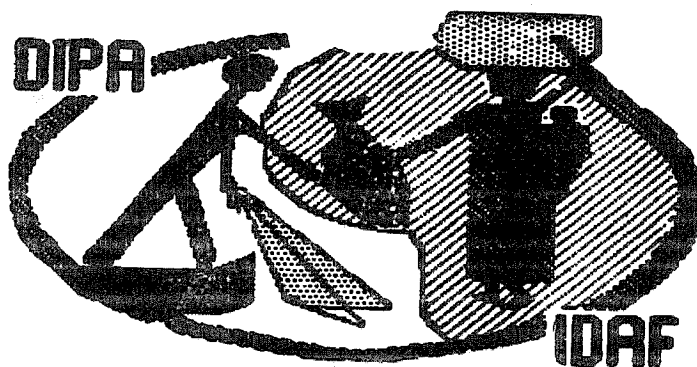


IDAF/WP/32

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THE FISHING COMMUNITIES OF THE BENIN
RIVER ESTUARY AREA :
Results from a village survey in Bendel State, Nigeria



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THE BENIN RIVER ESTUARY AREA :
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by

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Programme de Développement Intégré
des Pêches Artisanales en
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Programme for Integrated Development
of Artisanal Fisheries in
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With financial assistance from Denmark and Norway, and in collaboration with the Republic of Benin, the Fisheries Department of FAO is implementing in West Africa a programme of small scale fisheries development, commonly called the IDAF Project. This programme is based upon an integrated approach, involving production, processing and marketing of fish, and related activities ; it also involves, in particular, an active and full participation of the target fishing communities.

This report is a working paper and the conclusions and recommendations are those considered appropriate at the time of preparation. The working papers have not necessarily been cleared for publication by the government (s) concerned nor by FAO. They may be modified in the light of further knowledge gained at subsequent stages of the Project and issued later in other series.

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PREFACE

This report is a result of a cooperation between IDAF, the Nigerian Institute for Oceanographic and Marine Research (NIOMR) and the UNDP/FAO Project "Integrated Rural Fishing Development" (NIR/87/010). Basically, the survey was prepared, organised, supervised and funded by IDAF, carried out and analysed by NIOMR whereas NIR/87/010 provided necessary transport and assistance in the field.

The efforts of the field researchers, Messrs. M.O. Okpanefe and A. Abiodun should be highlighted. During three separate periods, they did their utmost to reach and investigate every village within and about a five kilometres belt along each bank of the Benin river downstream from Koko, including some of its adjoining creeks. As can be imagined, working conditions could be less than comfortable at times, involving long boatrides and also some extended walks.

However, the physical tribulations may have been minor compared to some of the psychological barriers they had to face in many villages which ranged from trivial distrust of outsiders to outright hostility and refusal even to let the researchers approach certain villages. In most cases, the needed information was nevertheless obtained thanks also to the invaluable help of the NIR/87/010 boatman, Mr. John Igben who not only conducted the researchers safely from village to village and helped translate into local languages when needed, he also unquestionably helped break the ice between suspicious villagers and researchers by convincing the former that they were being asked bona fide questions as part of an investigation that could eventually benefit them.

Yet, not even the diplomacy of Messrs. Okpanefe and Abiodun or the intimate local knowledge of Mr. Igben could prevent a total refusal to cooperate in a few of the villages, and it is probably no accident that these villages were usually composed of "immigrant" ethnic groups which in any case did not have "tribe-members" among the members of the research team. Tribal feelings can still be strong in Nigeria's more remote areas, the villages off the main transport routes in the Benin river delta being no exception. That is why some weight was given to the ethnic composition of the various villages surveyed. In any case, even in the uncooperative villages was it possible to extract some information, if only by deduction or secondary sources. These villages are listed separately in part IV.

Most villages were fortunately much more open and cooperative, though answers given to the various questions in the survey questionnaire were not necessarily always accurate and the researchers were therefore careful to double-check and question answers which could appear rather odd, not the least by comparing responses given with visual observations (e.g. by counting canoes, estimating household sizes, checking the existence of infrastructures, etc.). Such a rapid rural appraisal, as this survey in fact was, can never pretend to be 100 % accurate, but the information we have as a result of the survey is certainly far better than nothing, which was the case before for the villages covered save for a few of the larger and more predominant ones such as Ogheye. This particular village has been under the more intense scrutiny by IDAF's staff member A. IJff and her report is being published almost simultaneously with this one (IDAF WP/31). It is strongly recommended that the two reports be read in conjunction with each other.

It should finally be underlined that this report is largely written by the two researchers who carried out the survey, my own contributions being mainly editorial, in addition to preparing Part III. Thanks are due to the Director of NIOMR, Mr. J.G. Tobor, and the NIOMR Board for consenting to the assignment of two of the institute's staff for the survey. It allowed for a type of cooperation between a national research institute, a local development project and our regional programme which hopefully can be replicated elsewhere as well.

J.M.H.

PART I : DATA ANALYSIS

(By M.O. Okpanefe & A. Abiodun)

1. BACKGROUND

In August, 1988 and in reponse to the request by the government of Nigeria for UN assistance to finance and execute her Integrated Rural Fisheries Development Project for a period of three years, an agreement was signed by the government, the donor agency UNDP and the executing agency FAO.

The development objective of the project as envisaged is to maximise the supply and use of fisheries resources in an effort to help achieve Nigeria's goal of self-sufficiency in the food sector. Two Rural Fisheries Development Centres, Uta Ewa (Akwa Ibom State) and Koko (Bendel State) were selected for development into model Integrated Rural Fisheries Development complexes through improved facilities , introduction of appropriate modern technologies including mechanised boats and better fishing gear and methods as well as minimisation of post-harvest losses.

Due to operational fund and personnel problems, the project did not take off on schedule and FAO's regional programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF) came to assist by carrying out initial socio-economic background studies of the Koko area. However, IDAF did not have adequate manpower to undertake all the required base-line studies and in keeping with her policy of encouraging the involvement of indigenous researchers and research institutes, the Nigerian Institute for Oceanography and Marine Research was requested to conduct one of such studies under the sponsorship of IDAF.

The study, a village Survey of the Benin River estuary has the following as its objectives :

- (1) To provide the Integrated Rural Fisheries Development Project with the background information necessary to determine where and how the project activities in the Koko area can best be implemented.
- (2) To provide data on the number of villages, size and the composition of the population, available infrastructures and marketing networks.
- (3) To identify the major fishing villages which could benefit most from future fisheries project activities.

1.2 Scope of Coverage :

The survey involved the administration of predesigned questionnaires in all the villages on both the Left Bank and the Right Bank of the Benin River accessible by engine-driven boat. Villages on the adjoining creeks up to four kilometers on both sides of the river were also included in the survey.

1.3 Implementation Procedure :

The survey team comprised two researchers (Messrs M. O. Okpanefe and A. Abiodun both of the Nigerian Institute for Oceanography and Marine Research) and a boat driver (Mr John Igben) who doubled as both a guide and an interpreter in most of the villages visited. Three survey trips were undertaken :

- i) The first trip which essentially was a pilot survey, took place in October 1989. During this trip, 20 villages were visited . The questionnaire was tested and at the end of the trip, ammendments were made to the questionnaire for subsequent surveys.
- ii) The second trip, was undertaken in January 1990. 30 villages were visited, 2 of which had been visited during the first trip but where no information was supplied. The second visit to these two villages also yielded no positive result as the villagers refused to repond to questions.
- iii) In the final survey trip conducted in February 1990, 28 communities were visited/sighted. All these communities were located on the left bank.

2. THE PEOPLE :

The Benin River survey area is made up of diverse ethnic groups. These people inhabit the many villages in peaceful co-existence and are of mutual benefit to one another. The Itsekiris among the people are notably fishermen while the Ijaws combine canoe building with fishing. The Ijaws practise a little form of farming with their fishing as do the Urhobos, Ilajes and the Itsekiris who are reknown for the production of rushes (*Juncus spp*) used for mat weaving.

2.1 Population :

The total population of 72 out of the 74 villages sampled during the survey is estimated at 26,550. Of this estimated, 936 people inhabit 10 villages whose ethnic composition is not known. The population of two other villages (Usho and Ebighan) could however not be determined.

The ethnic composition of 62 of the villages is as presented in table 1.

Table 1 : Ethnic Composition of the Sample Villages

! Ethnic Group	! Number of People	! % Composition	!
!Itsekiri	! 14,748	! 57.6	!
!Ilaje	! 6,034	! 23.6	!
!Ijaw	! 3,840	! 15.0	!
!Urhobo	! 962	! 3.7	!
!Others*	! 30	! 0.1	!
!Total	! 25,614	! 100.0	!

* include the Nembe tribe of Rivers State encountered on the left bank of the Benin River.

As shown above, the largest singular ethnic group are the Itsekiris with 14,748 people accounting for 57.6 per cent of the estimated population. They are followed by the Ilajes who constitute about 23.6 per cent next to whom are the Ijaws who form 15 per cent of the population. The Urhobos account for only 3.7 per cent while the Nembe tribe constitutes an insignificant 0.1 percent. In fact this tribe was encountered only in Deghele on the left bank of the river.

2.2. Spatial distribution :

The location of the villages relative to one another in the proposed project area is indicated in the map. The spatial distribution of sampled villages is however reflected in table 2 below :

Table 2 : Spatial Distribution of the Villages

!Location	! No of villages	!	%	!
!Right Bank	! 23	!	31	!
!Right Bank Creek	! 19	!	26	!
!Sea Front	! 6	!	8	!
!Left Bank	! 9	!	12	!
!Left Bank Creek	! 17	!	23	!
!Total :	! 74	!	100	!

About 57 per cent of the sample villages are located either directly on the right bank or on a creek off the right bank of the Benin River while 8 percent of the villages are located on the shore of the Atlantic Ocean. Two out of six villages in this category (Ekekporo and Ebighan) are on the right side of the Benin River estuary. The remaining four villages (Agokutu, Aja-Eye, Aja-Ukpotufen and Agogboro) are situated on the left bank of the estuary. Twenty six villages representing 35 per cent of the villages visited are situated on the left bank or on a creek of this bank of the river.

The above table is only indicative of the geographical location of the sample villages. In terms of fishing, activities, they are done in three main zones, viz creeks, main river and sea. Villages that are not located on the shore of the Atlantic Ocean also do some fishing at sea.

An important observation during the survey is the occurrence of mud deposits on the left bank which rendered the bank shallow and inaccessible even to canoes. Some of the creek mouths are blocked by these deposits at ebb tide. Perhaps this explains why there are fewer villages (only 7) situated directly on the left bank, compared with as many as 23 such villages located directly on the right bank of the river.

3. BOATS :

Three main types of boats are owned and/or operated by fishermen of the survey area. There are the dug-out canoes of various sizes carved out of wood and made locally by the people, particularly the Ijaws. Others are the banana boats built from plank boards, and the Glass Reinforced Plastic (GRP) boats. All these boats except the GRP are used for both fishing and

transportation. The GRP boats are used mainly for transportation. The dug-out canoes are used for fishing on the main river, in the creeks or at sea while the banana boats are used for fishing mainly at sea. Most of the banana boats were therefore observed in the communities bordering the Atlantic Ocean e.g. Ogheye, Agokutu, Agogboro etc. The proportional representation of each of these boats and their distribution relative to areas of fishing activities is presented in table 3.

Table 3 : Boats in Use, the Population and their Distribution in the Survey Area

!Zone of! !Fishing!	No of people	Dug-out	%	Banana	%	GRP	%	Total Boats
!Sea (S)!	5,700	222	3.5	708	59.7	4	30.8	934
!River R!	2,172	827	13.2	5	0.4	-	-	832
!Creek C!	2,060	222	3.5	-	-	1	7.7	223
!R,S	6,820	1,040	16.5	379	32.0	7	53.8	1426
!C,S	300	100	1.6	50	4.2	-	-	300
!C,R	7,392	3,273	52.1	32	2.7	1	7.7	3306
!C,R,S	1,170	600	9.6	12	1.0	-	-	602
!Total*	25,614	6,284	100	1,186	100	13	100	7,483

* data in respect of 62 villages (n=62)

Of the total 7,483 boats in the survey area, dug-out canoes constitute about 84 per cent followed by banana boats which represent about 16 per cent. GPR boats account for less than 0.2 % of the total.

In relation to the zone of fishing, one finds that dug-out canoes are used more for creek and river fishing as about 69 per cent of these boats are used exclusively in these areas. Only 3.5 per cent of the dug-out canoes are operated at sea. These were found mostly at Orere at the mouth of the estuary where they operated fairly big-sized canoes for sea fishing.

Out of a total number of 1,186 banana boats in 62 villages of the survey area, 708 or about 60 per cent were used exclusively for sea fishing. 379 or 32% of the boats were used either for sea or river fishing. These two zones therefore accounted for over 90 percent of the banana boats in the survey area.

