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Distribution of Market Centers, Market
Periodicities, and Marketing in
Northwestern Nigeria

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DISTRIBUTION OF MARKET CENTERS, MARKET PERIODICITIES, AND MARKETING IN
NORTHWESTERN NIGERIA Isaac Ayinde Adalemo, Lecturer in Geography,
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It is gratifying to note the recognition paid to the pioneering role of geographers in the study of West African markets (see Hill 1966, p. 295, especially fn 3). Among geographers who have worked in this area are B. W. Hodder and U. I Ukwu, the former who did most of his work in Yorubaland and the latter, mainly in Iboland. Other studies have documented marketing activity in some parts of northern Nigeria (Hodder and Ukwu 1969; M. Smith 1962; Bohannan 1957, p. 613). In this paper, I wish to add to our knowledge of markets and marketing in northern Nigeria. Hopefully, a number of such studies will result in a complete map of periodic markets in Nigeria.

In addition to attempting to map the distribution of market centers, I will consider here a number of issues raised in earlier studies and their relevance or lack of it to the study area. Hodder (1965) asserts that "the distribution of periodic markets shows little correspondence either with the distribution of population, size or hierarchy of rural or urban settlements" (p. 51). Evidence will be adduced from recent studies to show that this conclusion is not correct.

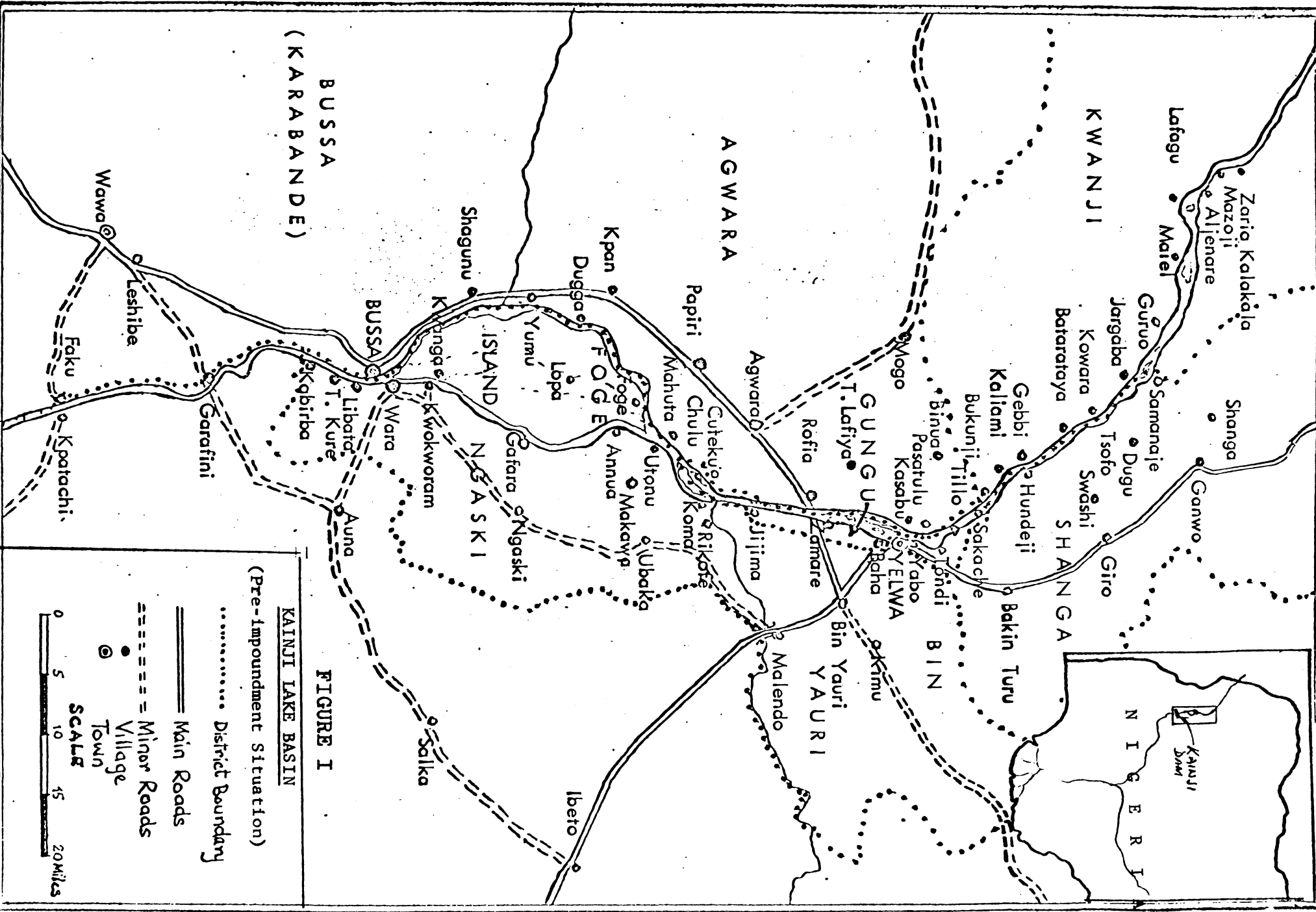
This paper will also attempt to relate the pre-impoundment locations of market centers to the new locations and suggest the probable effects of relocation on market functions and market areas. Finally, to illustrate the structure and development of the marketing system in the study area, I will present a brief account of the marketing of onions.

THE STUDY AREA

The study area coincides approximately to the area affected by the Kainji dam and the reservoir behind it (see Figures 1 and 4). The dam site is located near the villages of Faku and Kpatachi some fifty miles north of Jebba on the river Niger. The reservoir extends northwards approximately eighty miles to the vicinity of Sakace, a village on one of the numerous islands which dot the river Niger.¹ Sakace is about nine river miles north of Yelwa, the effective head of navigation and an important market town within the study area.² The northern boundary of the study area, however,

¹ For the pre-impoundment settlement locations mentioned in the text, please refer to Figure 1, the map of pre-impoundment situation in the Kainji lake basin. Post-impoundment locations are shown on Figure 4.

