

GOVERNMENT OF NAGALAND



Report on Evaluation Study of Rural Water Supply in Nagaland.

Directorate of Evaluation Government of Nagaland. Kohima.

PREFACE

1. The Government of Nagaland had desired that the Evaluation Organisation may carry out an assessment of the Rural water supply being implemented by the public health Engineering Department of the state Government. Accordingly, the Evaluation Organisation Undertake a Study on the Scheme. "Providing water Supply to Jalukie 'B' Village, Under Jalukie Sub-Division on a Pilot basis. The present report is the out come of this Pilot study.
2. This report which seeks to Provide on insight into its working is expected to be usefully by the implementing Department, administrators, Planners and others.
3. The Evaluation Organisation gratefully acknowledges the Co-operation received from the official of the public Health Engineering Department particularly the Sub-Divisional officer. (P.H.E) Jalukie.
4. Shri. N. Zeliang, Deputy Director of Evaluation Conducted the Study and prepared the report. The research assistance rendered by the Investigating staff of the Directorate of Evaluation deserves appreciation.

Dated.....1986

(H- G. GUPTA)
Joint Director of Evaluation
Nagaland, Kohhna.

CONTENT

Preface.

Chapter

1. INTRODUCTION.

General background, Need of the programme, the Rural water supply scheme, Revised minimum Need programme, Fain-Trap water supply scheme, Deep Tube well, Accelerated Rural water supply programme, Need for the Evaluation study, Objective of the study, Scope, Methodology & Sampling design.

II. OPERATION OF THE RURAL WATER SUPPLY-IN NAGALAND.

Organisational structure, physical progress during the plan period, problem village, physical Target & Achievement, selection of scheme, Adopted basis for estimation of New works, General norm for estimation of New works, General norm for instating pipe, tank etc. Financial Target and Achievement.

III. APPRAISAL OF WATER SUPPLY

The P.H.E. Sub-Division Jalukie, water supply Scheme to Jalukie 'B, village, Abstract of Cost, Financial aspect.

IV. VIEWS AND COMMENTS OF THE

The village, Item of works taken up and completed, Availability of water.

SCHEME TO-JALUKIE 'B, VILLAGE.

BENEFICIARIES.

V. MAIN FINDINGS AND SUGGESTION. Important findings-Recommendation.

LIST OF TABLES CONTAINED IN THE REPORT.

Table No. Heading. Page

- I. Administrative set- up of the P.H.E. Department.
- II. Physical Target and Achievement-during 1975-76 to 1981-82.
- III. Financial Target and Achievement-during 1975-76 to 1981-82
- IV. Particulars on coverages of water supply in the sub-Division.
- V. Estimated break-up of financial requirement for Jalukie'B, village-water supply scheme. ,
- VI. Year wise break-up of Expenditure.
- VII. Particulars of the village as reported by the respondent.
- VIII. Item of work actually taken up and completed (As per record of the Department)
- IX. Availability of water in the village through the pipe during 1982.

Chapter 1

INTRODUCTION

General Background.

1. 1. Nagaland the Sixteenth State of Indian Union was Constituted in December, 1963. It has an area of 16,527 Sq. Kms. There are 966 Villages and 122 hamlets having a population of 7,73,281 (1981) census) The annual rainfall occurring mostly between April to October averages between 2,000 mm. - 2,500 mm. The state was situated in the North-Eastern frontiers of India with hill, rugged and mountainous terrain. Almost all the Villages are established on hill top and ridges for security reasons as in the head hunting age of the state, security of the Village against enemy attack happened to be one of the main concerned of every Village.

Need of the Programme.

1. 2. Since, the Village population is living on hills and ridges, a lot of individual efforts are needed for bringing water from the streams to their houses by the Village people. Very often the water sources at which the people depends, are far away from the Villages. The problem get accentuated during winter months as the springs in most of the cases are not perennial ones and get dried up during these months Further, the sources itself may not be free from contamination. Thus it has been the concern of the Government to provide safe drinking water to the rural population so that the individual efforts and energy required for mammal lifting of water from the source to their Louses are saved and the villagers are presided with safe drinking water right in the Village. The Government of Nagaland has, therefore, given top priority for supplying water to rural areas in a phased programme, to cover all the villages under various Water Supply Programme.

The Rural Water Supply Schemes

2.3. At present, programmes under which Rural water Supply Schemes or the projects are being undertaken in Nagaland are as under.

Revised Minimum Need Programme.