Comparing these figures with the population figure in each zone, then we have 1 dug-out canoe to an average of 26 people, 1 banana boat to about 8 people and 1 GRP to 1,425 people in the sea fishing zone. In the exclusively river and creek fishing zones, we have 1 dug-out canoe to about 3 people, 1 banana boat to about 314 people and 1 GRP to over 5, 800 people.

It should be noted, however, that more GRP boats were observed (about 22) during the survey but most of them were not owned by the fishermen in the villages. They belonged to some wealthy businessmen who operated them for commercial transportation.

3.1. Motorisation

The extent to which a fisherman can go for fishing from his village is dependent on the power available to pull his boat. Were he depends on his physical energy, his zone of operation is limited. However, a fisherman that uses an outboard engine is able to go far and his chances of catching more fish are higher. Many of the fishermen claimed to have earlier owned outboard engines. Owing to lack of maintenance parts, some had been sold either as a whole or in parts.

At time when the government operated a policy of 50 % subsidy on fishing inputs and outboard engines, many fishermen owned engines which they bought cheaply. As a result of the economic downturn in the country, government discontinued the policy and placed an embargo on the importation of spare parts. This therefore aggravated the problem of purchase of new outboard engines, and the maintenance of old ones.

An estimated total of 1,487 outboard engines are owned by fishermen in the survey area. Out of this number, 1,201 or 80,8 per cent are functional while the rest 286 or 19.2 % are non-functional. Worthy of note is the fact that the banana and GRP boats are usually not operated without an outboard engine. This more or less gives a 1:1 ratio of banana boat to outboard engine. Dug-outs are not usually operated with engines but in exceptional cases, these boats are boarded with planks and run with outboard engine e.g. for transportation.

4. FISHING

The fishermen in the survey area carried out their fishing activities in three main locations viz the main Benin River, the numerous adjoining creeks, and at sea. These three zones and the combinations specified by the fishermen are presented in the following table 4.

Table 4 : Location of Fishing Activities in the Survey Area

! Location	! Number of villages	! %	!
!Sea (S)	! 4	! 6.4	!
!River (R)	! 13	! 21.0	!
!Creek (C)	! 4	! 6.4	!
!R,S	! 5	! 8.1	!
!C,S	! 1	! 1.6	!
!C,R	! 30	! 48.4	!
!C,R,S	! 5	! 8.1	!
!Total	! 62	! 100.0	!

From the table above, it could be observed that most fishing is done in the main river and the creeks both of which accounted for about three quarter of the number of villages. Only 6.4 per cent of the responses was indicative of exclusively marine fishing. The remaining 11 of the 62 villages do mixtures of sea , river and creek fishing. The main river and the creeks are brackish water environments, and it is here we find the greater concentration of fishing canoes, mostly unmotorized. Those who do their fishing on the sea are mainly fishermen who live in close proximity of the sea and who use motorised banana boats operated from places like Ogheye, Ugogenin, Agokutu, Agogboro and Ekekporo.

4.1 Fishing gear

Fishermen in Benin River area employ a wide range of gear in their fishing operations. The fishermen use nylon or polyamide nets of various sizes and types depending on the fish to be targeted. The main gears in use include gillnets, longline, hook and line, and a variety of traps. Other types include castnets, setnets, beach seines, encircling net for crayfish etc. Traps are used both for fish and for crayfish. The number of villages in which these types of gears are used is presented in table 5 below.

Table 5 : Gear in Use by Village

!Type	! No of village	! % of village	!
! Gillnet	! 43	! 93.5	!
! Longlines	! 42	! 91.3	!
! Traps	! 35	! 76.1	!
! Hook & line	! 17	! 36.9	!
! Others	! 24	! 52.2	!

n = 46 Villages

Note : The number of villages is lower because the discussion on these gears was not included in the pilot survey of some villages.

With a sample size of 46 villages, one can appreciate the degree of use of these gear types. As many as 43 of the villages or 93.5 % make use of gillnet while 42 villages (91.3 %) use longline. Traps are used in 35 villages (76. 1 %). Only 17 (36.9%) of the villages indicated the use of hook and line as one of their major fishing gears. Other gear types are used in 24 or 52.2 % of the villages.

The relative importance of these fishing gears in the different fishing zones is presented in table 6.

Table 6 : Distribution of Gear by Fishing Zones

Fishing zone	Type of Gear				
	Gillnet	Longline	Traps	Hook & line	Others
Sea (S)	4	3	2	2	1
River (R)	5	5	2	2	1
Creek (C)	2	1	1	-	2
R,S	4	5	4	3	1
C,S	-	1	1	1	1
C,R	23	22	20	6	15
C,R,S	5	5	5	3	3

n = 46 villages

Relating the table above to the number of villages in each zone in table 4, it could be inferred that gillnets and longline are used more at sea than traps and hooks & line. Traps are used predominantly for creek and river fishing. Others gears like castnets and seine nets are also used more than hook and line for creek and river fishing.

4.2 Sources of fishing inputs :

Materials used for making fishing gears are many and varied. They are also sourced from various places, but mainly from outside the survey area. These materials include various types of nets, hooks, twines, ropes, floats etc. Canoes and raffia are also used for making traps but these materials are locally sourced. The fishing inputs that are not available locally are sourced from places as shown in the following table :

Table 7 : Important Sources of Fishing Inputs

!Sources	!	Frequency	!	%	!
!Sapele	!	57	!	42.2	!
!Warri	!	47	!	34.8	!
!Koko	!	6	!	4.5	!
!Others	!	25	!	18.5	!
!Total	!	135	!	100.0	!

n = 62 villages

From the table, it is evident that even though Koko is within the survey area and close to most of the villages, it is a relatively unimportant source of fishing inputs. The most important source of fishing inputs to all the villages is Sapele with a relative frequency of 42.2 per cent. Next to Sapele is Warri with a relative frequency of 34.8 % . The other sources of fishing inputs include Lagos, Onitsha and Benin and these account for 18.5 % of the relative frequency.

In concrete terms, 57 out of 62 villages (91.9 %) source some of their fishing inputs from Sapele. 47 villages or 75.8 % purchase materials from Warri which happens to be the Local Government Headquarter of all villages in the survey area.

The three main gears used, viz gillnet, longline and hook and line are related to the sources of procurement in table 8 below.

Table 8 : Fishing Gear and Sources of Materials

!Source	!	Gillnet	!	%	!	Longline	!	%	!	Hook & line	!	%	!
!Sapele	!	38	!	82.6	!	37	!	80.4	!	15	!	32.6	!
!Warri	!	33	!	71.7	!	32	!	69.6	!	15	!	32.6	!
!Koko	!	2	!	4.3	!	2	!	4.3	!	2	!	4.3	!
!Others	!	16	!	34.8	!	17	!	36.9	!	10	!	21.7	!

n = 46 villages

Sapele is the most important source of materials for making gillnets and longlines with 82.6 % and 80.4 % of the villages respectively sourcing their materials for these two types of gear from Sapele. Warri is the next in importance. However, Sapele and Warri share equal importance for the supply of materials for hook and line.

5. FISH MARKETING

The aim of any economic enterprise is to derive some benefit in form of economic return. For a fisherman, the product of his labour is the fish. When the fishermen return with the fish, they sell it in most cases to their wives. Sometimes, they sell the fish directly to fish traders called fish mongers or fish mammals.

5.1 Fish products :

Fish is marketed in two main forms throughout the survey area either as fresh (wet) or smoked (dried). From the responses obtained to questions, fish sold in the fresh form varied from 0 % in certain villages to 90 % in some others. On the other hand, smoked fish form ranged between a minimum of 10% and a maximum of 100 % . On the average, about 70 % of the fish landed is sold in the smoked form while the remaining 30 % is marketed in the fresh form.

During the survey, it was discovered that none of the villages had a smoking kiln (an Altona oven has actually been built in Ogheye but is not being used). All fish smoking is therefore done in the traditional way either in the open or inside a smoking room. The smoking room could be a part of the living house of the fisherman or could be a separate house attached to the main living house. This latter form is however predominant.

The general traditional way of smoking is to spread the fish on wire gauze suspended by four sticks (poles). Firewood are arranged under the gauze and set on fire for the heat and smoke generated to dry the fish. In the case of crayfish, the product is spread on mats, woven from raffia palm, and turned at intervals to ensure uniform distribution of heat.

Drying of crayfish with the aid of direct solar energy (sun drying) was also observed in some of the villages.

Smoke-drying of fish is an activity reserved for women, hence it is normally the wives of the fishermen who smoke the catches of their husbands along with theirs. It was also

discovered in some villages that traders from outside these villages often purchased fish in fresh form from the fishermen but stayed behind in the villages to do the smoking by themselves over the traditional fire places.

5.2 Marketing outlets :

In almost all the villages, fish was being sold either within each village, that is, collected by outside traders or carried to other centres for sale by the fishermen's wives. Only 8 (12.9 %) out of 62 villages indicated that all their fish were sold to outside traders who came to the villages. In the remaining 54 villages, the products are marketed by local women through outlets whose relative importance is presented in table 9 below.

Table 9 : Markets for Sale of Fish

!Town	! Frequency	!	%	!	Absolute	%	!
!Sapele	!	41	!	37.3	!	75.9	!
!	!		!		!		!
!Warri	!	29	!	26.4	!	53.9	!
!	!		!		!		!
!Koko	!	17	!	15.4	!	31.5	!
!	!		!		!		!
!Ogheye	!	9	!	8.2	!	16.7	!
!	!		!		!		!
!Others*	!	14	!	12.7	!	25.9	!
!	!		!		!		!
!Total	!	110	!	100.0	!	-	!

n = 54

* include Ugbenu and Bresibi

It is reflected in the table above that Sapele market is the most patronised by the women for marketing their fish. It has a relative frequency of 37.3 % representing a reponse of 41 out of 110. Warri market with a relative frequency of 26.4 % is next in importance for fish marketing . More than 50 % of the villages patronize it. Koko market , patronized by over 31 % of the villages , follows Warri in importance. Ogheye market is patronized by 16 % of the villages. The significance of this is that most of the women used Ogheye only as a transit point where they can join river transportation to the other markets.

The relationship between the villages in their different geographical locations and the main market outlets for sale of fish is presented in table 10 below.