² Jebba was the head of navigation on the Niger prior to the construction of the Kainji dam. The rapids above Jebba represent one of the major obstacles to navigation on the lower and middle Niger. Some of these rapids have been flooded by the reservoir while navigation canals have been constructed to by-pass those located below the dam.



BUSSA
(KARABANDE)

AGWARA

KWANJI

SHANGA

GUNGU

BIN YAURI

FIGURE I

KAINJI LAKE BASIN

(Pre-impoundment Situation)

..... District Boundary

==== Main Roads

===== Minor Roads

● Village

⊙ Town

SCALE

0 5 10 15 20 Miles

NIGERIA

Kainji Basin

extends beyond the northern edge of the reservoir to include important market centers such as Gebbi, Dugu Tsofo, Giro, and Ganwo.

The whole area, from the dam site to the border with Niger Republic in the west, is characterized by concentration of settlements on both banks of the river Niger and on the islands. Most of these settlements are located within a few yards of the river valley proper; and since the reservoir at its narrowest point will extend many more yards beyond the present river valley, all of the villages within this range fall within the area impounded by the reservoir. About 150 villages in ten districts are affected and have been relocated. Most of these are located within three emirates--Kontagora, Borgu, and Yauri. More than two-thirds of the approximately 50,000 people who have been resettled live in Yauri emirate, which has the smallest area of the three affected emirates. Gungu district, extending from Koma in the south to Sakace in the north, occupies that narrow stretch of land along the river Niger. It has the greatest population density--286 persons per square mile--of all the districts in the study area, and it is here that relocation is likely to have its greatest impact. Its headquarters is the important market town of Yelwa. Population density becomes progressively lower as one moves away from Gungu district towards the dam site, where it is at its lowest--less than 27 persons per square mile--for the study area.

Table 1--RESETTLEMENT POPULATION IN KONTAGORA, BORGU, AND YAURI EMIRATES

Emirate	Area (in sq. mls.)	1952 Census Population	Resettlement Population	%
Kontagora	9,134	122,993	1,025	2.5
Borgu	10,908	75,740	11,831	28.5
Yauri	1,306	72,319	28,784	69.0
Totals		271,052	41,640	100.0

Source: Niger Dams (Resettlement) Authority, Agricultural Department, Bussa.

Table 2--RESETTLEMENT POPULATION BY DISTRICTS

Emirate	District	Total Population	Resettlement Population
Kontagora	Auna	15,408	1,025
Borgu	Agwara	23,101	6,085
	Bussa	4,871	4,655
	Wawa	4,804	1,091
Yauri	Bin Yauri	7,696	189
	Gungu	11,537	10,849
	Kwanji	7,583	780
	Ngaski	16,087	11,766
	Shanga	24,362	2,507
	Yelwa	4,781	2,693
Totals		120,230	41,640

Source: Nigerian Census (1952) and Niger Dams (Resettlement) Authority's Census of Affected Population (1966).

THE MARKETS

Markets in this area, like rural markets in most other parts of Africa, are a significant institution. Marketplaces afford the local population the opportunity to exchange their "surplus" production for cash. They can at the same time make important social and business contacts. Hodder (1961) and Hill (1966, pp. 300-309) have both tried to establish a typology of periodic markets in Yorubaland and West Africa respectively. As would be expected, because she dealt with a wider area, Polly Hill's classification contains more types than Hodder's. Of the seven distinct types she describes for West Africa, only two are known to exist in the Kainji lake basin--the 4-day and the 7-day cycles. The 7-day market week is predominant throughout Hausaland but the 4-day cycle has so far not been documented for this area of Nigeria (M. Smith 1962, Hill 1966). Robert H. T. Smith (1969) has recently designated this area a region of mixed market weeks.

The markets meet periodically either in a 4-day or 7-day cycle. A few special markets may meet more frequently. During the onion season, for example, business is transacted every day at Yelwa, Rofia, Zamare, and Bussa markets under specially constructed riverside sheds. There are, however, no daily markets within the study area. Sections of a market--for example, the meat market at Yelwa--may meet daily with a smaller number of meat sellers than is usual for a market day.

Functional Classification of Markets.

The markets within the Kainji lake basin are conveniently classifiable into two categories: (1) primary rural markets and (2) rural feeder (bulking point) markets. All the markets within the study area act as primary rural markets for the farmer's products. Only a handful combine with this the functions of a feeder market and consequently participate directly in inter-regional trade. The few markets in the second category act as bulking points for onions and beans. Graphically, the pattern looks something like Figure 2.

Cash crops such as onions and beans are brought to the markets in small canoes by individual farmers and are sold to traders who then load the bulked products into lorries and transport them to regional markets in southern Nigeria. Other farm and craft products are brought to the markets either by canoe or by headload, but these enter only into the local exchange. Markets such as Yelwa, Bussa, and a few others offer a wider range of goods (agricultural and imported) than those markets in the primary rural market category. They are also the only markets visited by itinerant traders coming from the southern markets. Accessibility to road transport is an important--though not the sole--factor in determining whether a market falls in the first or second category. Wara, for instance, is a large market but is inaccessible by motor road. So it merely passes its goods through Bussa to the national markets. Rofia market is small compared to Wara, but it is

