

University College of the Gold Coast  
Department of Extra-Mural Studies

R E P O R T

of the

T O N G U

R U R A L

S U R V E Y



held in the areas of the  
Upper and Central Tongu Local Councils  
April, 1953

Together with a Foreword by the Chief Regional Officer,  
Trans-Volta/Togoland

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University College of the Gold Coast  
Department of Extra-Mural Studies

R U R A L      S U R V E Y

held in the areas of the Upper  
and Central Tongu Local Councils

April 9th-20th,  
1953.

For members of the survey only.

## INTRODUCTORY

This small souvenir booklet is being sent out to all who took part in the Rural Survey organised by the Department of Extra-Mural Studies of the University College of the Gold Coast in April, 1953. It is intended only for those who took part, and a small certificate of attendance will also be sent to them later.

The report of the work done is a separate document and will be sent to all course students and many other interested persons.

The aims of the Survey were:-

1. To give students an understanding of social survey techniques.
2. To conduct an enquiry into the economic position of part of Tongu, with particular emphasis on water supply, and present a report to the Local Councils concerned, the District Council and the Regional Administration.
3. To improve public knowledge of a little-known and under-developed area of the Gold Coast.

The course started with briefing on Survey work and a set of background lectures, for which all members stayed in Adidome. On April 13th, they broke up into groups and travelled by launch or lorry to six different villages in the Central and Lower Tongu areas. Five were under the supervision of a graduate tutor, and the sixth was visited by the Director of Studies.

Five of the headquarters villages were on the banks of the Volta, owing to convenience of communication, but naturally all parties struck inland in search of villages with water supply difficulties. They travelled on foot or by bicycle; sometimes they had use of a lorry. Maps were made, photographs taken, samples of water collected; and this booklet gives a summary of work achieved on the prescribed work-sheets.

On the last day all parties re-assembled at Adidome for a final pooling of information and then students returned to their jobs.

LALAGE J. BOWN  
Resident Tutor, T.V. & S.T.

## ACKNOWLEDGMENTS

The success of the Rural Survey was only possible owing to the help of a large number of people, and the teams' gratitude must go to all of them. In this Souvenir of the Course it is only fitting to mention as many as we can by name.

The original idea which blossomed into the Survey came from George Sinclair O.B.E., Regional Officer, Trans-Volta and Southern Togoland, and thanks are due both to him and to Serge Thomas, B.A., Government Agent, Sogankope, for information and help.

The Government Agent placed three Rest Houses at our disposal throughout the Survey, and we are also grateful for this. Shelter was provided by schools as well, and we thank the Reverend Managers and Headmasters of the Presbyterian Schools at Adidome, Mepe and Mafi Kumasi, the Roman Catholic School at Battor and the Methodist School at Aveyime. Numerous cateresses and boys too helped our well-being, and congratulations go to the Chopmasters of most of the teams for efficiency and economy. The organisation of meals at Adidome would have been impossible without the hard work of G. Adali-Mortty, Adult Education Organiser.

The academic side of the work was mainly the burden of Gustav Jahoda, M.Sc., Ph.D., Lecturer in Sociology, University College, and David Apter, M.A., University of Princeton, U.S.A., the able and energetic Directors of the Survey, and their directions were carried out with enthusiasm and understanding by the group leaders, Mrs. Eleanor Apter, B.A., Miss Lalage Bown, M.A., Resident Tutor, Trans-Volta and Southern Togoland, Professor Hugh Blaney, M.Sc., Ph.D., and Theodore Mathias Tetteh of H.M. Fisheries. The teams appreciated the lectures which were given, and the time and trouble taken over them by S. Thomas, B.A., J.K. Nutakor, Professor J.V.F. Phillips, D.Sc., A.S.B. Wilson, B.Sc., E. Quartey-Papafio, B.Sc., E. Mundy, Driller and A.L. Titley, M.A.

Mr. Titley, the Regional Community Development Officer has put us especially in his debt by allowing all the members of his Department working in the area to attend the course and take full part in the work. The Regional Education Officer and the Chief Fisheries Officer also allowed members of their respective staffs to attend.

The welcome the teams received almost everywhere was due to many individuals, but we should like to record our special thanks to Fia Asem III, Head Chief of Mafi for sponsoring our work and for a generous gift of whisky, turkeys and pigeons; and also to The Rev. S.A. Dzirasa, Chairman, Lower Tongu Local Council, K. Agbonu, Chairman, Upper Tongu Local Council, and in particular, Justice K. Nutakor, Chairman of the Lower Tongu Local Council for support and co-operation. The Mafi Youth Association as a body displayed extreme generosity in supporting the Survey and making members at home by a very pleasant Saturday night party. One of the Association's members F.K. Dra Goka, Assistant Education Officer together with Mr. Nutakor represented them ably throughout the Survey, and helped in innumerable ways, from arranging the big sailing canoe to return members of the teams to Adidome to setting up the shed under which the cateresses cooked.

The individual chiefs who made team members welcome are too numerous to mention; we all remember with deep gratefulness many kind words, many gifts, and plenty of useful information. Each team member will have a particular chief in mind, whom he or she happened to find outstandingly helpful.

Finally, we are glad that two Assemblymen, J.K.A. Quashie, 1st. Member for Anlo, and P.D. Adjani, Member for Peki/Tongu should have found it worth their while to attend, and make useful contributions. One of them brought with him Kofi Ahorsey of the Daily Graphic who not only gave the Survey plenty of publicity, but also worked very hard on the Survey himself.

### 3. Obstacles and Problems in the way of improvement.

- (a) Conservatism of farmers all over the world.
- (b) The systems of land-tenure, which make for small holdings and do not encourage enclosure.
- (c) The chaotic marketing system.

### 4. Pigs and Poultry.

The problem is that pigs and poultry both compete for food useful for human consumption, and it is hardly wise to recommend the breeding of more pigs or poultry until food supplies are really plentiful.

The black pig is not the most economical type. Varieties like the Large White will give a better return in meat for the food they eat.

Poultry in this country is so mixed that its origin is unknown.

### 5. General Conclusions are:

- (a) That the Gold Coast needs an all-round increase in food-supplies.
- (b) That the Animal Health Department deserves every support.
- (c) That damming is necessary to improve water-supplies.
- (d) That a new approach is needed to the control of tsetse fly since the method of cutting-out bush at its breeding grounds will take hundreds of years.
- (e) That mass education is needed to stir farmers' enthusiasm for new methods, and to change society's valuation of the farmer.

## III. Mixed Farming in the Gold Coast

by E. Quartey-Papafio, B.Sc., Agricultural Officer, Keta.

### 1. Definitions:

- (a) Arable farming is cultivation of the soil for crops.
- (b) Livestock farming is breeding and herding and caring for animals. Tribes like the Masai go in for this.
- (c) Alternate farming is where one system is practised at one time and then followed by the other, on the same land.
- (d) Shifting cultivation is where arable farming is practised on one piece of land until its fertility is exhausted, and then moved to a new piece of land, as in many parts of Africa.
- (e) Mixed cropping is the growth of a variety of crops on a given piece of land.
- (f) Mixed farming is the keeping of livestock and growing of crops at one and the same time, so that the animals have food, and the crops may be fertilised with manure.

2. The value of mixed farming is that it maintains the soil's fertility.

### 3. The practice of mixed farming:

- (a) Crops. Rotation is advisable to avoid disease, and fertility should be ensured by the use of manures, composts (rotted vegetable matter) and chemicals. Manures should not be used until they are mature (after the heap has finished smoking).
- (b) Care of animals. The basis of cattle-feeding is grass, and we need to adopt the idea of preserving grass for use in the dry season.

4. The use of animals is manifold. They provide meat, milk, dairy products for food, hides and wool for clothing, bones, hooves, horns for glue etc., bloommeal for feed; and also they work as draught animals or in turning mills or threshing.

### 5. Mixed farming here.

In the Keta/Ada districts, the practice of buying manure for coconut groves and onion beds is widespread. How about using some of the manure in Tongu, instead of selling it all?

## SUMMARIES OF LECTURES

### I. The Ecology of the Gold Coast

by J.F.V. Phillips D.Sc., Professor of Agriculture, University College.

1. Material development in Africa is taking place against a background of intellectual and moral awakening. We must not let that awakening and the impatience it generates hasten us into over-rapid development. Over-hasty schemes, such as the Ground-Nut Scheme in Tanganyika, and the Poultry Scheme in the Gambia, lead to a waste of men, money and machines. We should, when we plan, take adequate note of the natural hazards to be over-come. We must never forget such obstacles as drought and tsetse fly, nor must we forget that when these are dealt with, other problems will follow them, e.g. over-stocking of land with cattle.

2. Ecology simply means the study of living things and life in all its aspects. We need to apply our ecological knowledge to the Gold Coast, and before development plans go ahead we want knowledge of:

- (a) Climate
- (b) Soils
- (c) Possibilities of blending old and new farming methods.

3. Development will change the face of Tongu. When the Volta Barrage is completed, between two and three-hundred acres of land on the Accra Plains, and possibly Tongu will be watered, and will be able to produce many new crops.

### II. Animal Husbandry in the Gold Coast

by A.S.B. Wilson, B.Sc., Senior Lecturer in Animal Husbandry, Department of Agriculture, University College.

1. Types of cattle known here are:

- (a) The Gold Coast short-horn, which has the advantage of immunity from tsetse, but is unlikely to increase its size until the water problem is settled. European in origin.
- (b) Humped cattle, of Asiatic origin, which are not immune to tsetse, and therefore not seen so much in the South.
- (c) A cross between the short-horn and the humped cattle.
- (d) Ndama from French Guinea. These are rather rare.

2. Ways of Improving Gold Coast cattle could be:

- (a) Selective breeding. The choice of sire is of the greatest importance.
- (b) The provision of "winter feed" for the dry season. Grass could be cut and kept air-tight, in pits or dement "silos", until needed.
- (c) Provision of better water-supplies, by damming, or well-digging.
- (d) Control of disease. Much work has already been done by the Department of Animal Health, often in the face of ignorance or apathy. The three main diseases are:-

- 1. Rinderpest (contagious)
- ii. Contagious pleuro-pneumonia. Both of these come in from French territory where control is not so strict.
- iii. Trypanosomiasis. Anttrycide has been found fairly effective if administered in the earliest stages of this disease.

## SOME COMMENTS ON MAFI HISTORY

Instead of his Welcome Address, we are including at his own request these notes by P.D. Adjani M.L.A.

### The Origins of Mafi

Mafi people migrated from Notse, and settled at Tsekpo for some years. Later they left and came and settled at their present place of abode. They were led by their King Fia Bometsuleh of the Gbortah tribe, who was then the ruler of Mafi. Fia Bometsuleh came to Mafi with his daughter, named Amewoame. After the death of Fia Bometsuleh the stool passed into the hands of Amewoame's son, whose father came from Torfi. From that time until today Torfi tribe has been the ruler of Mafi.

### The Naming of the Volta

Tongu people call the Volta Amu, and an explanation is this. Anyafoi was a hunter, and Amu a hunter-in-training. On the arrival of the Mafi people at their present place of settlement, Amu was asked by his master to go into the River first to enable him to find out whether it was deep or not. When Amu entered the water, he got drowned, and was never seen again.

When the news reached the immigrants who were waiting outside the River, they said that they were going to see the place where Amu got drowned. Hence the Volta River was named after Amu.

### Mafi Fetishes

Apart from other fetishes, there are two particularly important ones in Mafi, namely Avakpe and Korloeh. Avakpe (war-stone) is the senior fetish, and Korloeh is the messenger of Avakpe. The guardians of the fetish Avakpe are at Avakpedome, near Adidome. The name of the senior fetish priest in the state is Avakpenuor, and he lives at Avakpedome (under the war-stone).

The Avakpedome people are part of the Gbortah tribe which came with the Mafi paramount stool, and they claim to have been the first settlers of modern Mafi. There are eight tribes in Mafi, and of these Gbortah has been the king-maker; the right to enstool and destool has from time immemorial been vested in it.

### Mafi Land Tenure

The Akan custom of stool land does not exist in Mafi, we believe. Mafi has tribal lands, which may be entrusted to a chief, or sometimes to a fetish priest, since in the olden days of Mafi a fetish priest wielded a greater influence both in the political and spiritual life of the people.

GOVERNMENT DEVELOPMENT PLANS FOR TONGU

from a talk by Serge Thomas, B.A., Government Agent,  
Sogankope, delivered at the Opening Session

Expenditure under the Government Development Plan which will benefit Tongu is as follows:-

Administration

	£
District Office, Sogankope ... ..	2,500
Bungalow, Sogankope ... ..	6,000
Junior Staff Quarters (nearing completion)	2,520

Police

1952/53 Station and Quarters ... ..	10,179
-------------------------------------	--------

Local Government

District Council buildings, equipment	5,000
Local Councils buildings and equipment	8,800

Note that this becomes available when Councils have completed acquisition of land and contract; it may not all therefore be granted in 1953/54.

In addition to the above, Government makes a grant-in-aid for development work to Local Councils, proportionate to rate collection.

Communications

Accra - Tefle road ... ..	100,000	
Sogankope - Dzodze road ... ..	1,600	
Improvements to roads under Regional organisation ... ..	15,000	(not known how much will go to Tongu)

Animal Health

Station and Junior Staff Quarters, Sogankope	2,950
--	-------

Community Development Funds

1952/53 Used for various schemes ...	2,500
1953/54 ... ..	700

Housing

Allocated to Region for Housing Loans scheme	13,500	(not known how much will go to Tongu under these schemes)
Allocated to Region for Rural Housing	9,000	

Note Except where otherwise indicated, all this expenditure is for the year 1953/54.

### WELCOME ADDRESS

Read at the Opening Session by Justice K. Nutakor,  
Chairman, Central Tongu Local Council.

Mr. Chairman, Ladies, Gentlemen and prominent intellectuals, on behalf of the State of Mafi and the Central Tongu Local Council, I accord you a most hearty welcome on your visit to this historic town of Adidome. The fact that this year a Rural Survey is going to be held is an unmistakeable indication of the growing need for a knowledge of this unknown and undeveloped region of the Gold Coast.

There is probably some apprehension that the proceedings of this Survey may be overshadowed by political exigencies; but nothing to my mind can detract from the intrinsic importance of a Survey like this, without minimising in any way the importance of political problems in our life. I would maintain that the problems of Rural development are vital problems; they have an importance of their own, and we who are members of Local Councils attach great value and significance to them. I have no doubt that the deliberations of this gathering will be carried on with a sense of seriousness commensurate with the responsibility which has been cast on the shoulders of you and me. I have no doubts that this Survey will give a lead to both the Central and Local Governments on some of the most vital problems of Rural life in Tongu. I therefore consider it a privilege that we have this galaxy of intellectuals among us, and an honour that I should be authorised by my Council to welcome you on such an important occasion.

It is admitted in paragraph three of the programme before you that this place is a little-known and under-developed area of the Gold Coast. And in introducing the Survey, that the only qualification needed is an interest in rural life and a taste for adventure. Yes! When the historian of the future looks for examples of the worst results of feudal or imperialistic systems of society, where avarice allied with State and tribal pride and domination showed least signs of shame, where the common people were despised and poorest, where vital political and land disputes were tried ex parte, where spiritual heads were made chiefs without the consent and knowledge of the people, where the law was least regarded and loyalty least possible, he will point to Mafi.

The people of Mafi State comprise eight clans, viz: Gbortah, Tofi, Totoe, Gevier, Akorto, Aziewah, Aklorbor, and Toh. Of these, three tribes, namely Gbortah, Tofi and Fotoe came together from Tsekpore and settled on this land. Thereafter came Gevier and Akorto; later an Akan stock migrated from Denkyera after the Ntim Gyankare Ashanti war, to Akwamu, and thence to Mafi, where they founded Aziewah; then Akorbor, emigrants from Yilo Krobo, Okpepiem; finally came the Toh tribe, who migrated from a place known as Agu-Klepe. This Mafi State has four military wings, viz: Dome (Advance guard), Mia (left-wing) Dusi (right-wing) and Megbe or rear-guard. They also have four Asafo Companies: Apadza, Akofoade, Apesemeka and Kasampre.

So much for the introduction to Mafi History. The rest is for you to search and research. Once more you are all welcome.

Copy of a Letter sent to The Resident Tutor by the Regional Officer,  
Officer and read by her at the Opening Session.

REGIONAL OFFICER,

HO.

7th April, 1953.

No.S.0044/SF.32/4

Dear Miss Bown,

Thank you for sending me a copy of the programme for the rural survey in the Tongu area sponsored by the Department of Extra-Mural Studies of the University College of the Gold Coast.

The Gold Coast Government, in establishing the separate region of Trans-Volta Togoland, intended to increase the pace of development in this area. The people of Tongu are engaged chiefly in fishing in the Volta River, often hundreds of miles from home, and in the creeks and lagoons near their own homes, in raising cattle and in farming. The Government is anxious to help the people of Tongu as well as others to achieve higher standards of living. Additional information about the present activities of the Tongu people and local factors which may be impeding their progress would be useful at this stage when the Government wishes, in consultation with the 4 local councils and the proposed district council, to plan the development of this area.

I am hoping that the results of your rural survey will contribute towards a better understanding of the problems of the area and that this, in turn, will lead to action by the people themselves and their local councils, with the technical advice and help of the Gold Coast Government, to improve the economy and the social services of the Tongu people.

I hope that the chiefs, local councils and people of Tongu will welcome this survey as evidence that the University College has an interest in helping them towards a better future and I hope that those who take part in this survey will feel that their experiment has been worth while and will wish to continue to show an interest in the Tongu area.

Yours sincerely,

SGD. (G.E. SINCLAIR)

MISS LALAGE BOWN,  
RESIDENT TUTOR,  
DEPARTMENT OF EXTRA-MURAL STUDIES,  
UNIVERSITY COLLEGE OF THE GOLD COAST,  
TSITO.

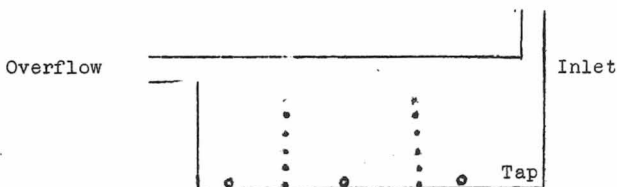
#### IV. TYPES OF WATER SUPPLY

by E. Mundy, Driller, Dept. of Rural  
Water Development.

"Development is water", because without water no human development is possible.

Sources of water are:-

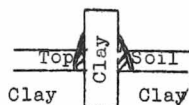
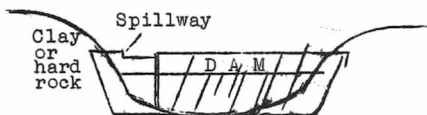
1. Rain. This is the primal source of all water. It may be stored in what the N.T. people call a "bilisi" - an underground tank hollowed out of the rock, with a narrow funnel-like entrance through the top-soil. But it is more common, and more easily practicable to build a cement tank to catch rainwater off the roof. A simple tank four feet by four feet by twelve will hold a thousand gallons of water. It should have an outlet at the top, in case of overflow (the outlet should be covered with mosquito-wiring), and should preferably be divided into three partitions, each with a separate tap, so that the user can judge the amount of water he has left.



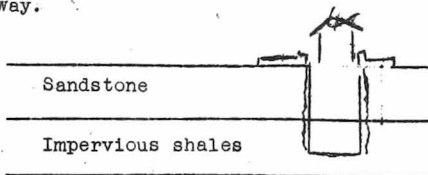
2. Rivers and streams. Most waterside villages rely on these. If the stream runs in a valley of clay or hard rock, it may be dammed. The core of the dam should be an upright wall of clay with its foundations down in the clay of the stream-bed, below the pervious topsoil. This should be supported by a sloping outer wall on either side, made of rocks or other material. A dam must have a spillway outlet at one side, through which water may be allowed to go, to prevent its overflowing the dam.

a. Dam across valley

b. Section of dam



3. Shallow wells may be dug if there is a top layer of sandstone through which water penetrates, followed by a layer of some impervious material like shales. The well should be dug to the bottom of the sandstone layer, and water will then collect, being unable to escape through the shales. On no account should the bed of shale be dug through, because below it there will be a dry layer which will let all the water run away.



Note: The cost of a well, lined to a depth of 45 ft. is £50 when sunk by the Dept. But one done by other people may cost £100.