NETWORK OF FISH MARKETING IN BENIN RIVER ESTUARY

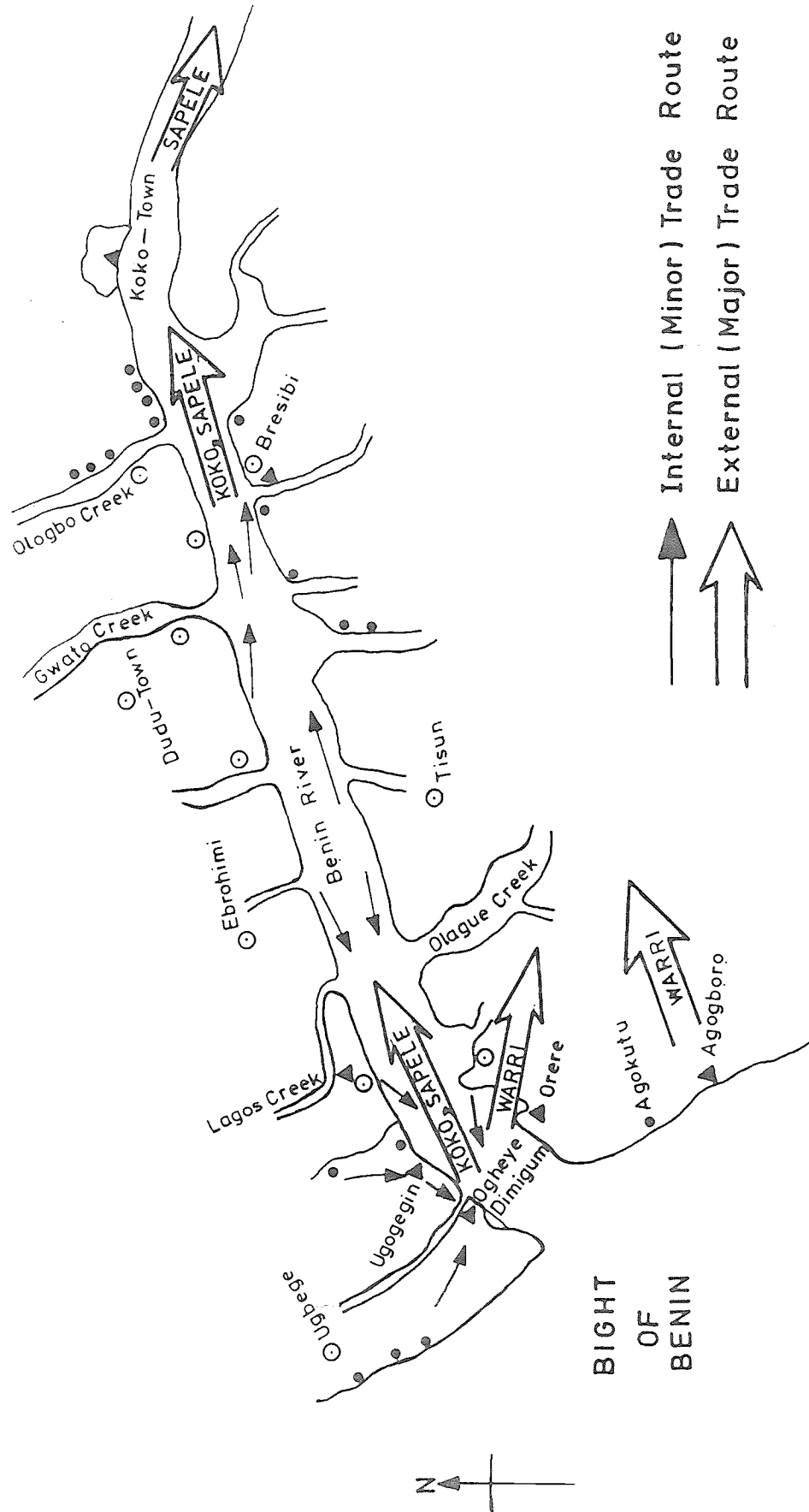


Table 10 : Villages by Location and Market Outlets

!Market !	Location of Village										!
	!LB	! %	! LC	! %	! RB	! %	!RC	! %	!Sea	! %	
!Sapele	! 4	! 36.4	! 9	! 36	! 13	! 36.1	! 12	! 38.7	! 3	! 43	!
!Warri	! 3	! 27.3	! 8	! 32	! 9	! 25	! 6	! 19.3	! 3	! 43	!
!Koko	! 1	! 9.0	! 4	! 16	! 6	! 16.7	! 6	! 19.3	! -	! -	!
!Ogheye	! -	! -	! 2	! 8	! 3	! 8.3	! 3	! 9.7	! 1	! 14	!
!Others	! 3	! 27.3	! 2	! 8	! 5	! 13.9	! 4	! 13.0	! -	! -	!
!Total	!11	!100.0	! 25	!100	! 36	!100	! 31	!100	! 7	!100	!

n = 54

Note :LB = Left Bank: LC = Left Creek: RB = Right Bank :
RC = Right Creek.

It is evident from the table above that no matter the location of the village, Sapele was the major outlet for marketing the fish product. However, for villages located on the sea shore, Sapele and Warri markets shared equal importance. For villages located on the left creek and the right bank respectively, Warri market is second in importance to Sapele. Warri market shares the second position with other markets for villages on the left bank and with Koko for villages on right bank creeks.

6. INFRASTRUCTURAL FACILITIES

Facilities covered during the survey include Pier / Jetty, Electricity, Potable water, Medical (Dispensary), School for children, Shops for purchase of provisions and Church. These facilities are lacking in most of the villages. A summary of the availability of these facilities is presented in the following table.

Table 11 : Availability of Infrastructures in the Survey Area

! Facility	! Number of villages			
	! Have	! %	! Lack	! %
! Pier/Jetty	! 16	! 25.8	! 46	! 74.2
! Electricity	! 5	! 8.1	! 57	! 91.9
! Private Generator	! 32	! 51.6	! 30	! 48.4
! Dispensary	! 5	! 8.1	! 57	! 91.9
! School	! 23	! 37.1	! 39	! 62.9
! Shop	! 9	! 14.5	! 53	! 85.5
! Church	! 20	! 32.3	! 42	! 67.7

n = 62 villages

16 Out of the 62 villages in the sample have piers/jetty which are made of wood and planks. The rest 46 villages or 74.2 % lack this facility. In fact, it was only in Gbogbodu that the survey team came across a steel jetty purportedly supplied to the community by the Warri Local Government. The common occurrence therefore is to find boats anchored to poles which lined the river/creek bank of any village. Only 9 villages or 14.5 % had shops. A shop here is described as a small room or kiosk set aside for retailing provisions. They are operated mostly by women. Most provisions are bought through hawkers or brought to the villagers by outside traders who come to buy fish from them. The women who market fish outside their villages also replenish their provisions during such trips. Churches were found available in 20 of the 62 villages.

6.1 Electricity

Communal electricity supply available through heavy duty generators were observed in only 5 of the villages. These were Gbokoda, Jakpa, Dudu Town, Bateren and Deghele. The plant at Gbokoda is however non-functional. In these and some other villages, individuals own generators for private electricity supply.

Private generators were available in 32 villages while they were lacking in 30 villages representing 51.6 % and 4 % respectively. The status of the available generators is presented in table 8.2

Table 12: Statuts of Individually Owned Generators

! Status	! Number	! %	!
!Functional	! 126	! 67.3	!
!Non-Functional	! 61	! 32.6	!
Total	! 187	! 100.0	!

About 126 or 67.3 per cent of the available generators are functional while the remaining 61, representing 32.6 % are non-functional.

6.2 Water supply :

Potable water is generally lacking in the survey area. Where boreholes exist, they were found to be non-functional as was the case in Gbokoda and Deghele. Only Jakpa had a semblance of a functional borehole for water supply though it could not be ascertained at the time of visit whether the borehole was operational. As a result of this, the villagers resorted to various sources for getting drinking water. These included rain water, ponds, wells, creek water etc. The relative importance of each of these sources of water supply is presented in table 13.

Table 13 : Sources of Water Supply to the Villages

! Source	! Frequency	! %	!
! Ologbo Creek	! 23	! 32.4	!
! Wells /Borehole	! 20	! 28.2	!
! Ogheye/Tanker	! 18	! 25.3	!
! Rain Water	! 10	! 14.1	!
!Total	! 71	! 100.0	!

n = 62 Villages

The most prominent source of fresh water supply to the communities is Ologbo Creek which has a relative weight of 32.4 %. Wells and boreholes account for 28.2 % . Ten villages source their drinking water from rain water which they collect and store in numerous containers during the rainy season to tide them over the dry season. Rain water is however collected on individual household basis. The more common combinations are tanker and rain water, wells and rain water etc. All the above mentioned three sources are free to the villagers. But another source which is the third most important with a relative frequency of 25.3 % is through purchase from tankers at Ogheye. These tankers run the water supply business on commercial basis.

It is important to note that the tankers which sell water to the villagers collect the water mostly from Ologbo Creek (river) which has fresh water . If the tankers are therefore combined with Ologbo creek, then the importance of Ologbo creek becomes more significant with 41 villages representing 66 % being dependent on it for fresh water. It is equally important to note that the water gotten from this and all other sources is not treated.

6.3 Medical facilities :

Of the villages in the sample, only 4 had dispensary buildings representing an insignificant 6.45 % . These dispensaries / clinics were found in Gbokoda, Jakpa, Deghele and Eateren . After the survey ended , it was learnt that a fifth, private dispensary had been built in Ogheye-Okoreke. Those in Deghele and bateren were not being operated but were built for them by the Government.

In view of this apparent lack of medical facilities in the survey area, the people therefore obtained medical attention from places whose relative importance are as presented in table 14 below :

Table 14 : Sources of Medical Treatment

! Place	! Frequency	! %	!
! Koko	! 41	! 41.0	!
! Gbokoda	! 19	! 19.0	!
! Sapele	! 18	! 18.0	!
! Others *	! 16	! 16.0	!
! Warri	! 6	! 6.0	!
! Total	! 100	! 100.0	!

* include Hawkers, Eku, Jakpa, Ogheye.

From the table, it can be deduced that the medical facility at Koko with a relative frequency of 41% is the most highly patronised by the villages in the survey area. In concrete terms, over 66% of the villages depend in part on Koko for medical care due perhaps to the existense of a fairly well-equipped hospital there . The next most important is Gbokoda with a relative frequency of 19% while Sapele which is third on the list has a relative weight of 18 %. Visitation to the medical centres are however occasioned by serious illnesses. Villagers claimed to patronise local medecine dealers (hawkers) for purchase of drugs in case of minor ailments.

6.4 Educational facilities :

A small proportion (37.1%) of the villages in the sample survey had schools which are mostly for the primary level. In fact, only Gbokoda had a secondary school amongst the lot. Despite the paucity of schools, a significant proportion of the existing ones had no teachers as reflected in table 15 below.

Table 15 : Status of Schools in the Villages

! Statuts	! Numbers	! %	!
!with teacher(s)!	! 16	! 69.6	!
!No teacher	! 7	! 30.4	!
!Total	! 23	! 100.0	!

The highest number of teachers in any of the schools having teachers was two (2). These two teachers handled children from primary one to primary six. There is a reportedly high turnover rate of teachers in the area because those posted there refuse to stay perhaps due to lack of basic amenities in the communities.

7. MISCELLANEOUS INFORMATION :

7.1 Transportation :

River transportation is the major means of access to the villages in the survey area. This accounts for why villagers claimed equal number of boats and inhabitants. At times, the only way of moving from one part of village to another is by boat. One therefore finds that even small kids exhibit dexterity in the padding of canoes for transportation or for fishing.

Public transport boats which carry people and a lot of cargo are operated in the area. The same is true of GRP speed boats most of which are operated on twin engines for commercial transportation .

The frequency of call by these boats in the villages was determined in the survey and the outcome is presented in table 16 below .

Table 16 : Access to Transportation and Speed Boats in the Villages

! Frequency	!Transport Boats		! Speed Boats	
	!No of Villages !	%	!No of Village !	%
!Regularly	! 5	! 8.1	! 5	! 8.1
!On Request	! 31	! 50.0	! 33	! 53.2
!Not at all	! 26	! 41.9	! 34	! 38.7
! Total	! 62	! 100.0	! 62	!100.0

It could be observed from the table that public transport and speed boats stop by most of the villages on request. This involves the travellers standing by the river in expectation of the arrival of these boats. On sighting them in mid-water, they wave frantically for the boats to pull by and pick them up. This is possible where the village has a pier that can accommodate the

big transport boats. Without a pier/jetty, the smaller speed boats can stop by to pick or drop passengers. In many cases however, the traveller has to pull in this canoe to meet the public transportation boats at mid-river before embarking.

Villages that enjoy the services of these boats regularly represent only 8.1 per cent of the total. They include Jakpa, Ogheye-Dimigun, Gbogbodu, Bresibi and Arun-Ologbo. Those which have access to the boats on request are 50% and 53.2% for public transport and speed boats respectively. Villages where the boats do not stop by at all represent 41.9% and 38.7% respectively for public transport and speed boats. Most of the villages in this latter category are those located inside the creeks.

There exist some road tracks through which some of the villages make contact with one another but such foot paths are very few. For instance, one can reach Tebu and Jakpa by foot track from Gbokoda. Similarly, Agogboro, Agokutu and Aja-Eye are connected to Orere by such track along the coast.

7.2 Political Relations :

All the villages in the survey area are under the administration of Warri Local Government but there are pockets of traditional administrative linkages. No particularly clear pattern could be discerned as some of the villages either claimed to be independent of any other or that they were a traditional headquarter to a group of other villages. Most of these claims were found to be related to ownership of land and it could be an explosive issue. However, some of the claims were corroborated by such subordinate villages from which it was noted that Jakpa, Deghele, Bateren, Ugbege, Ureju and Tebu are headquarters of some villages. The Ijaws associate with Okifamba village.

Aruntons are linked with the main (or stem) villages e.g. Arunton-Obaghoro is owned by Obaghoro community. The same applies to Arunton-Tebu, Arunton-Ebrohimi, Arunton-Kolokolo, Arunton-Tisun. Arunton in Itshekiri language means "mouth of creek". Similarly, Jakpatie which means "small Jakpa" belongs to Jakpa town while Baterentie belongs to Bateren.

7.3 Number of Fishermen :

The estimation of this parameter presented a difficulty as most villagers claimed fishing as their major occupation. The women, apart from trading, also do their own fishing both on a subsistence scale and for commercial purposes. This they do on the river and in the creeks but not on the open sea. Since most of the villages have non-functional or no schools for their children, the kids therefore have to accompany their parents on fishing trips. A very common sight is to find school-age children in groups of 3 or 4 out on the waters doing some fishing

by themselves with hooks and lines, setting traps or using some other forms of gear.

7.4 Other economic activities :

The predominant means of livelihood for the people in the survey area is fishing. Fishing activity is preponderant in the months beginning from April and ending in September. The period between October and March is the lean season.

In a sample of 46 villages, 12 of them indicated that they had no economic activity other than fishing. This represents 26.1% of the sample. The remaining 73.9% had some other forms of economic activities which are either done part-time or during the lean fishing season.

(Note : In the pilot phase, this question was not addressed hence the sample size is 46).

There are a wide range of the other forms of economic activities and they are listed as follows :

- Farming of cassava, yams, plantain, sugar cane.
It also includes collection of palm fruits for the production of edible oil.
- Farming (collection of) rushes (*juncus* spp) for mat weaving.
- Petty trading
- Canoe building
- Hunting for wild animals
- Cutting thatches for house roofing
- Lumbering or log felling for saw milling
- Keeping of livestock e.g. poultry, cattle, pigs, goats
- Cutting and sale of stick used in setting traps for crayfish
- Cutting of firewood for sale
- Salt making.

