meters will be replaced. in this table are g The fact that the pumps are not much used is a positive event; it means that no pumping was necessary because of flooding of the site. One small pump is more regularly used because of watering the embankment or filling the dirty water tank for the same purpose.

Half yearly report VWR Jan-June 1992

Well digging

Mr. Monkson with his assistant dug wells in the Gushiegu district. In May it was decided that the assistant was not needed any more and he was laid off. In total, six wells were worked on, three of them were started last season and the work consisted of the lining.

Table 6: List of wells dug in 1992 first half year

village	activity	remarks	
		depth	ltrs/day
Sampemo	'91 well, lined & wall head but no apron yet needs further blasting	8.7 m"	800 (Feb when at 5m)
Dugu	'91 well, lined & wall head but no apron yet	4 m'	300(Jan)
Sugbie	'91 well, lined & wall head but no apron yet	6 m'	dry(Jan)
Kalinka	VWR village, dug and lined	7 m"	dry
Yemo-Karaga	new well, dug, deepened by blasting, lined, no wall head, no apron	5.5 m'	little
Limo	dug only then due to high water table not finished.	4.5 m'	800(apr)
Nakuga	no activity but they need blasting for deepening	8.3 m" & 9.3 m"	plenty ,,
Galurie, Saguli, Bilsinga, Zulogu, Tinyogu, Tamale namandu, Arichiyili, Kambonayili, Gomah.		orientation & siting, await payment	

Note; " = well is finished

' = well is not finished

The account for this programme was on a total expenditure of cedis 333,350 and no income. This means that from the project funds the programme was supported with 333,350 cedis during this first half year of 1992.

The planned evaluation took place in March but not by Mr. Brew Hammond. He found the Training Network Centre (UST Kumasi) ready to take the job on them for the same fee.

The mission was in Tamale from March 9 till March 18 and presented their draft report in Tamale on 6 April. A final report was submitted after including the comments during the April meeting and received at the project in May.

The report described the present programme and how it is/was imbedded in the VWR project structure. It spelt out certain constraints at both sides and made recommendations.

Findings;

- Linkages with animation and technical sections are weak, reasons found were lack of cooperation (from both sides) and the fact that it operates outside the horseshoe. This resulted in poor internal linkages.
- The siting does not take into consideration easy access in connection with flooding.
- Head walls were judged to be too low and aprons too small.
- Health education impact has been minimal but a satisfactory degree of awareness of the causes and prevention of guinea worm exists.
- Utilisation of wells is low when boreholes are available.
- Lack of consistency in the administrative classification of the well digger as a senior which contributed in no small measure to cooperation problems.
- Many wells were found dry also because of the fact that not all visited wells were finished.

Several reasons were given to continue the programme; Feasible to reach various communities but technical possible in Salaga as interim solutions and emphasis recommended in Gushiegu district because of lack of other water programmes.

The following recommendations were given;

Improvement of the existing wells by making the head walls higher, extending the aprons, provide adequate soak away and well covers. Then the deepening of a number of wells was also recommended.

Considering the related problems, the well digger should have a status as a private hand dug well contractor.

For every village that applies with VWR and is subsequently selected a contract is made between the well digger and the project. Necessary equipment should be provided by the project either on hire or loan basis (this will be reflected in the contract rates).

The well sinker is to be given additional training in;

- Well siting
- Well head construction
- Costing of well digging contracts
- Well disinfection
- Participatory hygiene education methods

In the May meeting of the WSC it was decided to separate the well digging activities from VWR because it would not enhance a smooth operation. The future water coordinator is to write a project proposal and will then supervise the work of the well digger. The VWR project will supervise this season up to July and then close the well digging activities.

1.5 Animation activities

The programme of this period was mainly directed to the maintenance of contacts with the various selected villages. Time was spent on the animation of communities to pay their contributions in time and a gradual start or continuation of the health education. Fortunately, the sequence of dams to be built is now established which will guide the activities from now on.

No orientation visits were made.

This half-year, the A.S. has written out two social survey reports; on Zali and

Half yearly report VWR Jan-June 1992

Kasuliyili. A part from these villages no emphasis has been put on the finishing of the social surveys of the other villages however some activities have been done.

In new villages, water sources surveys and guinea-worm slides, GW-surveys and - discussions have taken place.

A well side observation was done to assess the number of water fetchers per time unit. This was needed to estimate if equipping a few wells with hand pumps would possibly cause unacceptable waiting time. The conclusion was that that would not appear. Annex I is the well side observation report, made by the AS.

Live stock count was done in a sub village of Kasuliyili. The AS is of the opinion that the present rates of consumption should be maintained and not lowered to 30ltr. This issue has to be worked out in the coming halfyear.

Guinea worm surveys were conducted in Dignayili, Kalinkaa, Awusiyili, Achiriyili, Yepalsi, Kasuliyili, Lingbung-Gurugu, Kpalung, Lingbung-Gundaa, Zali and Namdu-Zali, Macheli-yili, Worivi and Fihini¹.

The percentages of surveyed population affected were between 1.2% and 18% in the 1990 dry season (Oct '90 - May '91) with an average of 7.6% and 0% and 11.9% in the 1991 wet season (May '91 - Sept '91) with an average of 3%.

These surveys were followed by guinea-worm slides and discussions.

The monitoring of filtering has been intensified by the team; thus all project villages have been monitored and are still being monitored by the team. New filter cloths have been distributed where the filter cloths in use have holes. At the same time, education has been given on the washing and use of the new monofilament filter cloths in all our villages. The monitoring on filtering had indicated that many people had cloth with holes because of wrong washing methods. Villages where guinea-worm monitoring took place were:- Dasuyili, Kunkulun, Tingolin, Kpalung, Kasuliyili, Tanshegu, Gizaa, Bagon, Limo, Gundaa, Gupanerigu, Worive, Kukuo, Jakpahi¹.

649 Compounds were visited and 730 filter cloth inspected. In total 551 cloth were found with holes and replaced; only 178 cloth were good ones.

Role-plays on causes and prevention of Diarrhoea were acted out by both the animators and VMTs in several of the project villages.

Last but not least, the Village Maintenance Team members (VMT's) of Jakpahi, Kunkulun, Gizaa, Bagon and Kukuo were trained at the Gbulung Health post (see 1991 year report).

In August a conference of VMT members of all villages will be organised. All villages expressed their interest to attend such a conference.

Several problems were encountered during construction by the T.S. and some new villages which could not mobilise funds to pay for their dams. The A.S. took it upon themselves and tried to solve them.

One of the problems was the sand filter and its cleaning in Gbirimani.

¹ The underlined names are the project names.

Even though the Village maintenance teams of Gbirimani were taught how to clean it and they promised to clean it fortnightly, they did not. They claimed that they could not enter into the water to clean the sand filter because the water level was too high. The team therefore went there to monitor its cleaning. The Gbirimani wells were also cleaned by the villagers on the team's advice. The cleaning of the filter is a problem for the people for several reasons among which are:

1. The village is divided into two political sections.
2. The advantages and disadvantages of having a sand filter were not discussed with people. It was installed as an experiment.
3. The people are not co-operative. They have not been committed hence the lack of interest in the cleaning of the filter.