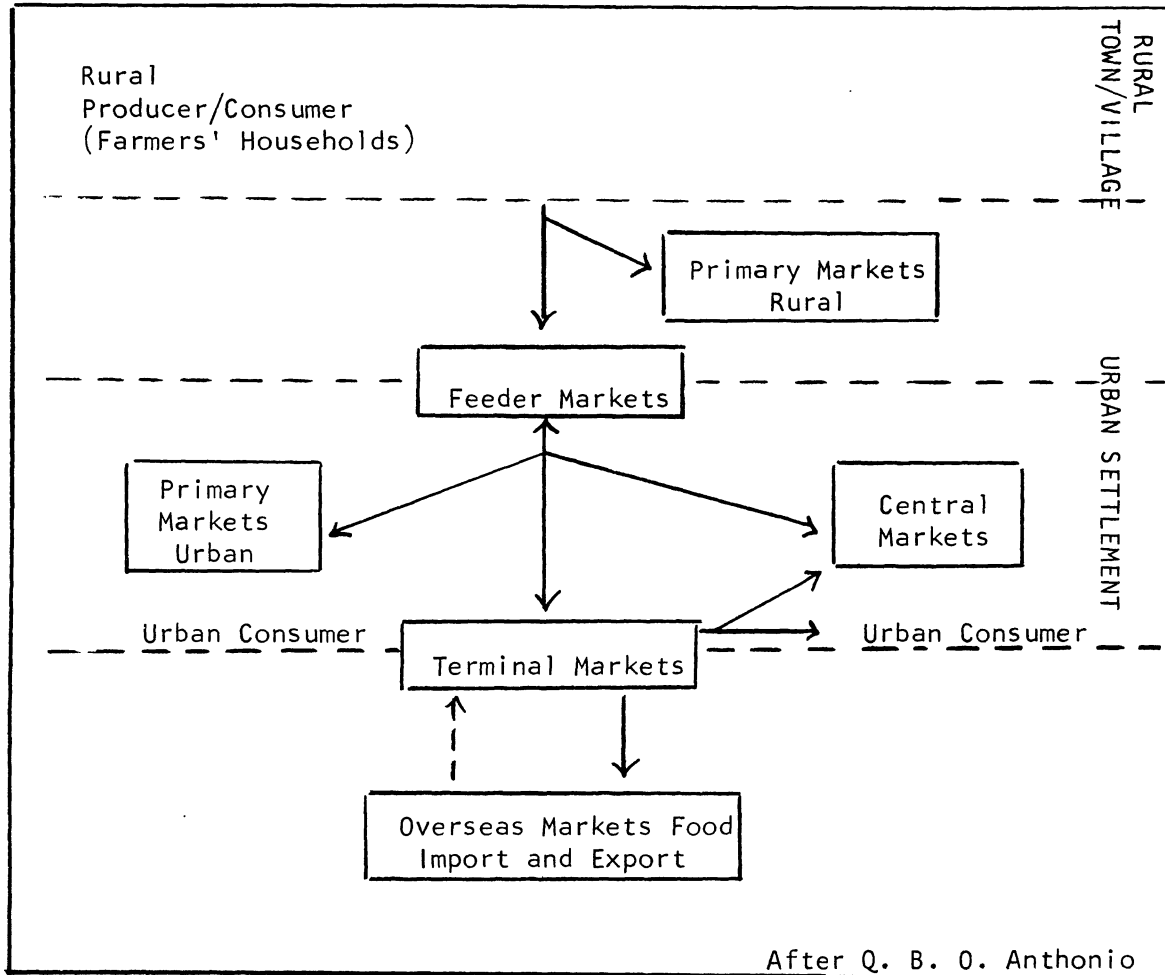
Table 3--FUNCTIONAL CLASSIFICATION OF MARKETS KAINJI LAKE BASIN

<u>MARKET</u>	<u>CATEGORY*</u>	<u>MARKET</u>	<u>CATEGORY</u>
Agwarra	1	Papiri	1
Bin Yauri	1	Rofia-Zamare	2
Bukunji	1	Shagunu	1
Bussa	2	Tillo	1
Dugga	1	Tungan Teku	1
Dugu Raha	1	Ujiji	1
Dugu Tsofo	1	Ulakami	1
Garafini	1	Ulaira	1
Gebbi	1	Utonu	1
Gungu Masu	1	Warra	1
Kasabu	1	Yumu	1
Koma	1	Yumu Gungu	1
Kpan	1	Yelwa	2
Mahuta	1		

*Category 1 -- Primary rural markets

Category 2 -- Rural feeder (bulking point) markets

Figure 2--FOODSTUFF MARKETS LINK IN NIGERIA



situated on the main road between Bussa and Yelwa and is able to perform functions which put it in category 2. Rofia has the added advantage of being located at the ferry point where only cars and small lorries can be ferried across the Niger. Farmers bring their crops to Rofia since traders find it convenient to load their goods on trailers or big lorries on the west bank of the Niger without having to use the ferry.

Changes in the relative classification of markets, in terms of functions performed, are likely to occur following resettlement. Relative locations will change and, with this, relative distances. Some markets which are at present merely primary rural markets may perform higher functions either as a result of a shift in location (due to resettlement) or because they would now be more accessible to motorable roads. The probable effect of these changes will be discussed later in the paper.

THE MARKETING SYSTEM

A variety of crops is brought to the market for sale on any market day. And the pattern of the general proceedings is not too different from those already described for other parts of northern Nigeria (M. Smith 1962, Bohannan 1957). The marketing of onions, however, deserves special study. Onions constitute the most important cash crop in the Kainji lake basin. They are grown by Gungawa (island dwellers) farmers on dry season irrigated fields along the banks of the Niger river. (For a detailed study of onion cultivation in the study area, see Roder 1967.) Yelwa and Rofia are the major markets to which onions are brought and at which bulking takes place before the onions are transported to the demand centers in southern Nigeria. It is an impressive sight to stand on the river bank near the specially constructed onion sheds and watch farmers as they bring in their onion crop in small canoes to brokers (dillali) who help them sell the crops for a commission to itinerant traders. During the onion season, the onion market meets daily even though the main market still meets every four days.

Farmers have not always needed to bring their crops to the marketplace. Some thirty years ago, the brokers (who were then agents of the itinerant traders) went to the farms to buy onions from the farmers. According to most of the brokers as well as the 425 farmers interviewed by the author, it was the brokers who encouraged the farmers to bring their crops to the markets. This was to be the beginning of a change in the marketing system which may ultimately lead to the disappearance of the broker and the itinerant trader. Today the broker is no longer the agent of the itinerant trader. His role has changed so much that he is now an agent of the farmer and deals with the itinerant trader only on behalf of the farmer. Contacts made while brokers visited farms now prove quite invaluable since a farmer is more likely to take his crops to a broker he knew previously than to a total stranger.