4. Boreholes. Instead of a sandwich of an impervious layer between two pervious ones, you may find the opposite condition, a layer of sand between an impermeable layer of clay above, and hard rock, e.g. granite, below. In this case one has to drill through the top layer, to reach water which collects in the sand. This has to be pumped up. The cost of a borehole is a disadvantage, and the following figures, while not referring to any particular borehole, give an idea of average costs:-

Drilling of Borehole	£400	
Pipes and lining	£400	
Pumping plant	£2000	
	<u>£2800</u>	Capital cost
Running costs	£ 400	per annum

After twenty years, the whole outfit will need renewing.

These two types of water source both indicate the need for a geological survey.

5. Ponds. These may be natural, or may be made by the construction of a dam as already described.

LIST OF MEMBERS OF SURVEY TEAMS

GROUP I. VOLO

<u>T.M. Tetteh</u>	H.M. Fisheries, Adidome, via Ada.
S.G.K. Adom	Body Corporate Training College, Jasikan
W.K. Avickson	E.P. Church, Adidome, via Ada.
R.K. Bodza	Asst. Mass Education Officer, Sogankope, via Ada.
Karimu Lawani	Adidome, via Ada.

GROUP II. MAFI KUMASI

<u>Hugh Blaney, M.Sc., Ph.D.</u>	Professor of Mathematics, University College, Achimota.
G.A. Agbanu	Presbyterian Mission, Mafi Kumasi
Paul K. Agbeshie	P.O. Box 14, Dodowa
Kofi Ahorsej	"Daily Graphic", P.O. Box 742, Accra.
L.A. Degbor	Presbyterian Primary School, Sogankope, via Ada.
W.K. Dovlo	P.O. Box 14, Peki.
C.K. Essilfie	Presbyterian Primary School, Box 6, Big Ada.
S.V.M. Ocloo	Mass Education Assistant, Dabala.

GROUP III. MEPE

<u>David Apter, M.A.</u>	The Graduate College, Princeton, New Jersey, U.S.A.
G.A. Adogla	University College, Achimota
Ralph Y. Asamany	E.P, Middle School, Box 6, Peki
Jonathan M.K. Dzre	Presbyterian Primary School, Tefle
S.K. Fleku	P.O. Box 31, Anfoega Akukome
D.A. Negloh	Presbyterian Primary School, Tefle

GROUP IV. BATTOR

<u>Mrs. Eleanor Apter, B.A.</u>	The Graduate College, Princeton, New Jersey, U.S.A.
E.B. Aclatse	c/o Central Tongu Local Council, Adidome, via Ada.
Moses K. Adogla	c/o Upper Tongu Local Council, Battor
F.M. Anlawu	R.C.M. Middle School, Box 5, Kpandu
C. Teyegaga	Box 0100, Christiansborg, Accra
S.K.A. Vullay	Awudome Local Council Office, Box 5, Tsito Awudome.

GROUP V. AVEYIME

<u>Gustav Jahoda, M.Sc., Ph.D.,</u>	Department of Sociology, University College, Achimota.
J.K. Atieku	
S.K. Gadzanaki	Aveyime Methodist Primary School, Battor.
V.A.K. Sekley	Mass Education Assistant, Addidome.
Kwasi Zu	Zukope, Sokpoe, via Ada.

GROUP VI. ADIDOME

<u>Lalage Bown, M.A.,</u>	Resident Tutor, Trans-Volta & S. Togoland, c/o Post Office, Tsito.
R.K. Adewu	c/o Central Tongu Local Council, Adidome.
G.K. Ashiaby	Health Department, Adidome, via Ada.
Miss Sarah E. Gbedemah	Mass Education Asst., Adidome, via Ada.
F.K. Dra Goka	Education Office, Adidome, via Ada
E.M. Kagbittor	Presbyterian Church, Adidome, via Ada
Justice K. Nutakor	P.O. Box 1, Adidome, via Ada.

Additional Attendants at Preliminary Course in Adidome

G. Adali-Mortty	Adult Education Organiser, Box 0100, Christiansborg, Accra.
P.D. Adjani, M.L.A.	P.O. Box 310, Accra
J.K.A. Quashie, M.L.A.	P.O. Box 13, Keta
G.A. Atitsogbui	Central Tongu Local Council Offices, Adidome
Seth K. Attipoe	c/o Government Agent's Office, Keta
Rev. S.A. Dzirasa	Methodist Church, Dodowa
Harding K. Zormelo	Zion Schools, Keta

ACHIEVEMENTS OF THE TEAMS, APRIL 13TH - 19TH

A	B	C	D	E	F	
TEAM	No. of Water Sources	No. of Villages	Complete Survey	Sample Compounds	Mileage Walked or Cycled	MAPS
I. VOLO	2	4	Gezelikope 1 Nutekpor 3 Krebetikope 11	23	16	2
II. MAFI KUMASI	16	15	Mafi Kumasi 51	-	35	2
III. MEPE	8	7	Degome 23 Zidakope 2 (known jointly as Fiakope)	12	38	1
IV. BATTOR	4	7	Battor 35	2	28	2
V. AVEYIME	8	9	Lutakolekopell	13	57	1
VI. ADIDOME	31	18	Mafi Anfoe 12	12	40	2
Practice Work				13		
TOTALS	69	60	Villages 9 Compounds 149	75	214	10

NOTES

1. The villages in Column C. do not include those in Column D.
2. The figures in Column D. refer to the number of Compounds.

SAMPLE WORK-SHEETS - GENERAL INSTRUCTIONS

UNIVERSITY COLLEGE OF THE GOLD COAST  
DEPARTMENT OF EXTRA-MURAL STUDIES

R U R A L S U R V E Y

(a) MAP - Procedure: each group will make out a map showing:

1. location of each compound (assigning a code number to each).
2. location of house of Chief/headman.
3. location of public buildings (e.g. schools).
4. location of drinking water sources (position if within village, and direction if outside the village).
5. distance of drinking water sources from centre of village (in feet).
6. location of other water sources (position if within village, and direction if outside the village).
7. distance of non-drinking water sources from centre of village (in feet).
8. location of trazing areas and cattle watering places.

Note - BE SURE TO VISIT THE WATER SOURCES YOURSELF!

(b) WATER SOURCES - Procedure: for each of these complete Form II, The Water Source Record.

(c) COMPOUND INFORMATION - Procedure: each individual will have Form III, The Compound Work Sheet. One Sheet is to be filled out for each compound, and where possible INFORMATION RECEIVED WILL BE PINPOINTED ON MAP, in addition to being filled in on Work Sheet.

(d) INFORMATION FROM CHIEF/HEADMAN - Procedure: one man in each group will be given Form IV, the Record Form of Chief/Headman. As much as possible, the Chief's comments should be taken down in his own words.

NOTE: EACH INTERROGATOR SHOULD RECORD ANY ADDITIONAL OBSERVATIONS THAT HE MIGHT HAVE IN THE FULLEST DETAIL. Only the barest essentials have been asked for on the Forms.

DO NOT FORGET IDENTIFYING MATERIAL ON EACH FORM !!!!!!!!!!!!!!!

WORKSHEETS II. WATER SOURCE RECORD

Group No. .... Village .....

Name of Investigator ..... Date .....

Local Name of Water Source .....

Code No. of Source .....Note: Pinpoint on map

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Drinking Water ..... Non-Drinking Water .....

(Tick off correct description. Tick both, if both)

(a) Kind of Source (river, well, etc.) .....

Stagnant ..... Running .....

(b) Approximate Distance from Centre of Village .....

.....

(c) Type of Access (e.g. road, difficult bush path) .....

.....

.....

(d) Appropriate Description of Source

Constant (all year round supply) .....

Seasonal (give seasonal flow) .....

Periodic (give periods) .....

Note: If not constant give details of variation of supply

(e) Any Other Comments

BE SURE THAT YOU HAVE PUT THE NAME OF THE VILLAGE AT THE TOP OF THIS PAGE!

II. WATER SOURCE RECORD - SUPPLEMENTARY

Group No. .... Village .....

Name of Investigator ..... Date .....

Local Name of Water Source .....

Code Number of Water Source .....

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(f) If the water source is a well:-

1. How deep is it? (depth should be indicated in Arms lengths)  
.....
2. Is it kept covered? ..... If it is, describe cover  
.....
3. Get a sample of rock from the bottom. LABEL WITH NAME OF SOURCE, GROUP NUMBER, AND NAME OF VILLAGE!

(g) If the water source is pond-like, is it a sump?.....

(h) Describe the appearance of the water (e.g. is it green cloudly, clear? .....  
.....  
.....

(i) Fill a bottle with a sample of the water. LABEL THE BOTTLE WITH THE NAME OF THE SOURCE, YOUR GROUP NUMBER AND THE NAME OF THE VILLAGE!

III. COMPOUND WORK SHEET

Group No. .... Village .....

Name of Investigator ..... Date .....

Code Number of Compound .....

A.

<u>Questions</u>	Drinking Water	Non-Drinking Water
1. From what sources do you get your water? (give local names)		
2. What is the total amount of D.W. used by your compound*?		
3. Do you ever have to pay for water?		
4. What do you do when your usual supply fails?		

B. General:

- (1) What are the main uses for Non-Drinking Water .....
- .....
- .....
- (2) Do you need more Non-Drinking Water .....
- (If answer is yes) What would you use it for .....
- .....
- (3) Do you consider your present water supplies sufficient for all your needs .....
- (4) If you don't, what do you think you can do? .....
- .....
- (5) If government assistance is specified, what do you think government should do, and at what governmental level should action be taken .....
- .....
- .....

\* To be derived by totalling no. of trips of all people in the compound per day for drinking water per kerosene tin measure.



SAMPLE WORKSHEETS: III. COMPOUND WORKSHEET - SUPPLEMENTARY

Group Number ..... Village .....

Name of Investigator ..... Date .....

Code number of Compound .....

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B. General (continued)

- (6) a. If you get your water from the Volta, does it ever taste salt? .....
- b. If so during what months? .....
- (7) Is any member of the compound suffering from guinea worm? .....
- (8) Has anyone had guinea-worm during the past two years? .....
- If so, who? .....
- (9) Has any building in the compound a metal roof? .....
- (10) a. Is any water collected off the roof? .....
- b. If so, what is it collected in? .....
- c. If so, what is it used for? .....
- (11) What other drinkables are used in the compound? .....
- (12) When water is short, what are the priorities in water use? (Number each item listed below, according to its order of priority. For example, if (a) personal drinking water is the last item to be cut down, it should be numbered 1.)
- a. Personal drinking water .....
- b. Drinking water for livestock .....
- c. Water for bathing .....
- d. Water for laundry .....
- e. Other (specify .....

BE SURE THAT YOU HAVE FILLED IN THE INFORMATION AT TOP OF PAGE!

SAMPLE WORKSHEET IV. RECORD OF CHIEF/HEADMAN

Name of Village ..... Date .....

Name of Chief/Headman ..... Name of Interrogator ..  
.....

---

(a) Water Supplies:

Note to interrogators: Cover much the same ground as for Compound Sheets, but let Chiefs tell you in their own words (to be recorded here as accurately as possible). Special emphasis should be placed on getting information on adequacy of supplies of water and customs, rites and festivals concerning water.

(b) How does the village earn its living. Note: Attention should be focussed on the following:

1. farming (list crops) .....
2. livestock (give details of kinds and numbers) .....
3. fishing (note the seasons) .....
4. miscellaneous (including crafts) .....

(c) Trade and exchange with outside of village

1. Main products imported . .....
2. Main products exported .....
3. Transit trade .....

(d) General Comments of Chief/Headman

## F O R E W O R D

by G.E. Sinclair, M.A., O.B.E., Chief Regional Officer,  
Trans-Volta/Togoland

Ho,  
8th June, 1954.

Miss L. Bown, M.A.,  
Resident Tutor for T.V.T.,  
University College of the Gold Coast.

Dear Miss Bown,

I am grateful to you for letting me see, in draft, the report of the Tongu Rural Survey which you organised for the Department of Extra-Mural Studies in April, 1953.

May I say that I regard this report as a most useful contribution to the development of Tongu? I would like to take this opportunity of expressing my thanks to all those volunteers who gave up two weeks of their time to the survey. As your helpers have shown such an interest in Tongu, I would like to let them know what government has been doing and planning for the area between the time of your survey and the issue of your report. You will notice that many of the measures taken are designed to solve the most urgent of the problems which your report has posed.

### Surveys

It was decided to treat the whole of the savannah lands lying south of Ho as a single area for the purpose of planning development. This area is enclosed, roughly, by the Ho/Denu road, the coast from Denu to Anyanui, the Volta River to Senchi (with a narrow strip of land running along the western bank of the Volta) and then the road from Senchi to Ho.

An agricultural survey of representative parts of the whole area (excluding the rump of Tongu, the area bounded by lines running from Adidome northwards for 12 miles and then almost due westwards to Pore and then south-westwards to Senchi and then following the river down to Adidome), has now been completed. In the area covered by the agricultural reports, a geological survey for water supplies and a comprehensive livestock survey have both been completed. The University College of the Gold Coast is to undertake a research scheme into cattle diseases in this area starting in September of this year. In addition, the Director of Tsetse Control has visited the area and is now planning so to control tsetse-fly that it will cease to be a limiting factor on either agriculture or the raising of livestock.

The Medical Field Unit has started work in the Tongu area and is carrying out a mass survey of endemic and pandemic diseases and will eventually cover the whole southern savannah. Funds have been allocated by the T.V.T. Council for the construction of a fifty bed hospital to be run by the Ewe, Presbyterian Church in the Tongu area.

## Development Plan

It has now been possible to work out the first phase of the development plan for the southern savannah.

**Feeder Roads:** On the advice of the National Food Board, Government supplied funds for the making of an all-weather road from Abutia Kloe (south of the Abutia Hills) to join the main Ho/Senchi road at Juapong. This road, constructed jointly by the people and the works staff of the government agent, has already done much to open up a rich food farming area. On the advice of the same Board, government provided funds for an all-weather road to connect Adidome with the road head from Ho at Adaklu: one branch of this road goes north-wards through Ahunda to Tserefe and the other north-eastwards to Kutime and thence by Ablonu and Waya to Abuadi. The western branch of this road has been open to traffic since the beginning of last dry season and is carrying a busy traffic between the three main market centres of Adidome, Mafi-Kumasi and Ho. This road also was constructed by communal enterprise helped by the works staff of the government agent, who have built the bridges and culverts, supplied transport for the gravelling, and provided labour in areas of sparse population.

A dry weather road from Mepe, through Battor and Aveme to Sege on the Accra/Tefle road has been constructed by the people themselves with the encouragement of a Mass Education Officer. A joint economic survey of this area is now being undertaken for the Volta River Project Preparatory Commission by an economist from the University College and an officer from the Department of Agriculture with the help of the government agent, Tongu. If this survey indicates that the expense of bringing the dry weather road up to all-weather standard is justified, £10,000 will be allocated for this purpose from funds allocated by the Tongu district council from the £1 million special grant made by government to the T.V.T. Council for development.

On the basis of the agricultural reports so far made, the construction of the following additional feeder roads in the savannah area has now been proposed by the three district councils concerned and these proposals are being considered by government.

### Ho district

Waya -	Ziope	8 miles
Ziope -	Kpeve	7 miles

### Keta district

Abor -	Wute	7 miles
Tadzewu -	Ehi	8 miles
Penyi-Ehi-Agbosome		11 miles

### Tongu district

Wute -	Kutime	10 miles
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In addition, the construction of the following roads has been recommended by the Anlo and Tongu district councils:

Mepe-Sege-Battor	16 miles
Yorkutikpo-Kpoviadzi- Wute	12 miles
Volo-Duffor-Pore	19 miles
Asiekpe-Pore	24 miles
Tadzewu-Hevi	8 miles

Detailed agricultural and economic reports will have to be obtained before they can be recommended to government. Before any decision is taken by the central government to provide funds for their construction, the district councils are being asked to guarantee that they will maintain them properly.

Water Supplies: The Department of Rural Water Development has been granted £300,000 out of the T.V.T. Council allocation for the whole region for extending its activities. A fair share of this will be spent in the southern savannah area and it is hoped, in the next dry season, to develop a vigorous programme of excavating reservoirs (200 feet square by 10 feet deep) and building wells over most of the area. Boreholes are unlikely to be successful in the area covered by your survey but it is hoped to find water, by boring, south of the line drawn from Abor to Sogankope and two drilling rigs are to start operating in that area in the next few months.

The list of priorities for rural water supplies drawn up by the various local councils, supported by the picture drawn in your report of the handicaps imposed in this area by the lack of good water, will be a great help in planning this work.

Medical Field Unit: The Medical Field Unit, which is now working in Tongu, is carrying out mass surveys of yaws, sleeping sickness, leprosy, guinea worm, bilharzia, malaria and river blindness and providing free mass treatment for the first three. It is carrying out also mass vaccination against smallpox.

Agriculture: It is hoped to start building, this year, an agricultural station at Wute (north-north-east of Abor) and this station will be responsible for helping farmers throughout the southern savannah. It is hoped to provide demonstration plots of crops suitable for the savannah and to supply seedlings; to maintain cattle, sheep and poultry and to demonstrate bullock ploughing and tractor ploughing. One of the main objects of the station will be to encourage mixed farming with the proper use of farm yard manure. It may be possible to establish a sub-station near Addome.

Livestock: The Acting Director of Veterinary Services, who has conducted a thorough livestock survey lasting over six months, has recommended to government the establishment of a veterinary station with a resident veterinary officer in the Addome/Sogankope area. This station will, it is hoped, work in close collaboration with the agricultural station at Wute and may have as a neighbour a sub-station of the agricultural station.

The Director of Tsetse Control is recommending to government the posting of a reclamation officer to Sogankope to organise the control of tsetse throughout the savannah and the posting of an entomologist to Ho. The University College is undertaking research into cattle diseases in the savannah area with a view of helping in the improvement of livestock.

#### Co-ordination of Development Work

Two conferences, attended by representatives of all government departments concerned as well as by the Department of Agriculture of the University College, have taken place

at Addome, one in January and one in May, to draw up a joint plan for the development of the savannah. It is hoped shortly to associate the three district councils concerned with the work of this conference, which will now meet at regular intervals.

I hope that this information about what government is already doing and what it plans to do in the immediate future will be of interest to those who took part in your survey and to those who will be reading the report.

Yours sincerely,

(Sgd.) G.E. Sinclair

## CHAPTER I - INTRODUCTION TO THE SURVEY

### (A) Aims

The first object of this Survey was to provide a number of students in University Extra-Mural classes with an introduction to some social survey techniques. On the principle that the only way to learn to play the harp is to play the harp, it was felt that the only way to give students an understanding of the problems of collecting social information was to set them to collect it - under the appropriate guidance.

The area of the Upper and Central Tongu Local Councils was selected as suitable for this essay in field work, because it is a district of which comparatively little is known, and it was felt that further background information would be useful to those authorities concerned in planning its future. As Mr. G.E. Sinclair, the Regional Officer for Trans-Volta/Togoland, wrote at the beginning of the Survey:

'... additional information about the present activities of the Tongu people and local factors which may be impeding their progress would be useful at this stage, when the Government wishes, in consultation with the four Local Councils and the proposed District Council, to plan the development of this area.'

Certain recommendations have been appended to each chapter of this Report, but they are only tentative; any specific projects would need further examination.

There were 37 students, and they worked with a strong sense of fulfilling a genuine social purpose. Thirty of them were teachers and clerks spending their Easter holidays in this unusual and strenuous fashion.

While the two main aims were thus education and the collection of material with the specific purpose of presenting it to the various authorities, it was also hoped that the Survey would fulfil a third end. Tongu has been one of the neglected districts of the Trans-Volta/Togoland Region and, like Cinderella, has found that her difficulties are not apprehended outside her own compound. Even within the Region there has been very little public interest in the district, and - to the rest of the Gold Coast - Tongu ways of life are a blank. Bringing a number of educated people from other parts of Trans-Volta and Togoland into the area was therefore partly an attempt to increase public interest in Tongu and its problems.

### (B) Subjects of Inquiry

Water supply was the main focus of the Survey's attention. Information was sought about water use, types of water supply, distances villagers had to go for their water, alternative sources in drought, customs concerning water, and any obvious consequences of water shortage, e.g. death of livestock, or prevalence of certain human ailments.

