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OF THE FISHERIES ON LAKE
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LTR LAKEWIDE SOCIO-ECONOMIC SURVEY, 1997:
NOTES ON METHODS AND PROCEDURES

By:

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FINNISH INTERNATIONAL DEVELOPMENT AGENCY

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PREFACE

The Research for the Management of the Fisheries on Lake Tanganyika project (LTR) became fully operational in January 1992. It is executed by the Food and Agriculture Organization of the United Nations (FAO) and funded by the Finnish International Development Agency (FINNIDA) and the Arab Gulf Program for the United Nations Development Organization (AGFUND).

LTR's objective is the determination of the biological basis for fish production on Lake Tanganyika, in order to permit the formulation of a coherent lake-wide fisheries management policy for the four riparian States (Burundi, Tanzania, Zaïre and Zambia).

Particular attention is given to the reinforcement of the skills and physical facilities of the fisheries research units in all four beneficiary countries as well as to the build-up of effective coordination mechanisms to ensure full collaboration between the Governments concerned.

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For both series, reference is further made to the document number (**01**), and the language in which the document is issued: English (**En**) and/or French (**Fr**).

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**LTR LAKEWIDE SOCIO-ECONOMIC SURVEY, 1997:
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1. INTRODUCTION

This technical document provides an account of the methods and procedures adopted for the 1997 LTR socio-economic (SEC) survey of Lake Tanganyika fishing communities.

A chronology of survey-related activities undertaken to date is shown in Table 1. It should be noted that it was not possible to conduct all activities simultaneously in the four territorial sectors of the lake. Preparatory activities and fieldwork were started somewhat earlier within the Tanzania and Zambia shorelines, owing to uncertainties with the security situation in Burundi and the Democratic Republic of Congo (DRC).

Details of survey planning, enumerator training, questionnaire design, and sampling strategies are addressed in the following sections. Further background material is contained in the various annexes that actually make up the bulk of this report. Data collection forms are shown as Annex 1, and the enumerator guides for questionnaire administration as Annex 2. Additional instructions prepared for survey team supervisors appear as Annex 3. Annex 4 presents sampling tables used for initial selection of sites and respondents, together with a map of the survey areas along the shorelines of the four lacustrine states. Annex 5 contains example printouts of data coding and entry sheets.

Subsequent technical documents will report on SEC survey results on a country-by-country basis, upon completion of the data analysis work now in progress at LTR-Bujumbura.

Table 1. Chronology of LTR SEC Survey activities.

Date	Activity	Remarks
14- 16.04.97	SEC Technical Consultation commences. FAO/Rome meetings.	Preliminary consultations with FAO/Rome operations and technical personnel with Lake Tanganyika/GCP/RAF/271/FIN interests or background. Review of available documents/previous reports pertaining to L. Tanganyika socio-economic issues.
17.04.97	Dar meetings.	Visit FAOR office; meeting with Dr. Andy Menz, Project Coordinator, Lake Tanganyika Biodiversity Project.
18.04.97	Kigoma meetings.	Meetings with LTR/Kigoma and TAFIRI staff. Preliminary discussion of workshop preparations, facilities available, etc.
19-	Kigoma workshop	Arrival of LTR/Mpulungu staff,

Date	Activity	Remarks
21.04.97	preparations.	Zambia DoF and Tanzania DoF participants.
22-30.04.97	Kigoma workshop sessions.	LTR TD65 refers.
30.04-02.05.97	Workshop follow-up.	Consultations with Hanek, LTR Coordinator, and LTR APOs re workshop proceedings finalisation, lakewide socio-economic survey plans (scope, logistics, etc.).
03-11.05.97	Draft questionnaire trial interviews, Kigoma area.	Continue work on survey protocols. Conduct pilot interviews using draft questionnaires at local landing site with TAFIRI participants
12.05.97	Dar meetings.	Visit FAO office. Meeting with A. Menz (Lake Tanganyika Biodiversity Project).
13-15.05.97	Rome meetings	Interim debriefing with FAO/Rome operational and technical personnel.
15.05-30.06.97	Survey preparations -- Tanzania and Zambia.	<ul style="list-style-type: none"> Carry out questionnaire trials in Mpulungu area. Finalise all three survey interview forms (Landing site/Village -- Form 1; Fishers -- Form 2; Processors/Traders - Form 3. Translation of survey forms into Kiswahili by TAFIRI staff. Finalise sampling strategy, Enumerator Guide, and Supervisor Instructions. Preparation and distribution to national teams of sample selection tables and computer data entry files.
01.07.97	Survey fieldwork commences - Tanzania and Zambia.	<ul style="list-style-type: none"> Tanzania team works along coastline in <i>RV Tanganyika Explorer</i> and inflatables. Zambia team in <i>RV Silver Shoal</i> and inflatables.
01-08.07.97	Survey preparations and training workshop -- Bujumbura (Burundi and DRC teams).	<ul style="list-style-type: none"> Training and practice interview sessions for both national teams. Design of survey strategy/site selection. Translation of survey forms, Enumerator Guide, and Supervisor Instructions into French by LTR/Bujumbura staff.
08.07.97	Survey fieldwork commences, Burundi and DRC.	<ul style="list-style-type: none"> Burundi team works along coastline with project vehicle. Congo team in hired transport boat.
14.07.97	Survey fieldwork completed, Burundi.	
15.07 - 01.08.97	Data entry work - Burundi.	LTR HQ - Bujumbura. DoF Burundi staff.
18.07.97	Survey fieldwork completed,	