As soon as the farmer's crops are unloaded, he entrusts his crops to the dillali, who helps him sell them to the traders. For this service, the dillali receives a standard commission of two shillings (about 25 cents) from the trader and one shilling from the farmer for each bag of onions sold.³ Apparently both the trader and the farmer value the services of the dillali. At least 90 per cent of the farmers interviewed sell their crops through the broker in spite of the fact that only 15 per cent of the farmers feel they have no choice but to sell through a broker. But there is some indication that a change is taking place in the marketing system. More and more

³ A bag of onions weighs approximately 240 lbs. and sells for about eight Nigerian Pounds at the beginning of the onion season (just before new onions enter the market) dropping precipitously to less than one Pound at the close of the season. The fluctuation in prices is due to (1) the perishability of the crop and the lack of adequate storage facilities within the study area; and (2) the farmers' acute need of cash during this period-- a factor which forces the farmers to sell their crops as soon as they are harvested.

farmers are taking their crops to the regional markets in southern Nigeria, especially since the 1966 crisis. Some farmers had already taken crops occasionally as far south as Onitsha prior to the crisis. They did this whenever they needed a new large canoe, available only in the Onitsha area. The 1966-1970 crisis and civil war has prevented them from going to Onitsha for a while. Yet farmers indicated their desire to take onions to and buy large canoes from Onitsha in the future whenever it is again safe to do so! These trips to the southern markets usually involve organized cooperative action by a number of farmers who may or may not belong to the same extended family. This ability to organize in taking crops to distant markets may indicate the direction in which the marketing system for onions is developing (see Figure 3). The last stage in this schema is likely to take some time in coming and would remove some of the extra links in the marketing chain. Ultimately, it will probably reduce the cost in time and money of marketing and distributing the onion crop and similar cash crops. Some farmers are known to have spent as many as five days in the local market and perhaps longer in the distant regional markets trying to sell their crops.

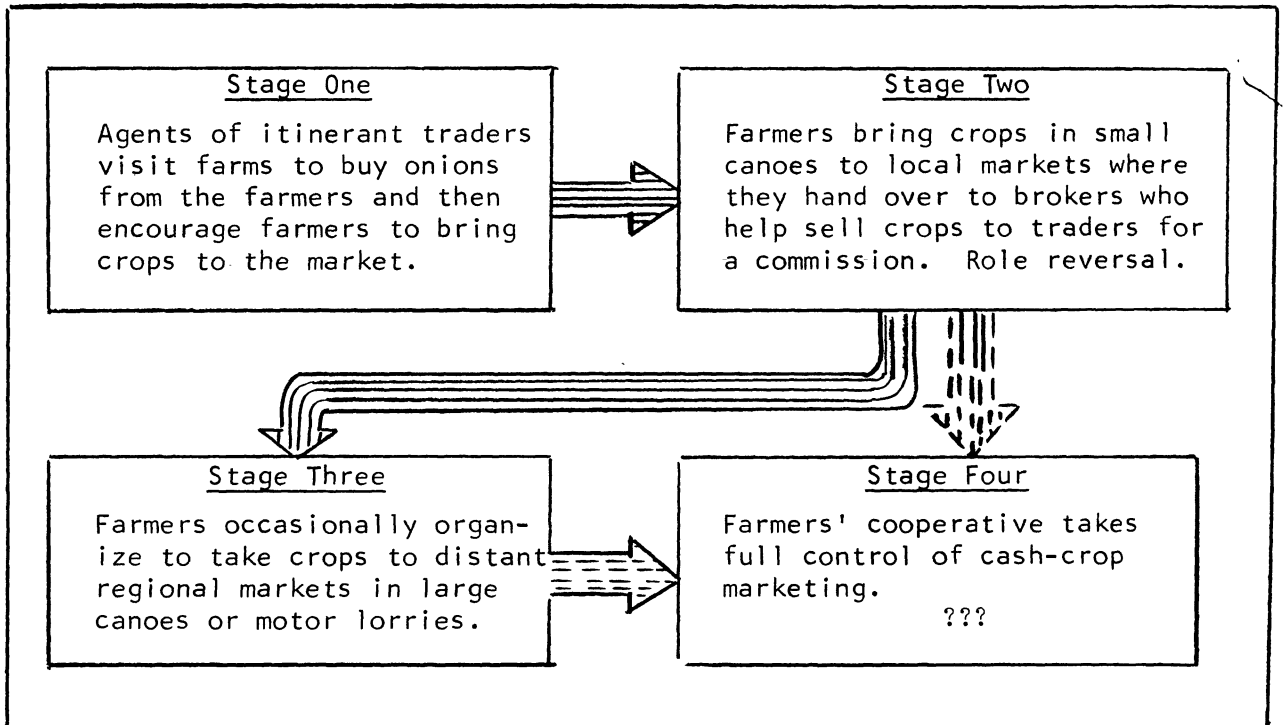
One of the extra links in the marketing chain is the itinerant trader. About 60 per cent of these traders are women. More than 70 per cent are Yorubas and 21.4 per cent are Hausas--Ibos have never featured prominently at this end of the system even during the period preceding the Nigerian crisis. The itinerant trader is not necessarily the final link between the farmer and the consumer. Many of them are, in fact, agents for wholesale traders operating in the regional markets in the south. Those who are forestallers take risks that agents and brokers need not take. The price fluctuations both at the local and regional markets are such that the forestaller may suffer substantial losses if she is not adept at hedging against an always possible slump in the market price. The development of farmers' cooperatives will probably render the role of the itinerant trader obsolete. Possibly the broker will be absorbed into the cooperative in a different role.

MARKET AREAS

Wolf Roder (1967) carried out a delimitation of market areas based on data collected by asking a sample of onion farmers to indicate, in order of preference, the markets they usually attend. He identified three types of market areas--(1) primary, (2) secondary, and (3) tertiary trade areas--for each market in the northern part of the study area. Yelwa's tertiary trade area covers the whole area of Foge island. In many cases, the primary trade area of one market overlaps and/or is included in the secondary trade area of another market. The same relationship is true of secondary and tertiary trade areas. The tertiary trade area is, therefore, a good indication of the maximum range of influence of a market--especially the bigger markets--while the primary trade areas are important for delimiting the area of influence of the smaller markets.