The question of water supply is inevitably linked up with that of economic development. The Survey included a general inquiry into how Tongu people gained their livelihood, since it was necessary to know whether water shortage was in fact the main hindrance to advance. This in turn involved a certain interest in communications throughout the area.

In addition to water, economic activities, and communications, it rapidly emerged that there was a fourth significant factor - the attitude of the Tongu people themselves to their problems. It was discovered that local morale was overwhelmed by the magnitude of the difficulties to be faced, and consequently this Report pays considerable attention to attitudes and opinions in Tongu as well as to factual information.

### (C) Methods of Work

The fieldwork of the Survey was carried out between April 9th and 20th, 1953. Worksheets were prepared, to be filled in by direct observation of water sources, by general questions to chiefs and elders on water lore, markets and agriculture, and by detailed questions to householders about use of water and livelihood.

Students on the Survey first assembled at Adidome for preliminary instruction and background lectures, and they practised filling in worksheets in Adidome, with the co-operation of the chiefs and townspeople. Once thoroughly versed in the main lines of enquiry to be pursued, they were divided into six small teams, and each was despatched to a different village for its headquarters. Five of the teams were supervised by graduate tutors: Gustav Jahoda, M.Sc.(Econ.), Ph.D., Professor Hugh Blaney, M.Sc., Ph.D., and Miss Lalage Bown, M.A., of the Gold Coast University College; David Apter, M.A., of the Graduate School, University of Princeton, and Mrs. Eleanor Apter, B.A., of Princeton. The leader expected for the sixth team proved unable to attend, and so Dr. Jahoda guided it at long range, while Mr. T.M. Tetteh of the Fisheries Department took charge on the spot.

In an area with inadequate roads, river transport was the only practicable means of dispersing Survey teams rapidly. Therefore riverside villages were chosen as suitable starting points for most of them. The team at Volu devoted its attention to villages on the north bank of the River Volta, behind the 'oyster'-fishing area; the two stationed at Battor and Aveyime concentrated mainly on the lagoon communities of the south bank; while the Mepe team tackled various types of village on both sides of the river. Their investigations into the lagoon communities to the south of Mepe were carried to the Accra-Keta road by the Adidome team, which had the advantage of both bicycle and motor transport; they were able also to work in the livestock area on the north bank, in a quadrilateral cornered by Avedo, Kpedzegno, Zongo and Adidome. The remaining type of community, consisting mainly of prosperous crop-growers, was the business of a team stationed inland at Mafi Kumasi, which surveyed an area bounded by Dzogadze, Sasekpe, Tsiati and Kpedzegno.

Each team selected one village for thorough compound-by-compound survey, making a sketch-map<sup>+</sup> and interviewing

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<sup>+</sup>For an example, see Appendix F: Sketch Plan of Anfoe Mafi.

the head of every household, as well as obtaining a general report from the chief or headman. The six villages treated in this way were:

- Krebetikofe - Simple riverside farming/fishing community in the 'oyster'-fishing section of the Volta.
- Battor - Large riverside farming/fishing community with market and Local Council Office.
- Degorme Fiakofe - Lagoon-side community with fairly constant water supply.
- Lutakorlekofe - Lagoon-side community with water difficulties in dry season.
- Mafi Anfoe - Typical mixed farming village in hinterland north of the Volta, relying entirely on water holes.
- Mafi Kumasi - Entrepot for crop-growing area in savannah south of Ho, relying on water holes and rock pools for water supply.

Five other villages were surveyed on a sample basis, in each case between one-quarter and one-half of the compounds being studied. These villages were:

- Volo - Large riverside fishing/farming community, centre of shell-fish and lime-burning industry.
- Kpordzikofe - Simple riverside fishing/farming community on south bank of Volta.
- Vome Adidokpui - Simple riverside fishing/farming community on north bank of Volta.
- Kodzovikofe - Creek farming village with no good permanent water supply.
- Avakpedome - Farming village in livestock area within easy reach of large market community, but without permanent water supply.

Data concerning 49 other villages (see Appendix) was collected by means of discussion with the chief or headman, or his representative. Some of these interviews were reinforced by questions to heads of compounds selected at random. The water sources of all these 61 villages were inspected and reported on by team members. Finally, facts about water supply and disease in nine other villages were gathered from witnesses whose reliability there was no reason to doubt.

This made a total of 70 Tongu villages, covered wholly or in part by the Survey.<sup>+</sup> In the time available, it was obviously not possible to visit every village in Upper and Central Tongu; nor was it possible to examine every single water hole in the whole area. The aim was to obtain a general picture of conditions in the different parts of the area in which the six teams were based. In this way,

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<sup>+</sup>For a list of these villages, see Appendix A; for a map of the area, see Appendix H: General Area of Upper & Central Tongu Survey.

the problems attached to all types of water supply came under study, and all the main sources of the area (rivers, lagoons and creeks) were examined.

Lower Tongu was not covered at all by the Survey; it appears that water problems are not so serious there, since most villages are within range of permanent supplies, either the Volta or its side-waters.

#### RECOMMENDATIONS arising out of Chapter I

Since the Survey was undertaken, at least two more specialised surveys have been set under way in Tongu, and more are planned, in connection with the development of the district. An initial problem for all such surveys is that of the correct identification of existing villages.

The Gold Coast is said to be one of the best-mapped countries in Africa, and the Survey Department's map on scale of 1.014 inches to the mile was found extremely useful. Its aid, however, was limited by the fact that there are villages which have sprung into existence since the map was made, for example Atsiemfo on the Addidome-Ho road, and villages which have since faded away, for example some of those to the south-west of the same road. A more up-to-date survey, with today's water-holes marked on it, would be more valuable than the map now in use.

Even old-established Tongu villages are often exceedingly hard to find owing to the capricious spelling of the Survey Department's maps. The town of Mepe is listed in the last Census as containing over 1,200 inhabitants, and in the second half of the year, when the migrant fishermen have returned, it could probably claim over 2,000; it certainly seems a pity that a town of such size should be disguised under the name Mafi on both large- and small-scale maps of the Gold Coast. Another example is the village of Mafi Dugame, opposite Addidome, which appears on the map as Mlefi.

This comment on spelling is not intended pedantically. Inaccuracies and inconsistencies in spelling of Tongu names, both in maps and the 1948 Census, involved the Survey in several embarrassments, which would also be likely to afflict future investigators. How, for instance, could one render intelligible a report on villages which readers could not identify on their maps? and how compare population figures obtained by the Survey teams with those recorded in the Census when some of the villages cannot be located in the lists by any known principle of spelling? The spelling in the Census is sometimes casual, as illustrated on page 190 where a division is written 'B a t t o r', and its chief town, with identical name, 'B a t o'; on page 194 the same name is spelled 'B a t o r'. It may be added that the map's version is 'B a t t a w'. In this case there is no doubt about the place referred to; but the matter becomes exasperating when one has to decide whether 'L o t a' refers to Luta or Lotor.

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\*For an example of the coverage of water sources achieved by one team, see Appendix G: Water Sources Surveyed by Team based at Addidome.

Ewe is a language with an efficient standard system of spelling, and on occasions when it is not possible to use the few symbols it employs outside the English alphabet, there is general agreement on which are the letters of that alphabet which most approximate to them. It would be a good thing if the standard system with the standard substitutes could be adopted for road signs, maps and census lists. No documentation of Tongu can be wholly successful until this is done, because variations in orthography make comparisons labourious or impossible. It is suggested that the Regional Administration might remind the Gold Coast Survey Department of the more obvious solecisms on its maps, so that they may be altered in any new editions of, for example, the very helpful Road Map. The Regional Administration and the Local Councils might also make a point of keeping all lists of villages in the standard spelling, so that registers of electors, Census records, etc., may be useful to any research workers in the future.

Easy reference would also be achieved if all villages were given their dual title. Many names in Tongu are not unique (e.g. Nyatikpo) and there are parts of the 1948 Census, mainly under the heading of 'not attached to a division' in which it is impossible to be certain from the published report which name refers to which village. A partial remedy for this is supplied in the system of a double name which generally applies even if an area is in dispute between two authorities. The name Fiakofe, for instance, is not unique, but the name Degorme Fiakofe is.

## CHAPTER II - POPULATION, OCCUPATIONS AND MIGRATION

### (A) Numbers

According to the 1948 Census, the total population of the Upper and Central Tongu Local Council areas was 64,000. Of the 70 villages visited by the Survey, 40 could be definitely traced in the Census, which recorded their total population as 10,217.\* It would be safe to estimate that the full 70 villages represented at least 15,000 people in 1948. The Survey, then, produced first-hand information for almost a quarter of the two Councils' citizens. But the villages were chosen to exemplify every type of community known to exist in the area, and the problems listed can reasonably be said to be problems typical of far more than a quarter of the whole population.

After five years, the Census figures can only be taken as a very rough guide to the population of a district where there is so much migration. But where comparisons were possible, it seemed that in most cases the Census may have underestimated it. In the farming community of Mafi Kumasi, for instance, the Census counted 249 people living in 57 compounds; Professor Blaney's survey team counted 313 living in 53. Similarly, in the lagoon village of Degorme Fiakofe, Mr. Apter's team counted 232 people living in 25 compounds, as against the 1948 figures of 66 living in 19 compounds. In the latter village, the expansion in

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\*For population figures of villages surveyed, see Appendix B.



the number of compounds suggests immigration as a part-cause of its increase, but this in itself is not enough to explain the discrepancy in the two counts.

The only community which appears startlingly larger in the Census than in the Survey statistics is Battor, where Mrs. Apter's team reported 279 inhabitants in 35 compounds whereas the Census notes 520 in 58. This divergence seems to indicate that the Census included satellite hamlets outside the boundaries limned out by the Survey team on their sketch-plan. Both the results show an average of eight persons per compound, which implies that if the 1953 team had covered the same ground its results would have been comparable with those of the 1948 enumerators.

In this connection, there are good grounds for believing that many of the migrant fishers from the river-side villages were not recorded at all in the Census.

As far as the home villages are concerned, both the Census and the 1953 Survey took place during the season when fishermen and women were away from home, and many of the compounds were almost deserted. Enquiries made by some of the teams showed that some villages are reduced by as much as three-quarters during the first half of the year, e.g. in Nyatikpo there are over 20 compounds, but only 30 people could be found, and in Mafi Dugame several compounds were completely empty at the time Survey members visited it. Illiterate heads of families probably tend to count in as many members of the compound as they remember having ever lived there, regardless of their presence or absence. Nevertheless, as Survey members found, in large polygamous households it takes very careful questioning to call to mind all absentees, especially among the younger generation.

As far as the rest of the Gold Coast is concerned, if these fishermen were included in the returns for other areas, obviously no difference would be made to the country's total estimated population. But some of these migrants travel beyond the border for their fishing, places mentioned being Mango and Ouagadougou on the Voltas and even Mopti on the Upper Niger. The majority, who stay inside the Gold Coast, live in temporary encampments on river banks or islands, and many may have been overlooked by enumerators.

#### (B) Ways of Gaining a Living

What are the main occupations among the people of Tongu? The range is fairly limited, and in each type of village one mode of gaining a livelihood predominates.

<sup>+</sup>This should be a matter of interest to local authorities, since it suggests that a larger population than that recorded in the Census is liable to pay rates. Many of the migrants own immovable property in Tongu.

<sup>⌘</sup>For an analysis of occupations in certain selected villages, see Appendix C.

(i) In the inland villages away from the river, the major occupation is farming, sometimes associated with a secondary occupation. The proportion of farmers to total population for the two villages of this type completely surveyed may be seen from the following figures:

<u>Village</u>	<u>Mafi Kumasi</u>	<u>Mafi Anfoe</u>
Male population over 16	88	53
Males occupied only in farming	27	19
Males combining farming with other work	41	29
<hr/>		
Female population over 16 ...	115	57
Females occupied only in farming	49	49
Females combining farming with other work outside the home ...	50	5
<hr/>		
Total adult population ...	203	110
Total occupied only in farming	76	68
Total combining farming with other work ...	91	34
<hr/>		
*Proportion of total population occupied only in farming ...	37%	62%
Proportion of total population combining farming with other work	<u>45%</u>	<u>31%</u>
Proportion engaged either partly or entirely in farming ...	82%	93%

Among the men, the work most commonly combined with farming is cloth-weaving. In Mafi Anfoe, all the 29 farmers who had a secondary occupation were weavers; in Mafi Kumasi, 41 farmers had a secondary occupation, and for 33 of these it was weaving. This pattern - the pursuit of farming and weaving in conjunction - was found typical of the Mafi area away from the river. Ten out of the 13 villages visited by the Survey round Mafi Kumasi were noted down as weaving centres, and in villages like Sasekpe the click of shuttles was the main sound in the air. In addition, of 16 villages to the north of the Volta visited by the Aidome team, 11 were weaving villages.

Weaving is regarded as a masculine craft, and questions as to whether it could not be done by women were treated as a joke. Presumably, in the days before the wide use of imported yarns, the woman's contribution was spinning, but there was only one woman whose entire occupation was spinning in Mafi Kumasi, and only three villages thought spinning a craft important enough to mention to the teams.

The women's work in these hinterland villages, apart from food-farming, seems to be mainly confined to household

\*Note: All percentages in this and the following tables are given to the nearest whole number.

duties. Many women may eke out their income by occasional crafts like the making of soft woven fibre-bags for carrying grain and other foodstuffs, or by the making of palm and kernel oil. Only in the larger marketing centres are there any significant numbers of women for whom the business of buying and selling is remunerative enough to rank as an 'occupation'. In the small village of Mafi Anfoe only two adult women quoted trading as their only occupation. In the vigorous market village of Mafi Kumasi, on the other hand, 42 women out of the total of 115 regarded trading as an important secondary occupation, and 13 gave trading as their sole economic activity.

Addome, the economic hub of the area, is untypical in supporting very many women traders; there, about 50% of the women gave trading as their main occupations, many of them specialising in particular commodities, e.g. groundnuts or 'kakro', while another 18% combined farming and trading.

(ii) In riverside villages of various sizes the main masculine occupations at the time of the Survey were:

<u>Village</u>	<u>Krebetikofe</u>	<u>Battor</u>	<u>+Volo</u>	<u>+Vome and +Kporzikofe</u>
Total adult males	17	102	65	24
Farming only ...	10	19	35	13
Farming and fishing	1	30	3	-
Fishing only ...	2	9	3	5

It will be seen that farming is still of major importance, for many of the villagers have to rely on their own work for their own food. The obvious supporting avocation is fishing, and as one Survey member wrote of Kepko 'fishing is a second occupation of every man in the village, with the explanation that one must have one's own meat to add to the farm products to make a meal.' The table above shows 16% of the adult men engaged in fishing as well as farming, and another 10% in fishing alone - this, be it noted, at the time of year when many of the full-time fishermen are absent.

Among the women, fewer of whom travel away for more than a short period, the importance of fishing in riverside communities is more strikingly evident from the figures.

<u>Village</u>	<u>Krebetikofe</u>	<u>Battor</u>	<u>+Volo</u>	<u>+Vome and +Kporzikofe</u>	<u>Total</u>
Total adult females	27	106	87	29	249
Farming only	7	11	28	8	54
Fishing only	9	26	-	13	48
Farming and fishing ...	5	36	49	5	95

Proportion of females occupied only in fishing	33%	25%	-	48%	19%
Proportion partly occupied in fishing ...	19%	34%	56%	18%	37%
Proportion partly or wholly engaged in fishing	52%	59%	56%	66%	56%

\*These villages were not completely surveyed; and the figures are for a sample selection of compounds only.

The type of fishing the women are employed in is diving for shell-fish. Girls begin this at the age of puberty, and some women of quite advanced age stated that it was still their occupation. Further details about this are given in Chapter IV.

(iii) In the villages near large lagoons or creeks, on either side of the Volta, fishing still plays an important part. In these communities too, farming and fishing go hand in hand; and when they are not too far from the Volta the women still spend some of their time diving for shell-fish.

<u>Village</u>	<u>Degorme Fiakofe</u>	<u>+Fakpoe and +Kodzovikofe</u>	<u>+Dove and +Zidakofe</u>
Total adult males ...	56	20	41
Farming ...	4	4	5
Fishing ...	16	2	5
Fishing and farming	14	7	12
Fishing and other ...	5	-	-
Farming and other ...	-	4	4
<hr/>			
Total adult females	85	20	73
Farming ...	7	13	10
Fishing ...	20	1	24
Fishing and farming	48	-	-
Fishing and other ...	-	-	-
Farming and other ...	1	4	22
<hr/>			
Proportion of male population engaged wholly or partly in fishing	63%	45%	42%
Proportion of female population engaged wholly or partly in fishing	80%	5%	33%

(iv) In the villages near the smaller creeks and ponds, behind Battor and Aveyime, the picture changes. The inhabitants are no longer interested in fishing, and farming becomes almost the only occupation; on this side of the Volta there are no widespread crafts to compare with the weaving on the north. Consequently, in the village of Lutakorlekofo 27 out of 30 men, and 21 out of 26 women, were listed as farmers.

<u>Village</u>	<u>Lutakorlekofo</u>	
Total adult males ...	...	30
Farming only ...	...	22
Farming and other ...	...	5
<hr/>		
Proportion of male population engaged wholly or partly in farming		90%
<hr/>		
Total adult females ...	...	26
Farming only ...	...	19
Farming and other ...	...	2
<hr/>		
Proportion of female population engaged wholly or partly in farming		81%

\*Sample compounds only.

To summarize: farming and weaving are the dominant occupations to the north of the Volta, except in Adidome; fishing and farming predominate on the river banks and larger lagoons; and farming alone to the south of the Volta away from the large stretches of water. Chapter IV will have more to say about the organisation of these occupations.

In all cases the figures are for individuals over 16 years of age, following the Census in making this the division between adulthood and childhood. Most of the children between the ages of nine and 16, however, have begun some kind of work if they are not in school. The girls generally help their mothers, either with housework or farming or trading, while the boys embark on farming, fishing or hunting, according to the locality. Children in and out of school may share in family craftwork, and in the weaving villages a school-boy will often make up for his school-fees by weaving for his parents during the holidays.

### (C) Population Movements

All the above types of villages seem to have reasons for a certain amount of seasonal movement out of Tongu. Cultivators and weavers both feel the pull of the wealthier areas, cultivators going to earn money on cocoa-farms, either their own or other people's, and weavers going away to the best markets for their cloth.

Many people did not say where their relatives had gone, but Buem and Akim seem to be the most popular cocoa districts, though Akwapim, Awudome and Abutia were also mentioned. At Tsurukpo one of the headmen stated that those of his people who went to work in Akim and Akwapim went regularly, staying away from May till November; but the headman of Vome Adidokpui gave the period August to June. In Mafi Kumasi, Survey members were told of a number of emigrants who had settled in Buem and showed no disposition to return home, except for festivals.

Weaving families sometimes sell their cloth in the nearby markets of Aveyime, Volo and Akuse, mainly to Hausa traders; but often one of their own members goes further afield with their textiles, and stays away for about a month or six weeks. Kadjebi, Akim Oda and Kumasi were mentioned as places where cloth would be taken for sale. Other types of trader, women hawkers for instance, may be drawn at irregular intervals to the large markets of Ho or Ada.

In the fishing areas, as already seen, there is considerable seasonal emigration northward. Some of the women go no further than Volo and Duffor for their shell-fish, but others go to Kpong, Senchi and Amedica. They take their children with them, unless they are in school. A number of the men go to Kpong and beyond, often leaving their wives behind. The rest of the men go still further afield. The River Afram is one strong magnet, and out of 66 people known to have gone away fishing from Degorme Fiakofe, 29 were reported to have gone to the Afram. The branches of the Upper Volta in the Northern Territories attract other fishermen; places mentioned by relatives included Krachi and Yeji on the main river; Yendi, between the Daka and the upper reaches of the Oti; Wa, Lawra and Ouagadougou on the line of the Black, and Mango on the White Volta; as well as Mopti on the Upper Niger. The first six months of the year are devoted to fishing in the North, and the men return in June

for the autumn flood-fishing in their own creeks and lagoons.\*

Fishermen who go to the North tend more and more to take one wife with them to cook and look after one or two children. It is not rare for men to disappear and leave their wives and families behind, or to take part of the family and desert the remainder. Survey teams found a number of wives who had waited a long time for husbands who had never returned from the Northern Territories.