Of all the above listed activities, production of rushes is the most prominent being undertaken in 14 out of 46 villages. This represents 30.4 %. It is an economic activity common among the Itsekiris and it is done between October and March during the dry season. At this period, the rushes are cut and spread out in the farm. They are assured of sufficient sunshine to dry them. According to those who do it, the activity is an economically rewarding one. A bundle from which between 10 and 12 mats can be woven currently sells for fifty naira (N50.00). A rushes farmer can make over four thousand naira (N4,000.00) in one season. The Itsekiris who produce the rushes do not do the weaving, rather, they are transported or sold to Ilaje communities who are skilled in weaving. In fact, the survey team came across mat weaving only in the predominantly Ilaje Agogboro community. Mat weaving is done only by women.

The next important secondary activity in the survey area is the production of food which was so indicated in 8 villages which represent 12.4 %, Canoe building, log felling and hunting were secondary activities encountered in the typical Ijaw communities only.

7.5 Cooperative societies :

During the survey, it was discovered that the villagers detested the idea of cooperative societies. Initial reactions to the survey team was to refuse to give information on grounds that the survey was believed to represent a cooperative organisation. Cooperation was got only after they were convinced that there existed no correlation between the team and any cooperative organisation. This often took a lot of time and talking.

The mere mention of cooperatives was anathema to them because of their previous encounter with attempts at forming such societies. Inputs given to such societies were reportedly "hijacked" by some highly placed people and thus real fishermen did not benefit from such inputs.

8. MAJOR PROBLEMS REPORTED BY VILLAGERS

There appeared to be a general consensus amongst the villagers in the survey area concerning the problems facing their means of livelihood and these include :

8.1 Fishing Inputs :

Fishing inputs were generally lacking or scarce and these inputs included netting materials, floaters, hooks, twine and ropes. Where these materials are available, they have become very expensive and are beyond the financial capability of many fishermen. This is however a reflection of the present economic situation in the country.

8.2 Outboard Engines :

Lack of outboard engines limits the area of operation of the fishermen and consequently their catches : the prices of engines are, in the opinion of the fishermen, very exorbitant. Coupled with this is the general lack of spare parts to maintain existing ones.

8.3 Water Hyacinth :

The incursion of water weed (*Eichornia crassipes*) into the Nigerian waters about 1986 has added another dimension to the problems of the fishermen. The fishermen complained of harvesting these water weeds with their gear rather than fish for which the gear were meant. This therefore reduces the life span of the nets which are frequently torn when clogged by the weeds. Apart from making the fish unavailable, these weeds also disrupt river transportation rendering the villages inaccessible. The weeds also damage the propellers of outboard engines.

8.4 Industrial Fishing Trawlers :

The government regulation delimiting the first three nautical miles from shore of the territorial waters for artisanal fishing within which trawlers should not operate is more often breached. Fishermen doing marine fishing complained that these trawlers usually operate close to shore and, in the process, destroy their gear at sea. The artisanal fishermen therefore face very serious competition from these numerous trawlers in their traditional fishing ground. However, many artisanal fishermen, especially those operating from Ogheye, seek out the industrial trawlers to purchase their by-catches which are smoked in the village.

8.5 Infrastructural :

Taking a cursory look at section 8 of this report where infrastructures and facilities available in the survey area was presented, the infrastructural problems facing the communities will easily be appreciated.

The major problems are lack of drinking water, electricity, medical facilities and schools for the children . Where boreholes were available, they were non-functional.

Other problems enunciated by the villagers included inundation of their villages at high tide; erosion of their land especially on the right bank of the Benin river ; absence of banking and postal facilities in the entire area ; very shallow creeks ; inadequate transportation and lack of jetties.

Table 17 : Summary of key village data

	Category	Its.	Ijaw	Ila.	Urh.	Oth.	Total	D.o.	Ban.	GRP	Total
Abadegbene	CR	0	100	0	0	0	100	42	0	0	42
Abiala II	C	0	150	0	0	0	150	50	0	0	50
Adagbrhassa	CR	0	350	0	0	0	350	60	0	0	60
Agogboro	S	105	0	3325	70	0	3500	0	500	1	501
Agokuto	S	n.a.	n.a.	n.a.	n.a.	n.a.	80	n.a.	6	n.a.	6
Aja-Amita	CRS	600	0	0	0	0	600	350	0	0	350
Aja-Eye	S	n.a.	n.a.	n.a.	n.a.	n.a.	25	n.a.	n.a.	n.a.	n.a.
Aja-Ukpofufen	S	100	0	0	0	0	100	40	0	2	42
Aja-Usobo	C	n.a.	n.a.	n.a.	n.a.	n.a.	180	n.a.	n.a.	n.a.	n.a.
Arun Ologbo	R	200	80	0	20	0	300	110	0	0	110
Arunton-Ebr.	CR	60	25	15	0	0	100	50	25	0	75
Arunton Kolo.	CR	35	15	0	25	0	75	20	0	0	20
Arunton-Tisun	CR	94	21	35	0	0	150	30	0	0	30
Asantuagbene	CR	0	140	0	0	0	140	100	0	0	100
Asabotie	CR	0	500	0	0	0	500	100	0	0	100
Atankpoki	CRS	80	0	0	0	0	80	160	10	0	70
Atsuran	R	400	0	0	0	0	400	100	0	0	100
Bateren	CR	360	40	0	0	0	400	80	0	0	80
Baterentie	CR	170	80	0	0	0	250	207	0	0	207
Bobì	CR	375	0	0	0	0	375	60	0	0	60
Bresibi	CR	220	25	0	105	0	350	300	0	0	300
Deghele	CR	300	20	0	50	30	400	200	0	0	200
Doro Camp	CR	0	0	0	120	0	120	60	0	1	61
Dudu Town	CR	500	0	0	0	0	500	400	6	0	406
Ebighan	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ebrohimi	CR	175	70	0	105	0	350	300	0	0	300
Egheyo	R	108	0	12	0	0	120	15	0	0	15
Ekekporo	S	350	0	250	0	0	600	130	140	0	270
Gbetiokun	R	7	0	0	5	0	12	5	0	0	5
Gbogbodu	CR	305	0	25	20	0	350	100	0	0	100
Gbokoda	C	1260	180	180	180	0	1800	100	0	1	101
German III	CR	24	0	10	6	0	40	15	0	0	15
Idebagbene	CR	0	400	0	0	0	400	100	0	0	100
Ideleketa	C	n.a.	n.a.	n.a.	n.a.	n.a.	35	n.a.	n.a.	n.a.	n.a.
Igbeletie	CR	0	30	0	0	0	30	10	0	0	10
Jakpa	CR	600	20	0	30	0	650	500	0	0	500
Jakpatie	RS	150	20	30	0	0	200	90	0	0	90
Jeje Camp	CR	13	8	0	0	0	21	5	0	0	5
Mukoro Camp	CR	0	0	0	20	0	20	15	0	0	15
Obaghorò	CR	148	7	0	6	0	161	100	0	0	100
Oboghorò	R	40	0	0	0	0	40	20	5	0	25
Obon-Ugbege	CS	n.a.	n.a.	n.a.	n.a.	n.a.	156	n.a.	n.a.	n.a.	n.a.
Ogheye-Dimigun	RS	900	300	1800	0	0	3000	250	350	6	606
Ogheye-Eghor.	S	1425	30	45	0	0	1500	52	68	1	121
Okifamba	CR	0	120	0	0	0	120	50	0	0	50
Okifamba Ext.	C	n.a.	n.a.	n.a.	n.a.	n.a.	20	n.a.	n.a.	n.a.	n.a.

Table 17(cont.)

Summary of key village Data

	Category	Its.	Ijaw	Ila.	Urh.	Oth.	Total	ID.o.	Ban.	GRP	Total
Olobo	CRS	40	0	0	0	0	40	40	0	0	40
Olopokan	R	n.a.	n.a.	n.a.	n.a.	n.a.	60	n.a.	n.a.	n.a.	n.a.
Olure	CR	n.a.	n.a.	n.a.	n.a.	n.a.	80	n.a.	n.a.	n.a.	n.a.
Orere	RS	1976	9	15	0	0	2000	350	0	0	350
Oroke	R	0	50	0	0	0	50	13	0	0	13
Orubu	CRS	235	15	0	0	0	250	50	2	0	52
Otumara	R	15	30	5	0	0	50	30	0	0	30
Seisuwogha.Z.	C	0	70	0	0	0	70	60	0	0	60
Tisun	C	n.a.	n.a.	n.a.	n.a.	n.a.	200	n.a.	n.a.	n.a.	n.a.
Uba-Iro	R	120	20	0	60	0	200	50	0	0	50
Uba-Odo	R	15	20	25	0	0	60	25	0	0	25
Uba-Sobo	CR	10	20	0	0	0	30	20	0	0	20
Uburakwe	CR	0	40	0	0	0	40	12	0	0	12
Udo 1	CRS	120	50	30	0	0	200	100	0	0	100
Ugbeeshi	RS	0	120	0	0	0	120	50	0	0	50
Ugbege	CS	300	0	0	0	0	300	100	50	0	150
Ugbomaja	C	40	0	0	0	0	40	12	0	0	12
Ugogegin	RS	750	525	225	0	0	1500	300	29	1	330
Ugogegin I	R	58	0	2	0	0	60	80	0	0	80
Ureju	R	700	0	0	0	0	700	300	0	0	300
Urhobo Camp	R	0	0	0	100	0	100	39	0	0	39
Usoh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Uton Garafa	CR	0	20	0	40	0	60	18	0	0	18
Utongbo	CR	n.a.	n.a.	n.a.	n.a.	n.a.	100	n.a.	n.a.	n.a.	n.a.
Utonlila	CR	50	0	0	0	0	50	6	1	0	7
Uton Ukukuro	R	0	80	0	0	0	80	40	0	0	40
Young Town	CR	1200	0	0	0	0	1200	250	0	0	250
Zion Ureju-T.	CR	15	15	30	0	0	60	25	0	0	25
Totals		8887	3815	934	962	30	12050	6346	1192	13	7451

key

CATEGORY :

POPULATION

BOATS

C = Creek (fishing)

Its = Itsekiri

D.o. = Dug-out canoes

R = River (fishing)

Ila. = Ilaje

Ban = Banana boat

S = Sea (fishing)

Urh. = Urhobo

GRP = Glassfibre Reinforced

Oth. = Others

Part II DISCUSSION OF SELECTED SURVEY RESULTS

(by Jan M. Haakonsen)

The principal aim of the village survey was to provide a situation analysis of the Benin river estuary area which could have practical relevance for the FAO executed Integrated Rural Fisheries Development Project. It is therefore worthwhile to take a closer look at those survey results which may have the most important implications for the project's future.

1. Natural constraints :

One of the greatest challenges of the project is probably that it has to cover one of the most difficult human habitats of Nigeria. The Benin estuary area is linked up with the huge Niger delta which for the most part consists of mangrove swamps divided up by the main channels of rivers like the Benin and a spectacular maze of smaller and larger creeks. These creeks are part of a network of natural inland water ways stretching from lac Nokoué in the Benin Republic to the Cameroonian border area.

Road communication is virtually non-existent in the area, so water transport is more important than in most places. People in the area are of course well adapted to this situation, but that also means that they have the possibility of settling just about anywhere in the area, and the settlement pattern is indeed very dispersed. It is clear that the project cannot possibly hope to be directly involved in but a small fraction of the villages there, some villages will thus have to have priority over others.

Koko was chosen well in advance as the site for a rural fisheries centre along the Benin river probably in part due to the fact that the town already has a port and is the last settlement on the Benin to have a road connection. However, it is still 55 km from the estuary itself where the most productive fisheries take place. All transport from Koko to the various fishing centres has to take place by boat. Only a few villages are interlinked with footpaths, none of them suitable for any kind of motorized vehicles. The only exception here may be the coastal strip south-east of Orere which is composed of "solid" sand. On the other side of the estuary, including the Ogheye area, the coastline is extremely muddy and in any case very exposed to erosion which is a major ecological problem here as along much of Nigeria's coast.

Another environmental threat which has appeared in the Benin river area only since 1988 is the presence of the water hyacinth (*Eichhornia crassipes*) which has spread from the Lagos lagoon system. This floating plant regularly clogs up creeks and rivers, with the consequence of isolating villages completely for long periods. Even on the Benin river itself can the aggregations of the hyacinth be so great as to hinder operations of motorized transport boats. Similarly, the plants pose problems for the fishermen, entangling themselves in and damaging nets and filling up surface level traps.

2. Koko's limited role as a centre

Of greater concern is perhaps the fact that Koko does not appear to be of any great importance to the villages downstream, despite its direct roadlink to Benin City and the rest of the country. Koko is patronized by villagers mainly for its hospital, for other purposes distant-lying Sapele and Warri are far more important for the downstream villages. This is particularly true for sectors directly relevant for the fisheries.