Farmers that I interviewed as they arrived at Yelwa and Rofia markets were asked to list other markets they usually attend. The resulting data presented

Figure 3--DIRECTION OF ONION MARKETING SYSTEM



in Tables 4 and 6 agree in many respects with Roder's conclusions. But the data indicate that distance from the market to the village area and the location of the market relative to the location of the farmer's village are important factors in his decision to attend a market. When the village is far from the market and is located on the opposite bank of the river, attendance is dramatically reduced. At shorter distances, however, there is no appreciable effect of location on the opposite bank. Thus, distance appears to be the more important factor. The case of Zamare is illustrative. Zamare is located directly across from Rofia on the opposite bank of the Niger river. Fifty-eight per cent of the farmers from Zamare attend Rofia market, which is at a shorter distance from Zamare than Yelwa, located on the same bank of the river. It is likely that more farmers would have taken their crops to Rofia but for two important factors: (1) Rofia itself is within the tertiary trade area of Yelwa; and (2) Zamare is in Gungawa district, and farmers usually attend markets situated within the administrative district in which they live.

Table 4--DISTRIBUTION OF MARKET ATTENDANCE* BY VILLAGE AREAS - KAIJI LAKE BASIN

VILLAGE AREAS	MARKET CENTERS											No. in Sample
	Dugu Tsofo	Giro	Gebbi	Bakin Turu	Tillo	Zamare	Agwara	Mahuta	Utonu	Wara	Bussa	
Kaliame	2	2	1	-	1	3	-	1	1	1	1	10
Gebbi	3	1	-	-	1	1	-	-	-	-	-	8
Tillo	12	7	2	-	-	14	-	1	-	-	-	39
Tondi	6	6	-	-	-	4	-	-	-	-	-	23
Yabo	9	5	1	1	3	8	-	-	1	-	-	48
Baha	24	16	2	1	8	45	2	1	2	-	-	90
Zamare	6	1	1	-	6	-	1	9	6	1	14	85
Jijima	-	-	-	-	4	5	-	3	2	2	5	15
Cuteku	2	2	-	-	4	5	3	11	1	1	14	32
Chulu	3	1	-	-	3	6	1	6	-	-	5	21
Koma	-	-	-	-	1	5	1	5	-	-	9	18
Utonu	-	-	-	-	-	1	-	1	-	-	-	6
Dugga	-	-	-	-	-	-	1	2	-	-	-	7
Kwanga	1	-	-	-	1	3	-	1	2	-	1	7
Total	68	41	7	2	32	100	9	41	15	5	49	425

*Entries are the number of farmers from a total of 425 interviewed at Yelwa and Rofia markets who indicate that they attend the markets listed above. Sixty-one per cent of the farmers were interviewed at Yelwa while 39 per cent were interviewed at Rofia.

Table 5--PERCENTAGE SHARE OF MARKET ATTENDANCE
(SELECTED MARKETS AND VILLAGE AREAS)

MARKETS	East Bank	Dugu		Zamare				
	West Bank	Tsofo	Giro	Gebbi	Tillo	Agwara	Mahuta	
VILLAGE AREAS								
	West Bank	East Bank						
Gebbi			4.1 2.3	*	2.8	1.0	0.0	0.0
Kaliame			2.7 4.6	12.5	2.8	2.9	0.0	2.4
Tillo			16.4 15.9	25.0	*	13.6	0.0	2.4
	Yabo		12.3 11.4	12.5	8.3	7.8	0.0	0.0
	Baha		32.9 36.4	25.0	22.2	43.7	22.2	2.4
	Zamare		8.2 2.3	12.5	16.7	*	11.1	21.4
Cuteku			2.7 4.6	0.0	11.1	4.9	33.3	26.2
Chulu			4.1 2.3	0.0	8.3	5.8	11.1	14.3
Others			16.6 20.2	12.5	27.8	20.3	22.3	30.9
Totals			100.0 100.0	100.0	100.0	100.0	100.0	100.0

DISTANCE AND MARKET ATTENDANCE

Farmers interviewed as they arrived at Yelwa and Rofia markets during the 1966-1967 onion season indicated that the most important reason for choosing to attend a particular market was nearness to their individual settlements. The second most important reason was the price they received for their crops at the market. Since the nearest markets for marketing onions at the local level are Yelwa and Rofia, I attempted to find out the importance of distance in the decision to attend one or the other of the two markets. I asked farmers to indicate the relative importance to them individually of four main reasons for attending the market at which they were interviewed. The result of the interview, tabulated in Table 6, is likely to have been different if the interview had been conducted at a different season of the year and with a different sample of farmers. Concerning cash-crop marketing in the Kainji lake basin, however, the tabulated result is certainly indicative of the factors that determine to which market a farmer takes his crops.

Table 6--PERCENTAGE DISTRIBUTION OF FARMERS ATTENDING YELWA AND ROFIA MARKETS 1966-1967 ONION SEASON

DISTRICT	MARKET ATTENDANCE		REASONS FOR ATTENDING MARKET				
	Yelwa	Rofia	Nearness to Village	Good Price for Crops	Can Buy Things Cheaply	Opportunity for Social Contact	Others
Kwanji	84.2	15.8	47.4	5.2	5.2	5.2	37.0
Hundeji	50.0	50.0	50.0	0.0	0.0	50.0	0.0
Gungu	68.4	31.0	55.6	23.4	9.1	1.8	10.1
Ngaski	17.8	82.2	35.6	33.3	13.3	0.0	17.8
Agwara	35.0	61.7	33.3	38.3	13.3	1.7	13.4
Others*	73.9	26.1	65.2	17.4	8.7	0.0	8.7

*Villages north of Yelwa outside of the area affected by lake flooding but for which Yelwa serves as the major wholesale market.

Index of Market Attraction

I computed the index of market attraction by using data collected at Yelwa and Rofia markets. First, I calculated the proportional share of each village of the total number of farmers who indicated attendance at a particular market (Table 5). The weighted proportion--derived by multiplying the proportional share of a village by the total number of farmers in that village and dividing the result by the square root of the distance between the village and Yelwa or Rofia market--was in turn divided by the square of the distance between each village and each market center. This yields a value which I shall, for lack of a better term, call the propensity to visit a particular market on the part of farmers from a particular village. The individual propensity value divided by the sum over all markets of that village's propensity values gives us the index of attraction of each market with respect to that village.