From the above, it is the suggestion of the animation section that the sand filter should be removed from Gbirimani and a more co-operative and smaller village will be educated on advantages and responsibilities for the filter system. Animation section could identify this village if the need arises. The same view is present in the TS.

Global 2000, Guinea-worm Eradication supplied the team with filter cloths for free distribution to the project villages at the A.S. request.

The nurse animator gives increased attention to aspects of environmental cleanliness and health topics that are not treated in the normal programme by the animators.

A proposal for the streamlining of the water hygiene education and the position of the nurse animator vis-a-vis the hygiene education were discussed with the W.S.C. The animation section felt that with the streamlining of the hygiene education, the nurse animator should be taken back by his mother Organisation since the animators can comfortably treat the topics without help. Where the topic is beyond our knowledge, the A.S. proposed to use the health unit under which the village falls. To ensure continued health education the proposal was that the Archdiocesan PHC unit would do this under their name and responsibility. The WSC suggested the A.S., Project Manager and health coordinator meet and take a decision.

The meeting was held and it was decided that the continued health education remains with the A.S. because the proposed intervention as an Archdiocesan PHC could create the misunderstanding that there is duplication.

The nurse animator has three roles;

- 1) advise and monitor the content of the health message of the animators.
- 2) build further on health education where and when necessary in the VWR villages up to 3 or 4 years after construction has been completed.
- 3) Assist the project maintenance team.

The AS was involved in the discussion of technical alternatives regarding the designs of Voggu-Gundaa and the work on the wells in Kalinkaa. Villagers from the Voggu-Gundaa and Kasuliyili projects were taken for a visit to Kunguri, Aseyili and Adumbliyili dams.

Half yearly report VWR Jan-June 1992

The long term maintenance programme started in Aseyili, Adumbiliyili, Gbirimani, Tibogu, Buyili, Shigu, Garizegu, Chanayili, Yong-Dakpemyili and Dimabi. These have had dams for two years and above. The team did not include Kpachiyili because their wells have no water and co-operation has not been smooth because of this. At the close of the period the first round of visits was not yet completed. The visits were rather late into the rainy season but this year, was not a problem because of the delaying rains. Normally visits should take place before May ending. All villages appreciated the visits and considered it as a morale booster to enhance the maintenance activities. In Annex II more details are given.

Table 7 gives an overview of the AS activities;

Table 7: DIAGRAMMATIC PRESENTATION OF THE HALF-YEAR'S ACTIVITIES

VILLAGE	ACTIVITIES					
	Social Survey x	Water-Hygiene % Education	Disc. of Tech. Possibility	Labour Organisation	Maintenance Programme	Monitoring
<u>Kpendua</u>	100%	On-going	On-going	Beginning	-	On-going
<u>Zion</u>	100%	"	-	-	-	-
<u>Buyili</u>	100%	x	x	x	x	-
<u>Dimabi</u>	100%	x	x	x	x	"
<u>Tibogu</u>	100%	x	x	x	x	"
<u>Gupanerigu</u>	100%	On-going	-	-	-	"
<u>Lino</u>	100%	"	-	-	-	"
<u>Kpalung</u>	5%	"	On-going	-	-	-
<u>Kasuliyili</u>	100%	"	-	-	-	"
<u>Tanshegu</u>	100%	"	-	-	-	"
<u>Kukuo</u>	100%	"	x	On-going	On-going	"
<u>Gbirimani</u>	100%	x	x	x	x	"
<u>Garizegu</u>	100%	x	x	x	x	"
<u>Shigu</u>	100%	x	x	x	x	"
<u>Yong Dakpemyili</u>	100%	x	x	x	x	"
<u>Tibognayili</u>	100%	On-going	On-going	x	x	"
<u>Kunguri</u>	100%	"	x	x	x	"
<u>Kpachiyili</u>	100%	"	x	x	x	"
<u>Tolon Cheshegu</u>	100%	"	x	x	x	"
<u>Jekpahi</u>	100%	"	x	x	On-going	"
<u>Kunkulum</u>	100%	"	x	x	"	"
<u>Chanayili</u>	100%	"	x	x	x	"
<u>Giza</u>	100%	"	x	x	On-going	"
<u>Bagon</u>	100%	"	x	x	"	"
<u>Tingolin</u>	100%	"	"	"	"	"
<u>Dasuyili</u>	100%	"	"	"	"	"
<u>Lingbun-Gundaa</u>	5%	"	-	-	-	"
<u>Yepalsi</u>	5%	"	-	-	-	"
<u>Zali</u>	100%	"	-	-	-	"
<u>Namdu-Kurigu</u>	100%	"	-	-	-	"
<u>Kalinkaa</u>	100%	"	On-going	-	-	"
<u>Gundaa</u>	100%	"	x	x	x	"
<u>Dignayili</u>	100%	"	On-going	-	-	"
<u>Awusiyili</u>	100%	"	x	-	-	"

x = activity has been executed.
UNDERLINED = Project name.

Half yearly report VWR Jan-June 1992

1.6 Workshop

As usual the maintenance and repair of the VWR's rolling fleet is executed by the workshop. This year the yearly big maintenance schedule will be made with the help of a plan board.

this year there will be no close down in August/September for the WS, hence some people have had their leave already.

Serious repairs had to be done on the Bomag compactor and one of the DAF trucks causing idling of the machines for several weeks.

Several tools/equipment for the workshop and TS were made;

- Making new well moulds for technical section.
- Repaired damaged water tank.
- Moved container office to TAMADEVS.
- Reinforced concrete mixers.
- Prepared store container.
- Workshop tools made : -gearbox jack.
 -spring clamps.
- Diesel storage cage for generator fuel.
- Furniture made for project.

Concerning the ordering and receiving of goods the following containers with goods for the project arrived;

CAP	86	,,	,,	27-	1-92
TAAP	30	,,	,,	13-	3-92
TAAP	31	,,	,,	6-	4-92
TAAP	32	,,	,,	22-	5-92
TAM	16	,,	,,	16-	6-92

New equipment arrived during this year like a parts washing bay, dynamic tyre balancer, welding transformer (replacement) and some special small tools.

The concrete-mixers which arrived in November, 1991 have disappointed us. Reinforcement of the housing is done but spares which were expected have not yet arrived, so one mixer is still idle.

The extension of the stores by containers has started; the foundation is made and one container prepared. When the second container is prepared and the equipment is in from the field, the containers can be placed.

As per 1st of July an inventory takes place of all stock. A casual clerk gives a helping hand. The stocktaking will be done during the normal work and is estimated to take 3 - 4 weeks (6 manweeks).

The general use of job cards gave some first results;

4th quarter 1991	62% of time registered (6.2% external jobs)
1st quarter 1992	50% of time registered (2.8% external jobs)
2nd quarter 1992	66% of time registered (8.9% external jobs)

To have a better idea of where the hours of the mechanics is spent on, we started in May with a daily hour record. In this record it is mentioned how many hours is spent by each mechanic on a particular job or on illness, shopping, fuelling etc. (only for the compound workshop).