2. 4. Provision of drinking water supply to all the problem Villages is one of the important items under the R.M.N.P. Providing the basic need of safe drinking water to all the Villages Nagaland has been receiving priority treatment of the State Plan, with this aim in view the Government had taken up a massive programme in the beginning of the Fifth Five Year Plan. As a result of these efforts, 397 Villages covering a population of 243,600 have already been benefited by the end of 1979-80. In the Sixth Five Year Plan it is proposed to cover 276 new Villages having a population of 2,11,000 at an estimated cost of Rs,1,105.00 lakhs.

Rain-Trap Water Supply Schemes.

2.5. This scheme is taken up under the UNICEF assistance. An outlay of Rs. 10.00' lakhs is provided during the Sixth Plan to cover 3 Villages having a population of about 1332.

1.7. As a part of the programme for providing safe drinking water to all the problem Villages in the country by the end of 1990 the Government of India have launched an additional programme entitled

"Accelerated Rural Water Supply Programme" during the year 1977-78. Thus this is a Centrally Sponsored Schemes financed by the Central Government. The fund provided under this scheme are in addition to the State Plan.

Need for the Evaluation Study.

1.8. As may be seen the problem of taking safe drinking water to the Villages is huge one and the expenditure involved in carrying out the programme is also enormous. In the Sixth Five Year Plan itself an outlay of Rs.1.58 lakhs has been envisaged. There is a feeling among the plan formulators in particular and the Government in general as to whether the money being invested in the programme is properly utilised and whether or not the benefit intended to accrue from the programme are really reaching the population concerned. The Government, therefore, wanted to know the extent and success of the programme by undertaking an Evaluation Study by the Evaluation Organisation. Hence the need of the study.

Deep Tube Well.

2.6. In addition to the pipe water supply schemes the department has launched a programme of deep tube-well in the foot hill areas with an estimated cost of. Rs. 10-45 lakhs covering 58 villages with a population of about 17,500.

II. Accelerated Rural Water Supply Programme.

Objective of the Study.

1. 9. This Evaluation Study was taken up with the following as main, objectives

- i. To make an appraisal of the physical and financial performances of the Rural Water Supply Schemes.
- ii. To assess the impact of the Schemes on the beneficiaries.
- iii. To ascertain its shortcoming and difficulties if any and.
- iv. To suggest measures for improving its functional efficiency.

Scope, Methodology & Sampling Design.

1.10. On a pilot basis only one scheme was taken for the purpose of this study. As suggested by the Superintending Engineer, P.H.E. Kohima the scheme on "Providing Water Supply to Jalukie "B" Village under Jalukie Sub-Division was taken up. For collection of primary data three schedules viz. (i) Schedule-'A' for information from the Executive Engineer (P.H.E.) (ii) Schedule-'B' for information from the Sub-Divisional officer (P.H.E.) (iii) Schedule-'C' for information to be collected from the beneficiaries to obtained their view and comments on the working of the water supply were used. To ascertain the impact of the scheme on the beneficiarie s 10(ten) knowledgeable persons who arc directly under the scheme were interviewed. The secondary information were collected through discussion and Government reports. The reference period of the study is from 1975-76 to 1981-82. For the purpose of detail enquiry one Sub-Division under each P.H.E. Division will be covered basing on the method as followed above.

Chapter – II

Operation of the Rural Water Supply in Nagaland.

Organisational Structure.

2. 1. The Department of Public Health Engineering is the sole agency which is implementing the Water Supply Schemes/Programmes in the state. The Department is headed by a superintending Engineer with head quarter at Kohima. There are 8(eight) working Divisions including Investigation Division (Centrally Sponsored Scheme) Besides there is one Monitoring Cell with one Executive Engineer attached to Superintending Engineers Office under (Centrally Sponsored Scheme). Under each P.H.E. Divisions which are headed by an Executive Engineer, there are a numbers of P.H.E. Sub-Division head by a Sub-Divisional Officers. Under the over all control of the head quarter office, the Divisional and Sub-Divisional Offices are set up as below:-