Table 7--INDEX OF ATTRACTION
(SELECTED MARKETS AND VILLAGES)

MARKETS	East Bank	Dugu Tsofo	Giro	Zamare					TOTALS	
	West Bank		Gebbi	Tillo	Agwara	Mahuta				
VILLAGE AREAS										
	West Bank	East Bank								
Kaliame			0.006	0.014	0.930	0.043	0.003	0.000	0.001	1.00
Tillo			0.008	0.003	0.027	0.956	0.006	0.000	0.001	1.00
		Yabo	0.072	0.036	0.125	0.561	0.206	0.000	0.000	1.00
		Baha	0.019	0.017	0.031	0.054	0.810	0.066	0.004	1.00
		Zamare	0.000	0.000	0.001	0.002	0.984	0.007	0.006	1.00
Cuteku			0.001	0.001	0.000	0.007	0.031	0.301	0.660	1.00
Chulu			0.000	0.000	0.000	0.001	0.004	0.021	0.974	1.00

Formally state, the index is derived by applying the following equations:

$$\frac{M_i P_{ij}}{(D_{iy})^{1/2}} = w (M_i P_{ij}) \quad (1)$$

$$\frac{w(M_i P_{ij})}{(D_{ij})^2} = PV_{ij} \quad (2)$$

$$\frac{PV_{ij}}{\sum_j PV_{ij}} = I_{ij} \quad (3)$$

where M_i = the number of farmers in village i

P_{ij} = the proportion of farmers attending Yelwa and Rofia markets from village i who indicate attendance at market j

D_{iy} = the distance between village i and Yelwa market in miles

D_{ij} = the distance between village i and market j

w = a weight equal to $(D_{iy})^{1/2}$

PV_{ij} = the propensity of farmers in village i to attend market j

and I_{ij} = the index of pull market j has on village i.

As pointed out earlier, distance is a very important factor in the farmer's choice of markets. But where the difference between market distances for two sets of markets is negligible, the farmer is more likely to attend the market on the same bank of the river as his village.

Resettlement of villages will result, in many cases, in increasing the distance between settlements (especially cross-channel distance). We can, therefore, expect shifts or changes in the present pattern of marketing and trade areas. The tendency will be towards a rise in the contact among settlements on the same bank of the lake to the disadvantage of cross-channel trade. Yet some patterns are bound to persist.

PERIODICITY

I have noted that there are two types of periodic markets in the Kainji lake basin. The 7-day cycle is said to be common in Hausaland, and its presence here probably indicates the extent of Hausa and/or Islamic influence in this area. The 4-day cycle, on the other hand, is something of a miss-match for the 7-day cycle if Hill's grouping (1966) of market weeks is correct. (R. Smith has classified markets in this area and Senufo markets under the category mixed market weeks; Smith 1969, p. 25.) The 4-day cycle normally goes with the 8-day cycle and vice-versa. The miss-match can probably be explained with reference to the ethnic composition and linguistic associations of the ethnic groups within the lake basin (see Tables 8 and 9). Although Hausa influence is noticeable over most of the study area, animist tribes still persist, and where they predominate, carry on their pre-Islamic social system. The 4-day week is probably of Mande origin⁴ and definitely indigenous to the Yoruba (who occupy the area just south of the study area). This could be a shatter belt where the Yoruba and Mande meet and mix with the Islamized north. The map of periodic markets (Figure 4) shows a greater occurrence of the 4-day cycle on the eastern bank of the Niger river; but they occur equally well in Gungu district (a non-Mande area) as in the Mande areas. One geographic factor which seems to be significant is the location of the markets in relation to the river. Most river-bank locations are 4-day markets while almost all the markets in the upland areas are 7-day markets. One must be cautious, however, about attaching too much importance to such apparent geographic associations. At best, we can say that this area is anomalous as far as Polly Hill's classification of market week is concerned. The problem can bear further study.

⁴ Jeness, personal communication. The Mande group includes the Borgawa, Bussawa, and Shangawa.