The totals of the jobcards in cedis is given below in Table 8

Quarter	labour bill	materials	transport/store
1st	1,803,710	8,177,038	n. a.
2nd	1,648,764 ²	7,957,267	1,347,641
Total	3,452,474	16,134,305	

NB 1hr of labour is ₵800

During the month of April, a theft was reported of totally 500 litres of Delvac 1340 engine oil. An investigation is still going on.

1.7 Additional activities

The project manager attended a workshop on water supply systems in Burkina Faso together with the executive secretary of the ADC. A report was written on this workshop. The main topic was to analyze which factors are important to take into account during the different phases of a project. The result was that many factors about the maintenance and exploitation of the water supply projects (here I refer to the infrastructure set up in the villages) have to be analyzed, foreseen and prepared before and during the construction of the dam, well etc. and not only after the construction is completed.

To realise a connection with the national power grid the establishment of a three km high tension line is necessary. The initial partners, TASC, Br Trevor, Gbewaa engineers and OSA have not paid yet their share. VRA could first not agree to a deal whereby the builder of the line would be reimbursed by new connectors, however their position seemed to have changed. Other parties have added to this project; NULUX a yet to build cotton factory and GOIL that has built its new offices near to GBEWAA. The cotton factory needs for its processing electricity and is a new driving force. Contacts have been intensified and VRA is now willing to construct the high tension line leaving the low tension lines to the different consumers. When VRA constructs the line they also provide the materials and first cost estimates show a lower cost than before. In addition the fact that more consumers are willing to bear the cost of the building of the line makes us believe that the cost will be lower. TAMADEVS is building some staff houses near the VWR and TASC compound and is also needing an electricity connection. No exact agreement could be reached yet how they would participate in the cost.

In February the project manager discussed together with the sectionheads, a goalsetting for each section. In the middle of the year a joint analysis will be made and goals and targets reformulated if necessary.

SAWA and TAMADEVS did a monitoring mission to the project in April. During that period Mr. Harleman of CEBEMO also visited the project. Just in that period the

² excluded the unfinished jobs 765hrs = ₵ 612,000

Half yearly report VWR Jan-June 1992

project manager had to travel home for personal reasons and so didn't really participate in the mission. The monitoring mission organised a one day workshop on project management. Main conclusion was that a further workshop on this issue is necessary to work out how decision powers are distributed and who is involved. My impression(pm) is that, for example, either section heads under rate their influence in this or that a too great autonomy is assumed. The workshop is organised for the middle of July and the consultant for the workshop Mr. Ben Annamoh will write out the results in a report. In the workshop the management system will be discussed; which levels of decision power in the project, which other organisations deal with the project and their decision powers.

As a result of Mr. Harleman's mission in April, several discussions have been held in the project to change the budgeting system so that it better matches with the consequent monitoring of the various activities of the project. Although the most important activity for the project is the building of water supply systems and its animation activities, it is impossible to set up a budget system only on that(cost of a particular dam). Budgets have to be made 2-4 years ahead but dam designs are not available and it is even not wished to make designs more than 1-2 years ahead. Chosen is to make a budget system per section which does not imply a partitioning of the project into independent sections.

It is especially wished to get an overview of the cost and the productivity and thus income when cost are calculated at certain hourly rates, of the workshop. The movement of items in and from the stores will be also separately monitored; so purchases booked on store codes and issues charged to sections and rebooked to store codes. This will enable us to have a quick overview if stock is increasing or decreasing and this is then not any more included in the expenditure figures. In August the new budget for the coming two years until July 1994 has to be ready for approval in the WSC and dispatched to CEBEMO.

Contacts have been made with Africa 2000, who could possibly finance some of the projects. It is not expected that they will finance complete dams because their maximum amount to be spent on one single project is USD 50,000 ≈ € 20 million.

We also contacted VEWIN, a semi-government organisation in the Netherlands which coordinates projects of provincial water corporations to find out funding possibilities from their side.

2. RELATION ARCHDIOCESE - VWR PROJECT

2.1 Archdiocesan Development Committee

The ADC met on 20-2 and 14-5 1992.

The main issues concerning VWR were:

- The approved waterpolicy, manpowerplanning and operationalisation document to be sent very soon to CEBEMO (Febr. '92).
- The constitution was approved and the water coordinator and the VWR project manager are ex-officio members of the ADC.
- The ADC was informed about the arrival of the SAWA/TAMADEVS monitoring mission and the ADC meeting with them.
- Also informed about the mission of Mr. Harleman of CEBEMO.
- That the water coordinator candidates were interviewed and now the salary has to be calculated by VWR to propose to the candidates. Two acceptable candidates were found although one candidate with a technical background was preferred.
- The assistant project manager was introduced to the ADC and he replaced the project manager, who was ill, in the May ADC meeting.
- The electricity bill from VWR to TASC was discussed. The bill covered the last three years and had risen to 2 million which could not be paid by TASC especially not because they had not yet received their funding. However the project has also not yet paid some bills to TASC for hauling containers.

2.2 Water Steering Committee (WSC)

The WSC met 3 times on 30/1, 6/4 and 13/5 1992.

NB during the 6/4 meeting some ADC members were present.

The following issues were discussed;

- Various training courses for the VWR staff.
- The assistant project manager was introduced at the April meeting.
- The training of the acting head of the Animation Section by the SAWA expatriate. Instructions were given to ensure that before Mrs Abu (SAWA) would round off the training before she terminated. Her contract was extended with one month up to May.
- The prolongation of the project manager contract to July 1993. A remark came that some problems in his functioning existed and the WSC wanted them to be resolved in the project. This was done and reported back to the WSC that the problems were discussed and that there was no need for further involvement from the WSC.
- The SAWA/TAMADEVS monitoring mission and the mission of Mr. Harleman from CEBEMO and in April a meeting with these visitors.
- The water coordinator and what was done to recruit one.
- The Technical supervisor Mr. Hufen didn't want to extend his contract and he advised the WSC to promote Mr. Siaw Awuah as the head of the section. This proposal was supported by the PM and accepted by the committee. The TOR for Mr. Hufen during the two remaining months and the TOR of the new head of section were approved.

Half yearly report VWR Jan-June 1992

- The question of the approval of the promotion of the acting head of AS was held up for reason that the WSC wanted a report from the PM and the AS advisor.
- The house asked the PM to have Mrs Abu (the advisor of AS) to make a confidential report, so that the WSC has it documented. The report will be sent to the chairman.
- The long term maintenance programme was approved and the go-ahead given to start with its implementation.
- The operationalisation document was discussed and finalised. The Chairman Mr. Attabeh was charged to work out all discussed details and to send it to CEBEMO.
- The TOR for the WS feasibility study was given and a budget of ₦ 300,000 approved.
- The results of the well digging evaluation was discussed on April 6th with the evaluators. In May the outcome of the report was again discussed. For the outcome see paragraph 1.4.2 well digging.
- An extra home travel for the project manager in the case of extension was agreed upon. The house disagreed that it was to be for all expatriate contracts. Only the case of the PM was it discussed and applicable only in his case .
- Senior Mechanic by name Abdulai Alhassan employed and to start work on 1st June, 1992.
- Developments in the recruitment of the water coordinator.
- Some thoughts on the coming programme
After taking five years to complete twelve projects(16 dams) with wells attached, twelve more villages have so far completed payments for work on dam construction to start in their villages.