Date	Activity	Remarks
	Tanzania.	
19.07 - 19.08.97	Data entry work - Tanzania	LTR station - Kigoma (TAFIRI). LTR and TAFIRI staff.
25.07.97	Survey fieldwork completed, Zambia.	
28.07 - 14.08.97	Data entry work - Zambia	LTR station - Mpulungu (DoF). LTR and DoF staff.
01.08.97	Survey fieldwork completed, DRC.	
04- 20.08.97	Data entry work - DRC	LTR HQ - Bujumbura. DoF Burundi staff.
20- 31.08.97	Data compilation and analysis	LTR HQ - Bujumbura. Verification of computer data files, preliminary analysis and draft reports on findings.

2. PLANNING AND TRAINING WORKSHOPS

Much of the groundwork for the SEC survey exercise was carried out in the course of a technical consultation mission undertaken by Reynolds from mid-April to mid-May 1997, which involved an LTR-sponsored planning and training workshop held at the Tanzania Fisheries Research Institute (TAFIRI) station in Kigoma. The proceedings and outcome of the Kigoma workshop have been reported in earlier documents (Reynolds 1997; Reynolds and Paffen 1997), so that only a brief summary is necessary here.

Beginning on 22 April 1997 and continuing for eight consecutive days, the workshop included participants from LTR/FAO stations in Kigoma (Tanzania) and Mpulungu (Zambia), and LTR national associates from the Department of Fisheries (DoF) in Zambia (Mpulungu station and Chilanga HQ), the DoF Tanzania (Dar HQ), and TAFIRI/Kigoma. Initial workshop sessions were taken up with basic introductory discussion of socio-economic perspectives and data collection methods, and review of selected reading material pertaining to socio-economics and fisheries management. Consultations were also held with colleagues from the Lake Tanganyika Biodiversity Project (LTBP) and the Tanganyika Catchment Reforestation and Education Project (TACARE), both of which share concerns with socio-economic and fisheries issues in and around the lake. The latter half of the workshop was devoted to practical tasks of survey preparation. Participants formed various task groups to prepare background notes, draft data collection forms, and recommendations on survey sampling and operational procedures.

In concluding the workshop sessions participants agreed upon a number of further preparatory actions to be taken by a co-ordination team led by Reynolds and Paffen, with a view towards launching the survey as soon as possible in the Tanzanian and Zambian sectors of the lake. It was further agreed that work should also be attempted in the Burundi and the DRC sectors within a few months, depending upon the security situation.

Selection of sample landing sites for Tanzania and calculations for possible fisher sampling strategies were completed by the end of the first week of May 1997, when Paffen

departed by lake steamer to return to her Mpulungu duty station. Reynolds stayed on for another week or so in order to continue developing questionnaires and conduct trial interviews at a local landing site.

Limitations of funds, time, and personnel imposed strict conditions that had to be taken into account in planning for survey structure and content (sampling proportions, scope of topical coverage in questionnaires, anticipated interview lengths, etc.). The co-ordination team also had to work in terms of an overall deadline for the completion of the whole exercise lakewide by mid-August 1997, when the second or analysis/reporting phase of the socio-economic technical consultation was due to commence.

This schedule was in fact met, despite various operational difficulties encountered by the field teams. A second training workshop was organised at LTR headquarters in Bujumbura during the first week of July 1997, which brought together members of the Burundi and DRC teams who were unable to attend the Kigoma sessions (Reynolds and Paffen 1997). These teams then embarked on their respective data collection missions, with the Burundi group completing work by 14 July 1997, and the DRC group by 1 August 1997.

3. SURVEY QUESTIONNAIRES

The design of the three data collection forms originally proposed by workshop participants was revised and elaborated during the course of pilot visits to a local landing site close to Kigoma. These visits involved local fisheries officers from Kigoma District and the Kigoma Town Council as well as TAFIRI and LTR staff. Each pilot visit was preceded by a briefing session and followed by a review meeting to discuss results. Further pre-tests were carried out a little later within the Zambian sector of the lake, after copies of the trial forms were sent on by e-mail to the Mpulungu station. The final survey-ready versions of all three forms, in both their English and Kiswahili versions, are presented in Annex 1. They include:

- **Form 1:** Village/Landing site inventory. (Availability of basic services/amenities; population estimates, housing conditions, etc. One form to be filled out for each sample site.)
- **Form 2:** Fisher interview questionnaire (Fishery unit affiliation; basic biodata; attitudes and opinions related to development/management issues -- perceptions of state of fisheries, possible regulatory mechanisms, etc.).
- **Form 3:** Trader/processor interview questionnaire (Type of enterprise, basic biodata; attitudes and opinions, etc.).