Even for those whose husbands do return, the enforced strain has double consequences. First, the women find it difficult to do all the farming by themselves. This results in a fall in subsistence, and means a larger cash outlay for food. Secondly, the enforced separation and the burden placed on the wives and families who remain in the village during the fishing season tend to upset normal family relationships. A few women declared with intense bitterness that they looked after a large number of children, cooked and kept house, farmed and did 'oyster'-fishing, while other wives and husbands were away for long periods. One woman pointed to a house in serious dis-repair, and said that no-one was at home to attend to the roof and walls.

These are the main lines of seasonal emigration. Throughout the area literates and craftsmen go away to work, but return at festivals. No attempt was made to enumerate these, and the whole subject needs further investigation.

Immigration into Tongu also needs further study. The main immigrants would appear to be Northerners who settle down in the Zongos of towns like Adidome and Volo, or who work in cattle-hamlets like Awusavikofe. A case history may be of interest:

A Dagomba man, N., aged about sixty, in the Adidome Zongo, said that he originally left the North as a youth to work as a porter in the cocoa area, but came to Adidome 'in the time of influenza' (c. 1918?) and set up as a cattle owner. He said that he now owns 200 cows and three stud bulls; and his family have sheep, goats, guinea-fowl, and chickens. He has a spacious compound, housing 22 people, including a tenant (with his family) who is a cattle-trader. N.'s own son-in-law also is a livestock dealer, and does business both in Accra and Ho, leaving for a month or six weeks at a time. A son and nephew are corn-millers. Of the 22 inhabitants of the compound, nine were children under the age of 16, and these and five other people were born in Adidome and have known no other home.

A man in such an established position as N. has committed himself to permanent immigration.

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\*People also go to the cocoa areas from the fishing villages.

(A) Riverside Villages

In Tongu, the dwellers near the Volta count themselves fortunate in having a never-failing source of abundant water, but it would be untrue to say that this gives them no problems.

Villages close to the Volta banks are victims of the river's great variation in level at different times in the year. Getting water from the Volta during flood-time is viewed with distaste because of the hazards involved from the speed of flow, and from floating debris, and also because of the quantity of silt and mud in the water; the debris includes a number of dead animals swept downstream. In the dry season, when the water is low, villagers have to climb down steep banks with their pots and kerosene tins, and it is not easy to make any permanent approach, owing to the seasonal flooding which in some places may alter the shape of the banks.

Distressed complaints were heard in Mafi Dugame, opposite Adidome, that the township was being steadily eaten away by the Volta, and elderly inhabitants declared that fifty years ago 'one could shout for one's neighbour at Adidome', which is now nearly two miles away across the water. The river evidently used to run in a narrower channel, but during this century it has begun to take toll of the buildings on its south bank. There are now several abandoned houses on the very edge of the sharp acclivity rising from the dry-season river, with their walls cracking apart, and only surviving precariously until the next flood. Some families have had to move their dwellings three times within living memory, in retreat from the eroding banks.

Several places reported brackish-tasting water owing to the effects of the tide at the mouth of the Volta at the end of a long dry season. But it is hard to measure this accurately. Battor was the most northerly point at which salty water was ever noticed, and the years mentioned were 1949 and 1952. Lower down, at Adidome, there was general agreement that the water was disagreeable for drinking in 1949 and 1952 - to such an extent that many of the inhabitants sought an alternative source of drinking water, paddling their canoes out to an island which retains a pond of fresh water from flood-time. Eight out of 19 heads of families said that the water at Adidome was slightly saline every year in March, April or May, but that normally most people continue to drink it. As might be expected, it seems to have some laxative effect, and there were complaints of diarrhoea and gripings at this season.

Villages somewhat further away from the Volta have the same irks of rainy-season pollution, dry-season steep banks, and occasional salinity. They have also the wearisomeness of a long walk to the water's edge. Even Adidome citizens have on an average to cover half a mile in their trips to the river; this involves a mile walk for any woman who wishes to fetch four gallons in a kerosene tin, or six gallons in a large pot. The average amount of water for all purposes used daily per person in Adidome worked out at a little over six gallons; for a population of almost 900 it would be fair to say, then, that a total of at least 900 miles was walked every day to supply the town.

+For tables showing types of water supply, distance from village, and incidence of disease, see Appendices D and E.

The annoyances felt in villages living close to the Volta are insignificant in comparison with the burdens of villages relying on other sources. The Volta is permanent and is relatively disease-free, whereas villages living away from the river are ridden with water-borne disease, and 50% of all the communities investigated had to seek alternative sources in the dry season.

#### (B) Lagoon Villages

Teams visited 13 villages with permanent supplies other than the Volta. These rely on creeks or 'lagoons', stagnant during most of the year, but replenished during the flood season by an overflow of the Volta, or by some small water-course which shrinks away after the rains, leaving only occasional ponds in its bed. Several of the lagoons are large, measuring nearly a mile across at the longest part, even at the end of the dry season when the Survey teams inspected them. It is almost unheard of for them to dry up; the last time there was no water in the Ke Lagoon (south of the Volta) appears to have been before the First World War, probably in 1911, and then a good crop of corn was grown on the residual mud.

Such lagoons, then, are not only reliable sources of supply for human beings, but they are largely used by cattle, particularly during the dry season, when the smaller ponds and runnels have disappeared. Each village on the banks generally has its own spot for collecting water, but there is little possibility of keeping cattle very far from the appointed places; moreover, drinking water is often fetched from a point only a few yards away from where the women wash clothes. At the end of the rains too, when the waters become stagnant once more, fishing in them begins, and mud is stirred up from the bottom during the making of fence-traps.

The Medical Field Units will soon be in a position to give authoritative information about diseases in Tongu and their exact prevalence. It can, however, be said that the lagoon villages are mostly troubled by bilharzia. This disease was reported in nine out of the 13 villages, and seemed to be regarded generally as one of the inevitable ills that flesh is heir to. It is possible that other villages also suffered from it, but were unwilling to mention it, since some people hold the fallacious belief that bilharzia was a kind of venereal disease. Two of the places where bilharzia was reported appeared to suffer from guinea-worm. Several communities complained of stomach ailments in the dry season when the water was stagnant - dysentery, diarrhoea and gripings.

#### (C) Sufferers from shortage

Most of the communities living away from the river have no permanent water supply, and during the rains rely on water-holes, from six to ten feet deep, generally dug out by the people themselves, and filled only by rainfall. They are generally dug at the bottom of a small slope, and water drains into them from a number of gullies all round. Sometimes they are shaded over with trees, which prevent evaporation, but shed their leaves into the water, where they decay and mingle with the green scum and darting insects which make the surface of most of them repulsive to contemplate.

A description by one observer of a typical water-hole was:

'It lay at the bottom of a dip and gets reinforced when there are heavy rainfalls. When it is full, one could imagine the water fairly good, but when half-full the fetchers ignorantly walk forward or deeper for a supposed clean water, and thereby get it muddy. The surroundings are bushy, and leaves that fall in get rotten and become scented .... It breeds sufficient tortoises rather than fish. Its appearance is green and muddy.'

There are often customary rules against washing clothes too near the water's edge, but only one water-hole was found to be protected from use by animals. This was at Avedo, where great care had been taken to dig the hole neatly to bank up the sides, and to make steps down to the water. As only a few people had made this hole, they did not want other villagers, who had not helped dig, to pirate the water, and for this reason they had fenced it tidily round and installed a pad-locked gate; the key in the keeping of the Linguist.

Other villages rely partly on such water-holes during the rains, and partly on pools formed of either rain- or spring-water collected in the rocks. Such a pool is Yorkpe, about 1500 yards from Mafi Kumasi. It is 15 feet deep and very difficult of access; its only replenisher is the rain, and it is slightly green in colour from the weed growing at the bottom. A similar pool is Kpedzegblo, about 700 yards from the village of the same name, where the water is retained in a long narrow cleft. The actual approach through grass to the rock at one end of the cleft is constricted, and it is difficult to climb over to fill a pot from any other part of the edge. In appearance, the water in the dry season is slightly greenish, with some decayed vegetable matter suspended in it. Water in these rock pools is usually much freer of solid matter than in the ordinary water-holes, but clambering up to the rocks is no easy business, so villagers tend to use their small water-holes when possible.

There is a very strong correlation between the use of water-holes and the prevalence of guineaworm. This malady, like bilharzia, is accepted with resignation as a necessary part of life, and as was remarked of Tsawala, 'they suffer guineaworm from time immemorial.' Information about guineaworm was obtained from 21 villages relying only on water-holes; the disease was found in 16 of them. Of seven other villages, using water-holes supplemented by rock pools, guineaworm was found in all. Thus, of all these villages using water-holes either alone or in combination, 82% had guineaworm. This does not simply mean that an occasional individual is affected. In nine compounds of Anfoe Mafi 83 people out of 177 were either suffering at the time, or had had the disease within the previous two years.

Guineaworm on this scale is also the bane of those few villages which draw water during the rains from the minor creeks and stream-bed pools which vanish with drought. It was reported from five of the eight villages relying on such pools. At Fakpoe, in a compound of seven people, two women and a boy were afflicted at the time of the Survey, and the comment was that one of the women suffered regularly. In Lutakorlekofo, out of a total of 74 people, 30 had had guineaworm within the past two years.

If guineaworm is one of the tribulations of those with small water sources, a second, which is taxing on human strength, is the regular annual shortage in the dry season. When the water-holes dry up or become too sludgy to be used, and when the

nearest rock-pools have been scraped to the last calabash-full, villagers have to travel long distances to get drinking water. Collecting water is normally a woman's work, but the headman of one village commented that men also shared the task in order to have adequate supplies.

Another village, Mediage, showed local initiative by completing two rainwater tanks in 1948. As a result, the villagers are now able to stave off thirst for some days when other sources fail. Each tank cost £150, an unreasonable amount of this going in transport payments. The carriage of each cement bag from Adidome, mostly by head-porterage, cost 4s.; that is to say, nearly one-half as much again as the price of the actual cement at that time. The inhabitants now pay 3d. a gallon for water from the tanks.

But Mediage is an exception, and in the rest of the area, during the dry season, the water question is one of paramount urgency. In some of the farming settlements in the hinterland whose inhabitants originally came from the south bank of the Volta, their answer is simply for many of them to return to their old homes. Thus, the headman of Mafi Zongo reported:

'When water becomes short, many people return to the other bank of the Volta, and those remaining dig the bottom of the pool for slow trickles of water.'

Most villages, however, have no second home, and the search for water is a diurnal problem.

Villages whose supplies dry up first, travel to their neighbours and put additional pressure on their resources. When all nearby water has been exhausted, the daily walk becomes longer still. At Anfoe, for example, it was said:

'People from Alorsekofe, Klukpo, Dadogbui, Tsawala, come to share the Anfoe water-supply in the dry season. Alorsekofe runs short first (this season, in February), and the others come later. When the Anfoe supply is exhausted, all have to go to Adidome or Lotor; when Lotor is exhausted they go to Dzanyigo.'

Full information was collected from 27 villages whose normal supplies failed in March and April. Twenty-three of them had to fall back on supplies a mile or more from their centres - which means at least a two-mile walk each morning for 4 - 6 gallons of water. Twelve of the 23 were five miles or over from their dry-season source, and five of the 12 were at least 10 miles from it. The cold figures are distressing. Their pathos is reinforced by some of the simple statements of the chiefs:

'Water is so scarce that despite the steepness of the approach people race for it. It does not satisfy the community for even a day. If one is unable to go, he pays 1/- per kerosene tin for its transportation.'

'When all other sources fail, we and all other neighbouring villages, numbering about 22 villages, flock on Kudita\*, form a queue where we sleep for one, two or three days, to collect a pot.'

'Agbovita, a spring between two rocks, is the only one in that area between people and thirst; during the dry season 200 - 300 people depend on it ... They may have to wait three days for their turn, and at times they resort to fighting. Water flows gently and bit by bit only, but it never dries up.'

\*The literal meaning of Kudita is "Drought pond."

The human effects of this situation are two-fold. In the first place exhaustion, and in the second privation.

With regard to exhaustion, one village elder said:

'Addidome is so far [about six miles] that on your return thirstiness almost exhausts the children and they get faint.'

Town-dwellers who get their water out of a tap, and villagers who have a perennial stream or spring close at hand, can have no idea of the hardship and the physical and mental lassitude involved in this toil after something to drink. After fetching water, there is not much energy left over for social development. People in one village, when asked why they had no latrine, responded unanswerably:

'We have no time to waste on latrine, for when we return from farm, we go for water.'

There have been a variety of vain attempts to dig wells. Survey members saw more than one group of young men digging hopefully in a spasm of exertion to reach water. The effort almost always ends the same way, and the following story is typical:

'The townspeople once had a well dug about 30 armspans deep'. They dug through a mixture of sand and clay for 30 armspans and then struck rock (rock white in colour, capable of striking sparks). They failed to strike water and filled in the hole with refuse.'

Fatigue and perpetual discouragement lead to the depression of mind discussed in Chapter V.

Exhaustion is supplemented by actual privation. Figures from Professor Blaney's Survey team show that the average consumption of water (for all purposes) per head per day in the Mafi Kumasi area is nine gallons, when water is available near at hand. But the average for water use at the end of the dry season in the same area worked out at only two gallons per head per day. The declension from the wet season average is evidence of stringent economy.

When a place runs short of water, very often the inhabitants have to go without a bath for several days - a genuine cause of distress to people with such a high standard of bodily cleanliness. Clothes-washing also suffers, and it was reported that the women of Avetakpo and Horkpor sometimes take their garments 12 miles to Addidome to wash them at the river on market day. More seriously, the villagers of the hinterland obviously do not, in many cases, get enough drinking water, and what they do get is of poor quality. Normally, no-one would dream of drinking the water collected in pots and drums off a thatched roof - but in Klukpo and other hamlets it was stated that anything so collected would be drunk in time of thirst.

There are no alternative drinkables used in Tongu. Bottled minerals and beers are too dear to be used except on social occasions. The only easily available alternative to

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\*Probably an exaggeration.

water in some places is coconut milk; this is not much used, partly owing to prejudice, but mainly because coconuts are a source of income.

Water itself may be bought in the dry season. In many communities there is no regular system of payment, but the water-carrier would always be rewarded with a dash. In others there are standard rates of payment. In the area of shortage, the usual price was 1/- a kerosene tin, (four gallons), but the highest was 1/6 (in Dzogadze).

#### (D) Water Use

A standard text-book for the tropics says:

'the minimum amount of water for which provision should be made is 15 - 25 gallons per head per day. This will provide enough for all domestic purposes.'

It would be fair to take a few gallons off the figure for total average consumption, since wasting and bathing are often done by the water-side, but ten gallons per head per day would be a not unreasonable figure to set up as a standard for water to be consumed in the compound in Tongu - particularly since pigs, sheep and poultry have to share in what is fetched. (The average consumption on which urban water supplies for the Gold Coast are calculated is ten gallons.)

All the Survey teams asked questions about actual water consumption within the compound, and by finding out which persons fetched water, and how often, and what receptacles they used, it was possible to arrive at the amount brought in to any given household. In cases where drinking water was brought in, or stored separately from non-drinking water, the amount used for each purpose could be calculated; but in many cases no differentiation was possible. The results obtained were:

#### Average consumption of water in gallons per day per head

<u>Lagoon and River Areas</u>	<u>Drinking Water</u>	<u>Non-Drinking</u>	<u>Undifferentiated</u>	<u>Gross Average</u>
Volo ...	1.1	2.9	-	4
Aveyime ...	1.8	3.2	3.8	4.3
Battor ...	1.8	2.9	-	4.7
Mepe ...	1.7	2.8	3.9	4.2
<hr/>				
<u>Areas away from River</u>				
Mafi Kumasi	3.3	5.7	9.1	9
Mafi Anfoe	2.4	5.8	5.3	6.4
<hr/>				
<u>Average for all Areas</u>				
	1.9	3.7	5.4	5.3
<hr/>				

\*Kirk: Practical Tropical Sanitation (2nd ed; London, 1949) pp. 216-7.

It will be noticed that the average consumption appears higher in the inland areas; this is because it is less easy to bath at a water-hole than in the river or a lagoon. It will also be noticed that the average for drinking water falls considerably below text-book standard, and that the gross average only approaches the standard ten-gallon level in one case.

Even in areas where water is not short, the average quantity brought into the compounds is small. There is a reason for this, in that every four or six gallons involves a journey for somebody, and even those villages with a permanent water supply may be a fair distance away from it. The following figures for distances from supply may be of interest:

Average distance from village to creek used for all purposes	...	...	2,746 paces
Average distance from village to drinking water sources in lagoon area	...	...	740 "
Average distance from village to non-drinking water sources in lagoon area	...	...	645 "
Average distance from village to drinking water sources in inland area (wet season)	...	...	457 "
Average distance from village to non-drinking water sources in inland areas (wet season)	...	...	417 "

#### (E) The Question of Quality

The quality of water in use is generally not satisfactory, either in the lagoon villages or in the townships of the hinterland area north of the Volta. Water is clearly the source of much disease; the incidence of bilharzia in the villages relying on lagoons, and of guineaworm in those relying on water-holes, have already been described, and other ailments exist which are probably traceable to water. Diarrhoea and dysentery, for example, were specifically mentioned in ten of the villages concerned.

The necessary equipment was not available to take samples for bacteriological analysis; but a general chemical analysis was made by Mr. R. Hulme, B.Sc., MCA., of the Department of Chemistry, University College of the Gold Coast, for over 50 samples of water used by various villages. He writes:

(a) The total solid gives the weight of all substances present in the water (organic and inorganic) irrespective of their physical form. The figures have been obtained by evaporating down 50 cc of each of the waters to dryness at temperatures of 150 - 200 Centigrade.

(b) The chloride content has been determined by titrating 50 cc portions of each of the waters against N/35.5 silver nitrate using a dichromate indicator. Very high values indicate pollution from either the sea or sewage, but would not necessarily render the water undrinkable if measures are taken to kill bacteria.

(c) The electrical resistance of all the waters has been measured on a Cambridge Instrument Co. 1000 c/s Bridge Circuit. It may be taken as a rough estimate of the amount of soluble inorganic matter present in arbitrary units. The higher the resistance, the more pure the water is with respect to inorganic substances.

(d) The pH (acidity or alkalinity) of all the waters has been measured, and is sensibly constant at neutrality.

The results are tabulated below. The values for the Achimota water supply have been given to afford a standard of comparison, and as the samples had to be analysed rapidly and the results can only be looked on as approximate, the limits of accuracy are also given

		<u>Total Solid</u>	<u>Chloride</u>	<u>Resist- ance</u>
Limits of Accuracy	...	+40 ppm	+2 ppm	+0.2
Achimota Water Supply	...	130	40	0.9 x 10 <sup>3</sup>

(1) <u>Water Holes</u>	<u>Village</u>	<u>Total Solid</u>	<u>Chloride</u>	<u>Resist- ance</u>
Agorvu				
Dirty	Alorsekofe	3200	26	1.5 x 10 <sup>3</sup>
Gbetorvu				
Stained	Alorsekofe	2200	24	3.7
Vudogobo				
Cloudy with smell	Kutime	1520	11	2.5
Agorvevu				
Cloudy	Klukpo	1440	26	1.5
Vuga				
Cloudy	Kpezegblo	1380	20	3.0
Fiegavu				
Stained and slightly cloudy	Sasekpe	1380	19	4.6
Semanuta				
Stained and slightly cloudy	Atsiemfo	1100	56 <sup>+</sup>	0.9
Devu				
Cloudy with smell	Anfoe	820	40	0.9
Dedeke				
Cloudy	Alorsekofe	700	34	3.0
Mewuvu				
Stained and cloudy	Mebiawe	700	18	5.3
Gblete				
Cloudy	Mediage	660	19	4.0
Amegavu				
Slight stain	Tsawala	620	17	3.5
Agodovu				
Slightly cloudy	Kpedzegblo	600	43 <sup>+</sup>	2.1
Azadavu				
Slightly cloudy	Gbalave	520	29	2.6
Anfoe				
Slightly cloudy	Anfoe	500	17	3.3
Vuga				
Cloudy with smell	Kutime	480	26	2.5
Kodavu				
Cloudy	Mafi Kumasi	460	22	2.3
Kudita				
Stained but clear	Mafi Kumasi	420	21	1.8
Kudadzovu				
Slightly cloudy	Agbadzikofe	400	14	4.1
Sevavu				
Stained	Seva	360	14	2.6

<sup>+</sup>These water holes show a very high degree of pollution from sewage.