PM of VWR asked whether it would be possible to get consultants to help the design and contractors to enhance the construction of dams in the twelve villages to shorten time on construction of the twelve dams. This would give village water a shorter time to move to the Salaga district.

In a long debate on the feasibility of supervising contractors and the capacity of VWR TS to design dams, it became clear that;

1) The house didn't want yet to take a decision whether a waiting time of 4 - 5 years is acceptable or not, unless it is made clear which proposal VWR comes out with, is feasible. TS claims to have enough design capacity to cope with construction speed of own equipment in spite of the fact that present unexpected delays at Kpendua didn't permit them to finish Voggu-Gunda design up till today. If construction would have been as planned the design would not have been ready in time.

The project doesn't reach its target of 6000-9000 people a year. However some positive points are to be mentioned; A second foreman has been found and the site engineer gets now more experienced with our set-up. This will speed up the work. Also this year considerable "repair works" have been done and the back-log has reduced.

There is some financial room because in the approved budget the salaries of the expatriates in the AS and TS were budgeted until July. From the remainder

consultancies could be paid. The project has to establish how much is left. The ball was thrown back to VWR to come out with a final strategy for discussion.

- During reading of the proposal of a updated TOR of the WSC which was attached to the Water policy, the proposal was accepted. However some places were too obviously directed to VWR only and should relate to all water activities of the Archdiocese. PM will read it through and rewrite it, so that it can be forwarded to the ADC.
- The proposal of the project to get the Archdiocesan PHC in charge of the on-going health education, preferably under their own name, was not adopted. A intens discussion took place with as result that Sr. Annamma, the AS, the PM and his assistant should sit together and work out more details.
- Mark met Nico Keyzer from CEBEMO in Accra during which the following issues ref WSC came up;
VWR should come out with a budget for the coming two years, based on the new situation. Could VWR do a market research to provide a market survey to financial sustainability? How feasible are the plans (water policy etc.) and the guidelines should reflect the financial sustainability. How can we use the available capacities? What services can be marketed? The Archdiocese is requested to define the contract SAWA-Archdiocese and to give a description of implications. How far are monitoring missions useful for the Diocese? Proposals should be forwarded before September else it will be too late.

2.3 Primary Health Care (Holy Cross PHC Unit)

The project manager , his assistant and the AS discussed the outlines of the tasks of the nurse animator. It was decided that although the PHC feels responsible for the continued health education in the VWR villages it cannot intervene under its own flag and it has to be under the VWR flag. Continued assistance from the Archdiocesan PHC programme was assured, if needed with more staff.

2.4 T.A.S.C.

Relations are cordial and cooperation with the haulage of containers and receipt of goods in TASC containers is working smoothly. The planned payments for electricity consumption and that for the joint construction of a line to the national grid have not been realised because Br. Trevor alone informed the project manager that his share was ready but the other partners haven't paid sofar.

2.5 National Catholic Service Centre (NCSC)

Continued support from this office is received. During this period we have enjoyed the service from this office. However the clearing of locally ordered goods and its clearance was not as smooth as usual and had some delays. They assist us in the clearing of goods, visas, purchase of air tickets and some payments of goods ordered by us in Accra. All considered we have no major complaints whatsoever and are very grateful for their support.

2.6 TAMADEVS

Regular contacts were ongoing with the development coordinator during this period. Of recent, the official title is executive secretary. The assistant took again part in the monitoring mission of March/April. This brought forth a closer and in-depth contact between this office and the project. He visited several

Half yearly report VWR Jan-June 1992

sites and we had fruitful contacts. In July a workshop on VWR management in which the executive secretary and his assistant participated, gave some more insight into the relationship and respective responsibilities of TAMADEVS and VWR. The regular monthly meetings continued to take place and are very useful.

2.7 Mechanical Training Centre

Between the MTC and the project exists the usual neighbourly contacts which are very cordial. No institutionalised cooperation in the form of sharing jobs has been established. The WS feasibility study report was not of the kind that will give us in the short term any lead where to go to. A possible cooperation was mentioned but not worked out well.

2.8 DEPSOCOM

This department has committed its cooperation to assist us in the making of a video film on the project. The first scenes have been taken on video.

3. EXTERNAL CONTACTS

3.1 Ministry of Health

Besides the cooperation with the VMT's training at Gbullung (mentioned in the last year report), the MOH has supplied the project with filter cloth. The demand is however higher than the supply. The MOH agreed that the project can sell self-made filter cloth but at a low price that it would not cover the cost. Regular contacts with the Danish supported laboratory for research on Guinea Worm and Bilharzia exists and are fruitful in the sense of regular exchange of information and findings.

3.2 G W & S C

Mr. Salifu Abdulai represents GW&SC in the WSC. Our contacts are restricted to this.

3.3 Association of Church Development Projects (ACDEP)

The AS acting Head of section didn't participate in its meeting because the information on the change of date was not communicated to the project.

3.4 P.N.D.C. Secretaries

Except for the now usual visits at the start of the construction season no further contacts were made. The District assembly of Tolon invited the project in April to be informed on the long term maintenance programme. Because of a communication gap the project was not represented there during the meeting. A new meeting was promised to be scheduled.

3.5 Volta River Authority (VRA)

The connection to the National Grid has not advanced much. Regular contacts exists but as long as our partners delay payment the total cost is too much for VWR alone. Br. Trevor informed us that his contribution was ready. In June a cotton business man contacted the project. Just near the Archdiocesan plot he is to build a cotton treatment plant needing much electricity. He has put great effort to revive the project and it seems that soon a conclusive agreement will be reached. It is however hoped that this time it will not be as with our former partners. The number of companies have increased to 6 (was 4) and VRA is now willing to build the high tension line. The cost for the line is considerably lower and with more participants the probability of payment is much higher. We have now real hope that by the end of the year the connection will be established.

3.6 Ministry of Agriculture MOA

The fisheries department has on request of the project assisted several villages in harvesting fish from their dams. The project is still the intermediate but efforts are made to have the villages directly to contact this department.

3.7 NORRIP

This government organisation has to coordinate all development activities in the Northern Region. It organised a workshop in which all development agencies came together to explain their area of intervention. The idea is to hold these meetings regularly and so coordinate activities.

Half yearly report VWR Jan-June 1992

3.8 Others

During this year several organisations, interested in our work contacted the project. We did a consultancy for the Danish Community project; advise on the repair of the Tolon dam. The GTZ/NORRIP programme hired us to give a cost estimate on a dam design and to comment on it.