KAINJI LAKE BASIN
MARKET LOCATIONS & PERIODICITIES

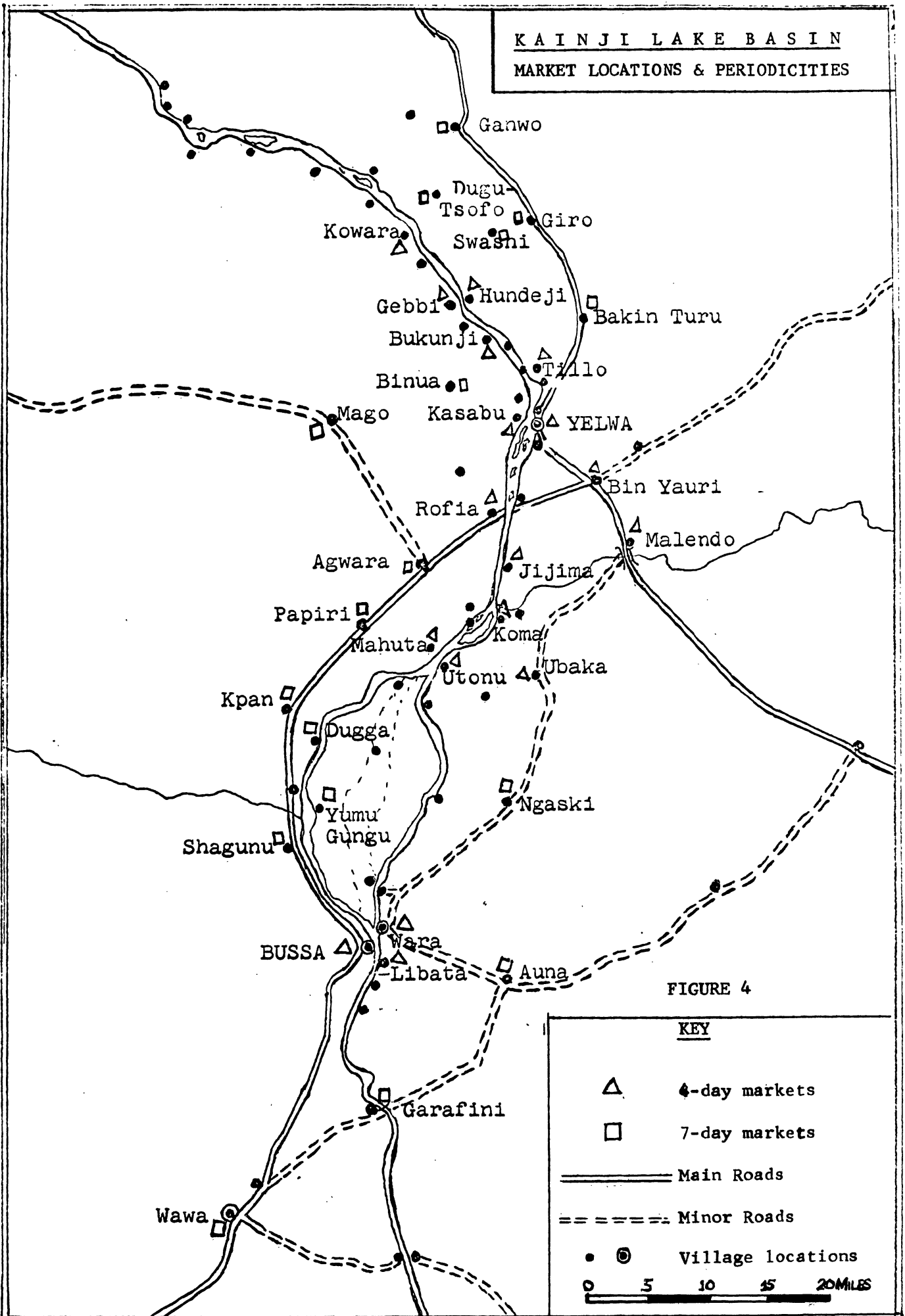


FIGURE 4

KEY

- △ 4-day markets
- 7-day markets
- Main Roads
- - - - - Minor Roads
- ● Village locations

0 5 10 15 20 MILES

Table 8--ETHNIC POPULATION BY DISTRICTS

Emirate	District	Pagan Tribes ^a	Hausawa ^b	Fulani Kanuri	Nufawa ^c	Misc.	Total
Kontagora	Auna	12,451	1,198	744	701	314	15,408
Borgu	Agwara	19,763	1,540	1,189	-	609	23,101
"	Bussa	2,714	1,151*	207	407	392	4,891
"	Wawa	1,540	1,677*	-	1,156	431	4,804
Yauri	Birnin Yauri	3,327	3,012	1,103	-	527	7,969
"	Gungu	9,043	1,799	-	-	695	11,537
"	Kwanji	5,431	771	441	-	940	7,583
"	Ngaski	12,521	2,474	-	-	1,092	16,087
"	Shanga	7,973	10,389	3,649	558	1,493	24,062
"	Yelwa	-	3,475 ⁺	264	498	544	4,781
Totals		74,763	27,486	7,597	3,320	7,037	120,203

Source: Jonathan Jeness, FAO Anthropologist, Kainji Dam Research Project, 1968.

* This figure represents exclusively the Bussawa population in these districts.

+ Includes the Yaurawa.

^a The group--pagan tribes--refers to animist groups such as the Kamberi, Lopawa, Larawa, Dukawa, and Shangawa.

^b Some animists who have become Moslems identify themselves as Hausas; they are, therefore, included in this category.

^c This group includes the Yoruba, some who are native to southern Borgu but most who are traders from southwestern Nigeria and who reside within the study area.

Table 9--LINGUISTIC ASSOCIATION OF THE ETHNIC GROUPS

Language Group	Ethnic Group
NIGER-CONGO FAMILY	
West Atlantic Sub-family	Fulani
Mande Sub-family	Borgawa Bussawa Shangawa
Gur Sub-family	Nufawa Yorubawa
Benue-Congo Sub-family	Dakarawa Dukawa Gungawa Kambari
AFRO-ASIATIC FAMILY	
Chad Sub-family	Hausawa

Source: Mr. Jonathan Jeness, FAO Anthropologist on the Kainji Dam Socio-Economic Research Project.

RESETTLEMENT AND MARKET CENTERS⁵

All the villages located below the normal reservoir level have been relocated. Relocation, as was pointed out earlier, will have very little effect on the market function and market area of many villages. But the few that will be affected will be hard hit. Each resettlement village is provided with those facilities that were available at the old locations. Assuming that market stalls would be built soon after the villages have been completed,⁶ there will be very little disruption in the marketing activities of the resettled population. One example which indicates that old patterns may persist is the case of Garafini. Garafini is located on both banks of the Niger, but the market center is on the east bank. Prior to resettlement, the west bank population usually crossed the river to attend market on the east bank.

⁵ Resettlement is mentioned in this paper only as it affects market locations and marketing. For a more detailed treatment see Adalemo 1968.

⁶ Reports on progress of resettlement projects show that communal buildings which include market stalls generally lag behind village construction. Niger Dams Authority Progress Report, Resettlement Contracts 1967.

THE KAINJI LAKE BASIN
(POST-IMPOUNDMENT SITUATION)