**TABLE-I.
ADMINISTRATIVE SET UP OF THE P.H.E. DEPARTMENT.**

SL No	Name of the P.H.E. Division Offices.	Name of the P.H.E. Sub-No. Division Offices
1	2	3
1.	P.H.E. M/C Division. Kohima.	a) P.H.E. Sub-Division No. I. Kohima. b) P.H.E. Sub-Division No. II. Kohima. c) P.H.E. Investigation Sub-Division, Kohima.
2.	PH.E. Division, Kohima (Renamed as P.H.E. Division Phek)	a) P.H.E. Sub-division, Phek. b) P.H.E. Sub-Division, Pfutsero.
3.	P.H.E. Division. Wokha	a) P.H.E. Sub-Division. Wokha. b) P.H.E. Sub-Division, Bhandari.
4	P.H.E. Division, Dimapur	a) PH.E. Sub- Division No.-I Dimapur b) P.H.E. Sub-Division No.II Dimapur c) P.H.E. Sub Division Jalukie d) P.H.E. Sub-Division Tening
5.	P.H.E. Division Mokokchung	a) P.H.E.Sub-Division, No.-I Mokokchung b) P.H.E. Subvision, No-II Mokokchung c) P.H.E. Subvision, Mangkolemba

6. P.H.E Investigation Division, Zunheboto.	a) P.H.E. Sub-Division Zunheboto. b) P.H.E. Sub-Division Aghunato.
7. P.H.E. Division Tuensang.	a) P.H.E. Sub-Division Tuensang b) P.H.E. Sub-Division Kiphire
8. P.H.E. Division, Mon.	a) P.H.E. Subdivision, Mon. b) P.H.E. Subdivision, Changpang.

[Source Field Investigation]

Physical Progress during the plan period.

2.2. A massive programme for providing safe drinking water to the Villages in the state were started from the beginning of the Fifth Year Plan. As a result of this efforts, 397 Villages covering a population of about 2,43,180 is reported to have been benefited by the end of the Fifth Five Year Plan period under Rural Water Supply Schemes.

2.3 During the Sixth Five Year Plan the state Government proposed to cover 435 new Villages having a population of about 3,45,000 with an estimated cost of Rs. 17=45 lakhs. This ambitious plan was fumed keeping in view with the International Drinking Water Supply and sanitation Decade 1981-90'. A cent percent population coverage with drinking water facilities was contemplated. The made of Water Supply in Nagaland are mostly by pipe through gravitation system. The Department is however launching a programme of deep tube well in the foot hill areas with an estimated cost of Rs. 17=45 lakhs covering 58 Villages with a population of about 17,500 during the Sixth Five Year Plan.

Problem Villages.

2.4. In Nagaland all the Villages are classified as 'Problem Village". The basis for determining a Village as 'Problem' are as under :—

- a) Where the Village have no source at an attitude of 1,000 metres above M.S.L. or
- b) Where the Village are situated in difficult terrain and do not have any access to water source and prone to water disease.

Physical Target & Achievement.

2. 5. The physical target and achievement of the P.H.E. Department during the last 7 (seven) years period are as under.

TABLE II.
PHYSICAL TARGET AND ACHIEVEMENT DURING-
1975-76 To 1981-82.

Years	Physical Target		Physical Achievement	
	Urban	Rural	Urban	Rural
1	2	3	4	5
1975-76	3	36	3	3
1976-77	3	32	3	32
1977-78	3	61	3	47
1978-79	3	83	3	65
1979-80	3	162	3	74
19780-81	3	135	3	72
1981-82	3	108	3	83

[Source :- S.E., P.H.E.]

2.6. In Nagaland only 3 towns (Viz. Kohima, Mokokchung and Dirnapur) are declared as Urban areas, and as such the target and achievement as shown in Col-2 & 4 are augmentation works only. The target and achievement as shown in Col-3 & 5 are inclusive of new work taken up as well as augmentation works of the department.
Selection of Schemes.

2.7. Since all the Villages in Nagaland are declared as "Problem Villages" it is expected that the Department fix 'Priority list of Villages for providing water supply to the problem Villages. But, it is found that no such priority is fixed by the Department in matter of giving water supply to the problem villages of the same Category. Selection of scheme for inclusion in the work programme are done at random based on pressures.

2.8. As almost all the villages in Nagaland are established on hill top, providing hygienic drinking water to the people at a reasonable cost poses a difficult task facing the department. On the experience gained from the execution of the rural water supply schemes, the state government worked out that on the average a minimum of Rs. 200/-per capita is considered necessary to supply only 10 gallons per head per day. Therefore, for formulating a realistic estimate for all the schemes the above rate of Rs. 200/— per capita has been adopted for the new schemes of rural water supply in Nagaland.

General Norms For Installing pipe Tank etc.