Each member of the respective national teams was provided with a copy of the 'Enumerator Guide,' which lays out general and step-by-step instructions for the conduct of data collection with the three forms. The Guide is shown as Annex 2. Additional instructions for team supervisors were also prepared, and are included as Annex 3.

4. SAMPLING METHODS

4.1 Sample Villages/Landing Sites (Form 1)

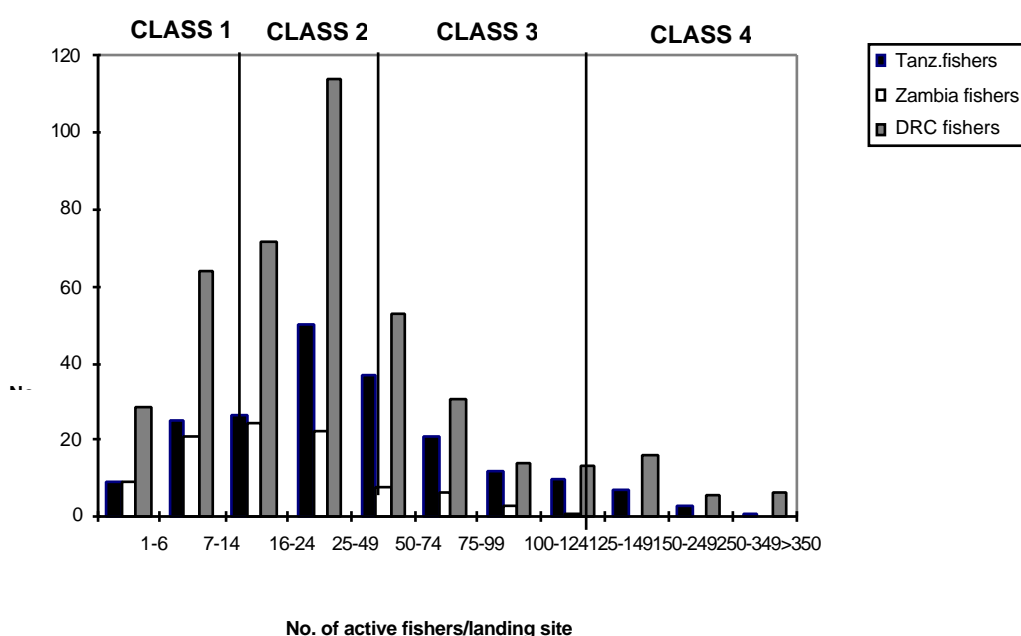
4.1.1 Background

The Kigoma SEC Planning Workshop agreed to use the total number of active fishers (FI) found at each landing site during the 1995 Frame Survey (FS)¹ as a proxy for lakeshore distribution of human population and socio-economic activity -- both regarded as critical features that ought to be reflected in any survey sample structure. From this point, the sampling strategy evolved in the following way.

In order to ensure geographical representation, area stratification was carried out on the basis of coastline divisions already defined by previous FS exercises (map, Annex 4). Within each area, representation of different sizes of landing sites (i.e. different socio-economic realities) is ensured by sorting the landing sites into size classes. In other words, stratification is both by area of shoreline and according to class of landings within a given area. The procedure can be described as follows.

A frequency distribution of landing sites sorted by number of FI, as determined during FS 95 in Tanzania, Zambia, and the DRC was first constructed, as shown in Figure 1.

Figure 1. No. of active fishers by landing site (FS '95), Tanzania, Zambia, and DRC



Four main classes of landing sites were distinguished on the basis of this distribution. These are designated in Table 2.

¹ Carried out by the LTR in collaboration with the Department of Fisheries (DoF) in each of the four lacustrine states

Table 2. Landing site class sizes.

Class No.	No. active fishers (FS '95)
Class 1 =	1-24 FI
Class 2 =	25-74 FI
Class 3 =	75-149 FI
Class 4 =	150 FI

4.1.2 Site selection

One landing site per class of landing sites was randomly chosen per area. The results of this selection procedure are shown in the Site Information Sheets and maps presented in Annex 4. It should be noted that for some areas not all size classes may be represented. Burundi and the DRC presented special circumstances due to the security situation, and in these cases it was not possible to cover the entire shoreline. For Burundi, only five landing sites were determined to be accessible for survey. In the case of the DCR, only the three northern zones of both Sud Kivu and Shaba provinces could be covered by the survey teams. Totals of sites selected for survey visits in the respective national sectors are presented in Table 3.