We had in the field of exchange of information contacts with Africa 2000. The PM and the head of the TS visited the Sankat Agric station near Accra. Several visitors from abroad contacted the Animation section to see their work.

The project was asked to be member of an association named RECCOWID, set up by Norrip which includes all projects that deal with women's development.

Then the different suppliers and contractors we deal with.

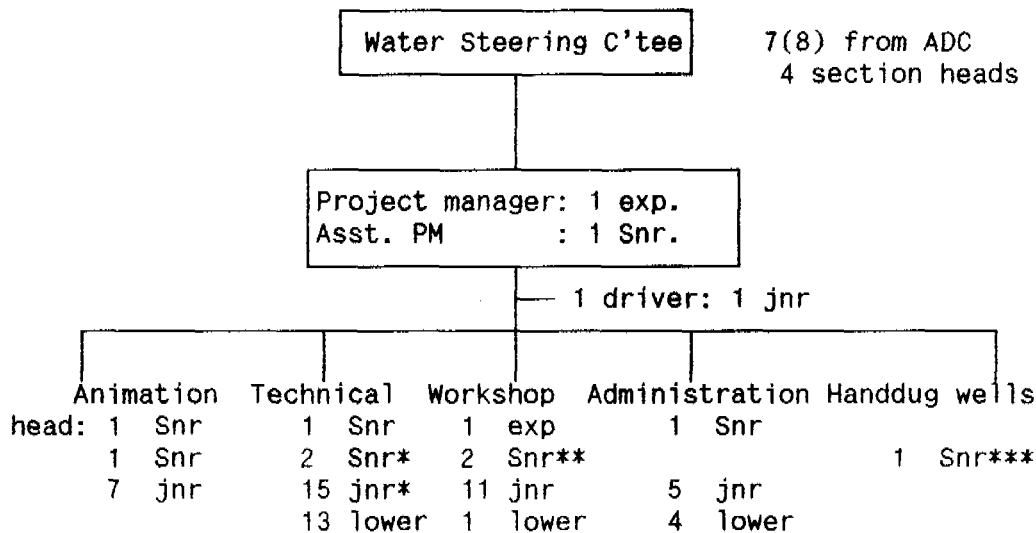
4.

PROJECT ORGANISATION

This chapter deals with the internal organisation of the project as at 1-7-'92. All organisation charts will be given. Each paragraph deals with a section of the project. In this report all the organisation charts are given.

4.1 Management

The following organisation chart shows the staffing of the project as at 1-7-'92.



The staff as at 30-6-'92

and in future:

Expatriates	2	0
Senior	10	11
Junior	39	40
Lower	<u>18</u>	<u>18</u>
	69	69

* One of the junior staff is following a one year course in the United Kingdom and will on his return be appointed to a senior position in the laboratory (not yet included here as a senior).

** A new workshop supervisor has been found in March '92 and is now in his probation period. (he left per August 1st)

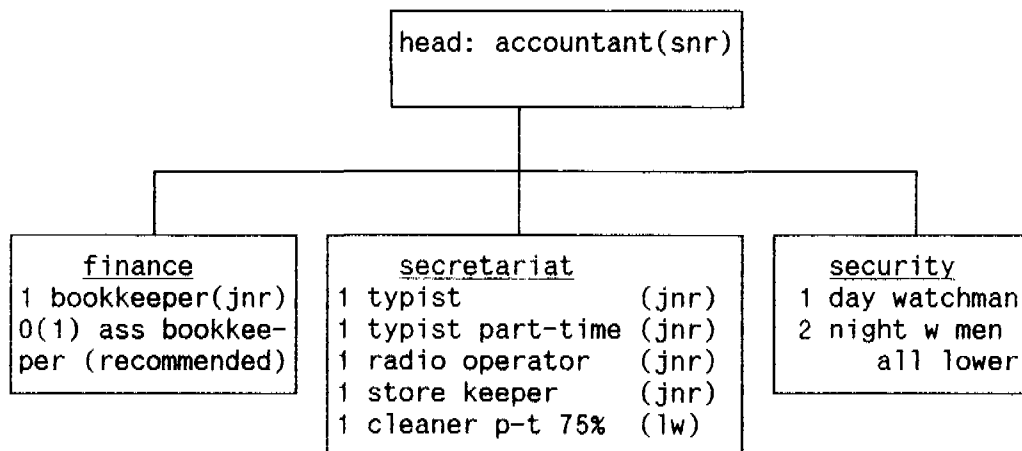
*** The WSC decided to detach the well digger per 1st August.

Half yearly report VWR Jan-June 1992

4.2 Administration

The typist is until the middle of July on course and a casual is replacing him. The store keeper is a weak point in the section but the section head is overburdened with the work and cannot spend enough time to supervise him intensively. In the project the need for a second bookkeeper is seen as an absolute necessity to cope with the workload and to assure the good recording of the finances. TAMADEVS has however doubts and Mr. Harleman from CEBEMO. The latter however sees the need for extra manpower if the finances of the Workshop are separately recorded. A new budget and coding system that was developed is treating all sections and the stores separately, hence it is clear that without this extra manpower the new system cannot be operated and even without the new system this extra manpower is needed if proper record keeping of finances and the store have to be save guarded. In our next WSC meeting we hope to come to a solution on this matter.

The organisation chart is as follows;



A casual typist replaced the typist on training.

A casual clerk replaced the radio operator during his training. This casual continued doing some jobs for the project manager and gave assistance to the inventory exercise in June.

The fact that the financial reporting has been transferred from SAWA to the project increased the workload. The first quarterly report was made and took much more time than the expected two weeks.

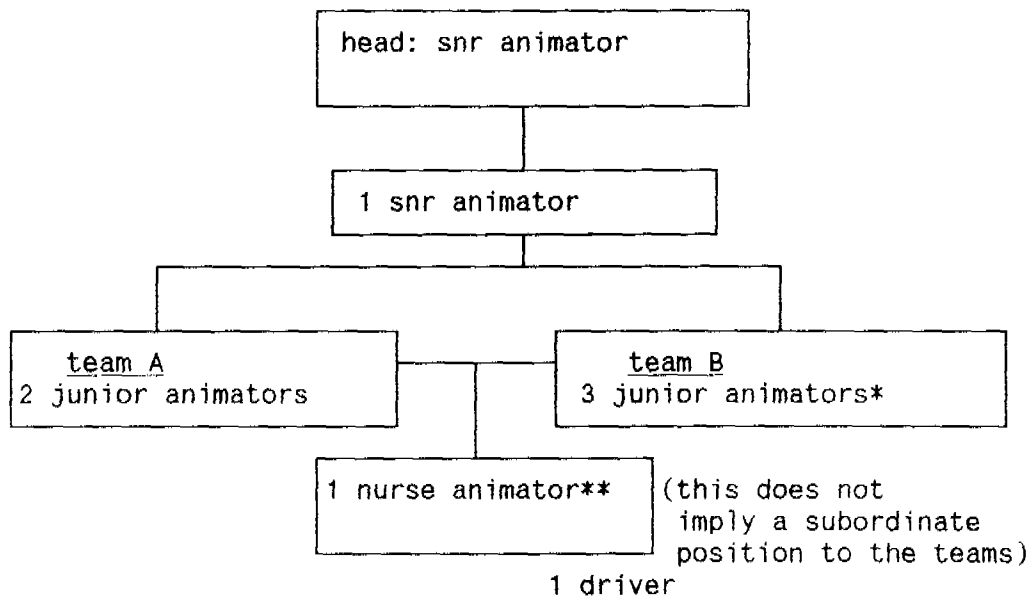
4.3 Animation section

The confirmation of the senior animator has progressed a bit. The Bishop requested for a report on him which has been made and sent. Hopefully we will have an answer soon. The contract with the advisor has been extended with one month to enable her to complete the training of the acting head.