(1) <u>Water Holes</u>	<u>Village</u>	<u>Total Solid</u>	<u>Chloride</u>	<u>Resist - ance</u>
Amezugbevu Cloudy with smell ...	Kutime	360	15	2.5
Yevunuvu Slightly cloudy	Kporduwla	340	18	4.0
Huorovu Stained ...	Avakpedome	340	58 <sup>+</sup>	1.5
Adavu Stained but clear ...	Dzogadze	280	15	1.8
Gborlavu Clear ...	Zongo	220	9	5.7
Vuga Clear ...	Asierkpe	200	12	4.0
Dekpor Clear ...	Zongo	160	15	3.7
Sakpitikofevu Clear ...	Sakpitikofe	100	16	2.0
<hr/>				
(2) <u>Creeks, Lagoons and Ponds</u>				
Vlekoe Stained and cloudy ...	Aviloko	2800	21	4.0 x 10 <sup>3</sup>
Kapa Stained and cloudy ...	Lutakorlekofe	1480	25	2.0
Avakpetor Stained and slightly cloudy	Meyimpor	800	17	4.5
Korlor Stained and cloudy ...	Nutekpor/ Gezele	720	17	7.0
Mlagoe Slightly cloudy	Dove	560	18	2.4
Tsimortorvu Slightly cloudy	Fakpoe	480	31	1.6
Luta Clear ...	Lutakorlekofe	280	11	4.5
Le Slightly cloudy	Lengu	260	15	4.0
Aklakpa Stained but clear (except for much coarse suspended matter)	Dadome	240	18	4.0
Avilo Slightly cloudy	Aviloko	220	14	6.0
Dzanyigo Clear ...	Awusavikofe/ Avedo	220	13	3.0
Ke Clear ...	Ameduikor	160	15	3.7
Toryiboe Clear ...	Mafi Dugame	160	7	4.8
Amedul Slightly cloudy	Ameduikor	120	10	4.0
Aklamador Clear ...	Aklamador	100	10	4.0
De Clear ...	Degorme/ Zidakofe	50	10	4.0

<sup>+</sup>This water hole shows a very high degree of pollution from sewage.

(3) <u>Rock Pools</u>	<u>Village</u>	<u>Total Solid</u>	<u>Chloride</u>	<u>Resistance</u>
Amekpe				
Cloudy with smell ...	Mediage	380	15	1.1
Vuga				
Stained but clear ...	Sasekpe	200	13	1.5
Sasekpe				
Clear ...	Sasekpe	180	10	5.2
Yorkpe				
Clear ...	Mafi Kumasi	140	10	2.5
Kpevudo				
Stained ...	Dadogbui	120	12	4.0
Kpedzegblo				
Stained ...	Kpedzegblo	100	8	7.0
Akpokphor				
Clear with slight sediment ...	Mafi Kumasi	100	10	2.0
Tsamavu ...	Tsakpo	100	16	3.0
Avakpetor				
Sparkling ...	Avakpedome	70	12	5.0

Now two of the first criteria for wholesome drinking water are that it should be without taste, smell or colour, and that it should not contain an undue amount of solid constituents. Most of the supplies analysed above are unwholesome on both counts. Only about one-third of all types of source are listed as 'clear'. With regard to solid matter, it can be seen that only two out of the 28 water-holes approximate to the Achimota standard, and it should be pointed out that one of these two (Sakpitikofevu) has not been disturbed for a long time, as the hamlet it served has died out. The remaining 26 contain a high proportion of solid matter, and the indication of the third column is that it is largely organic. Of the 16 lagoons and ponds, only five approached the Achimota standard in the proportion of solid matter. Rock-pools seem on the whole the most satisfactory type of source, since they are freer from solid impurities and have a lower average chloride content.

There is a general dislike of using water with dirt suspended in it; some supplies, which are obviously thick with solid particles, being reserved for building purposes, or for animals. In addition, some customs, whether by accident or design, help to avoid too much stirring up of impurities in the drinking source. For instance, Havenuo and other villages have a custom that every fourth day, corresponding with Keta market day, should be observed as an Afenoegbe or resting day, when no-one is allowed to fetch water from Yorkpe; this gives sediment time to settle. Moreover it was claimed that in several villages it is customary to clean out certain sources at the end of the dry season.

Many villages have no latrine, acting on the optimistic notion that 'our pigs are our sanitary labourers'. There is thus no guarantee that elimination will take place at a reasonable distance from the water, and urination near streams and water-sources seems to be commonplace. This could obviously contribute to the spreading of bilharzia and various worm diseases. In addition, the pigs themselves may be seen wallowing freely in the water.

Even those villages which do have some kind of sanitary provision often fall far below a reasonable standard. This is a description by one Survey member of the public latrine of a village with over 600 people:

'A broken wall, rotten roof with holes, and cannot keep out rain. It is filled to the brim and yet in use. Both men's and women's are situated in one place a few paces from each other. Women's latrine is not roofed, and a grass fence is made round it.'

Another habit which encourages the spread of disease, particularly guineaworm, is that of wading into the water to fill a pot or tin. In only very few cases is there any proper approach to a water-hole or lagoon, and women thus have no option but to walk right into the water. Up till now there has been no understanding of the dangers of this, both in spreading guineaworm and contracting bilharzia.

### RECOMMENDATIONS arising out of Chapter III

It is clear that the water situation in Tongu is fundamental - a serious social problem in itself, quite apart from its effects on the area's economic life. As a result of the Survey, considerable thought has been given to the question of what might be done on the local level in the way of palliatives, and a number of recommendations may here be mentioned. There are two aspects of the problem: what may be done to improve the quality of existing supplies, and what may be done to increase the quantity.

To take the question of quality first. It is suggested that an onslaught on sanitary conditions should be made by Local Councils, as a first step towards breaking the bilharzia cycle and preventing general contamination of water sources.

The provision of latrines is something which should not strain the resources of either Council; it requires energy rather than money, and the help of the Sanitary Inspectors may be sought. Latrines can be dug by communal labour, and the Councils' part would be confined to persuasion and the provision of some building materials. The District Development Committee might give consideration to requests for building latrines before all other requests for assistance, save only those for the sinking of wells and building of water tanks. Larger communities should be given priority consideration, and should be followed by small market centres, such as Avedo (which had no public convenience at all at the time of the Survey).

Stimulus to the construction of good latrines might be given by the Councils' making some other service conditional on the existence within the village of a good latrine, and definite specifications should be available in Council Offices. Poor transport facilities make bucket latrines an unsatisfactory proposition in most places, and usually the deep-pit type is more practicable. Pits should be at least 18ft. deep, their sides should be reinforced with creosoted timber, and they should be covered with a slab of reinforced concrete rather than wood.

At the same time people need to be educated in simple hygienic precautions. Here, mass education workers in Tongu could be of the very greatest help. The District Council might discuss with the Regional Community Development Officer

a plan to get his teams to concentrate for some months on latrine-building and the boiling and filtering of drinking water. It should be remembered that instruction on water treatment will be unsuccessful if confined to meaningless precept. Mass education workers must themselves set an example by always asking for boiled water, and everything must be done to induce a real faith in its value, rather than a mere verbal assent, which leaves untouched the real springs of action. A small travelling exhibition might be arranged, including peeps through a microscope at water swarming with repellent bacteria. Without the aid of such visual evidence it is difficult to convince people in any part of the world of the existence of harmful agencies in clear-looking water.

The prestige of central and regional Government could be thrown into the scale if the Government Agents were to emphasise the importance of proper latrines and water treatment on any visit to a village.

But more valuable than the attitude of outsiders to water would be the example of the local literates. All too often, a teacher, after giving a hygiene lesson, will himself act in direct contravention of the principles he has just been teaching. This is a problem not confined to the Tongu area, and by no means easy to solve. But something must be done to make teachers and children act according to the principles of hygiene. For example, the Local Councils might announce a prize to the school which best kept to the rules of hygiene by faithful use of latrines and boiling of water during a whole term.

It is especially important to enlist the help of all influential people in the community. The clergy can be asked to give practical advice to their congregations, as well as setting a personal example. Again, if chiefs and headmen, even fetish priests, can be convinced of the need to boil and filter water, their pronouncements would carry weight with many people. (The senior fetish priest of Mafi Division, for example, showed a genuine understanding that bad water produced disease.)

The second problem is that of quantity. As already described, the most usual measure attempted by the local people has been the digging of shallow water-holes. Their limited size conduces to constant stirring up of impurities by the water-fetchers, and also it appears that guineaworm flourishes better in small holes than in large areas of water. The Councils, therefore, should do nothing at all to encourage the digging of these shallow holes. Moreover, once alternative water supplies are provided, they should ensure that water-holes are filled in, and not left to breed mosquitoes and other harmful organisms.

A second method of increasing water supplies is the digging of wells. The Regional Administration has received a report from the Director of Geological Survey which suggests that in only a small area are 'carefully sited deep wells', likely to be productive. The District Development Committee, therefore, should be very careful to refer to geological advice before giving grants for wells. Where wells are feasible, the Local Councils should take suitable measures to see that they are not polluted, e.g. by providing a fence round the well-head, and a cover.

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\*Funds were voted in May, 1954, for a number of shallow wells, sited in the strip of granite acid gneiss running from Kpedzegblo to Ablonu.

What other possibilities are there? One is the provision of rainwater tanks. Several communities have a school with a metal roof, and the Councils might build tanks to catch the rain off the school roof. If proper guttering is not available, it can be cheaply made by a local blacksmith from a few metal roofing sheets. In order to prevent pollution from the washing down of bird and animal droppings during the first rains, there should be a small intermediate tank to catch the first washings, and the pipe leading to the main tank should be at a high enough level to take only the overflow when the first tank is full; thus all the sediment is deposited in the first tank. This first tank may simply be an old petrol drum. The larger the tank, the better, from the point of view of increasing supplies, but advice should be sought from the Department of Rural Water Development on what size and shape takes the greatest strain with the minimum of expense on materials. The Council should be able to recoup the cost of such a tank by charging a very small fee, similar to the *Mediage* rate.

Storage tanks may be a great help to a small community, but obviously they are only feasible in villages which have a road approaching them, and at least one public building with a roof made of imported materials.

In one or two of the larger townships, transporting of water from the nearest large source may well be the only possibility a Local Council can consider. In Adidome, for example, it has been shown that about 900 miles-worth of human energy is expended daily on fetching water - energy which could have been used in farming, fishing or other constructive ways. Clearly, it would be useful to have some kind of organised means of bringing water to such a town. The Local Council might make a commercial proposition out of this, since the idea of payment is not new. In Adidome, for example, the standard rates at the time of the Survey were 2d. a pot for river-water, or 1/4d. for a 44-gallon drum on Tuesdays and Fridays (market days); while for water for animals to drink the rate was 4d. for 20 gallons.

Only one other mode of increasing the quantity of water available could be practicable through local effort. That is the making of dams, such as are encouraged in certain parts of the Northern Territories; they are inexpensive, can be achieved by communal labour, and afford benefit to the livestock owner. However, Government geologists point out that the topography of Tongu is not favourable to dam-building.

In summary then, as far as Local Councils are concerned, it may be said that they have a large part to play in improving the quality and making the best of existing water supplies. They need, however, the co-operation of the Department of Social Welfare and Community Development. Increasing the quantity of water available is hardly within local scope in most cases.

Other ways of providing more water could only be embarked on by central Government. In the matter of bore-holes, which might be useful in a few places, Government alone can act. But the black-soil areas which cover the greater part of Tongu

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\* Since the time of the Survey, a trial bore-hole has been sited at Mafi Kumasli.

are unsuitable for bore-holes. An alternative might be the excavation of strictly controlled large ponds to serve as reservoirs, and Mr. I.G. Hughes of the Geological Survey Department writes:

'In those areas where ponds are the only solution to the problem, these must be fenced in and draw-off arrangements should be fitted to prevent pollution. The provision of shade is important, and in my opinion its value outweighs the harm done by decaying leaves. In this context, I can only endorse the ... call for the education of the people in the principles of hygiene ...'

The construction of fences and draw-off arrangements would prevent livestock using the same supply as that intended for human consumption, but there are still certain health problems produced by the existence of ponds (or indeed reservoirs behind dams). Large water surfaces tend to woo disease-bearing insects, and bilharzia too is a danger. However, with the help of central Government agencies, these difficulties may be alleviated. As in the Northern Territories, the Fisheries Department's help may be enlisted in stocking the waters with fish to keep down insects. Failing the provision of fish, then Local Council employees might be instructed in methods of spraying, so that Councils could carry this out as a control measure twice yearly. Then, the Department of Agriculture might be asked to help with the supply of ducks, to villages using ponds or other reservoirs; ducks are useful in keeping down bilharzia, since they kill the fresh-water snails which carry bilharzia parasites.

Only Government could carry out a comprehensive programme of excavating ponds of the type envisaged, and only the resources of Government could face the contemplation of some even more costly and far-reaching scheme, such as the pumping-up of water from the Volta, to be piped down from the Abutia hills. On human grounds, Government expenditure in assisting to provide water is easily justified. Whether any large expenditure is economically worthwhile depends on material considerations. Would more and better water enable Tongu to contribute appreciably more to the economy of the Gold Coast? That is the next question to be considered.

#### CHAPTER IV - ECONOMIC ACTIVITIES AND COMMUNICATIONS

The aim here is to give a general outline of the main economic activities, including fishing and farming, and in each case to see if water problems have reacted on them in any way. Possible lines of economic development will be discussed, in connection with the second main problem of the area, communications.

##### (A) Fishing

In the lagoon and river villages, small boys start learning to fish at the age of seven or eight, and they begin to go to work seriously in pairs when they are 15 or 16 years old. Adult men continue fishing as long as they have strength and faculties, so that in Degorme Fiakofe only five or six old men were described as being 'beyond fishing age'.

Young men migrating to other areas to fish for the first time will buy their equipment on arrival, and this probably means resorting to the money-lender. Prices of fish in the North were often described as 'good', but sellers are in a fiercely competitive position. In order to avoid the ups and downs of the market, fishermen get their wives to smoke and preserve the fish, so that it can be sold out of season. The disadvantage of this is that some families have to remain in the North, processing and selling out of season, during periods when they would normally be back in the villages tending their farms and getting basic food supplies stored.

The men who fish at home often eke out only a marginal existence. They fish either in the Volta, or in the creeks and lagoons, the season being the low-water period from February to May. Methods used include fence-traps, basket-traps, nets, and hook and line fishing. A fisherman may make free use of the Volta, but creeks and lagoons are regarded as the property of those whose lands run alongside their bounds, or else of a particular village on the bank. The owners let out fishing rights by the season; a typical season's fees at Agbetsikpo were 12s. for dropping a line, 25s. for casting a net, and 50s. for erecting a fence-trap. In some creeks in the Aveyime area it is the custom for the lessee to pay over as rent one-third of his season's catch.

There is considerable bitterness between some villages over the ownership of fishing rights, and in particular over the Ke Lagoon, which is at the moment in the charge of the Tromua Gbenur at Dove. The Government has recognised his position as chief of Dove, while the Fiaga of Mafi, and consequently many of his subjects, have not.

Catches of fish are sold to women, who may be Nigerians or Krobos, or Tongus. It is not uncommon for a fisherman to sell to his wife. There is always a sale for fish, and it is in demand all over the Tongu area, being sold in the markets such as Mafi Kumasi and Adidome, supplemented with sea-fish brought in from Keta. Half the hinterland villages mentioned fish as a common import. A certain proportion of the catch is marketed further afield, often passing through Akuse en route for Accra, Koforidua and Kumasi.

The inaccessibility of the Tongu area, the unorganised position of the sellers, and their ignorance of market conditions, prevent them from getting good prices for their fish. Since few buyers come into the area, the villagers are only too glad to get rid of their surplus, and middlemen who appear in the villages at the end of the selling season often purchase large quantities of fish at low prices. Those fishermen who have their fish taken to Akuse, by head-loading and canoe, are no better off. Buyers know only too well the difficulty with which goods have been brought to market, and they understand the reluctance with which a person would take them home unsold.

The womenfolk's preserve is diving for shell-fish. Many are able to do this from their own homes, while others betake themselves to the riverside between Volo and Amedica, set up small huts on the sandy strips, and remain there for the season (November to July), often diving from six to eight

hours a day, except when they are undergoing monthly periods, and on other 'tabu' occasions. In Volo it is 'tabu' to collect 'oysters' every fourth day, though other occupations, such as farming, may be freely indulged in.

The women's catches are generally sold to middlemen from Krobo, who come to the women's encampments or to the nearest markets, and buy in panfuls valued in a regular scale between 1s. and £1. The price of shell-fish seemed low in comparison to the effort involved and the women appear to be in an even weaker selling position than their men, since the demand is not so great and the fish are not so easily preserved. No social organisation was found among either fishermen or divers to compare with the company system of the coast, which tends to protect the sellers' interests to some extent. At present, the average yield of a season's 'oyster' catch is between £20 and £30.

The supply of water is clearly a major factor determining the supply of fish caught in the area, both for local consumption and for sale further afield. The people themselves show continual anxiety about water flow, and in many of the creek villages water rites are not concerned directly with personal water needs but rather with a flow to enhance the supply of fish. Only one example was encountered during the Survey where the shortage of water for consumption interfered directly with fishing:

'West of Ahunda there is a pond called Fedá, which in the old days was dammed and then drained of water to make the fish easy to get. When this is exhausted, there is no other water in the area, so fishing there has now been stopped. From the village to the River Aklakpa, the only alternative, is more than four miles.'

The great problems of fishermen at the moment are those of indebtedness, marketing and the over-fishing of the large lagoons, such as Ke.

#### Fishermen and the Volta River Project

There are several benefits which riverside fishing villages might derive from the Project, and the people themselves showed some awareness of them. A good deal of hope was expressed that the Volta Project would employ labourers from Tongu, enabling men to find long-sought employment within reasonable distance of their homes.

If the flow of water below the dam is maintained at a constant level, this should help to banish salinity from the river water, and to reduce the annual damage to crops and erosion of townships brought about by uncontrolled floods.

Set against these, there are certain very real difficulties which the fishers are likely to incur, and which will need exceedingly careful investigation. During the first years after the building of the dam, the gradual piling up of the waters behind it will present the migrant fishermen with a bewildering change in the shape of their old fishing grounds, which may affect both catches and morale.

Life in the home villages below the dam will also inevitably be altered, and two main problems must be solved. Can the villagers be given an alternative source of livelihood adequate to compensate for the loss of the creek fishing?

And can new arrangements be made about water supplies, in order to replace the deteriorating creek supplies?

(B) Crop Farming

Most families in Tongu produce at least some of their own food. In almost every village, even those with the poorest soil, cassava is grown and is the main staple, eaten in various forms, cooked fresh, dried and made into porridge (kokontekple), or processed into 'gari'. In infertile places the quality is poor; for example, in the Volo area it was reported that

'food is cooked cassava, very hard and pale yellow in colour. This kind of cooked cassava is not eaten in places where the soil is fertile and the cassava is soft and white when cooked.'

There is a certain transit trade in cassava and gari by the river route, and in fact cassava is both exported and imported by all the market villages in Tongu. People seem to recognise the inadequacy and monotony of a diet founded on cassava, and try to vary it by buying groundnuts and cocoyams for frying. Women from the fishing villages exchange their wares for plantain from Akuse, which they either fry or boil.

The other most widely-grown crops are maize and groundnuts, groundnuts being grown in 47 villages out of 60, and maize in 46. Groundnuts in particular are exported to Accra on lorries from Adidome market. The soil is only suitable for yams round Mafi Kumasi. And thus only 16 villages were found raising them, all lying in or near that area. Water-yams and cocoyams too are more or less confined to the hinterland.

The Piaga of Mafi pointed out that the Mafi Kumasi district is the whole Division's crop supplier, and indeed it is the most fertile strip of land to be found in the combined territory of both Local Councils. The geological explanation for this is that the underlying gneiss runs in a belt of coarse grain, and the soil itself is therefore coarse and well-drained.