Table 3. National sample site totals by geographical strata.

Country/Region	Total sample sites	Total strata
Zambia	13 sites distributed across	4 areas
Tanzania (Kigoma)	22 sites distributed across	6 areas
Tanzania (Rukwa)	19 sites distributed across	6 areas
Burundi	5 sites distributed across	2 areas.
DRC (Sud Kivu)	9 sites distributed across	3 areas
DRC (Shaba)	12 sites distributed across	3 areas

4.2 Fisher Sample (Form 2)**4.2.1 Background**

On the basis of pilot interviewing (pre-tests) run in Tanzania and Zambia, it was established that each Fisher interview (Form 2) and Processor/Trader interview (Form 3) would take some 30 to 40 minutes on average. This knowledge helped the SEC co-ordination team to develop a rough estimate as to how many separate interviews could be managed by the various national teams within the allotted period of fieldwork. It was then necessary to devise a standard technique for selecting individual fisher respondents.

The approach adopted assumes that:

- Total numbers of active fishing units is approximated by results of the LTR '95 FS.
- Proportions of artisanal vs. traditional fishing units are generally as indicated in results of the LTR '95 FS.

Recognising that gear type is the main determinant of fishing unit structure and the role played by the various participants in unit operations, the co-ordination team laid plans to include as wide a range of 'traditional' and 'artisanal' gear types as possible in the respective national sector samples. Furthermore, provision had to be made to include at least five different categories of individuals associated with fishing operations, depending on the unit. Thus:

Table 4. Anticipated categories of fishers.

Category	Indication
1) 'Owner'	= Owners of the main gear operated who do not directly participate in fishing trips.
2) 'Owner-Op'	= Owners of the main gear operated who directly participate in fishing trips.
3) 'Operator captain'	= Operators who do not own the main gear but who act as fishing leaders or captains.
4) 'Crew/labourer'	= Operators who do not own the main gear (e.g. net setters and pullers).
5) Light boat owner/operator	= Owners or operators of auxiliary light boats for night fishing operations.

Units operating traditional gear types (lines, lusenga scoop nets, gill nets) can be expected to have fewer numbers of individuals associated with any of these categories than those operating artisanal gear (beach seines, lift nets, chiromilla seines). For sample determination purposes it was estimated that an average of 3 different categories of fishers are associated with artisanal units (AU) and that for traditional fishing units (TU) an average of 1.5 different categories of fishers (mostly of category 1) would be found.

4.2.2 Respondent selection

Derivation of the fisher sample population is summarised in Tables 5 and 6. It was thought best for practical reasons to work with a sampling fraction of 5% of all AUs and TUs in Tanzania and the DRC, rather than taking 5% of the total number of active fishers counted under the 1995 FS -- as had at first been discussed during the Kigoma workshop. The latter rate would have yielded far too many sample fishers for the enumerator teams to be able to interview. In the same way, sampling fractions for Zambia and Burundi were established on the basis of what the teams could reasonably be expected to handle.

Table 5. Determination of fisher sample population (Step 1.)

(1)	(2)	(3)	(4)	(5)	(6)
Country/ Region	Total sites selected	Fishing unit sampling fraction	Total sample units	Estimated % artisanal units	Estimat ed % traditi on-al units
Zambia	13	15%	116	70%	30%
Tanz./ Kigoma	22	5.0%	117	60%	40%
Tanz./ Rukwa	19	5.0%	68	60%	40%
Burundi	5	7.5%	64	70%	30%
DRC (Sud Kivu)	9	5.0%	107	40%	60%
DRC (Shaba)	12	5.0%	117	20%	80%
Totals	80		589		

Table 6. Determination of fisher sample population (Step 2.)

(1)	(2)	(3)	(4)	(5)	(6)
Country/ Region	Tot. sample artisan-al units (AU)	Est. No. respond- ents (AU x 3)	Tot. sample trad- itional units (TU)	Est. No. respond- ents (TU x 1.5)	Tot. all respond- ents
Zambia	35	105	81	122	227
Tanz./ Kigoma	71	223	46	69	292
Tanz./ Rukwa	41	123	27	41	164
Burundi	45	135	19	29	164
DRC (Sud Kivu)	43	128	64	96	224
DRC (Shaba)	23	70	94	140	210
Totals	258	784	331	497	1281

Completion of **Form 2 (Fishers)** was required within each national sector/region for the total number of individual respondents noted in columns (3) and (5) of Table 6.

4.2.3 Directed sampling

In order to achieve these quotas, team supervisors were asked particularly to keep the following points in mind:

- Ensure that sampling is directed according to whether individual fishers are associated with artisanal or traditional units. For example, in the case of Zambia 15% of all fishing units are to be sampled, of which 3 out of every 10 should be traditional units.