The position of the acting head has not yet been confirmed when the matter was brought up in the WSC; The WSC wanted a confidential report from the advisor which was made and signed by all parties.

One of the junior animators resigned in February for personal reasons. He is not replaced but the section can still cope with the workload.

The organisation chart is as follows as per 30-6-'92;



* one animator is now driver/animator

**The nurse animator mainly the normal programme our approach to the villagers. In the VMT training he took the health part of the course on him. He is the second section member of the Project Maintenance Team(PMT).

The above organisation chart was now functional most of the semester.

Although the Project Maintenance Team was operational it is not shown here as a separate entity. This might be done when they are at full time occupied with this job. The team is formed by the nurse animator, the animator driver and one person from the technical section.

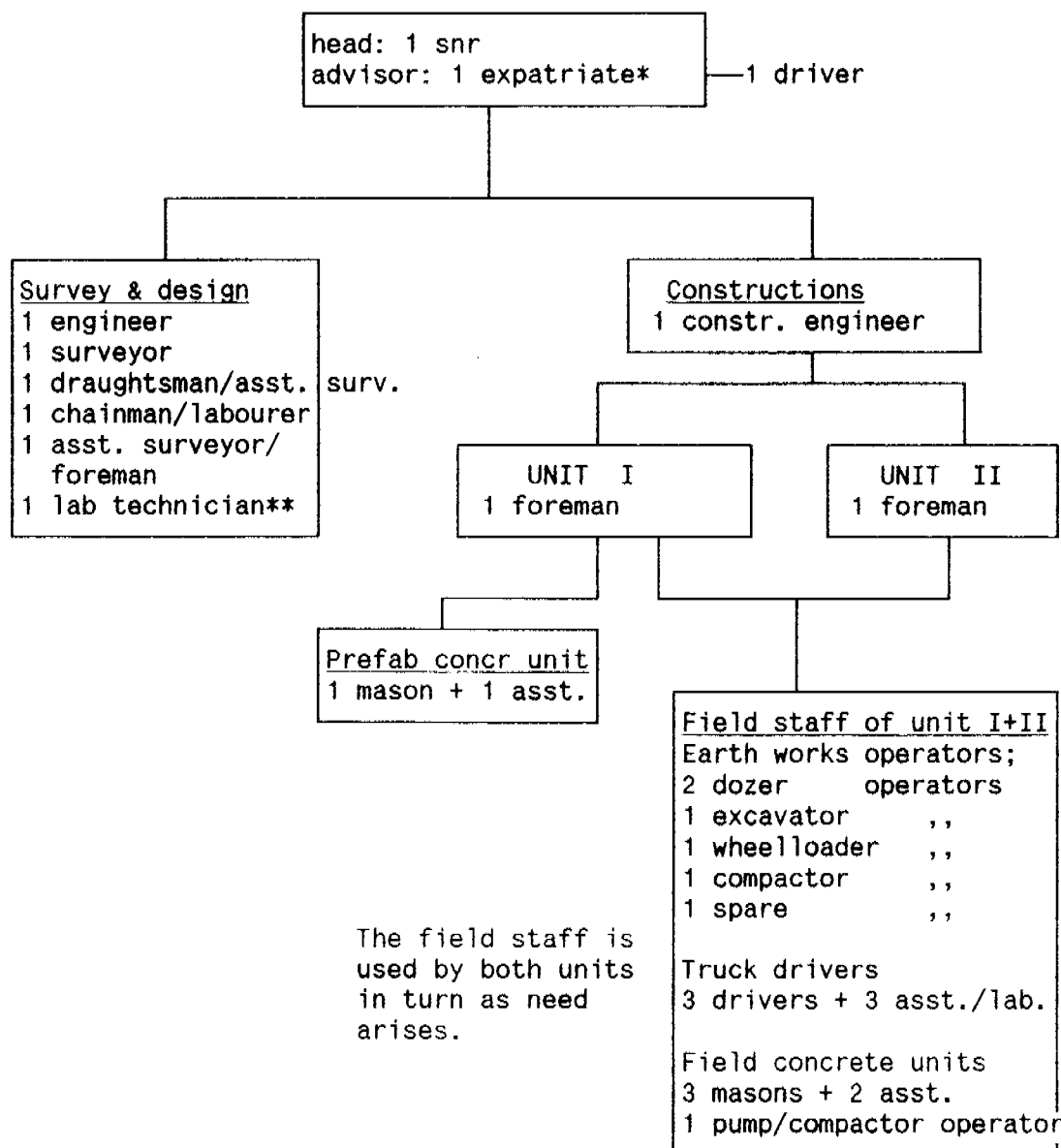
A new TOR is in the make for the nurse animator to spell out the project (and thus the archdiocesan) continued involvement and guidance in the maintenance and health education in the project villages.

Half yearly report VWR Jan-June 1992

4.4 Technical section

Various positions have been filled now (30-6-'92) and the staffing is complete (except the senior in the laboratory).

The following chart is showing it;



* The expatriate head became an advisor in February and left in April.

**When the junior, studying in the UK returns, the casual in the laboratory will be terminating his contract.

In the WSC meeting of February Mr. Awuah is promoted to the position of section head and Mr. Hufen has become the advisor. In April the contract of Mr. Hufen terminated and he left. A Terms Of Reference was made for what he should do

during this period which he partially achieved.

The construction engineer and the design engineer have been recommended for confirmation to the Archbishop.