On this propitious soil, a wide variety of crops flourish. Besides the staples already mentioned, the Survey recorded rice, bambara nuts, pigeon peas, beans, tigernuts; tomatoes, garden eggs, onions, okro, pepper; oil palms, coconuts, avocado pears, pawpaws, and pineapples. Some of these find their way northwards to markets such as Ho and Tsito. Others are sold in Mafi Kumasi itself, in Adidome, Sogankofe and other Tongu markets. Rice has a specially good sale, and, like groundnuts, is exported via Adidome to Accra. Only two crop failures were reported to the Survey; one in 1938 owing to locusts, and the other in 1952 owing to maize rust.

The existence of a district with such rich and various yields, tied by history and administration to others whose soils only support the monotony of cassava, has inevitably fostered trade between the two types of community. From the observations of the Survey therefore, it would be misleading to talk of a 'subsistence economy'. Farmers at Mafi Kumasi

may eat some of what they produce, but they sell a sufficient surplus to pay for various imported goods, whereas the fishermen and live-stock owners in other places cannot produce all that they require to eat and have to pay for their sustenance by sale of fish and animals.

Apart from food crops, a little cotton was found growing in some of the villages around Mafi Kumasi, but interest in this has fallen away recently. The 'aggor' palm also formed part of the vegetation, and this can be split into light balks useful for roofing.

The Mafi Kumasi area is already relatively well populated, but there is a large extent of uncultivated land. Inevitably, the present population and its farms are huddled round the water sources; the small outlying settlements suffer very heavily from water shortage in the dry season, which impedes further cultivation.

### (C) Hunting

The hunting season runs from December to April and animals found near the Mafi Kumasi villages include small antelope, guineapigs, squirrels, hares, wild pigs, partridge and guineafowl. Hares seem to prevail right down to Sogankofe on the north bank of the river, and several may be seen on the Sogankofe-Addidome road any night. It was said that monkeys were also plentiful in the whole of the hinterland; the village of Tove complained of monkeys as a serious nuisance to farmers.

In addition, on the South bank of the Volta, especially round the Ke Lagoon, there are numerous snakes. The people kill puff-adders and pythons and sell their skins to Hausa traders. Only two haunts of crocodiles were mentioned, the Aklakpa and Dzanyigo Creeks; but all over Tongu, being bitten by crocodiles is one of the favourite penalties assigned in popular imagination to persons breaking any of the water tabus.

### (D) Livestock

As elsewhere in the Gold Coast, small domestic animals are to be found in most villages. The one curious exception was Dove on the Ke Lagoon, where the fetish is said to 'hate' live-stock and especially the process of birth (even women must leave the town to bear their children). In addition, one or two villages in the prosperous crop-farming belt said that they had abandoned keeping sheep and goats, because of the damage done to unfenced crops.

Domestic fowls are widely kept, but the numbers owned by each compound are low. Throughout the area, six to ten chickens was as many as any individual would keep. Ducks, turkeys, guineafowl and pigeons are sometimes kept. Ducks are to be found in lagoon villages, like Aviloko, and also in some of the prosperous hinterland settlements. Turkeys and guineafowl are of most interest to places on the South bank of the Volta, ranging from Tsurukpo to Mafi Dugame, because of the Christmas trade with Accra. Pigeons are a speciality of the crop-growing area, where grain can be spared to feed them, and in a village like Dzogadze they are kept in surprising large numbers. They are fattened in small basket-work cages.

With the exception of these pigeons, domestic birds roam about the village, picking up scraps and water where they can. Several villages complained that they lost birds in the dry season and it seems likely that heat exhaustion is the cause, aggravated by thirst, since it is not customary to provide water specially for fowls. Actual disease is also a cause, and more than one village described the symptoms of Newcastle disease, and asked if there was any way of averting it.

Sheep and goats are a commonplace in the area, but in spite of the complaints about damage to crops, villages in the Mafi Kumasi area seem to own the largest numbers. There is no doubt at all that these animals suffer in times of drought and water shortage. Their pots are not always filled, and the quality of the water they drink is bad. Consequently in all the villages where there is no regular water-supply, there were reports that their animals died. As it was poignantly put by the headman at Atsiemfo: 'We were having about 100 sheep and goats. Owing to the scarcity of water, they all died away.' The biggest mortality is after the first rains, when animals who have survived on insufficient water gorge themselves over-greedily when at last they find sufficient to drink.

Pigs are often kept as scavengers, and in some cases for export to Accra, but there were no complaints that they were troubled by drought.

An interesting feature is the increasing number of cattle being kept in the area. The Department of Animal Health conducts periodical comprehensive cattle censuses, and their figures show a remarkable expansion. Cattle-rearing is still new enough for some of its beginnings to be remembered; for instance, it was stated at Adidome that 'zebu cattle' were only introduced into the area after the First World War.

Cattle-rearing appears to be a profitable enterprise, and large herds are owned by some individuals, or kept in trust by them for family-groups. Grazing rights are obtainable at a very small cost. Until recently, in the Upper Tongu Local Council territory, grazing rights in perpetuity could be acquired by the presentation of one cow from the herd; now the Council is attempting to fix a yearly charge for such rights. Herds are generally kept by Fulani herdsmen, who establish themselves in small cattle-rearing villages (witness the name Awusavikofe - small Hausa farming village), and are paid in kind, usually in milk, to the detriment of the calves. Only in the Battor area do local inhabitants seem to take part in the actual work of herding, and it is an indication of the way they have assimilated a pastoral economy that milk is often drunk; in Agbetsikpo it is customary to give it to the children.

The best grazing grounds are to the North of the Volta, and a town on the south bank, like Mepe, may send its animals to the far side. Cattle are generally sold to Hausa traders at the age of seven or eight years; before the war the price of an adult cow used to be £6 or £7, but now it might bring in as much as £25 or even £30. A good share of the profits of the cattle trade probably goes to non-natives of the area, since Hausa and N.T. men act universally as middlemen, several of them being resident in Accra.

Disease is one hazard of the cattle-rearing industry; for example, at Nutekpor, near Volo, most of the cattle were wiped out in 1952, and the rearers returned to their homes. The work of the Department of Animal Health in recent years has, however, minimised the danger of some of the most deadly diseases.

Water shortage definitely bulked as the largest single problem facing owners. The greatest number of animal deaths occur in the dry season, between December and April. Moreover, out of 30 cattle-rearing communities investigated, no less than 12 are forced to keep their beasts at a distance from the village in order to ensure them water. The only alternative is to keep them close at hand and subject them to continual long trips in search of water during dry weather; people in Gbalave asserted that, as they had to take their animals regularly ten miles to the Volta during the dry season, many of the young ones flagged and died.\* There is inevitably an unhealthy concentration of animals round the main water-sources during the dry season, and this puts overmuch pressure on the grazing near them. Four villages stated that they would like to keep cattle if they could be sure of water for them, and people in Mafi Kumasi said that they would keep many more cattle if only more water were available.

#### (E) Other Aspects of Economic Development

Mineral resources appear to be very poor in Tongu. Some rock-samples were referred to Dr. W. Bruckner, of the Department of Geology, University College of the Gold Coast. He writes:

'I do not believe that any of these rocks or soils is of economic importance. The gneisses may be useful as building stones, for garden walls, paths, pavements and as road or railway ballast. I think some rocks may be satisfactory for quarrying. Such material is, however, common all over the Accra plains. The laminated granite-gneiss may be used for the same purposes, though it is less decorative and probably breaks easily into small splinters. The quartz is usually condensed in a stone layer under the top soils and distributed over the whole of the Accra plains. One might think of glass-making from it, but as far as I can remember, there should not be any iron oxide in glass quartz, and this substance is always present in the quartz stone layer. Also its thinness may prevent an economic quarrying. The "clay" samples from Kudita and Gborkofe are very sandy and certainly no good for pottery requiring very fine-grained clay.'

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\*In his paper, Animal Health Survey in Trans-Volta/Togoland, 1953/4, Mr. R.C. Hutchinson emphasises this difficulty, and declares that 'it is quite common for a journey of seven or eight miles in each direction to be necessary'.

As regards export crafts, the most widespread is weaving, which was carried on in 23 of the villages visited. Of masculine crafts, smithing (particularly gold and silverwork) comes next in importance, followed by basketry and net-making. Boat-making from the silkcotton tree is another natural craft for a fishing community, and is a traditional occupation at Mepe and Vome Adidokpui; but it is usually carried out away from home. Other crafts which earn money for Tongu men are carpentry, building, stool-making and wood-carving, aggor-beam splitting and palm-wine tapping. Corn-milling is met with in many of the crop centres, and certain special occupations are met with in special places; for example, lime-burning in Volo<sup>+</sup>, the making of shuttles and combs in the weaving villages, and mattress-making at Avekpedome.

Female crafts include, first in importance, gari and kokonte-making. This is followed by palm-oil and coconut-oil manufacture, also that of soap. Some pottery was mentioned to Survey teams.

#### (F) Trade and Communications

There is no stimulus to increase production unless goods can be taken easily to market. The Survey found some flourishing markets in the area, particularly those at Mafi Kumasi, Adidome and Sogankofe; while Sege holds an important position in the livestock trade with Accra. Several of the small markets in the district have had to close down owing to lack of water to satisfy the needs of incoming traders. There are other markets outside Tongu, such as Ada and Akuse, which draw Tongu trade. But very many Tongu villages suffer from the absence of any easy access to existing markets.

A glance at the map will show that Tongu is an area of poor communications. The main economic artery of the Confederacy is the River Volta. Short-distance travelling between villages is often done by canoe, and the single UAC launch service plying between Ada and Akuse provides the means both of communicating with other villages and of travelling out of the area. It carries both passengers and mails. Store goods are brought into the area, and fish and other local produce taken out, mainly by large sailing canoes. It is hardly coincidence that the riverside villages have been among the first in the area to develop churches, schools, small trading stores, larger markets and improved types of house-building.

The further one goes away from the river, the more important road communication becomes. The whole of Tongu has the aspect of a no-man's-land lying between two highways to Accra; that from Keta, crossing the Volta at Sogankofe/Tefle, and that from Ho, crossing the Volta at Senchi. The Ho-Keta route passes to the east of Tongu, and the only link between the two Accra roads which passes through the area is that between Ho and Sogankofe. This is the most important motorable road in Central Tongu. The Sogankofe-Adidome section of this road had been newly made-up at the time of the Survey, and was found to be in excellent condition, with proper culverts and adequate drainage. The journey from Adidome onwards to Ho was difficult in the rains, and the section between Ahunda and Adaklu was complicated by precarious wooden bridges.

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<sup>+</sup> During the war the obtaining of lime from shells was a flourishing local industry, but it has now diminished in importance.

There are two or three side-roads raying off the main Ho-Sogankofe one. That passing to Mafi Kumasi and ultimately to Ways, was the only one extensively used by lorry traffic. Many side-roads were in almost derelict condition, and did not seem to be much used. Often they had been built in a burst of enthusiasm, but no provision had been made to maintain them. Government help had enabled a road to be started from Volo which was planned to run to Pore and join the main Ho-Accra road somewhere near Frankadua. Unfortunately, the stretch of good surface peters out after a few miles, as political differences continue to smoulder between Volo and its neighbours.

On the southern bank, a motorable track runs from Aveyime to the Accra road at Sege. The surface varies greatly in quality, and is subject to flooding in the rains. This and the Ho-Sogankofe road were the only two major communication lines which the Survey teams found, apart from the river.

The people themselves are well aware of the depressive effect on trade resulting from such a sparsity of outlets. Tongues recurred to the complaint as to a sore tooth. One group of people said: 'we find it difficult to transport our foodstuffs to where we can get good markets. Because of this, we are poor.' In another village, the exact analysis was given again: 'We find it very difficult to get our crops to the markets. As a result, our crops are bought at a very low price.' The migrant fishermen, who are only at home for a very short cropping season, are the chief sufferers from this state of affairs.

Customers have to pay high prices for European goods, owing to the difficulty of bringing them in from the large trading stores at Akuse, Ada and Keta, and the single one at Addome. As a consequence, the range of imports into Tongu tends to be rather limited; the main foods are fish, salt, sugar, corn, flour, onions, and tinned meat; manufactured commodities are mainly confined to cloth, weaving yarns and fishing lines, tobacco, cigarettes and matches, kerosene and hurricane lamps, building materials, enamel ware, and toilet articles of all kinds. It was hard to estimate the quantity of imported drinks, such as beer and gin, because much was evidently sold by un-licensed persons.

Markets as institutions suffer from bad roads. Mafi Zongo was bound to feel a shrinkage of custom after the rise of the Mafi Kumasi market, with its far better position for exporting rice and groundnuts and the far more populous area behind it. But it need not have suffered such a collapse as it has if the half-built road to link it with the Ho-Addome one had been completed and extended to some of the neighbouring villages. It could then have attracted some of the lorries which at present take advantage of the Mafi Kumasi Road.

Postal communications are also poor. Mail services are dealt with by only a few Postal Agencies on the Volta banks. Lack of roads has meant lack of delivery facilities in the hinterland, and at the time of the Survey no Postal Agency was found there. The people of a vigorous school-centre and market-town like Mafi Kumasi had to go 18 miles, to Addome, to collect their mails, but they were luckier

than the cluster of villages at the upper end of the Aklakpa creek which lie away from both river and road, and have an even more arduous journey to obtain letters. There are no telegraph lines at the moment in the two Councils' areas, and telegrams have to wait for mail days for delivery.

#### RECOMMENDATIONS arising out of Chapter IV

The establishment of co-operative selling organisations for both fishermen and 'oyster' divers is desirable, in order to strengthen their bargaining power; but the fishing industry offers few possibilities of development, particularly in view of the uncertainties arising out of the Volta scheme. Alternative sources of livelihood are desirable, both to increase cash incomes, and to alleviate the social problems of migration from the villages.

Industrial development is remote; the only possibility would be some extension of the weaving industry. In view of the lack of success which attended the I.D.C.'s efforts to expand the weaving industry in Avatime, there is room for caution about this. The main problem here is marketing; traditional cloth in the Gold Coast is both heavier and more durable than imported textiles, and therefore the demand for it is comparatively low.

The main prospects for Tongu seem to lie in the development of farming, both food crops and cattle rearing. For this, improved water supply is the first priority. If water shortage could be overcome, perhaps by building dams, the food growing area around Mafi Kumasi might be extended; more groundnuts and rice, for example, might be produced for sale to other parts of Tongu, to Accra and - in future - Tema. More important would be an increase in the number of cattle kept; and if mixed farming were introduced, crop yields would thereby be further increased.

Here is to be found the most pressing economic justification for central Government expenditure on improved water supplies in Tongu. The Gold Coast is still relying largely on meat imported on the hoof from French territory. Any area closer at hand which is able to supply more meat to the large towns is surely worthy of considerable help. Tongu, moreover, is close to Tema and to the whole area scheduled for development under the Volta Project. When the inevitable influx of population to the Volta area begins to put pressure on the local food-supplies, there is serious danger of a steep rise in food prices.

Only if some good food-producing area is developed close at hand can this type of inflation be averted. Tongu would appear to be one obvious area for the provision of meat, and to some extent of food-crops too. More water in Tongu would mean more and better cattle, and hence more meat for sale in Tema, Kpong and Ajena.

If water is given first priority, improved communications are also essential. Materials for extending the activities of the drilling rigs, or for building dams, cannot be brought in without roads; nor can food supplies be taken out of the area. Improved roads and improved water supplies are therefore bound to be pursued together.

What can be done to improve communications in Tongu? The key market in the area is at present Addome, which is on both road and river. Every village in the hinterland spoke

of the value of Addidome as a meeting-place between the Ada salt-producers, the Keta onion-farmers and sea-fishers, and the Mafi crop-growers; and they stressed the need of a really good road to scoop in all the trade along the Ho-Addidome route. The present road was established in the inter-war period, and then it was common for the District Commissioner to visit the vanished rest-house at Kpedzegblo, the traditional seat of the Fiaga of Mafi. But the deterioration of the road confirmed the decision of the Fiaga to move to Addidome. There is still a fear that history may repeat itself and that the present Ho-Addidome road (at the moment none too easy going after rain) may be neglected again.

At this point, it may be worth repeating a principle to which lip-service is often paid, but which nevertheless tends to be neglected in practice. The history of the Ho-Addidome road confirms that it is a waste of effort to establish a road where there is no provision for maintaining it. If the existing Tongu roads are to be improved, and new roads driven through, funds for maintenance must be available from the start, unless the Government or one of the Councils can undertake their upkeep. Economic development cannot be successful, where there is no continuity in the standards of the communications system.

The present Ho-Addidome road, converted into a good-class motorable road suitable for use throughout the year, would be the obvious backbone for one or two carefully selected feeder roads, such as that now running to Mafi Kumasi. This would provide an outlet to north and to south, for both crops and livestock. If the food needs of the Volta Project are to be taken into consideration, a further outlet to the north-west would be needed, and the abortive road between Volo and Pore could usefully be taken up again now that the National Food Board has had the stream bridged between Pore and the main Accra road. If local political differences are too acute, the road could be started opposite Bator instead. Such a road would have an incalculable effect in opening up the area of Upper Tongu west of the River Aklakpa. This was outside the Survey's scope, but is known to be very backward and isolated.

On the south side of the river, the need is to open up an effective way to the main Keta-Accra road. Great energies have been displayed on the track from Aveyime to Sege, but it needs the help of the Government with culverts. Other villages might then be encouraged to construct side-roads to join it.

Postal and telegraphic services are badly needed. Since the Survey, one Postal Agency has been opened at Volo; but it is suggested that the District Council might take up the task of pressing for more Postal Agencies.

It is not easy to make recommendations on river transport until the effects of the Volta Scheme become apparent. Meanwhile, it can only be said that improved launch services are desirable.

To sum up, the most pressing need is for Government to take an interest in Tongu water supplies. Apart from the physical difficulties the inhabitants are suffering from, their economy is handicapped by the lack of good supplies for themselves and their cattle. Not only is their own economic progress at stake, but also their ability to contribute

to the supply of food for the Volta Project area, and for Tema. These supplies demand good communications, and in many cases communications and water supplies must be developed simultaneously.

There is another reason for Government to take an interest in Tongu. We found there a prevailing mood of hopelessness and depressed uncertainty which was not conducive to good or effective citizenship. Some radical demonstration of the Government's goodwill is vital if the people of Tongu are to alter their attitude.

## CHAPTER V - ASPECTS OF PUBLIC OPINION IN TONGU

### (A) Introduction

In the course of the Survey, investigators were constantly gathering impressions about the attitude of mind of Tongu people about Tongu problems, and some of the opinions most commonly expressed are recorded here. It is necessary to caution the reader that the Survey was not itself an attitude survey, and that the impressions gathered here are those which are in effect by-products of the main Survey. It is not possible to say that these are the attitudes of the people in these areas; what can be said is that these are some of the attitudes expressed by some of the influential people in the villages involved, particularly some of the headmen and chiefs.

The people of Tongu feel neglected by the Gold Coast. Even though some of the villages are only 70 miles from Accra, they are cut off from their more fortunate neighbours by lack of direct communication lines, and hence lack of trade. They feel their remoteness and isolation keenly. They suffer from neglect, disease and poverty. Many of the villages have no schools and hardly any have even the minimum of medical facilities represented by a trained dispenser.

Inter-woven with the prevailing feeling of neglect there is a distressed uncertainty about the future. Here, where traditional social life is more intact than in most southern areas of the Gold Coast, there is a dry-rot of anxiety about the future which makes it difficult for communities to act - even on their own behalf, and in ways prescribed to them by tradition, such as communal labour.

Anxiety and apathy are the more pronounced since so many of the young men are away for large parts of the year. Anywhere in the world, it is normally the younger generation who leaven a community with optimism in its struggle against an adverse environment. When development is left to the old and exhausted, it is unlikely to be tackled with hope or faith.

### (B) Attitudes about water

In those villages on the Volta or some other permanent water source, there was an immediate reaction of surprise that people should waste time doing a Survey when for years they have had good supplies. But for the many villages getting water from streams or wells which dry up during part of the year, water was the most desperate problem of all.