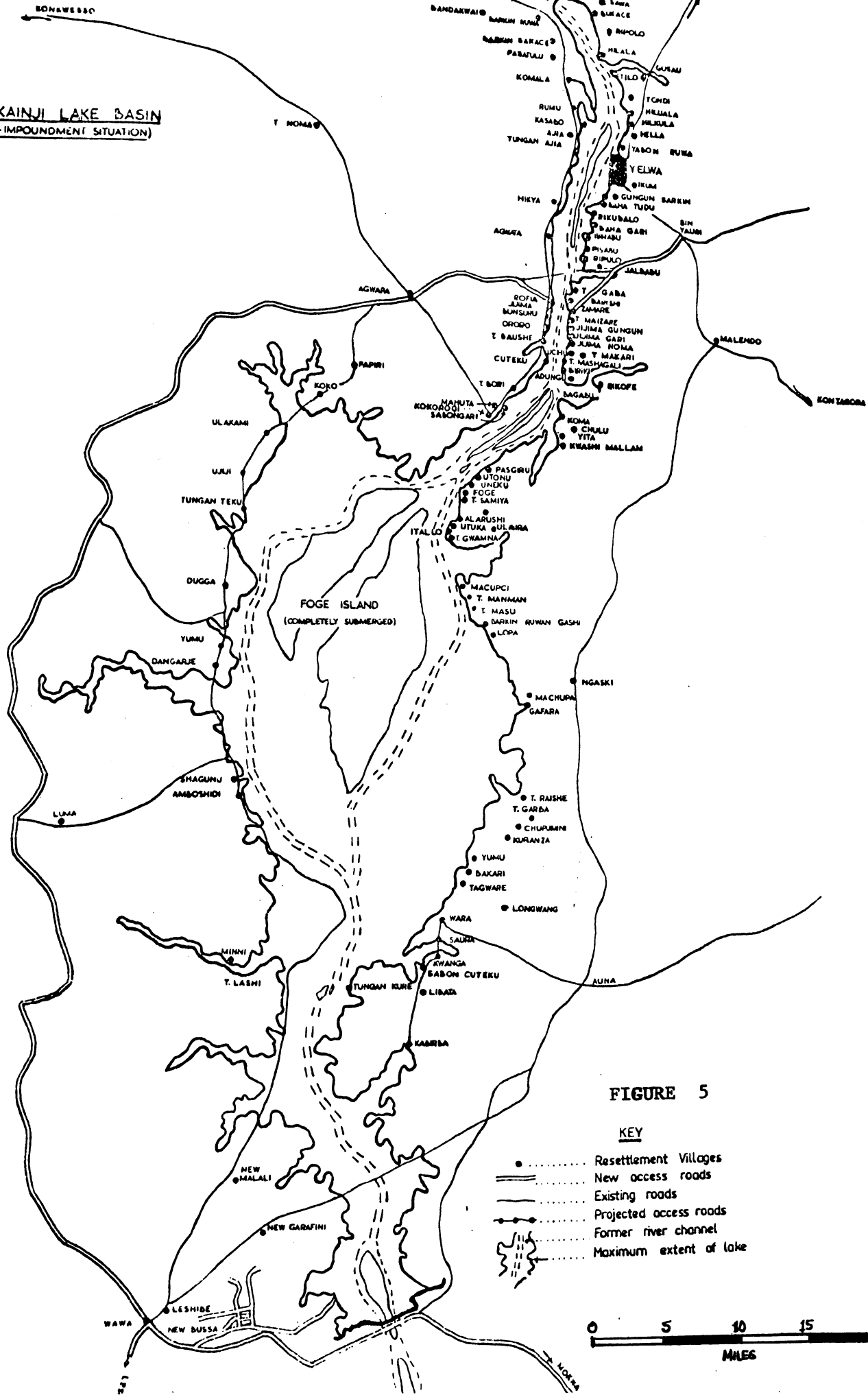
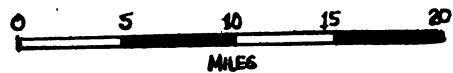


FIGURE 5

- KEY**
- Resettlement Villages
 - New access roads
 - Existing roads
 - Projected access roads
 - Former river channel
 - Maximum extent of lake



The two settlements have now been shifted away from the river with the result that they are now separated by a distance of ten miles. The west bank villagers still attend the market on the east bank. There is no reason to believe that they will not continue to come all the way across the lake especially if a shuttle service is available.

The situation is completely different with respect to the post-impoundment locations of Wara and Bussa. Bussa, once the main outlet for Wara, has been relocated some twenty-five miles to the south of its former location whereas Wara has only been moved back a few miles directly east of its former location. Apart from the fact that the east-west displacement is between ten and twelve miles, the nearest settlement with a market (Shagunu) is some eight miles upstream on the west bank. Wara may, therefore, develop into a bulking point and needs to have road access to other parts of Nigeria. A perimeter road was proposed for the east bank but has been canceled. Unless this road or some other outlet is provided later, Wara will continue to suffer. Instead of Wara, Shagunu may increase in importance and take over the functions of Bussa vis-à-vis Wara and other villages on the east bank. Wara may, however, rely completely on water transportation and become an important port and market center.

Yelwa's location remains relatively unchanged. The surrounding villages will still be within the trade area of Yelwa market. The construction of the west bank perimeter road definitely places Yelwa in an advantageous position relative to other settlements. It is hoped that the bottleneck at Rofia will be removed either by the construction of a bridge or the replacement of the old ferry boat by a new and bigger boat. One important change for Yelwa, however, is that with the construction of a navigation channel around Awuru falls, Yelwa will become the head of year-round navigation on the Niger.

SUMMARY AND CONCLUSION

In this paper I have taken a look at the markets in the Kainji lake basin and identified them by function, location, and periodicity. Functional classification distinguishes between the markets which cater only to local trade and those which are involved in interregional trade (bulking points). But I have made no attempt to establish a hierarchy of markets since the necessary data is not yet available. Evidence from the data available and the foregoing discussion suggests that Hodder's assertion that there is no relationship between size of settlement population and a hierarchy of markets is not substantiated in the study area. A study of market centers in Ghana by Smith and Fagerlund (1970) suggests that locational and size regularities are properties of periodic markets as much as they are of other central places.

Periodicity has been shown to be a characteristic of the markets in the study area. The occurrence side by side of 4-day and 7-day market weeks is shown to be anomalous in the context of Hill's classification or grouping of market weeks, suggesting perhaps that a mixing of social institutions has occurred within the study area. My observations about the probable

effect of resettlement on individual market centers and their trade areas are at best conjectural. A study of the post-impoundment situation will be necessary to show how the system is adjusting to the dislocation brought about by resettlement.

Finally, my brief discussion of onion marketing shows the development of new elements within the marketing system, a development triggered by the innovativeness of the brokers, which may render their own roles in the marketing chain obsolete. The stimulus which the new developmental activity in this area represents is bound to have far-reaching effects on the whole lake basin, particularly on the marketing system. When the opportunity presents itself, I intend to study the changes that have occurred as a result of dam construction and resettlement activity in the Kainji lake basin.

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