For instance, only 6 of 62 villages acknowledge Koko as one of the places to go to when in need of fishing gear and fishing equipment. As a place to market fish, Koko is reported to be used by nearly a third of the villages, but often in conjunction with others. It is also significant that none of the sea-fishing villages market any of their fish through Koko despite having the largest volumes of exportable fish.

With this background, it is obvious that much of the project's activities will have to take place outside Koko, particularly in Ogheye and possibly also Agogoro which appears to be the most active fishing village in the area (incidentally one of the most important "discoveries" of this survey). Koko is suitable as a base for project operations in the field, its potential as a major fisheries centre, however, is more doubtful.

3. Fishing operations

It is obvious that fishing takes place in every village surveyed, but on quite different levels. In many villages, particularly those located in small creeks, fishing appears to be but one of two or three economic activities. The fish caught is largely for auto-consumption within the village itself. Fishing vessels here consist, with few exceptions, of small unmotorized dug-out canoes from which a variety of fishing techniques are employed of which gillnets appear to be almost universally applied. Other common gear is traps and hook & line.

Fishermen fishing more in the main river do this also largely without engines using mostly dugouts and in a few cases also banana-boats. Products from these fisheries are more liable to end up on the distant market circuits indicating larger volumes and surpluses. Fishing methods are similar to those of the creek fisheries, and include also longlines.

The bulk of the fish nevertheless comes from the coastal and estuary villages. Sea fishing is for the most part conducted from motorized banana-boats, and more rarely from larger dug-outs which may also be motorized. Here, too, gillnets (bottom-set and drift) are widely used as are longlines. The latter is a method which is otherwise little used in Gulf of Guinea countries.

Lack of fishing gear is frequently reported as a problem by fishermen, both because one has to travel far to get it in many cases (Sapele, Warri) and because of the high costs. The latter is hardly unique for fishing gear. As part of the Nigerian Government's structural adjustment programme (SAP), the Naira has been devaluated by several hundred percent in just a few years. As a consequence, the price of imported goods has risen drastically. This price rises are perhaps particularly strongly felt when it comes to fishing inputs as these were often subsidized by the Government in the past. The country's present economic condition and SAP have not allowed for such subsidies to continue.

The same applies to outboard engines which some fishermen said they could no longer afford (i.e. after the removal of subsidies). This may indicate that the use of outboard engines in certain fishing operations, e.g. in creeks and on the main river, may not be economically viable. It is thus questionable whether engines should be promoted in such cases, for instance through credit schemes to fishermen.

In the marine fisheries the situation is different where a much larger operational area combined with higher volume of catches justify the regular use of outboard engines. Outboard engines are also needed for long-distance transport which curiously seems to be totally in the hands of outsiders, presumably urban-based boatowners in places like Warri and Sapele. Not one village surveyed reported the local ownership of one of the regular transport boats, and only six of the villages had GRP boats which are usually used for human transport.

4. Community needs

The integrated project contains a community development element and, given the almost universal absence of even the most basic facilities, priorities will have to be set in order to at least cover the most urgent needs. Most villages could need better health and educational facilities, however, the most immediate problem everywhere is the lack of a proper and permanent drinking water supply.

Only five villages have a communal water supply, but in at least four cases it is non-functional. Most people rely on haphazardously collected and poorly stored rainwater whenever it is available. In the dry season drinking water is generally purchased at high prices or collected from the limited fresh water sources in the area. One such source is Ologbo creek almost as far upstream as Koko. Most water tankers come here to collect water to sell in the downstream area, and it is reckoned that at least two thirds of the villages surveyed depend on unpurified Ologbo Creek water for drinking during the dry season.

There would seem to be a potential for improving both the supply and the quality of drinking water by improving storage and rainwater collection techniques and perhaps also by rehabilitating existing, but non-functional wells.

5. Socio-economic observations

The area surveyed is basically populated by four ethnic groups of which the Itsekiri is the most prominent one representing nearly three fifth of the population surveyed. This group also owns most of the land in the area. The Ilaje from Ondo state are predominant along the coast but consider themselves, and are so treated, as a sort of temporary visitors even though they may have been settled in one of the local villages for considerable time.

The third-largest group in the area is the Ijaw who often keep apart from others by founding their own settlements. Finally, the few Urhobo in the area are on the fringe of their traditional territory which is mostly inland of the mangrove swamps.

Although increased contacts between different groups these days contribute to dilute some of the past differences, it continues to be important to recognize what distinguishes one group from another. One thing is the language, and since English is only spoken to a limited extent in the more remote villages, knowledge of local languages or the use of an appropriate interpreter is essential in dealing with the village communities.

Occupational specialization also often reflects ethnic background to a large extent in the area in question, for instance, the Urhobo are the farmers and although they also engage in some fishing, cultivating the land remains the principal occupation of most. One is therefore just about guaranteed never to encounter an Urhobo operating, say, a long-line a couple of miles off-shore.

Such a fisherman would more likely be an Ilaje, this ethnic group being the dominant marine fishermen in the area as in much of Nigeria. They are also the builders and principal users of the planked banana-boat, and are probably the most active fishermen in the project area. On the other hand, one would not expect to see an Ilaje cultivating a field in the Benin estuary area.

The Ijaw also engage actively in fishing, though more within the estuary and creeks, and operate exclusively from dug-outs. It is often the women who do most of the fishing, Ijaw men distinguishing themselves more for their canoe-carving skills which are in great demand in the swampy mangrove belt.

As traditional landowners in the area, the Itsekiri can most easily make use of what grows naturally in the area. The collection of rushes (*Juncus* spp.) for mat-making seems to be a particularly important activity in this connection, yielding important economic returns. It is also an activity which compliments well the river and creek fisheries most Itsekiri are engaged in as rushes can be collected during the off-seasons in fishing. It is also clear that the Itsekiri with their historical property rights in much of the project area also play an important traditional political role.

Ethnic traditions and distinctions are thus important to bear in mind for the project when operating in the area. However, one cannot end this overview without underlining a surprisingly strong unifying factor between all the ethnic groups in all the villages visited, namely the extremely strong sentiments against official cooperative societies. Apparently due to poor experiences in the past, fishermen in the area are ardently opposed to the very idea of new cooperative schemes being introduced to them. In fact, the field researchers often had to go through great pains to convince villagers that the survey had nothing to do with the cooperative movement before the villagers would accept to answer their questions. These experiences in themselves may have been the singlemost important socio-economic result of the survey.

PART III : SUMMARY VILLAGE PROFILES

The following list gives an "at a glance" impression of the villages surveyed, in alphabetical order.

Explanation on the various data categories are given below. Villages marked with an asterisk are included also in part IV with some further comments. Note that village names are the ones presently in use in the respective villages themselves and may not always be called the same by outsiders or on maps from the area. Many of them, especially the smaller ones, are quite unstable and may be occupied continuously only for limited periods, sometimes by different groups. Others again may be totally abandoned after a while, at the same time new settlements can appear elsewhere from one week to the next.

Explanations

Location and distance from Koko : Left and right bank always refers to the main river Benin. Distance is by boat, i.e. the time it took from Koko using a 15 foot open Yamaha GRP with 25 hp outboard motor. Time references are necessarily very approximate as travel time varies enormously according to tide, current and weather conditions.

Composition : Refers to the ethnic composition of the villages, usually as reported by the villagers.

Community HQ : Refers to whether or not a village is centre for other satellite villages. See section 8.1 under part I of the report for further explanation.

Boats : The various vessels belonging to the villages are listed as follows.

D.o. : Dugouts

Ban. : (Planked) "banana" boats

Trans.: (Planked) public transport boats

GRP : Open GRP boat, usually Yamaha models around 15 feet built in Port Harcourt

ABADEGBENE (Extension)

Location and distance from Koko : Adagbrhassa Creek, < 1hr

Inhabitants : 100 Composition : Ijaw 100 %

Community HQ ? : No

Boats : D.o. :42 Ban :0 Trans : 0 GRP : 0

Operational engines : 0

Type of fisheries : Creek,
main river

Gear used : Gillnets, traps,
long-line, castnet, driftnet

Main fish markets : Sapele

Other economic activities : Canoe carving

Infrastructure/facilities : School (primary)

Public transport : Sapele-Ogheye boat stops on request

ABIALA II

Location and distance from Koko : Ologbo Creek, 35 mins.

Inhabitants 150 Composition : Ijaw 100 %

Community HQ ? : No

Boats : D.o.: 50 Ban :0 Trans : 0 GRP : 0

Operational engines : 1

Type of fisheries: Creek Gear used : n.a.

Main fish markets : Sapele, Bresibi, Ugbenu

Other economic activities : n.a.

Infrastructure/facilities : School (primary)

Public transport : None

ADAGERHASSA

Location and distance from Koko : Right bank, 50 min

Inhabitants : 350 Composition : Ijaw 100 %

Community HQ ? :n.a.

Boats : D.o. : 60 Ban : 0 Trans : 0 GRP : 0

Operational engines : 3

Type of fisheries : Creek,
main river

Main fish markets : Sapele

Other economic activities : n.a.

Infrastructure/facilities : n.a.

Public transport : Sapele-Ogheye boats stop by on request

AGOGBORO

Location and distance from Koko : On the coast, > 2hrs

Inhabitants 3,500	Composition :	Ilaje 95 %
		Itsekiri 3 %
		Urhobo 2 %

Community HQ ? : No

Boats : D.o.: 0 Ban : 500 Trans : 0 GRP : 1

Operational engines : 500

Type of fisheries: Sea fishery Gear used :Gillnets, long-line
castnet, driftnet

Main fish markets : Sapele, Warri

Other economic activities : Farming, mat weaving

Infrastructure/facilities : School (primary), church

Public transport : None

AGOKUTU *

Location and distance from Koko :Lagos creek, 1hr 10 mn

Inhabitants : 600

Composition :Itsekiri 100 %

Community HQ ? : No

Boats : D.o. :350 Ban :0 Trans : 0 GRP : 0

Operational engines : 0

Type of fisheries : Creek, main Gear used : Gillnets, traps,
river, sea long-line, castnet,

Main fish markets : Sapele, Warri, Onitsha

Other economic activities : Rushes, trading

Infrastructure/facilities : Pier, shop

Public transport : Sapele-Ondo State boat stops on request

AJA-AMITA

Location and distance from Koko : Sea coast, > 2hrs

Inhabitants 80

Composition : Ilaje 100 %

Community HQ ? : No

Boats : D.o.: 0 Ban :6 Trans : 0 GRP : 0

Operational engines : n.a.

Type of fisheries: Sea Gear used :Gillnets,
driftnets

Main fish markets : n.a.

Other economic activities : n.a.

Infrastructure/facilities : n.a.

Public transport : None

AJA-EYE *

Location and distance from Koko : Sea-coast, < 2hrs
 Inhabitants : 25 Composition : Probably 100 % Itsekiri
 Community HQ ? n.a.
 Boats : n.a. D.o.: Ban : Trans : GRP :
 Operational engines : n.a.
 Type of fisheries : n.a. Gear used : n.a.
 Main fish markets : n.a.
 Other economic activities : n.a.
 Infrastructure/ facilities : n.a.
 Public transport : None

AJA-UKPOTUFEN

Location and distance from Koko : Sea-coast, 1hr 40 mn
 Inhabitants : 100 Composition : Itsekiri 100 %
 Community HQ ? : No (independent village)
 Boats : D.o.: 40 Ban : 0 Trans : 0 GRP : 2
 Operational engines : 2
 Type of fisheries : Sea Gear used : Gillnets, traps
 long-line
 Main fish markets : Sapele, Warri
 Other economic activities : None
 Infrastructure/ facilities : None
 Public transport : None

AJA-USOBO *

Location and distance from Koko : Behind Orere, 1hr 40 min
 Inhabitants : 180 Composition : Probably predominantly Urhobo
 Community HQ ? : n.a.
 Boats : D.o.: 110 Ban : none Trans : 0 GRP : 0
 Operational engines : 0
 Type of fisheries : Creek Gear used : Gillnets, traps
 Main fish markets : n.a.
 Other economic activities : Palm oil production
 Infrastructure/ facilities : None
 Public transport : None

ARUN - OLOGBO

Location and distance from Koko : Right bank, 20 mins
 Inhabitants : 300 Composition : Itsekiri 67 %
 Ijaw 26 %
 Urhobo 7 %
 Community HQ ? : n.a.
 Boats : D.o.: 110 Ban : 0 Trans : 0 GRP : 0
 Operational engines : 5
 Type of fisheries : Main river Gear used : n.a.
 Main fish markets : Sapele, Ugbenu
 Other economic activities : n.a.
 Infrastructure/ facilities : Pier
 Public transport : Sapele-Ogheye boats stop regularly at the
 village.

ARUNTON-EBRIHIMI

Location and distance from Koko : Right bank, < 1 hr

Inhabitants : 100	Composition :	Itsekiri	60 %
		Ijaw	25 %
		Ilafe	15 %

Community HQ ? : No

Boats : D.o.:50 Ban : 25 Trans : 0 GRP :0

Operational engines :0

Type of fisheries :Creek, main river Gear used :gillnets,traps,
hook & line, longline

Main fish markets : Koko, Sapele, Warri

Other economic activities : n.a.