What did seem significant was that many of the villages thought their supply was 'good' if the quantity was sufficient, and reasonably easy to access. They were not concerned with the quality of the water, and were generally ignorant of water-borne diseases. Many people thought that guineaworm was hereditary. There was a widespread belief that boiled water was not good for drinking, since it 'acts as a purge.' Even some members of the Survey teams shared this prejudice. In almost every village, too, there was a 'tabu' against taking a pot blackened by fire to the water source.

In spite of the lack of concern over pollution, there was much concern visible dirt. People disliked using water that was obviously muddy; for instance, villages along the Volta generally turn to neighbouring creeks and ponds during flood-time. Where villages had a stagnant water supply, it was found that bathing and washing clothes were carried on in a different place from the drinking water source. Sometimes the two might be separated by only a few yards, but often there were rules about the distance one must go from the water-source before washing one's clothes, and these rules had strong customary sanction. Many people would take water back to their compounds for bathing or washing.

In some places, there was an understanding that throwing refuse into a drinking supply, such as a river, is not desirable. In one village, the headman and elders devoutly repeated that in their village throwing refuse into the river was just not done. Further investigation showed that refuse was in fact being dumped in the water. Often, such chiefs or headmen and elders are concerned that their village should be seen in a good light, and when certain practices occur which do not conform to 'European' standards, there is either embarrassment or distrust on the part of responsible villagers when they are questioned.

The Survey revealed a good deal of misunderstanding on the question of wells. There was a belief that almost anywhere a well is put, it will function. No understanding was shown that it can only be useful where the underlying geological structure is suitable. Rather, the dryness of a well was attributed to its not being deep enough. The general attitude was that this is something which Government must provide. It furnishes a clear, if ill-informed grudge against Government, which becomes a symbol of neglect out of all proportion to the issue of wells itself. There is a feeling of resentment that Government does nothing, and it is coupled with a conception of Government as a remote and undifferentiated thing which ignores poor people. It is a common complaint that only the well-developed areas get further development; the underdeveloped areas suffer neglect.

On the other hand, when asked why they did not try to dig a well themselves, villagers indicated that it was too difficult; that they did not have the tools; that they did not know how. In some cases they have tried and given up. In other cases they knew of villages which had tried and met defeat. People did not know where to turn for advice on self-help, or where to get technical assistance and tools. When information on self-help was tendered, the normal attitude was either a long list of reasons why self-help was out of the question in their particular case, or else a courteous 'thank you'. There was little indication that lack of information was the real basis for inaction.

Some sign of where the people looked for help came from statements made by chiefs and headmen of villages. The statements were mostly vague. In one place where water is a perennial problem, the headman said: 'I think we are helpless and we want the Government to send labourers to dig a well for us.' In another, where some efforts had been made and the headman seemed anxious to demonstrate the willingness of his people, he said: 'We need wells and are ready to help in any way for we suffer from a acute shortage of water during the dry season; we made several attempts to dig a well of our own, but in vain.' Here lack of knowledge is the bar. One chief said: 'We shall supply free communal labour to any interested body that may help to dig a well for us, because all the wells we try to dig ourselves fall on rocks.'

These two were exceptions. By and large, the villagers' own word 'helpless' sums up their own feelings about self-help. They feel helpless and view themselves as helpless. This kind of depression and self-pity is as effective a bar to any self-sustaining and co-ordinated activity as any other more formal barrier.

### (C) Transport and Communications

Along the Volta, adequate roads rather than water supply took first priority in people's demands. Poverty was often directly blamed onto lack of roads. The obvious question which teams tended to ask was: 'If you want roads, why don't you go and build them?' The reasons given were sometimes complex, occasionally slightly ludicrous, but on the whole of general importance to anyone trying to get people to work for themselves and their Local Councils.

One of the major barriers to self-help was the difficulty in any village of getting things done which are in some way out of the customary pattern in technique or organisation. In one place, people pointed out to the interrogators that the school needed a metal roof. The interrogators agreed and asked why the Government Agent had not been consulted. The villagers announced that he had been, a year ago. The interrogators were on the point of assuming that nothing had been done in response to the request, but discovered that the roofing had actually been sent and had been stacked up for almost two months. When asked why they did not get on with the job, the villagers replied with some indignation that the Government Agent had failed to supply the nails and timber necessary for roofing. This incident is not quoted in a spirit of reproof but simply as an example of an attitude of mind.

In some cases, the same attitude applies towards roads and general communication facilities. Again there are excuses, in the form of lack of skill and lack of knowledge. In many cases, however, it would appear that these excuses are all too valid. In one village the inhabitants started to build a road. The flood washed away their efforts at key points. They are waiting for the Government to put in a bridge, although when asked where in the Government the request had been made, no one could say. It clearly was not made to the Government Agent. Rather it seemed that one day Government would appear out of the clouds and build a bridge. The need for help in removing large

obstructing trees, and in building culverts, was also felt. The Tongu public need to be informed about Government, about places to go to for help and advice, and about the role of Local and District Councils in such affairs.

As information facilities are not good in Tongu (there is no wireless rediffusion available) a great responsibility rests on the shoulders of Councillors. They should themselves be well-informed about sources of help, and they should act as spurs to any half-formulated urge to self-help by referring problems of road-building to such organs as the District Development Committee. In fact, it was found that certain Councillors were already taking this responsibility seriously; it was significant that where Councillors themselves had thrashed out the road problem with their Ward and forwarded its request for help to the Development Committee, not only was technical assistance forthcoming but the villagers themselves seemed spurred on to effort and received new heart.

On further probing, some of the villages revealed local jealousies which prevented co-operation in building longer roads (for instance, links from the south Volta-side to the main Accra road). Each of the villages alleged that the next village was not putting in its fair share of hard work. Where these grievances appear genuine, old feuds between villages or their chiefs survive. These are often aggravated by latter-day boundary and land disputes, as in the Mafi Division, where occasionally a hostile village intervenes between a more enterprising township and its possible link with the main road. The issue of roads tends to perpetuate and even enhance land disputes, because there is a clear apprehension that wealth and commerce follow the opening of a road, and a fear that new wealth and power disparities might further weaken certain traditional elements.

But perhaps the major cause of apathy in self-help is an economic one. During a good portion of the year, there is a genuine lack of manpower. Many of the fishing villages, as already mentioned, send their able-bodied men away for six or eight months of every year, and when they return they have to tend their farms. During the fishing season they are not at home to supply communal labour, and during the farming period they are hard at work putting by some of their subsistence. In the hinterland villages too, men are often absent in the cocoa districts or the mines. Thus there is a vicious circle: to keep the men at home, greater prosperity is needed; to get greater prosperity, roads are needed; to build roads, men's labour is needed. It is not easy to escape the villagers' own conclusion that Government must step in, or the Local Council, to break the vicious circle somewhere - probably by employing more paid road-labourers.

Apart from roads, other forms of improved communications are desired. The UAC Launch is the subject of some rather bitter feeling. While it is recognised as an invaluable link with other parts of the country, it is not regarded as adequate. Overcrowding was seriously criticised; as one headman said:

'We have been experiencing great difficulties with the one UAC launch plying the Volta. It sometimes gets excessively loaded that passengers are not picked up from our station here. We shall be very grateful if this should be taken into consideration.'

(D) Attitudes towards social and economic problems

Schools merit attention as symbols of advancement and progress, as well as means for training and educating children. Most of the larger villages which have not yet got schools would like to have them, if only for the former reason. In one village where the plea for schools was made in very strong terms, a talk with the headmaster of a neighbouring Middle School showed that in practice people were often averse to sending their children, particularly their girls, for schooling. For many in the area where school buildings and teachers were available, schools appeared a nuisance since they took children away from farming and fishing, trading and domestic duties. A large family might feel that it could spare one or two children, but only because it seemed socially undesirable to have no representative of the family in school.

In villages just outside the more centrally-located communities with schools, the cry of 'we want schools' seemed universal. In one village, a handful of children walked the three and half miles twice a day to and from school in the neighbouring village. The argument was that more children would be forthcoming if the school were on the spot.

Medical and health facilities are also desired, but seem far more out of reach. People felt desperate at the distance to be travelled on foot and by canoe or lorry in order to get the dispensaries or hospitals. In one village, a Survey team was told that so many people died before the end of the journey that they had stopped going at all; seriously ill people had a better chance of recovery by remaining in the village and resting. Moreover, it was commented that often treatment prescribed to out-patients at Keta or Akuse was outside the income or possible living conditions of the patients.

This intense concern with water, roads, schools and health seems to create a picture of economic 'backwardness', the term the people apply to themselves. They are upset by circumstances felt to be beyond their own control. They are only too well aware of what they need and they expect to get help from outside. They do not have any very clear picture of how to implement partial self-help by communal efforts of their own; further they see only too definitely the difficulties involved in any large-scale projects like road-building, demanding sustained effort over long periods of time. Moreover they have only the vaguest conception of the relation of tax-payment to improved living standards, and although local rates are lower in Tongu than in most parts of Trans-Volta/Togoland, they are felt as a burden owing to the relative poverty of Tongu people.

RECOMMENDATIONS arising out of Chapter V

The Government, like God, prefers naturally to help those people who help themselves. But the prevailing climate of opinion in Tongu is not very propitious toward self-help. It is felt that in order to tackle the low morale of the people, the following measures are necessary:

(1) An effort must be made, both by Local Councils and District Council, to spread knowledge of where advice and help may be found. Not only should Councillors be indefatigable in explanation to their constituents, but the Councils

as a body should make an effort to contact all literates in the area, both by written material and by meetings. With a little imagination and ingenuity some new ways can be devised for pressing home to the public that there are certain organs of local and central Government which can offer practical help and advice.

To take a measure of which the cost would be trifling: a member of the District Council might devote a day to travelling up-river on the public launch with a megaphone, and shouting a few simple hints on, say, where to apply for tools for village improvement; villagers always congregate on the bank when the launch is due, and one would be sure of some sort of audience. Thinking up simple ways like this of spreading information should not be beneath the dignity, or beyond the imagination, of the Councils.

(2) Help must be given by Mass Education teams. Their immense value is in eliminating the spirit of apathetic helplessness and, more positively, in initiating a feeling of participation in the new ways of life spreading in the Gold Coast. At present it was found that fishermen especially have no sense of sharing in, or belonging to, the Gold Coast itself. Rather, the Gold Coast is to them a somewhat hostile environment, contributing to their plight, but doing little for them. As a result, the past becomes a kind of golden age. Where the old solutions no longer work, imagination and skill are difficult to find, because of the enormity of the problems to be faced. Such a spirit is not in the best interests of a young, striving and forward-looking nation. Mass Education, by providing the outside stimulus, the new techniques and new ideas, can help to create a sense of sharing in something exciting - the improvement of one's own community in collaboration with the powers that be.

(3) Tongu needs further direct development by the central Government. Where the problems are too large to be faced locally, the Government will have to step in, as it is in fact doing already. Any development project should be given the widest publicity, so that the people may be thoroughly roused out of their apathy.

Government has two allies in development in the area, the local Councillors and the general public. The reception given to the Survey teams was an indication of this. It was out of all proportion to the promise held out by the Survey, but presents were given and speeches made which showed that the teams were regarded as vehicles through which the world would come to know about Tongu, and as tangible symbols of better things to come. If this mood can be made use of, the Government's task in Tongu will be easier. There seems great wisdom in the Regional Administration's plan of a concerted development programme which will have a real impact on the area, and thus improve not only material conditions, but mental horizons as well.

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APPENDIX A (see Chapter I)List of Villages from which first-hand information was obtained

<u>GROUP I</u>	<u>Name of Village</u>	<u>Chief or Headman interviewed (or other informant)</u>
Team based at Volo	Gezelikofe	Gezele Kudor
	Krebetikofe	Adzorme Agbemafle
	Nutekpor	
	Volo	Mankrado Kofi Avorvator
<hr/>		
<u>GROUP II</u>		
Team based at Mafi Kumasi	Asierkpe	Kodzo Gazo
	Dzogadze	Asafohene Anoba of Aziewa
	Gborkofe	Dadevi Atitsusi
	Havenuo	Hode Gbema
	Kporduwla	Korlogo
	Mafi Kumasi	Mankralo Asafo III and Acting Mankralo Fiator
	Mafi Kutime	Tutordo Vidza
	Mebiawe	Bedzra Amoa
	Mediage	Akorli Agbanu
	Nukportoe	Kwao Adade
	Sasekpe	Boafo II
	Tsiati	Kofi Logo
	Tsirinyikofe	Adzer Tsirinyi
<hr/>		
<u>GROUP III</u>		
Team based at Mepe	Adumasi	
	Dadome	
	Degorme Fiakofe	Akorli Akorlor (for Hodoamede Hlovor)
	Dove	Tronua Gbenuor
	Fakpoe	Kodzo Agbenyega
	Kodzovikofe	
	Lengu	
	Mepe	
Zidakofe	Kobla Gator	
<hr/>		
<u>GROUP IV</u>		
Team based at Battor	Aklamador	Kwa Begu Kotoade
	Aviloko	Hevi Mankralo
	Battor	Councillor Gota & Postal Agent
	Kekpo	Kumedzro (represented by Viba)
	Nyatikpo	
<hr/>		
<u>GROUP V</u>		
Team based at Aveyime	Agbetsikpo	
	Kpordzikofe	
	Luta Asafoatsekofe	
	Lutakorlekofe	
	Tsurukpo Ada	
	Tsurukpo Osudoku	
Tsurukpo Tefle		
Vome Adidokpui		

<u>GROUP VI</u>	<u>Name of Village</u>	<u>Chief or Headman interviewed (or other informant)</u>
Team based at Addidome	Addidome	Fia Asem III
	Alorsekofe	Vedzi Agbevenu
	Ameduikor	Asafohene Dzra II
	Mafi Anfoe	Zonyina Aboetaka II
	Atsiemfo	Sebewu Hozame
	Avakpedome	Avakpenuor
	Awusavikofe	
	Avedo	Boatin
	Dadogbui	Agbenyega Pani
	Mafi Dugame	Gomelesio Adzormehe
	Mafi Dugame Aziewa	Kugbadzor Adzirackor
	Dzitsekofe	Kodzo Dengu (for Dzitse)
	Forkpo Tefle	Christian Forvlo
	Gbalave	Fiaside Hode
	Kpedzegblo	Awuku Siem Azietor
	Klukpo	
	Kudadzowu	Agbadzi
	Larvorkofe	Kwami Ahiabli
	(for Avedo Bakpa)	(for Togbui Ziga)
	Meyikpor	Tage Adzani
Tsawala	Adebuhlo Kuvordo	
Tove		
Mafi Zongo	Asafohene Kwasi Wusu III	

List of villages not visited, but for which reliable second-hand information was obtained

Adakpatosukofe	Fia Asem III
Adudonu	G.A. Adogla
Atsiefeme	Fia Asem III
Avetakpo	G.A. Adogla
Fierkpe	Fia Asem III
Hevitoe	Fia Asem III
Horkpo	G.A. Adogla
Srekpe	Fia Asem III
Tator	G.A. Adogla

APPENDIX B (see Chapter II)Population figures for villages surveyed(1) Villages surveyed compound by compound

<u>Name</u>	<u>1948 Census Figures</u>		<u>Survey Figures</u>	
	<u>Compounds</u>	<u>Population</u>	<u>Compounds</u>	<u>Population</u>
Mafi Anfoe ...			15	216
Battor ...	58	520	35	279
Degorme Fiakofe	19	66	25	232
Krebetikofe ...			12	78
Lutakorlekofe ...			11	74
Mafi Kumasi ...	57	249	53	313

(2) Villages covered with general questionnaires

<u>Name</u>	<u>1948 Census Figures</u>	
	<u>Compounds</u>	<u>Population</u>
Gezelikofe		
Nutekpor		
Volo ...	61	763
Asierkpe ...	67	373
Dzogadze		
Gborokofe ...	24	153
Harvenuo ...	50	180
Kporduwla ...	22	170
Mafi Kutime ...	53	354
Mebiawe ...	26	132
Mediage ...	34	146
Nukportoe		
Sasekpe ...	18	780
Tsiati ...	36	153
Tsirinyikofe ...	38	201
Adumasi ...	3	46
Dadome		
Dove ...	74	418
Fakpoe ...	16	222
Kodzovikofe ...	4	63
Lengu ...	3	51
Mepe ...	319	1,258
Zidakofe		
Aklamador		
Aviloko		
Kekpo ...	22	167
Nyatikpo ...	29	150
Agbetsikpo		
Kpordzikofe ...	7	47
Luta Asafoatsekofe		
Tsurukpo (3 sections)		
Vome Adidokpui		

<u>Name</u>	<u>1948 Census figures</u>	
	<u>Compounds</u>	<u>Population</u>
Addome ...	130	874
Alorsekofe ...		
Ameduikor		
Atsiemfo ...	89	496
Avakpedome		
Awusavikofe		
Avedo ...	72	429
Avedo Bakpa	40	214
Dadogbui		
Mafi Dugame	127	605
Dzitsekofe		
Forkpo Tefle	38	144
Gbalave ...	11	99
Klukpo ...	56	307
Ɖpedzegblo ...	49	401
Kudadzowu		
Fiave Kportame	17	124
Meyikpor ...	4	25
Tsawala		
Tove		
Mafi Zongo ...	19	105
Adakpatosukofe	27	177
Adudomu		
Atsiefeme ...	41	190
Avetakpo ...	9	30
Fierkpe ...	62	110
Hevitoe		
Horkpo		
Srekpe		
Tator ...	36	159

APPENDIX C (see Chapter II)Analysis of occupations in certain selected villages

1. Krebetikofe Simple riverside farming/fishing community in 'oyster'-fishing section of Volta.

<u>Males</u>		<u>Females</u>	
Farmers <sup>+</sup> ...	10	Oyster-pickers ...	9
Fishermen ...	2	Farmers ...	7
Farmer/fisher	1	Farmer/oyster-pickers	5
Traders ...	3	Hawker/oyster-pickers	2
Teacher ...	1	Traders ...	4
Schoolboys ...	2	Girls not in school	8
Other boys ...	10	Infants under five	5
Infants under five	9		
	<u>38</u>		<u>40</u>

<sup>+</sup>Note: Includes one ex-teacher

2. Battor Large riverside farming/fishing community, with market and Local Council headquarters.

<u>Males</u>		<u>Females</u>	
Farmer/fishers	30	Farmer/fishers ...	36
Farmers ...	19	Fishers (oyster) ...	26
Fishers ...	9	Traders ...	15
Clerks ...	10	Trader/farmers ...	12
Teachers ...	5	Farmers ...	11
Labourers ...	5	Herbalist/traders...	2
Traders ...	4	Teachers ...	2
Carpenter/farmer/fisher	4	Servants ...	2
Tailor ...	4	Schoolgirls ...	8
Policemen ...	4	Other girls and infants ...	20
Mason/herbalists	2		
Shoemaker ...	1		
Canoe-builder	1		
Mason ...	1		
Farmer/trader	1		
Carpenter ...	1		
Herbalist/farmer	1		
Schoolboys ...	44		
Other boys and infants	9		
	<u>155</u>		<u>134</u>

3. Degorme Fiakofe Lagoonside community with constant water-supply.

<u>Males</u>		<u>Females</u>	
Fishers ...	16	Farmer/oyster-pickers	48
Fisher/farmers	13	Oyster-pickers	20
Fisher/hunters	3	Farmers ...	7
Fisher/farmer/hunter	1	Traders ...	5
Fisher/fitter	1	Trader/farmer ...	1
Farmers ...	1	Housemaids ...	4
Clerks ...	4	Schoolgirls ...	2
Traders ...	3	Other girls ...	22
Tailors ...	2	Infants under five	18
Smiths ...	2		<hr/> 127
Fitter ...	2		
Driver ...	1		
Teacher ...	1		
Hunter ...	1		
Cowherd ...	1		
Servant ...	1		
Arbitration ...	1		
Unemployed ...	1		
Schoolboys ...	16		
Other boys ...	24		
Infants under five	11		
	<hr/> 107		

4. Lutakorlekofe Lagoonside community with water difficulties in dry season.

<u>Males</u>		<u>Females</u>	
Farmers ...	22	Farmers ...	19
Farmer/masons	5	Traders ...	2
Cowherds ...	3	Trader/farmers	2
Boys not in school	7	Bakers ...	2
Infants under five	2	Milkmaid ...	1
	<hr/> 39	Servants ...	6
		Girls not in school	3
			<hr/> 35

5. Mafi Anfoe Farming village in hinterland north of Volta

<u>Males</u>		<u>Females</u>	
Farmer/weavers	29	Farmers ...	49
Farmers ...	19	Weaver/farmers	5
Weavers ...	2	Traders ...	2
Carpenters ...	2	Housewife ...	1
Blacksmith ...	1	Schoolgirls ...	2
Schoolboys ...	17	Other girls ...	7
Other bo ...	7		<hr/> 73
	<hr/> 77		

Total infants under five (sex undifferentiated)

66

6. Mafi Kumasi Market town in crop-growing area

<u>Males</u>		<u>Females</u>	
Farmer/weavers ...	30	Farmers ...	49
Farmers ...	27	Farmer/traders ...	42
Farmer/traders ...	7	Traders ...	13
Farmer/weaver/traders	2	Members of cult living	
Farmer/weaver/priest	1	with priestess and	
Carpenters ...	5	farming and trading on	
Tailors ...	3	her behalf ...	8
Teachers ...	2	Priestess ...	1
Trader ...	1	Porter ...	1
Tailor/trader/farmer	1	Housemaid ...	1
Bricklayer ...	1	Schoolgirls ...	10
Labourer ...	1	Other girls and infants	40
Cornmiller ...	1		
Servants ...	6		
Schoolboys ...	29		
Other boys and infants	30		
	<u>147</u>		<u>166</u>

Note It will be observed that data for children and infants was not collected on a uniform basis. This was because the teams were concentrating on adult occupations.