- As it will generally not be possible to find all individuals associated with all units available at a given site during the survey visit (making a truly random selection of respondents impossible), teams will simply have to identify respondents out of the collection of those they happen to find at the time.
- Local fishers should be asked about the different types of gear in use at particular sites, and sampling should be guided so as to include as many of these different types as possible.

4.3 Processor/Trader sample (Form 3)

4.3.1 Background

Since there was no basis for estimating total numbers beforehand (as was possible with the fisher population), and knowing also that only a limited number of Form 3 interviews could be conducted within the time available, the survey co-ordination team decided that overall processor/trader sample size should simply be keyed to the fisher sampling rates (i.e. for Form 2). Thus, one processor or trader interview would be conducted per fisher unit-based interview.

4.3.2 Respondent selection

The 'fisher unit rate' approach resulted in the following sample population of processors and traders to be interviewed using Form 3:

Table 7. Determination of processor/trader sample population.

Country/ Region	Fishing unit sampling fraction	Total sample units (= total processors/ traders to be selected)
Zambia	15%	116
Tanz./ Kigoma	5.0%	117
Tanz./ Rukwa	5.0%	68
Burundi	7.5%	64
DRC (Sud Kivu)	5.0%	107
DRC (Shaba)	5.0%	117
Total		589

4.3.3 Directed sampling

As in the case of the fisher respondent selection process, team supervisors were reminded that truly random selection of processors/traders for interview at any given site would generally not be possible to organise. It was therefore recommended that teams again resort to 'opportunity interviewing' in order to fill the quotas required within each

survey area.

Supervisors were asked to ensure, however, that sampling be directed such that equal numbers of processors and traders would be represented, both female and male, and that, for traders, at least half of those selected would be 'local' operators (trading within a 5 km radius of a given survey site), and half 'long-distance' operators (trading beyond a 5 km radius of a given site).

5. PREPARATIONS FOR DATA COMPILATION AND ANALYSIS

The three data collection forms (Annex 1) were designed as much as possible with code-ready response categories. Each national survey working group was provided with a computer file of an Excel spreadsheet structured for immediate data entry of code-ready items. For 'open-ended' question responses, such as in the case of fisher views on the most serious problems that confront them and their communities, coding was carried out in conjunction with the data compilation and verification work which began around mid-August 1997 at LTR-Bujumbura, as part of the second phase of the socio-economic technical consultation. Example printouts of the coding sheets are presented as Annex 5.

6. CONCLUSION

The preceding sections have summarised preparations for the 1997 LTR socio-economic survey of Lake Tanganyika fishing communities. The exercise was conducted by enumeration teams working in all four of the lacustrine states from the first of July until early August 1997.

Survey work was planned on a collaborative basis between LTR personnel and national project associates in each country. Training of enumerator teams and team supervisors took place through workshops held in Kigoma for Tanzania and Zambia participants (April - May 1997) and in Bujumbura for those from Burundi and the DRC (early July 1997). Fieldwork had to be carried out under rather tight limitations of resources in funding, time, and personnel, and the topical scope and sampling strategy of the survey had to be adjusted accordingly.

Three questionnaire forms were designed as tools to collect background information on general community features (Form 1), and the circumstances and opinions of individual fishers (Form 2) and processors/traders (Form 3).

Sample populations of landing sites and individual respondents were constructed through a step-wise process that involved:

- geographical stratification of the shoreline within each national sector;
- further stratification of landing sites on the basis of known numbers of active fishers (1995 LTR Frame Survey data); and
- directed sampling of different categories of artisanal and

traditional fishers and processors/traders within overall quotas set on the basis of estimated interview duration.

In this manner, a total of 80 landing sites, 1281 fishers, and 589 processors/traders were selected for inclusion in the survey samples lakewide.

Details of fieldwork missions and survey results will be reported in separate national case study papers.

7. REFERENCES CITED

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GCP/RAF/271/FIN-TD/65 (En). 35p.

ANNEX 1.

A.) LTR 1997 SEC SURVEY DATA COLLECTION FORMS (ENGLISH)

- **FORM 1: VILLAGE/LANDING SITE INVENTORY.**
- **FORM 2: FISHER INTERVIEW QUESTIONNAIRE.**
- **FORM 3: TRADER/PROCESSOR INTERVIEW QUESTIONNAIRE.**

B.) LTR 1997 SEC SURVEY DATA COLLECTION FORMS (KISWAHILI)

- **FORM 1: VILLAGE/LANDING SITE INVENTORY.**
- **FORM 2: FISHER INTERVIEW QUESTIONNAIRE.**
- **FORM 3: TRADER/PROCESSOR INTERVIEW QUESTIONNAIRE**