Infrastructure/ facilities : None

Public transport : Sapele-Ogheye boats stop at request

ARUNTON-KOLO KOLO

Location and distance from Koko :Olague Creek, 1hr 10 mins

Inhabitants : 75	Composition :	Itsekiri	47 %
		Urhobo	33 %
Community HQ ? : no		Ijaw	20 %

Boats : D.o.:20 Ban : 0 Trans : 0 GRP :0

Operational engines : 0

Type of fisheries:Creeks, main river Gear used : Gillnets
longline, castnet,
seine net

Main fish markets : Sapele, Warri

Other economic activities : None

Infrastructure/ facilities : None

Public transport : Warri- Ogheye boats stop on request

ARUNTON-TISUN

Location and distance from Koko :Creek off left bank, 1hr

Inhabitants :150	Composition :Itsekiri	63 %
	Ilaje	23 %
	Ijaw	14 %

Community HQ ? : No (independent)

Boats : D.o.:30 Ban : 0 Trans : 0 GRP :0

Operational engines : 0

Type of fisheries : Creeks, main river	Gear used : Gillnets,
	traps, longline,
	castnet

Main fish markets : Arunton-Tisun

Other economic activities : None

Infrastructure/ facilities : None

Public transport : Sapele-Ogheye boats stop at request

ASANTUAGBENE

Location and distance from Koko :Right bank, < 1hr

Inhabitants : 140	Composition :Ijaw	100 %
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Community HQ ? : n.a.

Boats : D.o.: 100 Ban :0 Trans : 0 GRP :0

Operational engines : 0

Type of fisheries:Creeks, main river	Gear used :Gillnets,traps
	Longline

Main fish markets : Koko, Sapele, Warri, Bresibi

Other economic activities : n.a.

Infrastructure/ facilities : None

Public transport : Sapele-Ogheye boats stop at request

ASABOTIE

Location and distance from Koko : Right bank, 35 mins

In habitants : 500

Composition : Ijaw 100 %

Community HQ ? : n.a.

Boats : D.o.: 100 Ban : 0 Trans : 0 GRP : 0

Operational engines : 0

Type of fisheries: Creeks, main river, Gear used : Gillnets, traps, longline

Main fish markets : Koko, Sapele, Warri

Other economic activities : n.a.

Infrastructure/ facilities : Church

Public transport : Sapele-Ogheye boats stop on request.

ATANKPOKI

Location and distance from Koko : Right bank, 1 hr.

Inhabitants : 80

Composition : Itsekiri 100 %

Community HQ : No

Boats : D.o.: 60 Ban : 10 Trans : 0 GRP : 0

Operational engines : 0

Type of fisheries : Creeks, main river, Gear used : Gillnets, traps sea hook and line, longline

Main fish markets : Sapele, Ogheye, Warri

Other economic activities : None

Infrastructure/ facilities : Church

Public transport : Sapele-Ogheye boats stop on request

BATERENTIE

Location and distance from Koko : Left bank, 1 hr 20 min

Inhabitants	: 250	Composition	: Itsekiri	67 %
			Ijaw	33 %

Community HQ : No

Boats : D.o.:207 Ban : 0 Trans :0 GRP :0

Operational engines : 0

Type of fisheries : Creeks, main river Gear used : Gillnets,
traps, longline, castnet

Main fish markets : Sapele, Warri

Other economic activities : Firewood cutting

Infrastructure/ facilities :Pier

Public transport : Warri-Ogheye and Sapele-Ogheye boats stop
at request

BOBI

Location and distance from Koko: Creeks off left bank, 1 hr 35 min

Inhabitants : 375 Composition : Itsekiri 100 %

Community HQ : yes

Boats : D.o.:60 Ban : 0 Trans :0 GRP :0

Operational engines : 0

Type of fisheries : Creeks, main river Gear used : Gillnets,
traps, hook & line,
longline

Main fish markets :Koko, Sapele, Ogheye, Warri

Other economic activities : Firewood cutting, collection of canes
for traps

Infrastructure/ facilities :School (primary)

Public transport : None

BRESIBI

Location and distance from Koko : Left bank, < 30 mins.

Inhabitants : 350	Composition : Itsekiri	65 %
	Urhobo	30 %
Community HQ ? : n.a.	Ijaw	5 %

Boats : D.o. 300 Ban : 0 Trans : 0 GRP : 0

Operational engines : 1

Type of fisheries : Creeks, main river Gear used : n.a.

Main fish markets : Koko, Sapele, Benin

Other economic activities : n.a.

Infrastructure / facilities : Pier, shop, school (Primary)

Public transport : Sapele-Ogheye boats stop by regularly

DEGHELE

Location and distance from Koko : Off Olague Creek, 1 hr 25 min

Inhabitants : 400	Composition : Itsekiri	75 %
	Urhobo	15 %
	Ijaw	5 %
	Nembe	7 %

Community HQ ? : Yes

Boats : D.o. : 200 Ban : 0 Trans : 0 GRP : 0

Operational engines : 3

Type of fisheries : Creeks, main river	Gear used : Gillnets, traps, longline, castnets
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Main fish markets : Sapele, Warri, Lagos, Onitsha

Other economic activities : Rushes, farming

Infrastructure / facilities : Pier, electricity, water(non functional), dispensary, school (primary)

Public transport : None.

DORO CAMP

Location and distance from Koko : Ologbo creek, 40 min

Inhabitants : 120

Composition : Urhobo 100 %

Community HQ ? : n.a.

Boats : D.o. : 60 Ban : 0 Trans : 0 GRP : 1

Operational engines : 1

Type of fisheries : Creeks, main Gear used : Traps

Main fish markets : Ugbenu

Other economic activities : Farming

Infrastructure / facilities : Shop

Public transport : None

DUDU TOWN

Location and distance from Koko : Off Gwato creek, < 1 hr

Inhabitants : 500

Composition : Itsekiri 100 %

Community HQ ? : yes

Boats : D.o. : 400 Ban : 6 Trans : 0 GRP : 0

Operational engines : 0

Type of fisheries : Creeks, main river Gear used : Gillnets,
traps, hook, & line
castnets, longline

Main fish markets : Koko, Sapele , Warri

Other economic activities : Making thatches for roofing

Infrastructure / facilities : Pier, electricity, church, school
(Primary)

Public transport : None

EBROHIMI

Location and distance from Koko : Creek off right bank, 1hr +
Inhabitants : 350 Composition : Itsekiri 50 %
 Urhobo 30 %
 Ijaw 20 %
Community HO ? : Yes

Boats : D.o. : 300 Ban : 0 Trans : 0 GRP : 0

 Operational engines : 1

Type of fisheries : Creeks, main Gear used : Gillnets, traps
 river longline, castnet

Main fish markets : Koko, Sapele

Other economic activities : Rushes, hunting

Infrastructure / facilities : School (primary)

Public transport : None

EGHEYO

Location and distance from Koko : Right bank, 1 hr 25 min

Inhabitants : 120		Composition :	Itsekiri	90 %
			Ilaje	10 %
Community HQ ? : n.a.				

Boats : D.o : 15 Ban : 0 Trans : 0 GRP : 0

Operational engines :0

Type of fisheries : Main river Gear used : n.a.

Main fish markets : Egheyo

Other economic activities :n.a.

Infrastructure / facilities : Pier

Public transport : Sapele-Ogheye boats stop at

EKEKPORO

Location and distance from Koko : Sea coast, 1hr 50 min

Inhabitants :600	Composition :	Itsekiri	58 %
		Ilaje	42 %
Community HQ ? :Yes			

Boats : D.o. :130 Ban :140 Trans :0 GRP: 0

Operational engines :150

Type of fisheries : Sea Gear used : Gillnets,
hook & line, longline

Main fish markets :Sapele, Oqheye, Warri

Other economic activities : None

Infrastructure / facilities : School

Public transport : None

GBOKODA

Location and distance from Koko :Lagos Creek, 1hr 27 min

Inhabitants : 1.800	Composition : Itsekiri	70 %
	Ijaw	10 %
	Urhobo	10 %
	Ilafe	10 %

Community HQ ? : n.a.

Boats : D.o.:100 Ban : 0 Trans :0 GRP : 1

Operational engines : 6

Type of fisheries : Creeks Gear used :n.a.

Main fish markets :Gbokoda, Sapele, Warri, Ogheye

Other economic activities : n.a.

Infrastructure / facilities : Pier, electricity, water (non functional), dispensary, school (primary), shops, church.

Public transport :Sapele-Ondo state, Warri-Ondo state and Sapele-Sekelewu boats stop on request.

GERMAN III

Location and distance from Koko : Right bank, 1hr +

Inhabitants :40	Composition : Itsekiri	60 %
	Ilafe	25 %
	Urhobo	15 %

Community HQ ? : No

Boats : D.o.: 15 Ban :0 Trans :0 GRP :0

Operational engines : 0

Type of fisheries :Creeks, main river	Gear used : Gillnets,
	traps, hook and line,
	longline encircling
	seine net

Main fish markets : Sapele, Warri, Onitsha

Other economic activities : Rushes

Infrastructure / facilities :None

Public transport : Sapele-Ogheye boats stop at request

IDEBAGBENE

Location and distance from Koko : Gwato Creek, < 35 min
 Inhabitants : 400 Composition : Ijaw 100 %
 Community HQ ? : n.a.
 Boats : D.o.:100 Ban :0 Trans :0 GRP :0
 Operational engines : 1
 Type of fisheries : Creeks, main river Gear used : n.a.
 Main fish markets : Idegbagbene
 Other economic activities : n.a.
 Infrastructure / facilities : School (primary), church.
 Public transport : Sapele-Ogheye boats stop on request

IDELEKETA *

Location and distance from Koko : near Jakpa, 1 hr
 Inhabitants : 30 Composition : Itsekiri 100 %
 Community HQ ? : n.a.
 Boats : D.o.:2 Ban :0 Trans :0 GRP : 0
 Operational engines : 0
 Type of fisheries : Creeks Gear used : n.a.
 Main fish markets : n.a.
 Other economic activities : n.a.
 Infrastructure / facilities : n.a.
 Public transport : None

IGBELETIE

Location and distance from Koko : Creek off left bank, < 1hr

Inhabitants : 30

Composition : Ijaws 100 %

Community HQ ? : No (Independent)

Boats : D.o.:10 Ban :0 Trans :0 GRP :0

Operational engines : 0

Type of fisheries : Creeks, main river Gear used : Gillnets,
traps, longline,
castnet

Main fish markets : n.a.

Other economic activities : Log felling

Infrastructure / facilities :None

Public transport : None

JAKPA

Location and distance from Koko :Creek off right bank, 1 hr 30
min

Inhabitants :650

Composition : Itsekiri 99 %

Urhobo 1/2 %

Community HQ ? : Yes

Ijaw 1/2 %

Boats : D.o. :500 Ban :0 Trans :0 GRP :0

Operational engines : 0

Type of fisheries :Creeks, main river Gear used :Gillnets,
traps, hook and line,
longlines.

Main fish markets :Koko, Sapele, Oqheye, Warri

Other economic activities : Rushes

Infrastructure / Facilities : Pier, electricity, water, dispensary,
school (primary), shops, church

Public transport : Jakpa-Sapele boat goes regularly, Ogheye-Sapele boats stop on request.

JAKPATIE

Location and distance from Koko :Right bank, 1 hr +

Inhabitants :200	Composition :Itsekiri	75 %
	Ilaje	15 %
	Ijaw	10 %

Community HQ ? :No

Boats : D.o.:90 Ban :0 Trans :0 GRP :0

Operational engines: 0

Type of fisheries :Main river, sea	Gear used :Gillnets,
	Hook & line, longline

Main fish markets : Sapele, Warri

Other economic activities :None

Infrastructure / facilities :None

Public transport : Sapele-Ogheye boats stop on request

JEJE CAMP

Location and distance from Koko :Creek off left bank, < 30 min

Inhabitants :21	Composition : Itsekiri	62 %
	Ijaw	38 %

Community HQ ? :No

Boats : D.o.:5 Ban :0 Trans :0 GRP : 0

Operational engines :0

Type of fisheries :Creeks, main river	Gear used : Gillnets,
	longline,castnet

Main fish markets : Koko

Other economic activities :log felling, canoe carving

Infrastructure / facilities : None

Public transport : None

MUKORO CAMP

Location and distance : Ologbo Creek, 40 min

Inhabitants : 20

Composition : Urhobo 100 %

Community HQ: n.a.

Boats : D.o. :15 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Creeks, main river Gear used :n.a.