APPENDIX D (see Chapter III)

TABLE SHOWING TYPES OF WATER SUPPLY, DISTANCE FROM VILLAGE AND INCIDENCE OF DISEASE IN VILLAGES SURVEYED

(1) Villages with Single All-Season Supply

<u>Village</u>	<u>Name of Water Source</u>	<u>Type of Source</u>	<u>Distance from Village</u>	<u>Comments</u>	<u>Diseases Reported<sup>+</sup></u>			
					<u>G. Worm</u>	<u>Bil.</u>	<u>Dry-Season Ailments</u>	<u>Eye Troubles</u>
Krebetikofe	Volta	River	100 paces	Filled with mud and decayed matter in floods	⌘	⌘	⌘	⌘
Volo	Volta	River	200 paces	Filled with mud and decayed matter in floods	⌘	⌘	⌘	⌘
Dove	Mlagoe	Creek	130 paces	Stagnant, but runs into Volta in floods	⌘	Yes		
Degorme Fiakofe	De	Creek	50 paces	Customary to take clothes to Volta for washing, one mile distant. De nearly dried up in 1951.	⌘	Yes		
Lengu	Lengu	Creek	250 paces	Villagers turn to Aklamador Lagoon in August; it is used also for fishing	⌘	Yes		

<sup>+</sup>The symbol ⌘ indicates that the disease was reported to be absent.  
Blank spaces indicate that no information was obtained.

(1) Villages with Single All-Season Supply (continued)

<u>Village</u>	<u>Name of Water Source</u>	<u>Type of Source</u>	<u>Distance from Village</u>	<u>Comments</u>	<u>Diseases Reported</u>			
					<u>G. Worm</u>	<u>Bil.</u>	<u>Dry-Season Ailments</u>	<u>Eye Troubles</u>
Mepe	Volta	River		Recourse to pools in August		*		
Zidakofe	De	Creek	270 paces		Yes		Stomach troubles	
Aklamador	Aklamador	Lagoon	100 paces					
Battor	Volta	River	630 paces		*	Yes	Dysentery	
Kekpo	Volta	River	120 paces		*			Yes
Agbetsikpo	Bleta	Creek	550 paces		Yes	Yes	Stomach troubles	
Kporzikofe	Volta	River	Close	Malaria reported				
Luta								
Asafotsekofe	Luta	Creek	490 paces		Yes			
Vome								
Adidokpui	Volta	River	50 paces				Diarrhoea, worms, cow-boil, coughs	
Adidome	Volta	River	$\frac{1}{2}$ mile	When Volta is very salty people turn to Kome, pool on island in Volta	Rare		Laxative effect of salt water	
Ameduikor	Amedui	Creek	300 paces			Yes		Yes
	Ke	Creek	1000 paces	Amedui is an arm of Ke				
Awusavikofe	Dzanyigo	Creek	600 paces	Dzanyigo is filled by R. Tordor and Volta in floods	Yes	Yes		Yes

(1) Villages with Single All-Season Supply (continued)

<u>Village</u>	<u>Name of Water Source</u>	<u>Type of Source</u>	<u>Distance from Village</u>	<u>Comments</u>	<u>Diseases Reported</u>			
					<u>G. Worm</u>	<u>Bil.</u>	<u>Dry-Season Ailments</u>	<u>Eye Troubles</u>
Mafi Dugame	Volta	River	50 paces	Resort to Toryiboe Creek when Volta is salty	Yes	Yes		Yes
Dzitsekofe	Ke	Creek	700 paces		Yes			Yes
Forkpo Tefle	Amedui	Creek	410 paces		Yes			
Fieve Kportame	Kete	Creek	2½ miles					

(2) Villages with no Permanent Source of Supply

(a) Villages relying in Wet Season on Streams

<u>Village</u>	<u>Wet Season Supply</u>		<u>Distance</u>	<u>Comments</u>	<u>Dry Season Supply</u>		<u>Distance</u>	<u>Diseases Reported</u>		
	<u>Name</u>	<u>Type</u>			<u>Name</u>	<u>Type</u>		<u>G. Worm</u>	<u>Bil.</u>	<u>Dry-Season Ailments</u>
Gezelikofe	Korlor	Stream	1 mile	Coloured and stagnant in dry season	Volta	River	3½ miles	+		
Nutekpor	Korlor	Stream	1 mile	Coloured and stagnant in dry season	Volta	River	3 miles	+		

(1) Villages with Single All-Season Supply (continued)(b) Villages relying in Wet Season on Water holes and Rock pools

<u>Village</u>	<u>Wet Season Supply</u>		<u>Distance</u>	<u>Comments</u>	<u>Dry Season Supply</u>		<u>Distance</u>	<u>Diseases Reported</u>			
	<u>Name</u>	<u>Type</u>			<u>Name</u>	<u>Type</u>		<u>G. Worm</u>	<u>Bil.</u>	<u>Dry-Season Ailments</u>	<u>Eye Troubles</u>
Asierkpe	Vuga Kusru	WH WH	440 paces		Adakpa	Stream		Yes	*	Dysentery	Yes
Dzogadze	Adavu Gbadavu Kasavu	WH WH WH	1 mile 1 mile 1 mile		Todzi	Stream	1½ days' journey				
Gborkofe	Kudita	WH	Close		Todzi	Stream	15 miles	Yes	*		
Mafi Kumasi	Kudita Yorkpe	WH Rockpool	210 paces 1500 paces		Adakpa Todzi	Stream Stream	8 miles 15 miles	Yes		Coughs	
Mafi Kutime	Vudogobo Vuga	WH WH	Close Close		Adakpa	Stream		Yes	Yes		
Havenuo	Various	WH	Close		Kudita	Rockpool					
Kporduwla	Various	WH	Close					Yes			
Mediage	Amakpe Gblete etc.	Rockpool WH	350 paces 240 paces		2 water tanks in village			Yes			
Nukportoe	Atiteglo Vukpe	WH Rockpool		Drinking water Non-drinking water	Todzi	Stream	1½ days' journey				
Sasekpe	Fiegavu Vuga Sasekpe	WH WH Rockpool	110 paces 190 paces 320 paces		Todzi	Stream	8 miles	Yes			
Tsiati	Dzovu	WH	620 paces		Vuga Yorkpe Adakpa	WH Rockpool Stream		Yes		Dysentery	

(2) Villages with no Permanent Source of Supply (continued)

Village	Wet Season Supply		Distance	Comments	Dry Season Supply		Distance	Diseases Reported				
	Name	Type			Name	Type		G. Worm	Bil.	Dry-Season Ailments	Eye Troubles	
Mebiawe	Kudita etc.	WH	Close		Adakpa	Stream		Yes				
Tsirinyi-kofe	Kudita etc.	WH	Close		Adakpa	Stream		Yes				
Avetakpo	Various	WH	100-500 paces		Agorme	Pool	7 miles	Yes				
Horkpo	Various	WH	100-500 paces		Adudon (Women take clothes to Adidome to wash 12 miles)							
Alorsekofe	Agorvu	WH	220 paces		Anfoe	WH	½ mile	Yes	Yes			
	Gbetorvu	WH	1 mile		Lotor	Stream	4 miles					
	Dedeke	WH	830 paces		Dzanyigo	Creek	5 miles					
Mafi Anfoe	Ahorta	WH	Close		Lotor	Stream	4 miles	Yes	Yes			
	Devu	WH	125 paces		Dzanyigo	Creek	5 miles					
	Anfoe	WH	530 paces	About 18ft. deep	Volta	River	6 miles					
Atsiefeme	Feda	Small pool	Close		Aklakpa	River	4 miles					
Atsiemfo	Amativu	WH	500 paces		Volta	River	3 miles					
	Semanutavu	WH	1 mile									
Avakpedome	Husorvu	WH	120 paces		Volta	River	1½ miles	Yes	Yes	Skin eruptions and worms		
	Avakpetor	Creek	800 paces									
Avedo	Wedede	WH	600 paces	Dug by villagers and only used by those who helped. Others always go to Dzanyigo	Dzanyigo	Creek	2 miles	Yes	Yes			Yes

(2) Villages with no Permanent Source of Supply (continued)

Village	Wet Season Supply		Distance	Comments	Dry Season Supply		Distance	Diseases Reported			
	Name	Type			Name	Type		G.Worm	Bil.	Dry-Season Ailments	Eye Troubles
Avedo Bakpa	Seva	WH	1 mile		Dzanyigo	Creek	2½ miles	Yes	Yes	Coughs	Yes
Dadogbui	Kpevudo	Rockpool	910 paces		Anfoe Volta	WH River	1 mile 6 miles	Yes			
Gbalave	Gbordzovu	WH	½ mile		Aforvu at Adakpa Volta	WH in Creek-bed River	6 miles	Yes		Stomach troubles	
	Azadavu	WH	1½ miles								
Hevitoe	Aflave	WH	Close		Aklakpa	River	1½ miles				
Klukpo	Various	WH			Volta	River	6 miles	Yes			
Kpedzegblo	Various	WH	200-500 paces		Adakpa	River	3 miles	Yes			
	Kpedzegblo	Rockpool	770 paces	Kpedzegblo seldom fails							
Meyikpor	Husorvu Avakpetor	WH Creek			Volta	River	¾ miles				
Kudadzovu	Various	WH			Volta	River	10 miles				
Sakpitikofe	Sakpiti- kofevu	WH	200 paces	Village has died out							
Srekpe	Various	WH			Todzi	Stream	6 miles				
Tswala	Amegavu	WH	730 paces		Volta	River	6 miles	Yes	Yes		
	Awlevu	WH	450 paces								
Tove	Korgboe	WH	500 paces		Dzanyigo	Creek	1½ miles		Yes		Yes
	Tordor	Stream	530 paces								
Mafi Zongo & 7 neighbouring villages	Dekpor Gborglavu	WH WH	420 paces 600 paces		During drought many inhabitants return to other bank of Volta. Remainder scrape bottom of WHs.				Yes	Yes	Yes

Villages with no Permanent Source of Supply (continued)

(c) Villages relying in Wet Season on Creeks

Village	Wet Season Supply		Distance	Comments	Dry Season Supply		Distance	G. Worm	Diseases Reported		
	Name	Type			Name	Type			Bil.	Dry-Season Ailments	Eye-Troubles
Asi	Afadra	Creek	530 paces	Rarely fails	Volta	River		Rare			
ne	Aklakpa	River	Close	Rarely fails	Volta	River		Yes			
ne	Tsimor Tovu	Creek	1 mile	Filled from Aklakpa during floods	Afadra Volta	Creek River	1½ miles	Yes			
vikofe	Tsimor Tovu	Creek	2 miles	Filled from Aklakpa during floods	Tsimor	Creek	2½ miles	Yes			
ko	Avilo Avilokloe	Creek Creek	60 paces 80 paces	During wet season many of inhabitants return to Battor; both of these last dried up in drought, 1949.	Aklamador						
							Creek	½ mile	*	Dysentery	Yes
kpo	Vlekoe	Creek	Close	Filled by Volta in rains. Last dried up 1949. Used only for cattle in dry season. Never used for clothes-washing		River	¾ mile				

Villages with no Permanent Source of Supply (continued)

(c) Villages relying in Wet Season on Creeks

<u>Village</u>	<u>Wet Season Supply</u>		<u>Distance</u>	<u>Comments</u>	<u>Dry Season Supply</u>		<u>Distance</u>	<u>G. Worm</u>	<u>Diseases Reported</u>		
	<u>Name</u>	<u>Type</u>			<u>Name</u>	<u>Supply</u>			<u>Bil.</u>	<u>Dry-Season</u>	<u>Eye-</u>
									<u>Ailments</u>	<u>Troubles</u>	
Kakorle- ofe	Saletsonya Kapa	Creek Creek	450 paces 500 paces	Malaria reported Kapa used mainly for cattle	Mioletsonya Creek	Rockpool	½ mile	Yes	Yes	Yes	
Arukpo (1 stations)	Ta	Creek	½ mile	Used only for cattle in dry season	Agbate	Rockpool	¾ mile	Yes	Yes	Piles	

APPENDIX E (see Chapter III)Summary tables showing incidence of disease in different types of water supply

Number of villages for which adequate information was noted:  
66 with living inhabitants.

(1) Villages with single all-season supply

Type of supply	...	...	...	River Volta	Lagoon
Total villages investigated				9 <sup>+</sup>	13
Of which: Guineaeworm reported in				2 <sup>+</sup>	4
Bilharzia reported in				2 <sup>±</sup>	9
Eye troubles reported in				3	1

<sup>+</sup>rare in both cases

<sup>±</sup>lagoons also used in both cases

(2) Villages relying on water-holes in wet season

Type of supply	...	...	...	Water-holes only	Water-holes and rock-pools
Total villages investigated				24	8
Of which: Guineaeworm reported in				16	7
Dry Season ailments reported in				4	1 <sup>±</sup>
Bilharzia reported in				7 <sup>+</sup>	1 <sup>±</sup>

<sup>+</sup>of these, four only rarely

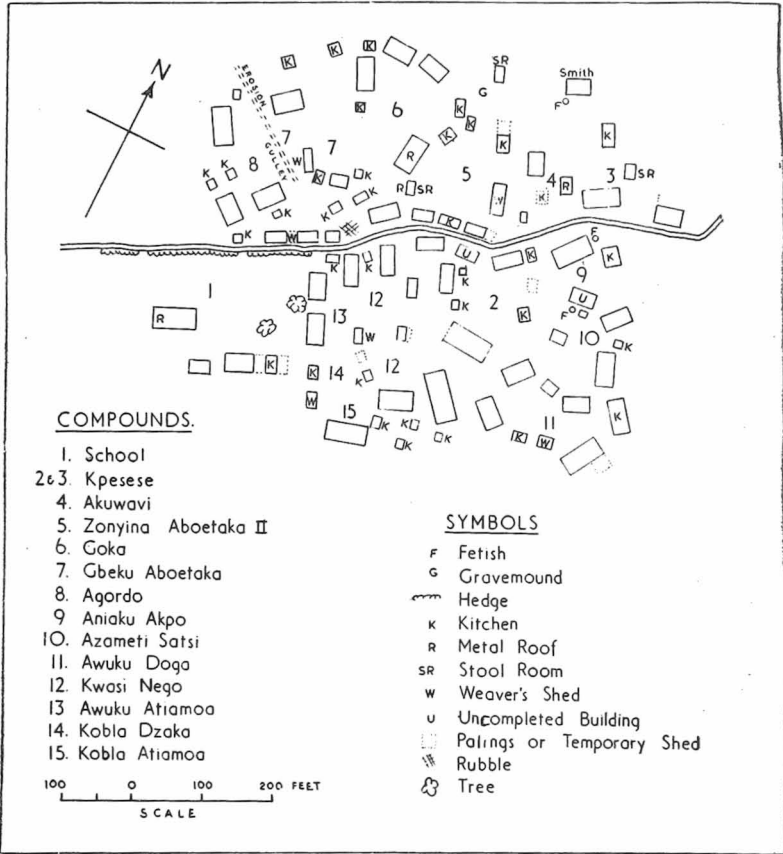
<sup>±</sup>this village uses a lagoon as well

(3) Villages not resorting to water-holes in wet season, but with no permanent supply

Type of supply	...	...	...	Lagoon or creek	Streams
Total villages investigated				8	4
Of which: Guineaeworm reported in				5	2
Bilharzia reported in				2	-
Dry season ailments reported in				2	-

APPENDIX F

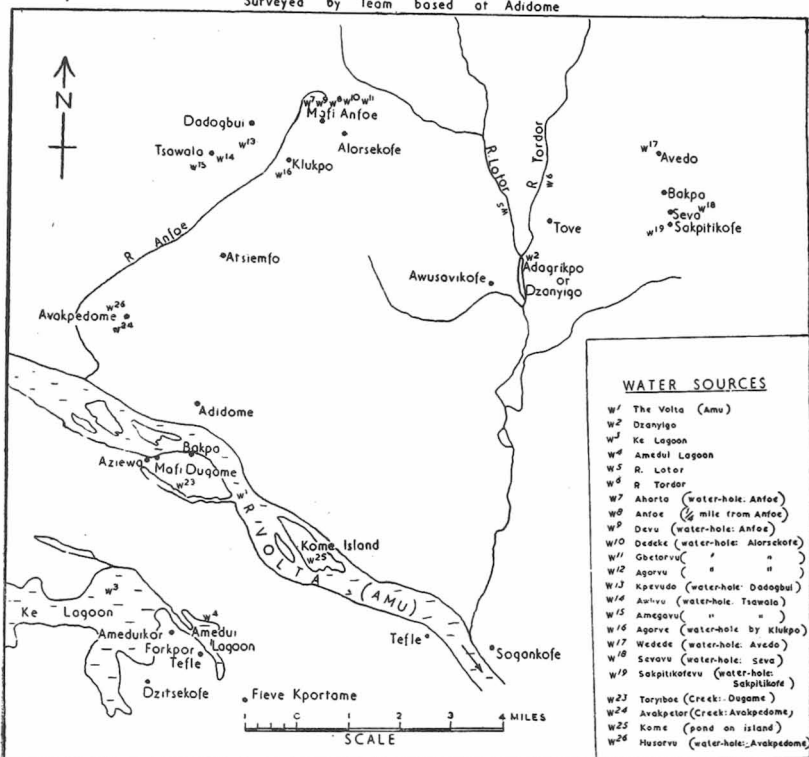
SKETCH PLAN OF ANFOE-MAFI



# APPENDIX G

## WATER SOURCES

Surveyed by Team based at Adidome



### WATER SOURCES

- W1 The Volta (Amu)
- W2 Dzanyigo
- W3 Ke Lagoon
- W4 Amedu Lagoon
- W5 R. Lator
- W6 R. Tordor
- W7 Aharta (water-hole: Anfoe)
- W8 Anfoe (1/2 mile from Anfoe)
- W9 Devu (water-hole: Anfoe)
- W10 Deede (water-hole: Alorsekofe)
- W11 Gbatorvu ( " " )
- W12 Agorvu ( " " )
- W13 Kpavda (water-hole: Dadaqbui)
- W14 Anvu (water-hole: Tsawala)
- W15 Amegavvu ( " " )
- W16 Agorvu (water-hole by Klukpo)
- W17 Wedede (water-hole: Avedo)
- W18 Sevav (water-hole: Seva)
- W19 Sakpitkofevu (water-hole: Sakpitkofe)
- W23 Tanyiboe (Creek: Duqome)
- W24 Avakpetor (Creek: Avakpedome)
- W25 Kome (pond on island)
- W26 Huzorvu (water-hole: Avakpedome)



University College of the Gold Coast  
Department of Extra-Mural Studies

**REPORT**

**OF THE**

**TONGU RURAL SURVEY**

held in the areas of the Upper and Central Tongu  
Local Councils, April, 1953



together with a Foreword by the Regional Officer,  
Trans-Volta/Togoland