FORM 1: VILLAGE/LANDING SITE BASIC INVENTORY

Date:	Georef.:	Enumerator(s):
Start time:	Site code:	
Total duration visit:	Class No.:	Reviewer(s):
Village/landing site:	Area No.:	

Principal site contacts (by position in community):

(a)	(d)
(b)	(e)
(c)	(f)

A. POPULATION & SETTLEMENT**(1) Population estimates:**

[use worksheet]

Total No. of people:

No. of adult males:

No. of adult females:

No. of children < 18 yrs:

(2) Population 5 yrs ago:

Less than now

About the same

More

(3) Reasons for increase or decrease:

[specify]

(4) Structures/households:

[use worksheet]

No. of buildings:

No. of households:

(5) Settlement land is:

Private

Public

Both private & public

[remarks]

B. ACCESS/TRANSPORTATION**(1) Access by land:**

(a) Access by: [tick]

Footpath only

Road

☐ → Q1b☐ → Q1c

(b) If PATH ONLY, how far to nearest road with connections to major town in district: KM

Name of town: [specify]

→ QB1f

(c) Type of access road: [tick]

Dirt track only

Murrum/Gravel

Paved/Tarmac

No, seasonal

Yes, always

(d) Is the road always passable? [tick]

☐ → Q1e☐ → Q1f

(e) Indicate season(s) when the road is usually impassable: [circle months]

J F M A M J J A S O N D

(f) Is there any land transport serving the community?

Yes

☐ → Q1g

No

☐ → Q

(g) If YES, provide the following information:

Type of transport:**Service to/from where:**

No. of services at least:

1x/day 3x/wk

1x/wk < 1x/wk

Large bus (overland)

Lorry/Large truck

Pick-up truck

Taxi/Minibus

Bicycle/wheelbarrow/
porter**(2) Access by water:**

(a) Is there any water transport serving the community?

Yes

☐ → Q2b

No

☐ → Sc C

(b) If YES, provide the following information:

Type of transport:**Service to/from where:**

No. of services at least:

1x/day 3x/wk

1x/wk < 1x/wk

Steamer/Cargo ship

Water taxi/Transporter

C. BASIC FACILITIES INVENTORY

FACILITY/SERVICE	TALLY COLUMN	TOT. No	REMARKS (Special observations, supply/operational problems, etc.) [see manual]	IF NONE, NEAREST [kms]
Retail goods/services				
(1) Roofed, permanent market stalls				
(2) Open, temporary market vendor displays				
(3) General retail shops (food, clothes, HH, goods, etc.)				
(4) Retail drug/medicine shops				
(5) Food/soda kiosks				
(6) Tea rooms/ restaurants				
(7) Bars				
(8) Maize mills				
(9) Hardware shops				
(10) Fuel supply (petrol, kerosene, paraffin)				
(11) Fishing gear supply				
(12) Outboard engine mechanic				
(13) Carpenter/boat building & repair				
Public services/utilities				
(14) Water supply	<div style="text-align: center;"> ↓ Piped <input type="checkbox"/> Well <input type="checkbox"/> </div> <div style="text-align: center;"> ↓ Stream <input type="checkbox"/> Lake only <input type="checkbox"/> </div>			
(15) Electricity	Yes <input type="checkbox"/> No <input type="checkbox"/>			
(16) Hospital/Clinic/ Dispensary				
If ANY MEDICAL FACILITY, ask staff about the three most serious local health problems encountered. [list as first, second & third most common]	(a)			
	(b)			
	(c)			
(17) Primary school				
(18) Secondary school				
(19) Mobile cinema	Yes <input type="checkbox"/> No <input type="checkbox"/>		How often, which type of shows? [specify]	

FACILITY/SERVICE	TALLY COLUMN	TOT. No	REMARKS (Special observations, supply/operational problems, etc.) [see manual]	IF NONE, NEAREST [KM]
(20) Telephone service/ radio call	Yes <input type="checkbox"/> No <input type="checkbox"/>			
(21) Post office	Yes <input type="checkbox"/> No <input type="checkbox"/>			
(22) Bank	Yes <input type="checkbox"/> No <input type="checkbox"/>			
(23) Fishery office/ fisheries staff	Yes <input type="checkbox"/> No <input type="checkbox"/>			
(24) Fisher committee/ landing site head	Yes <input type="checkbox"/> No <input type="checkbox"/>		Explain arrangement, how it operates, etc. [specify]	
(25) Community projects	List any community development work now underway in the area (e.g. self-help water scheme, health project, road improvement, etc. Are projects funded locally or by outside agency?) [specify all relevant details]			
	(a)			
	(b)			
	(c)			
	(d)			

D. FISH PROCESSING/TRADING**(1) Forms of processing practised:**

	Rank order of occurrence:
Sun drying	<input checked="" type="checkbox"/>
Salt/sun drying	<input type="checkbox"/>
Scorch/sun drying	<input type="checkbox"/>
Smoking	<input type="checkbox"/>
Other [specify]	<input type="checkbox"/>