Main fish markets :Koko, Ugbenu

Other economic activities :Farming

Infrastructure / facilities :None

Public transport :None

OBAGHBORO

Location and distance from Koko :Creek off right bank, 1 hr 15 min

Inhabitants :161

Composition :	Itsekiri	79 %
	Ijaw	11 %
	Urhobo	10 %

Community HQ:Yes

Boats : D.o. :100 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Creeks, main river Gear used :Gillnets,
traps, longline

Main fish markets :Koko, Sapele

Other economic activities : Rushes

Infrastructure / facilities : School (primary)

Public transport : None

OBOGHORO

Location and distance from Koko : Right bank, 1 hr 30 min

Inhabitants : 40

Composition : Itsekiri 100 %

Community HQ: Yes

Boats : D.o. :20 Ban :5 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Main river

Gear used : Gillnets, longline

Main fish markets :Sapele

Other economic activities :None

Infrastructure / facilities :None

Public transport : Sapele-Ogheye boats stop on request

OBON - UGBEGE *

Location and distance from Koko :Jorojoro Creek, 1hr 50 min

Inhabitants :156

Composition : Itsekiri 100 %

Community HQ: No

Boats : D.o. :25 Ban :4 Trans :0 GRP :0

Operational engines : n.a.

Type of fisheries : Creeks, sea

Gear used :n.a.

Main fish markets :Obon - Uqbege

Other economic activities :n.a.

Infrastructure / facilities : None

Public transport :None

OGHEYE DIMIGUN

Location and distance from Koko : Right bank (near estuary)
1 hr 25 min

Inhabitants :3.000	Composition :	Ilaje	60 %
		Itsekiri	30 %
		Ijaw	10 %

Community HQ ? : Yes

Boats : D.o.: 250 Ban :350 Trans : 0 GRP :6

Operational engines : 400

Type of fisheries :Estuary, sea	Gear used :Gillnets, traps, longline
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Main fish markets : Sapele, Warri

Other economic activities :Trading

Infrastructure / facilities : Pier, engine repair, school
(primary) shops, church

Public transport : Regular transport links to Sapele, Warri and
Ondo state.

OGHEYE - EGHOROKE

Location and distance from Koko : Right bank (near estuary), 1hr
30 min

Inhabitants :1.500	Composition :	Itsekiri	95 %
		Ilaje	3 %
		Ijaw	2 %

Community HQ ? : Yes

Boats : D.o.52 Ban :68 Trans :0 GRP : 1

Operational engines :41

Type of fisheries :Sea	Gear used : Gillnets, hook and line traps
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Main fish markets :Sapele , Warri

Other economic activities :Boat building

Infrastructure / facilities :Dispensary, school (primary), shops,
church.

Public transport : Regular transport links from adjacent Ogheye-
Dinigun

OKIFAMBA

Location and distance from Koko : Off Adagbrhassa creek, < 1hr

Inhabitants :120

Composition :Ijaw 100 %

Community HQ ? :Yes

Boats : D.o. : 50 Ban :0 Trans :0 GRP :0

Operational engines :1

Type of fisheries :Creeks, main river Gear used :Gillnets,
traps, longline

Main fish markets :Koko, Sapele, Benin city

Other economic activities :Canoe carving, log felling

Infrastructure / facilities : School (primary), church

Public transport :None

OKIFAMBA EXTENSION *

Location and distance from Koko : Adagbrhassa creek, < 1hr

Inhabitants :20

Composition : Ijaw 100 %

Community HQ ? :No

Boats : D.o. :8 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Creeks Gear used :Gillnets, traps
longline, castnets

Main fish markets :n.a.

Other economic activities :Canoe carving

Infrastructure / facilities :None

Public transport :None

OLOBE

Location and distance from Koko : Creek off left bank, 1 hr 40 min

Inhabitants :40

Composition :Itsekiri 100 %

Community HQ ? :yes

Boats : D.o.:40 Ban :0 Trans :0 GRP :0

Operational engines :5

Type of fisheries :Creeks, main river, sea Gear used :Gillnets, traps, longline

Main fish markets :Sapele, Bateretie

Other economic activities :Cutting sticks for crayfish traps

Infrastructure / facilities :None

Public transport :None

OLOPOKAN *

Location and distance from Koko : Right bank, < 1 hr

Inhabitants :60

Composition : Ijaw 100 %

Community HQ ? :n.a.

Boats : D.o.: 15 Ban :0 Trans : 0 GRP :0

Operational engines :n.a.

Type of fisheries :n.a.

Gear used :n.a.

Main fish markets :n.a.

Other economic activities :n.a.

Infrastructure / facilities :None

Public transport : Sapele - Ogheye boats at request.

OLURE *

Location and distance from Koko :Creek off left bank, 40 min

Inhabitants :80

Composition :n.a.

Community HQ ? :n.a.

Boats : D.o.:12 Ban :0 Trans :0 GRP :0

Operational engines :n.a.

Type of fisheries :Creek, main river Gear used :n.a.

Main fish markets :n.a.

Other economic activities : n.a.

Infrastructure / facilities :n.a.

Public transport : None

ORERE

Location and distance from Koko : Left bank (near estuary),
1 hr 35 min

Inhabitants :2.000

Composition :Itsekiri 99 %
Ilaje 1 %

Community HQ ? : Yes

Boats : D.o.:350 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Main river, sea Gear used :Gillnets, traps
hooks & line, longline,
encircling net for cray fish

Main fish markets :Sapele, Warri

Other economic activities :None

Infrastructure / facilities :School (primary), church

Public transport : None

OROKE

Location and distance from Koko :Left bank, 20 mins
 Inhabitants :50 Composition : Ijaw 100 %
 Community HQ ? :n.a.
 Boats : D.o.:13 Ban :0 Trans:0 GRP :0
 Operational engines :0
 Type of fisheries :Main river Gear used :n.a.
 Main fish markets :Ugbenu
 Other economic activities :n.a.
 Infrastructure / facilities :Pier
 Public transport : Sapele-Ogheye boats stop at request

ORUBU

Location and distance from Koko :Creek off left bank, 1 hr 35 mins
 Inhabitants :250 Composition : Itsekiri 94 %
 Ijaw 6 %
 Community HQ ? : No (independent)
 Boats : D.o.: 50 Ban :2 Trans :0 GRP :0
 Operational engines :1
 Type of fisheries :Creeks, main river, Gear used :Gillnets,
 sea traps, hooks & line,
 longline, castnets
 Main fish markets : Koko, Sapele, Warri
 Other economic activities :Cutting sticks for traps, salt
 making
 Infrastructure / facilities : Pier, school (primary)
 Public transport : None

OTUMARA

Location and distance : Right bank, 12 min

Inhabitants :50	Composition :Ijaw	60 %
	Itsekiri	30 %
	Ilaje	10 %

Community HQ ? : n.a.

Boats : D.o.: 30 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Main river Gear used :n.a.

Main fish markets :Koko

Other economic activities :n.a.

Infrastructure / facilities :None

Public transport :Sapele-Ogheye boats stop at request

SEISUWOGHA - ZION

Location and distance from koko : Ologbo Creek, 45 min

Inhabitants :70	Composition :Ijaw	100 %
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Community HQ ? :n.a.

Boats : D.o.:60 Ban : 0 Trans : 0 GRP :0

Operational engines :0

Type of fisheries :Creeks Gear used :n.a.

Main fish markets :Ugbenu

Other economic activities :Hunting, canoe carving

Infrastructure / facilities :Church

Public transport : None

TISUN *

Location and distance : Creek off left bank, 1hr 10 min

Inhabitants : 200

Composition : Itsekiri 100 %

Community HQ ? : Yes

Boats : D.o. : 24 Ban : 0 Trans : 0 GRP : 0

Operational engines : 0

Type of fisheries : Creeks

Gear used : n.a.

Main fish markets : n.a.

Other economic activities : Rushes, farming

Infrastructure / facilities : None

Public transport : None

UBA - IRO

Location and distance from Koko : Right bank, 20 min

Inhabitants : 200

Composition : Itsekiri 60 %
 Urhobo 30 %
 Ijaw 10 %

Community HQ ? : n.a.

Boats : D.o.: 50 Ban : 0 Trans : 0 GRP : 0

Operational engines : 1

Type of fisheries : Main river

Gear used : n.a.

Main fish markets : Uba - Iro

Other economic activities : n.a.

Infrastructure / facilities : Pier

Public transport : Sapele-Ogheye boats stop at request

UBA - ODO

Location and distance from Koko :Right bank,13 min

Inhabitants :60	Composition :	Ilaje	42 %
		Ijaw	33 %
		Itsekiri	25 %

Community HQ ? :n.a.

Boats : D.o. : 25 Ban :0 Trans : 0 GRP :0

Operational engines :0

Type of fisheries : Main river Gear used : n.a.

Main fish markets :Sapele, Ugbenu

Other economic activities :n.a.

Infrastructure / facilities : None

Public transport : Sapele-Ogheye boasts stop at request

UBA - SOBO

Location and distance : Creek off left bank, < 30 min

Inhabitants :30	Composition :	Ijaw	67 %
		Itsekiri	33 %

Community HQ ? :No

Boats : D.o.: 20 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Creeks, main river Gear used :Gillnets,
longline, castnet

Main fish markets :Koko, Ugbe Koko

Other economic activities : Canoe carving

Infrastructure / facilities :None

Public transport :None

UBURAKWE

Location and distance from Koko : Right bank, <30 min

[illegible]

Community HQ? : No

Boats : D.o. :50 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Creeks, main river Gear used :Gillnets,
traps, hook & line

Main fish markets :Ugbenu, Bresibi

Other economic activities :Hunting

Infrastructure / facilities :Church

Public transport :Sapele-Ogheye boats stop at request

UDO I

Location and distance from Koko : Off Lagos Creek, 1hr 15 min

Inhabitants :200	Compostion :Itsekiri	60 %
	Ilaje	25 %
	Ijaw	15 %

Community HQ? :No

Boats : D.o. :100 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries : Creeks, main river,
sea

Gear used : Gillnets,
traps, hooks & line
longline, castnet

Main fish markets :Sapele, Warri

Other economic activities :Rushes

Infrastructure / facilities : Church

Public transport :None

UGBEESHI (ARUNTON - TEBU)

Location and distance from Koko : Right bank, 1hr
 Inhabitants :120 Compostion :Ijaw 100 %
 Community HQ? : No
 Boats : D.o. :50 Ban :0 Trans :0 GRP :0
 Operational engines :0
 Type of fisheries :Main river, sea Gear used :Traps,
 longline
 Main fish markets :Warri
 Other economic activities :Rushes
 Infrastructure / facilities :None
 Public transport :Sapele-Ogheye boats stop at request

UGBEGE

Location and distance from Koko : Jorojoro Creek (off Ogheye)
 2 hrs
 Inhabitants : 300 Compostion :Itsekiri 100 %
 Community HQ? :Yes
 Boats : D.o. : 100 Ban :50 Trans :0 GRP : 0
 Operational engines :40
 Type of fisheries :Creeks, and sea Gear used :Hooks & line,
 traps, longline, castnet
 Main fish markets : Sapele, Ogheye, Warri
 Other economic activities : Rushes, palm nuts
 Infrastructure / facilities :School (primary), shop, church
 Public transport :None

UGBOMAJA

Location and distance from Koko : Olague Creek, 1 hr 16 min
 Inhabitants :40 Compostion :Itsekiri 100 %
 Community HQ? : No
 Boats : D.o. :12 Ban :0 Trans :0 GRP :0
 Operational engines :0
 Type of fisheries : Creeks Gear used :Gillnets,
 longline, castnet
 Main fish markets : UGBOMAJA
 Other economic activities :Rushes
 Infrastructure / facilities :None
 Public transport :Warri-Ogheye boats stop at request

UGOGEGIN

Location and distance from Koko :Right bank, 1hr 30 min
 Inhabitants :1.500 Compostion :Itsekiri 50 %
 Ijaw 35 %
 Ilaje 15 %
 Community HQ? :No
 Boats : D.o. :300 Ban : 29 Trans :0 GRP :1
 Operational engines :16
 Type of fisheries :Main river, sea Gear used :Gillnets,
 longline, traps
 Main fish markets :Koko, Sapele, Ogheye, Warri
 Other economic activities :Trading
 Infrastructure / facilities :School (primary), church
 Public transport :Sapele-Ogheye and Warri-Ogheye boats stop at
 request

UGOGEGIN I (ADAGBRHASSA)

Location and distance from Koko : Right bank, < 1 hr

Inhabitants :60	Compostion :Itsekiri 97 %
	Ilaje 3 %

Community HQ? : No

Boats : D.o. :80 Ban :0 Trans :0 GRP :0

Operational engines : 0

Type of fisheries :Main river

Gear used :Gillnets,
hook line, longline,
castnet

Main fish markets : Sapele

Other economic activities :None

Infrastructure / facilities :Church

Public transport :Sapele-Ogheye boats stop at request

UREJU

Location and distance from Koko : Right bank, 30 min

Inhabitants :700 Compostion :Itsekiri 100 %

Community HQ? :Yes

Boats : D.o. :300 Ban : 0 Trans :0 GRP :0

Operational engines :6

Type of fisheries :Main river Gear used : n.a.