2.9. No. procedure or norm is fixed as to how distributive tap pipe aid tank are to be install. There are generally done on the basis of per capita requirement of water, location of the village etc., While doing so, due consideration is also given to Government establishment, different khels etc.
Financial Target and Achievement.

2.10. The Financial target and achievement of the Department during the period under study are reflected in the table at the next page.

TABLE III**FINANCIAL TARGET AND ACHIEVEMENT DURING 1975-76 TO 1981-1982**

Rs. In Lakhs

Years	Financial Target			Financial Achievement		
	Plan		Non-Plan	Plan		Non-Plan
	Urban	Rural	Urban/Rural	Urban	Rural	Urban/Rural
1	2	3	4	5	6	7
1975-76	40	65	101.31	65	77.52	101.31
1976-77	21	92	139.68	40	118	139.63
1977-78	52.05	173.45	155.52	51	175	155.52
1978-79	75	212	312.57	73	214	312.57
1979-80	274	304	192.38	43.92	312	192.38
1980-81	121	300	500.95	43.92	399	500.98
1981-82	117	331.5	477.07	73.35	349	477.07

[Source: - S.E. (P.H.E.) Office record]

2.11 Under Non-Plan no separate record on rural and urban target and achievement were made available during the period under study. The target used to be fully spent. Since the above table fully reflect the performance of the Department, on further illustration is attempted.

Chapter-III**APPRAISAL OF WATER SUPPLY SCHEME TO JALUKIE 'B' - VILLAGE.****The P.H.E. Sub-Division Jalukie.**

3.1. The P.L.I.E. Sub-Division Jalukie is under the P.H.E. Division, Dimapur. The Sub-Divisional office (PHE) Jalukie is, therefore, under the control of Executive Engineer (PHE) Dimapur. Under the jurisdiction of the Sub-Divisional officer (PHE) Jalukie, there are 84 (eighty four) villages with 5,018 house hold having a population of 31,230 as per 1981 census. Recently, the PHE Sub-Division, Jalukie was divided into 2 Sub-Divisions namely Jalukie Sub-Division and Tening. Sub-Division. But upto the time of this enquiry, the two Sub-Divisions were under the S.D.O. (PHE) Jalukie and hence this study covered both the Sub-Divisions.

3.2. The total numbers of villages where water supply facilities were made available and where Water Supply facilities could not be provided by the Government till 31-3-1982 in the Sub-Division is shown in table-IV as under: -

TABLE –V
ESTIMATED BREAK-UP OF FINANCIAL REQUIREMENT FOR JALUKIE ‘B’
VILLAGE WATER SUPPLY SCHEME

Sl. No. (1)	Sub-head of items (2)	Quantity (3)	Rates (4)	Unit (5)	Amount (Rs) (6)
1	Cost of G. I. Pipe a) 2. dia b). 1-1/2 dia c). 3/4 dia d). 1/2 dia	4,200 Mts. 1,300 Mts 900 Mts 750 Mts.	24.50 17.50 13.15 7.15	Mts. Mts. Mts. Mts.	1,02,900.00 22,620.00 15,855.00 5,362.00
2	2. Providing 400 gls P.S. tanks	10 Nos	1,800	Each	18,000.00
3	Construction of 400 gls P.S. tank staging.	10 Nos	1250	Each	12,500.00
4	Construction of R.C.C. 10,000 gls. as per approved"	1 No	10,11.500	Each	10,11.500
5	Labour charge for laying G.I, Pipe in position, a). 2,, dia b). 1-1/2 dia c). 3/4 dia d). 1/2 dia	4,200 Mts 1,300 Mts 900 Mts	31,00 1,00 50	Permts Permts Permts	12,600.00 1,300.00 450.00
6	Carriage of material from Dimapur PHE store of Jalukie 'B' Village 57 Kms.	44 m/t	0.85	PMT	3,740.00
7	Addl. 10% for shifting materials such as air value, elbowtie union etc.				18,705.70
8	Addl. 2% W/c establishment				4,117.26
9	Addl. 3% contingency charge.				6,599.40

[Source :- S.E. P.H.E. Dimapur]

3.5. Based on the above design of work the items of works actually taken up and completed are reported to be as under: -

- | | |
|---|-----------------------------|
| 1. Construction of overhead steel structured staging | 1 No 10,00 gls. |
| 2. Tanks provided | 10 Nos. (G.I.) |
| 3. Construction of staging for tank | 10 Nos. |
| 4. Pipe length laid from source to M/R | 4,200 mts (2 "" dia) |
| 5. Pipe length laid from M/R to the distribution tank | 1,300 mts. (1-1/2 dia) |
| 6. Pipe length laid from distribution tank to the public taps | 900X750 mts (3/4 & 1/2 dia) |
| 7. Quality of Iron/Steel used for tank | both P.S & G.I. |
| 8. Nos. of public taps provided | 20 Nos. |

[Source :- Field Investigation]

3.6. As per the record of the office, the water was taped down from the pipe line of Jalukie Town Water Supply (i.e. from near the P.W.D. Godown) to Jalukie'B' Village. Hence no separate inlet tank at source for the Jalukie 'B' Water Supply is reported to have been constructed.