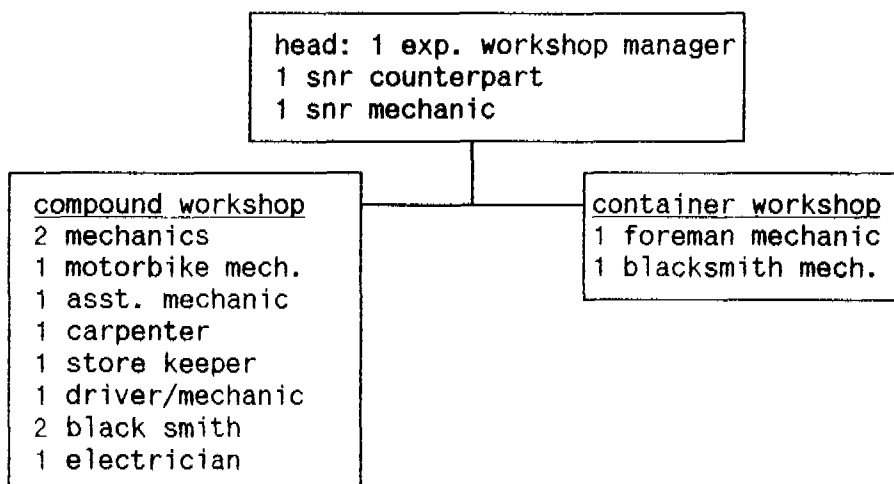
The Project Maintenance Team is assisted by the TS; the laboratory man when he comes back from his study in the UK. The first year he will be further trained in this particular job by the construction engineer. The project manager did it this first time because the construction engineer had no time available but in October–November (the second round) he will have time.

4.5 Workshop

The staffing changed this year;

The recruitment has resulted in the recommendation for an appointment of a workshop supervisor who started per June. In December a recommendation for confirmation can be expected if his performance is satisfactory.

The organizational chart is now as follows:



Regularly some trainees from the Nandom Vocational Training school were present.

4.6 Infrastructure

The container office destined to the TS is now designated as canteen and will be placed just outside the entrance of the compound. A small shed will be erected where the food seller can set up her pots.

The building of one of the four staff houses is completed.

From April ending the house has been moved in.

The connection to the National VRA grid has not been realised because of non payment of the partners so far. A cotton factory will be built and the manager has been very active to reactivate the project. Gail has established his offices near Gbewaa and needs electricity. The Archdiocese has started the building of a pastoral centre not far from the VWR compound and TAMADEVS is building new staff houses next to the proposed site for VWR staff houses. They all need electricity. Because of this the number of interested parties has increased and if we come to a new agreement the charges will be hopefully lower enabling the connection to take off.

Half yearly report VWR Jan-June 1992

4.7 Transport and Equipment

No big equipment or means of transport have been added.

Table 8 gives the list of rolling fleet and plant as at 30/6/'92

Table 8

DESCRIPTION	BRAND	TYPE	QUANTITY
Wheelloader	Caterpillar	936 E	1
Bulldozer	"	D6H	2
Excavator	"	215 C	1
Compactor	Bomag	172 D	1
Tipper truck	DAF	1800	1
Multipurpose truck	DAF	1800	2
Motor pump	Lister	TR3/J156	1
"	"	LV1/J70	2
Generator	"	27, 12, 7KVA	3 (1 TASC)
"	Yamaha	4.7 KVA	2
Aircompressor	Ingersollrand		2 (welldig)
4WD pick-up	Nissan	Patrol	2
4WD station wagon	"	"	3
2WD pick-up doub cab.	"	"	2
Motorbike	Honda	XL100	5(1 for sale)
"	"	XL125S	6
"	"	CG 125	1
Concrete mixer	Briggs & str.	petrol	3
Concrete mixer	Hatz	diesel	2
Concrete mixer		electric	1
Plate compactor	Bomag	BPR 50/55D	1
Vibromax roller	Bomag		1
Low loader	--	--	1

5.

OTHER PROJECT INPUTS5.1 Backstopping from SAWA

The following backstopping was provided by SAWA;

- Sending regularly related articles and reports to the project which they find in literature etc.
- Monitoring mission March/April 1992 (Simon Dermijn & Dick Bouman).
- First and second version of a draft on a monitoring system for VWR.
- Report on the transfers and booked expenditure of the project from the start in '87 until the end of 1991.
- Sending specific literature on transfer of workshop to an independent set up.

5.2 Training

The following training were followed by/given to VWR staff;

AS:

- Two remaining modules for the acting head by the advisor
- On-the-job training by the advisor to jnr, snr animators and the acting head.
- Gonja language training to the animators who are not Gonja.
- Four animators followed computer lessons (wordperfect, Lotus).

TS:

- Due to the fact that this is the busy season mainly on-the-job training has been given;
Mainly in the field by the construction engineer to the field staff. The Advisor advised on a day to day basis.
- Some of the senior staff attended computer lessons (wordperfect, Lotus).

WS:

- New courses have been identified for staff at LEYLAND-DAF and TRACTOR & EQUIPMENT in Accra.
- The black smith is still being trained for lathing work. He is adequate in small and simple items but for more complicated and accurate parts he needs more experience.

Adm:

- Computer courses were given on
Wordperfect: accountant, typists
Lotus: bookkeeper, accountant
- The radio operator followed a course on computer hardware repairs and maintenance in Accra for almost six weeks.
- The fulltime typist was from the middle of January following a secretary/stenographer course in Accra. He will finish in July and the course includes also word processing.

5.3 Special issues

AS problem solving

At Kpendua; there was a land problem between the Wasipewura and the Kpendua chief. The Wasipewura claimed ownership of the land on which the dam was to be constructed. He therefore insisted on signing papers to that effect. The Tolon Naa under whom Kpendua falls traditionally refused to sign on the excuse that nobody knew the demarcation between Gonja land and Dagomba land. The project Manager and acting Animation Head immediately took steps and solved the problem through the help of the then Regional Secretary. Construction was delayed for one week. The lesson is that the animation section will investigate more thoroughly in future how the land ownership in the village is.

The Kukuo dam almost dried up and the A.S. organised meetings with the three villages - Kukuo, Bagon and Gizaa to find a temporary solution before the technical team came to solve it. In view of this, Jekpahi/Kunkulun were contacted so that their dam could be used by the three other villages.

TS consumption capacity calculation

To enhance the design capacity of the Technical section the project manager devoted part of his time to develop a spreadsheet for calculating the spillway level with regard to the daily consumption and losses in a few minutes. The now used hand method takes several hours, even days, before the right level is established. The design engineer and the head of section had a demonstration of the use of the spreadsheet.

Design capacity TS VWSR on fore hand

As mentioned before the capacity of the Technical section to prepare Village Water Supply Reports which include the Animation reports and conclusions, before the construction starts is not achieved this year. However the Voggu-Gundaa design has been presented in time but the danger exists that the dam once constructed, the pressure to complete these VWS reports will not be there any more. This makes it impossible to have a proper documentation of the dams for the future. Close monitoring of this aspect in the coming months will be needed. It will be still worth while to consider extra manpower in the design capacity of the section for a limited period of say 1 year to make sure the section gets ahead with the documentation.

Management information system

Another concern for the management is the timely and accurate information for management decisions. In the field of productivity of machines and construction units, time spending in the workshop, values of stock or stock position, exact cost of animation activities for the different dam projects many data are collected but not transferred to timely and clear statements or reports. An example may be the inventory of the Big store done in October 1991 has till date not resulted in a clear report stating the value of stock. An other example is the absence of a regular efficiency coefficient from the use of machines in the technical section although a start was made with it in July 1989. The data are available but not accessible and not communicated to the management.

6.