Main fish markets :Ureju

Other economic activities :Making thatches for roofing

Infrastructure / facilities :Pier

Public transport :Sapele-Ogheye boats stop at request

URHOB0 CAMP

Location and distance from Koko :Opposite Koko, 5 min

Inhabitants :100

Composition :Urhobo 100 %

Community HQ? : No (independent)

Boats : D.o. 39 Ban :0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Main river

Gear used: Gillnets, traps
longline

Main fish markets :Urhobo camp

Other economic activities :Farming

Infrastructure / facilities :None

Public transport :None

USOH *

Location and distance from Koko : Left bank, 1 hr 25 min

Inhabitants :n.a.

Composition :n.a.

Community HQ? :n.a.

Boats : n.a D.o. : Ban : Trans : GRP :

Operational engines :

Type of fisheries :n.a.

Gear used :n.a.

Main fish markets :n.a.

Other economic activities :n.a.

Infrastructure / facilities :n.a.

Public transport :n.a.

Public transport :Sapele-Ogheye and Sapele-Ondo state boats
stop at request

UTONLILA

Location and distance from Koko :Creek off right bank, 1 hr 20 min

Inhabitants :50

Composition :Itsekiri 100 %

Community HQ? :

Boats : D.o. : 6 Ban :1 Trans :0 GRP :

Operational engines :0

Type of fisheries :Creeks, main river Gear used: Gillnets,
traps longline

Main fish markets :Sapele

Other economic activities :None

Infrastructure / facilities : None

Public transport : None

UTON - UKUKURO

Location and distance from Koko :Left bank, 13 min

Inhabitants :80

Composition : Ijaw 100 %

Community HQ? : n.a.

Boats : D.o. 40 Ban : 0 Trans :0 GRP :0

Operational engines :0

Type of fisheries :Main river Gear used : n.a.

Main fish markets :Uton - Ukukuro

Other economic activities :n.a.

Infrastructure / facilities :Church

Public transport :Sapele-Ogheye boats stop at request

YOUNG TOWN

Location and distance from Koko :Left bank, 28 min

Inhabitants :1.200 Composition :Itsekiri 100 %

Community HQ? :n.a.

Boats : D.o.:250 Ban : 0 Trans :0 GRP :0

Operational engines : 6

Type of fisheries :Creeks, main river Gear used n.a.

Main fish markets :Sapele, Bresibi, Warri

Other economic activities :Making thatches for roofing

Infrastructure / facilities :School (primary), shop

Public transport :Sapele-Ogheye boats stop at request

ZION UREJU TITUN

Location and distance from Koko : Robin creek, < 1hr

Inhabitants :60 Composition :Ilaje 50 %
 Ijaw 25 %
 Itsekiri 25 %

Community HQ? : No

Boats : D.o.: 25 Ban :0 Trans :0 GRP :0

Operational engines :6

Type of fisheries :Creeks, main river Gear used Gillnets,
 longline, castnet

Main fish markets :Sapele, Warri

Other economic activities :None

Infrastructure / facilities :Church

Public transport :Sapele-Ogheye boats stop at request.

Part IV : COMMUNITIES WITHOUT DETAILED INFORMATION

AGOKUTU

This is an Ilaje community situated on the bank of the Atlantic Ocean left of the Benin River Estuary between Orere and Agogboro. There are 18 houses in the village which has an estimated population of about 80 people. 6 banana boats were counted parked on the beach at the time of visit to the village. It is expected that these boats are motorised as the villagers have nowhere to fish other than the open sea. Fishing gears are expected to be mainly gill nets and drift nets for bonga fishing. The village lacks social amenities. Boats are parked on the sandy beach and are pushed into the sea when the waves hit them. Agokutu is not far from Agogboro.

AJA-EYE

Aja - Eye is situated on the bank of the Atlantic Ocean between Orere and Agokutu. It is however closer to Orere. Not much is known about the village except that 6 houses were counted and the population is estimated to be about 25 people. It is an Itsekiri community. No boat was observed in the village since it is located a little distance away from the shoreline.

AJA-USOBO

Aja-Usobo is situated on a creek behind Orere and Aja-Ukpotufen. The village can be approached through a foot path between Orere and Aja-Ukpotufen. It takes about 5 minutes to walk.

By its name, it is expected that most of the villagers would be of Urhobo descent. There are 31 houses in the village with an estimated population of about 180 people. 11 dug-out canoes were counted in the creek at the time of visit to the village.

Gear types observed in the village are gillnets and traps (for catching crayfish). One other notable economic activity in the village is the collection of palm fruits for palm oil production. no social amenity was observed, in the village and it cannot be reached by either transport or speed boats.

EBIGHAN

Ebighan village is located on the sea front (Atlantic Ocean) but is accessible through the Jorojoro creek some 20 minutes boat time from Ogheye on the right bank of the river.

Situated deep inside Bendel State territory, this community claims affiliation to their Ilaje Kingmen of Ondo State. The survey team was refused entry into the village hence nothing is known about it except that it has a wooden jetty. Being an Ilaje community, they would be expected to be full-time fishermen doing marine fishing especially skilled in Bonga fishing for which the Ilajes are reknown.

IDELEKETA

This is an Itsekiri village located on a creek very close to Jakpa. There are 17 houses in the village but it is doubtful if the population of inhabitants could exceed 35 people as most of the houses looked abandoned. 2 dug-out canoes were observed by the survey team in the village.

OBON-UGBEGE

Obon-Ugbege is the market extension of Ugbege community. It is located on Jorojoro creek, some 22 minutes boat time off Ogheye on the right bank of the Benin river. The community is on an important route noted for its trade in "Rushes" (*Juncus* spp) and fish between Bendel and Ondo States.

Obon Ugbege is linked by creeks to main Ugbege village and Eketle which is located on the sea front. These creeks are however shallow and cannot be traversed easily by an engine-operated boat.

The estimated population of 156 inhabitants live in 26 houses built on stilts and roofed with thatches and zinc. 25 dug-out canoes and 4 banana boats were observed in this village. The villagers are mostly Itsekiri and owe allegiance to the main Ugbege community. The village lacks all basic amenities.

OKIFAMBA EXTENSION

This camp is located near the junction of Okifamba and Adagbrhassa creeks. There are 5 thatch-roofed houses in the village which has an estimated population of 20 inhabitants. 8 dug-out canoes were observed in the village. The major economic activity of the villagers is fishing (which is done mostly in the creeks) and this is complemented by canoe building. The fishing gear used include gill nets, traps and long lines. The village can be reached within 1 hour from Koko town. It is an Ijaw community. It lacks any social amenity.

OLOPOKAN

This is a fishing community located on the right bank of the Benin river a short distance from the mouth of the Gwato creek. The two visits to this village yielded no positive result as the villagers refused to answer questions.

The village consists of 13 thatch-roofed houses with an estimated population of about 60 people. It is an Ijaw community. The number of dug-out canoes observed in the village during the time of visit was 15.

As an Ijaw community, it can be expected that their main occupation will be fishing, possibly accompanied by boat building. The village lacks any infrastructural facility e.g. potable water, electricity, medical facility, pier or school. It is expected that the main fishing will be done in the Benin river and nearby creeks with the use of fishing gears like hook and line, gillnet and traps.

OLURE

Olure is located on the left bank creek off Benin river about 42 minutes boat time from Koko. It is a permanent fishing community. At the time of visit to this village, all the men had gone out fishing leaving behind women and children. However, there are 16 houses in the village with an estimated population of about 80 inhabitants. 12 dug-out canoes were counted in the village at the time of visit. It is an Itsekiri community. Fishing activities are expected to be carried out on the river and in the creeks.

TISUN

Tisun is located deep inside Tisun Creek off the left bank of Benin River. It takes about 1hr 10 min. reach Tisun from Koko through a very narrow and, shallow creek. Detailed information could not be collected from this village because the village leader could not be found after about 2 hours of waiting.

The village is populated more by the Itsekiri ethnic group. There are about 37 houses in the village with an estimated population of about 200 inhabitants. 24 dug-out canoes were counted in the village creek bank at the time of visit.

Tisun village has a lot of cultivable land and as such produce "rushes" for mat-making and also yams, cassava, plantain, even though on a subsistence scale.

The village lacks any imaginable social amenity and does it have a jetty. Transport boats and speed boats do not call on the village.

USOH

Usoh is situated on the left bank almost opposite Ugogegin. It was impossible to approach Usoh at the time of visit as a result of the heavy mud deposits at the left bank of the Benin river. Not much is known about the village except that from the post of retreat, only 3 houses could be sighted.

UTONGBO

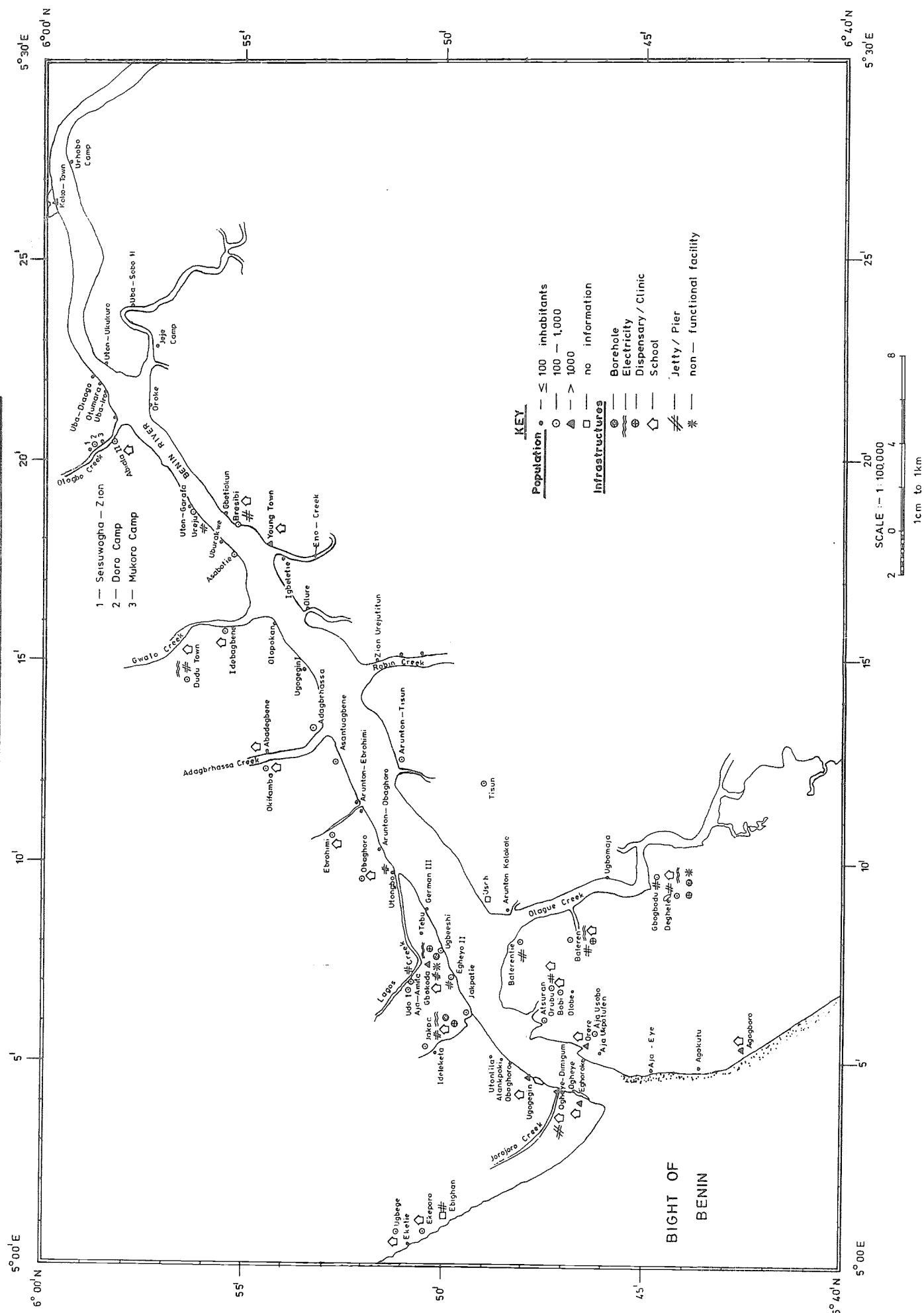
Located on the mouth of Lagos creek by right bank of the Benin river, Utongbo is about 1 hour boat-time (25hp) from Koko. This village was visited twice but without success as the community leader did not cooperate.

The village comprises 20 houses (thatch and zinc roofs) with an estimated population of about 100 people. The dominant tribal group are the Ijaws and there are some Itsekiris. The village leader is an Ijaw. 18 dug-out canoes and 1 banana boat were observed in the village. Also observed was one functional outboard engine.

The major occupation of the villagers is fishing which is done in the river and in the creeks with the use of gears like gillnets, long lines, etc;

Other than the presence of a pier, the community visibly lacks essential infrastructural facilities e.g. electricity, water and health facility.

MAP OF FISHING COMMUNITIES OF BENIN RIVER ESTUARY



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