Financial Aspect.

3.7. As stated in 3.4 an amount of Rs.2,16,600.00 was sanctioned for the Jalukie 'B' Village Water Supply Scheme. The year-wise expenditure incurred on the works are presented in table below :-

TABLE-VI.
Year-wise Break-up of Expenditure.

SL. No.	Years	Total amount Sanctioned for the work	Actual Expe. involved.
(1)	(2)	(3)	(4)
1.	1979-80	2.16,600.00	2,21,564.20
2.	1980-81		88,151.00
Total:		2,16,600.00	3,09,715.2

3.8 The above table indicate that there was an excess expenditure of Rs. 95,115,38 over the estimated amount .The Evaluation team could not get the reasons for the excess expenditure. However it is presumed that the excess was due to the increase in the labour/material costs.

Chapter-IV

Views and Comments of the Beneficiaries.

4.1 In order to obtain the Views and Comments of local people, who are the direct beneficiaries of this scheme, a quick study was conducted by interviewing knowledgeable persons of the village. About 25% house hold were interviewed.

The Village.

4.2. The particulars of the village for which the water Supply Scheme was undertaken are reported to be as under: —

TABLE-VII.
PARTICULARS OF THE VILLAGE AS REPORTED BY THE RESPONDENTS.

SI. No.	Items	Reported figures (average)
(1)	(2)	(3)
1.	Total house hold	228
2.	Total population	1,120
3.	Distance of Water Source before- the introduction of the scheme.	3 Furlongs.
4.	Distance of Water Source after introduction of the scheme.	180 fts
5.	Distance of the Water tapping point (i. e. Kejanglwa) form Village.	3.Kms.

Items of work taken up and completed.

4.3. The Evaluation team collected information from two sources (Viz. this official records and from the respondents as well as through physical verification from the spot) regarding the items of work actually taken up and completed. These information are shown in table-VIII in the below.

TABLE-VIII
ITEMS OF WORK ACTUALLY TAKEN UP AND COMPLETED.

Items of works completed	As per official record.	As reported by respondents
1	2	3
Construction of M/R	1 No. 10,000 Gls	1 No. 10,000 Gls
Tanks provided	10 Nos.	8 Nos.
Construction of staging for tank	10 Nos.	8 Nos.
Pipe length from tapping point to M/R	4,200 Mts.	3,000 Mts
Size of pipe used from tapping point to M/R	2'' dia	1-1/3 dia
Pipe size used from M/P to other distribution points	1-1/2' 1-1/2' & 3/4	1/2'&3/4' dia

(Source :-- Field Investigation)

4.4. The statistical figures presented above showed that there is a difference between the official figures and the actual figures reported by the respondents, the reasons for this difference could not be made available to the Evaluation team.

Availability of water.

4.5. The Evaluation team collected information on the availability of Water in the village through the pipe during 1982. The information as reported by the beneficiary respondents are presented at the next page.

TABLE—IX
AVAILABILITY OF WATER IN THE VILLAGE THROUGH—PIPE DURING 1982.

Months	Respondents Reporting Nos of days water not available at all (average)	Respondents reporting Nos. of days few water available (average)	Respondents reporting Nos. of days sufficient water available (average)
1	2	3	4
January	18	4	8
February	18	5	6
March	18	5	9
April	17	5	9
May	14	5	12
June	13	5	12
July	12	5	14
August	12	5	16
September	12	5	13
October	12	5	14
November	15	5	14
December	15	6	2
Total Average	15	5	11

(Source: — Field Investigation)

4.6. The figures as presented in table-IX reveals that on the average in a month there is 15 days with complete dry' 5 days with little water and 11 days with sufficient water through the pipe. The released of water in almost all the case is reported to be 30-35 minutes per day only. This is said to be the benefit derived by the local beneficiaries for spending Rs.3,09, 716.38 by the Government on the scheme providing water supply to Jalukie 'B' village.