PLANNING**6.1 Technical section**

During the first half-year, the section could not achieve all targets planned for the period. One area where targets were not attained is:

- writing of design reports - (Voggu-Gundaa, Kasuliyili)

The workload on Jonathan (design engineer) is immense because he supervises also the laboratory work and this is affecting his productivity in writing design reports.

Apart from the workload, the lack of manuals on procedures, the technical supervisor devotes a lot of time either in explaining, finding data or preparing notes or instructions not only for the junior staff but also for the seniors. Then administrative matters engage quite considerable time. Consequently actual time devoted to design work is limited.

The second half-year has two distinct periods: the rainy season where all field activities stop and work is concentrated on compound jobs; and the beginning of the dry season when construction work is re-activated. The second half-year should see the completion of the Voggu Gundaa water scheme and the beginning of Kasuliyili dam.

During the period of low construction activity the following minor works are envisaged to be executed:

- i) Gates to be fixed (K, Ku, Gi, D & T-CH)
- ii) To tighten fence wires (K, D & T-CH)
- iii) Fix supporting pillars in the corners of fences (K, D & T-CH)
- iv) Fix strainer for cattle dam pipe. (K & Ku)
- v) Paint well covers (Ku & Gi)
- vi) Advise against farming immediately upstream of reservoir of Kukuo
- vii) Repair one broken chain holding one of the well covers at Gizaa.
- viii) Repair cracks on dam wall of Dimabi
- ix) Monitor algae growth in reservoir (at shallow depths) T-C
- x) To tighten the loose fence wires at the well (Tolon-Cheshegu)
- xi) Mend the numerous cracks in the apron at Gunda wells

K=Kunkulun; Ku=Kukuo; Gi=Gizaa; D=Dimabi; T-CH=Tolon Cheshegu

6.2 Animation section

The following chapter outlines the components of the Animation programme for the coming half-year - 6.2.1 to 6.2.9 will give a work plan for the activities in the various villages.

The season will be characterised by in-service training and maintenance work on the dams. The villages with dams will be divided among the two teams for the planting of vetiver grass and mending of gullies. The better team will be given a good bonus at the end of the season.

Also, work in some of the villages will have to stop this wet season because the roads are impassable. Work will be resumed in the dry season. These villages are

Half yearly report VWR Jan-June 1992

Lungbung-Gundaa, Zion, Kpalung, Achiriyili, Yepalsi and Lungbung-Gurugu Water hygiene education will begin in Kpachiyili because the T.S. has solved the problem of getting water into the wells.

6.2.1 Orientation visits

Even though orientation visits should take place this season, there will be none because only three applications for dams have come in this year - two from Tolon-Kumbungu District and one from Savelugu-Nanton District. Apart from the few number of applicants, the results of the previous visits have not been released because of the long list of villages yet to be served. It is therefore better not to visit any more villages and raise their expectations. The applying villages will however be attended to if the present villages (twelve) are served.

6.2.2 Social Survey

Social surveys will not be carried out this season unless the need arises.

6.2.3 Water Hygiene Education

Guinea-worm surveys will be conducted in the early dry season in five selected villages. This will be the beginning of bi-annual surveys in these villages because the construction of dams here is not foreseen in the near future. The five villages are Tibogu-nayili, Kasuliyili, Lungbung-Gundaa, Tingolin and Kpalung. The aim of these continuous guinea-worm surveys until these villages get dams is to establish how much influence the A.S. has on the people's change in attitude.

Water hygiene education will resume in Kpachiyili (see July-Dec., 1991 halfyear report).

Guinea-worm slides and discussions will take place in a few villages - Fihini, Zali and Namdu-Zali.

6.2.4 Discussion of technical possibilities and labour organisation

Timing of the above depend on the T.S.

6.2.5 Maintenance Programme

Follow-ups to VMTs' activities will be intensified this season. This is the season for the planting of vetiver grass and mending of erosion gullies. Each team will be responsible for its village dams in this exercise.

A conference of all VMTs will take place in Tamale. Topics in relation to dams will be discussed during this conference. In all about one hundred and thirty-two VMTs, chairmen and magazias from twenty-two villages are expected to attend this conference. Topics to be proposed include:

1. Environmental influence of a dam - its advantages and disadvantages.
2. What the villages think about the project approach to dam building.
3. Maintenance of dam - necessary or not?
4. Activities to be done around the dam.

The second routine long-term maintenance visits will be paid to villages which have paid their contributions for these visits. The time has been proposed for immediately after the rains.

6.2.6 Monitoring

The monitoring of filtering of water in the villages where we work will be a continuous process.

Guinea-worm surveys will be conducted in five selected villages. (see 6.2.3.)

6.2.7 Internal organisation of the A.S.

The section will remain two teams - each team with its villages. The Snr. Animator will supervise the daily activities of the teams. The acting head will handle all the administrative activities of the A.S., and see to it that Animation programme is implemented smoothly.

6.2.8 Training

In-service training will be organised for the team. The Deles III training will take place in July/August.

If possible, a report-writing workshop will be organised because even though the section had one last wet season, the animators have not improved in this area. It is also proposed to have a Graap training within the section. This will take place after the Deles III workshop because the two methods are closely related. It will be given by the acting animation head.

The senior animator and one animator have proposed to attend a course on Human Relations and Communication for four weeks in Kumasi in September, 1992.

6.3 workshop

The planning of the workshop consists mainly of the following;

When the plant is withdrawn from the site the major maintenance inspection is carried out on it.

The placement of the new container stores and its access platform to be installed and taken into use.

when the feasibility reports is delivered to work out more in detail what it means for the project and to choose a policy for its future.

Improve on the registration of the time spending of the workshop staff and the time registration on daily forms as well as on the jobcards.

Make as from June 31st an inventory of the spare parts and other stock in the workshop stores.

6.4 Administration

The major problem to be solved in the section is to increase the manpower. The increased workload on the accountant is a serious threat to the proper accounting and registration of the project. Already the section is not able to provide timely information to the project management and it results often in not providing the information at all. Project management becomes in this way decision taking blindfolded with the hope that the right choice is made. In the Water Steering Committee meeting (August) this blockade to the recruitment of an extra bookkeeper will hopefully be taken away.

The planning consists further when extra manpower is recruited in the computerisation of the store bookkeeping system and later to put the financial bookkeeping into a computerised system so that more timely information can be provided.

Data base courses will continue after the yearly break (September/ October).

6.5 Project management

One of the first activities will be the management workshop in July.

The training and assessment of the assistant project manager is hopefully resulting in a positive advise to confirm the present man on probation sofar no conclusion can be drawn yet.

The VRA electricity connection seems to have a better chance now and the objective is to have a clear idea on the cost and the building of the line is on its way.

Further in the year the project manager and his assistant would like to follow a course in Cameroon for which permission will be sought from the WSC.

Later in the year when the SAWA/TAMADEVS monitoring mission takes place we hope to finalise the set up of the monitoring system. The work pressure on the heads of section is high so it is hoped that they find time to analyze the proposed system.

The management also will try to get a funding from Africa 2000 for the wells and fence of Kasuliyili dam.

reports\H_YRREP.192