4 7. On further enquiry it has been reported that the kejanglwa villagers are normally blocking that water line of Jalukie 'B' village. The kejanglwa villagers on the other hand reported that the water which they are getting i.e.) 1-1/2' dia pipe line from the source Techaukie River is hardly meeting the requirement of village. Further, the requirement of Jalukie 'B, village is a *T* dia pipe line. Thus even if the entire water is released from the kejanglwa, the requirement of Jalukie 'B' villagers can not be met. This creation of the department are leading to complaint and counter complaint from both the villagers and a misunderstanding between these two village has already been developed.

Chapter-V

MAIN FINDINGS & SUGGESTIONS.

Important Findings,

5.1. The Evaluation Organisation after collecting official record and field study on, providing water supply to Jalukie-B' village, had to offer the following important findings.

i). It was surprised to see that in official record, the scheme as estimated was completed and an amount of Rs. 3, 09,115.38 was actually spent on the scheme. But in actual practice it was found that only an extension line was provided to the Jalukie 'B, village from kejanglwa village water supply.

ii). Further, it is not known how a completion report of the scheme could be submitted when there is nothing done as per the estimated work. That too with an excess expenditure of Rs. 93,000/- over the estimate cost.

iii). It is interesting to see how the exact numbers of pipe of different sizes were fully utilised as estimated earlier in spite of the fact that the construction of water supply line from Jalukie town was not taken up as originally proposed, whether the exact numbers of pipes of different sizes will be utilised for providing an extension line from kejanglwa village water supply to Jalukie'B' village is any body's guess.

iv). It is more interesting to see that the Kejanglwa villagers were provided with a 1-1/2 dia pipe line only from Techauki River (Source) after considering the requirement of the villagers. From this 1-1/2' dia pipe line for Kejanglwa Villagers, it is unthinkable to tap another 2" dia pipe line for Jalukie 'B' Villagers.

V). The requirement of water for both kejanglwa villages and Jalukie 'B' village is 3-1/2' dia pipe line (i.e 1-21: dia for kejanglwa and 22' dia for Jalukie ('B') as shown in the technical estimate which are available in file No. EE/ DHE/DEM/T-58/77-78 and No. EE/PHE/DEM/ T/57/ 1978-79. Thus the sharing of a 1-1/2' dia pipe line water between kejanglwa villagers, and Jalukie'B' Villagers will naturally cause acute scarcity of water for both the villages This has resulted into complaint and counter complaint from both the villages for water and the Jalukie 'B' villagers seldom get water.

vi) Moreover' it is reported that a 2' dia pipe line only was laid for Jalukie town. If this is so' how a 2" dia pipe line could be tap down to Jalukie 'B' village again ? Hence, it appears that the technical estimate seems to be defective even if the water is tap down from Jalukie town water supply line as proposed earlier.

vii). On actual physical verification by the Evaluation team; it was found that 1-1/2 dia pipe was laid from kejanglwa to Jalukie 'B' village instead of 2' dia pipe.

viii). As per record 10 Nos. of P. S. Tank were provided to the village. But an actual physical verification by the Evaluation team only 8 tanks (6.G.I. & 2 P.S.] were provided to the villagers.

ix). As per the estimate the villagers should be provided with P.S. Tanks. But in actual position the villagers were provided with mostly G.I. tanks.

x). If the work was taken up on a technically sound ground and completed with the expenditure already involved there will be no shortage of water in village. Recommendations.

i). The Government should see why such irregularities were allowed to go unchecked by the Department. The recurrence of such gross irregularities should strictly be watch and checked by the Department in future.

ii). In order that no further misunderstanding is created among the two village?, it is suggested that a water line if possible, for Jalukie 'B' village is laid separately by connecting the Ibe) from kuja.ngl.waj where the water line for Jalukie 'A' started. Since the 1-1/2" dia pipe line from source i.e- Techauki River to kejanglwa Reservoir is not sufficient for both The villages the department will, have to lay another pipe line of 2" dia for Jalukie 'B'.

iii). As reported on the average the villagers has to go without a single drop of water through the pipe for 15 days' 5 days with few water and the remaining 11 days with sufficient water. This showed that the villagers are still depending on natural source for their daily water requirement and that too in most cases at a distance of 3-6 furlongs. Not only that the water are not free from pollution and disease. Under this circumstances' it is suggested that the Department should immediately take up a quick possible measures to tide over the present a acute water scarcity problems.