(2) Smoking methods used:

Raised kilns	<input checked="" type="checkbox"/>
Pit kilns	<input type="checkbox"/>
'Chorkor' kilns	<input type="checkbox"/>
Other [specify]	<input type="checkbox"/>

(3) Drying methods used:

	Rank order of occurrence:
On sand	<input checked="" type="checkbox"/>
On bare ground	<input type="checkbox"/>
On gravel layer	<input type="checkbox"/>
On clay plaster surface	<input type="checkbox"/>
On grass mats	<input type="checkbox"/>
On concrete platform	<input type="checkbox"/>
On elevated racks	<input type="checkbox"/>
Other [specify]	<input type="checkbox"/>

(4) Estimated total No. of active processors and traders:

[use worksheet]

	No. in regular work as processor	% Processing only			
Female					
Male					
Total					
	No. in regular work as trader	% Trading only **	No. operating locally only	No. operating >5 km radius	
Female					
Male					
Total					

*: Usually do processing only, without trading.

**: Usually do trading only, without processing.

(5) Principal market channels (non-local trade = > 5 kms):

Type of product	Principal destination	Main transport [use code]
Fresh fish		
Dried fish		
Smoked fish		
Other [specify]		

Transport codes: S = streamer, T = transporter boat, R = road (bus, lorry, pick-up truck),
B = bicycle load, H = head load.

LANDING SITE HOUSECOUNT WORKSHEET

(Use extra worksheets as necessary, all clipped to FORM 1, LANDING SITE BASIC INVENTORY)

Unit No.	STRUCTURE/UNIT, USE [tick]				STRUCTURE, TYPE [tick]				If HH, No. of RESIDENTS [No. and code]			OWNER SHIP [tick]		REMARKS
	HH quarters	Store	Latrine	Other [use code or remarks **]	Temporary	Standard	CIS	Block	Adult males	Adult females	Child. <18 yr	Owner	Tenant	
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
TOTAL														

** STRUCTURE USE codes: K = separate kitchen, E = separate eating house or pavilion, R = chicken run or farm

Total buildings:

Area No.:

Total separate households:

Class No.:

Landing site/village name:

Page:

Of:

FORM 2: FISHERS

Date: _____

Georef.: _____

Enumerator(s): _____

Start time: _____

Site code: _____

Total duration visit: _____

Class No.: _____

Reviewer(s): _____

Village/landing site: _____

Area No.: _____

A. RESPONDENT/UNIT IDENTIFICATION

(1) Unit is:	Fish. No.	Light No.	Aux. No.
Dugout			
Planked canoe			
Catamaran			
Other [specify]			

(2) Propulsion is: ☒ Paddles ☐ Outboard eng. → No. =
☐ Sail ☐ HP =
 Other [specify] _____

(3) Main gear is:

	No. of items
Hand line	
Long line	
Gillnet	
Lusenga net	
Lift net	
Apollo	
Day beach seine	
Night beach seine	
Chiromilla seine	
Other [specify]	

(4) Respondent is:

Owner/Operator	<input checked="" type="checkbox"/>	→ Q6
Owner/Non-Operator	<input type="checkbox"/>	→ Q6
Operator/Non-Owner (captain, leader)	<input type="checkbox"/>	→ Q5&6
Operator/Non-Owner (labourer, crew member)	<input type="checkbox"/>	→ Q5&6
Light boat owner	<input type="checkbox"/>	→ Q6

(5) If owner is absent, request following personal details:

(a) Female ☐ Male ☐
 (b) Age [specify] _____ yrs
 (c) Living place [specify] _____

(d) Main occupation(s) [specify] _____

(6) Unit operations:

	No. of crew	Age oldest	Age youngest
(a) About the active crew	<input type="text"/>	<input type="text"/>	<input type="text"/>

	DNA ✓	Rented ✓	Individual ✓	Shared ✓	If SHARED, No. of partners
(b) Craft ownership:					
(c) Engine ownership:					
(d) Main gear ownership					
(e) Do operator/crew ever bring their own gear?		Yes, always <input type="checkbox"/> → Q6f	Yes, sometimes <input type="checkbox"/> → Q6f	No <input type="checkbox"/> → Sc B	
(f) If YES, which kind of gear? [specify]	_____				

B. RESPONDENT PERSONAL HISTORY

(1) Gender: Female ☐ Male ☐

(2) Age: [specify] _____ YR

(3) Formal education:

(a) Yrs primary school? [specify] _____

(b) Primary school certificate? Yes ☐ No ☐

(c) Yrs secondary school? [specify] _____

(d) Secondary school certificate? Yes ☐ No ☐

(e) Other formal education/training? [specify] _____

(5) Religious affiliation:

Muslim	<input checked="" type="checkbox"/>
Christian catholic	<input type="checkbox"/>
Christian protestant	<input type="checkbox"/>
Other [specify]	

(4) Language fluency:

	Speaking	Writing
Kiswahili	<input type="checkbox"/>	<input type="checkbox"/>
Tabwa	<input type="checkbox"/>	<input type="checkbox"/>
Kibembe	<input type="checkbox"/>	<input type="checkbox"/>
Kiha	<input type="checkbox"/>	<input type="checkbox"/>
Fipa	<input type="checkbox"/>	<input type="checkbox"/>
Bemba	<input type="checkbox"/>	<input type="checkbox"/>
Lungu	<input type="checkbox"/>	<input type="checkbox"/>
Kirundi	<input type="checkbox"/>	<input type="checkbox"/>
Lingala	<input type="checkbox"/>	<input type="checkbox"/>
Mambwe	<input type="checkbox"/>	<input type="checkbox"/>
French	<input type="checkbox"/>	<input type="checkbox"/>
English	<input type="checkbox"/>	<input type="checkbox"/>

Other [specify] _____

(6) Marital/Family status: Yes ☐ No ☐

(a) Now married? ☐ (b) If male, No. of wives? [specify] _____

(c) No. of dependent children <18yr? [specify] _____

(d) No. of other dependants? [specify] _____

(e) Living place of spouse/family? Here ☐ Elsewhere ☐

(7) Birth place:

(a) Born here (within 5 KM)?

Yes ☐ → Q8
 No ☐ → Q7b

(b) If NO, born within (in KM): 10 ☐ 50 ☐ 75 ☐ 100 ☐ >100 ☐

(c) If NO, in which place? [specify name]

[specify District]

[specify Region]

[specify Country]

→ Q8b

(8) Residential history:

(a) If born HERE, ever lived other place?

Yes ☐ → R8a
 No ☐ → Q8c

If YES, where? [specify]

If YES, why? [specify]

(b) If born SOMEWHERE ELSE, how long here?

[specify months, yrs]

Why came to this place? [specify]

(8) Residential history - continued:

(c) Now full time resident?

Yes, full time ☐ → Q9 No, part time ☐ → Q8d No, work only ☐ → Q8d

(d) If NO, time/month spent here?

(Almost) all ☐ 3 wks/mo. ☐ 2 wks/mo. ☐ 1 wks/mo. ☐

(e) About the other place of residence:

Where? [specify]

Why? [specify]

(9) Living quarters here:(a) None ☐ Rented ☐ Shared ☐ Own ☐(b) Structure: DNA ☐ Temp. ☐ Stand. ☐ CIS ☐ Block ☐

Other [specify]

(10) Living quarters other place:(a) None ☐ Rented ☐ Shared ☐ Own ☐(b) Structure: DNA ☐ Temp. ☐ Stand. ☐ CIS ☐ Block ☐

Other [specify]

C. RESPONDENT FISHING INFO/INCOME STATUS**(1) Fishing history:**

(a) Are you involved in fishing on a full-time basis?

Yes ☐ ✓
 No ☐

(b) How long have you been involved in fishing?

[specify] yrs

(c) Why did you start fishing? [specify reasons]

(d) Were you involved with other work before fishing?

Yes ☐ ✓
 No ☐ → Q1f

(e) Which work? [specify]

(f) What was/is the main work of your parents? [response]

(Note also any fish related work, even part-time)

Father:

Mother:

(2) Sale/use of catch after a fishing trip/night:

(a) How do you sell your catch/share of catch?

	Catch sold to:	Most sales to:
Beach traders	<input type="checkbox"/>	<input type="checkbox"/>
Family members to sell	<input type="checkbox"/>	<input type="checkbox"/>
Local market	<input type="checkbox"/>	<input type="checkbox"/>
Consumer direct	<input type="checkbox"/>	<input type="checkbox"/>
Fishing Company	<input type="checkbox"/>	<input type="checkbox"/>

Other [specify]

(b) How do you rely on traders?

[specify your answer]

For boat/gear ☐

[specify your answer]

For loans ☐Yes ☐ No ☐

(c) Do you generally sell to the same trader?

Why/why not? [specify]

(d) Do you/your household members ever process fish caught?

Yes ☐ → Q2e No ☐ → Q3

(e) If YES, specify the 3 most important types of fish processed:

	Name:	Processing mode	Used home only	Used home + sale
Type 1:				
Type 2:				
Type 3:				

(3) Other work, income estimates:

(a) What other work/business do you have besides fishing?

Farming for food only ☐Farming for food + cash ☐Fish trade ☐Labour ☐

[specify details]

[specify details]

Salary job ☒ [specify details]Business ☐ [specify details]

Other [specify details]

(b) Does most of the money you earn on average each month come from fishing or from some other work/business? [tick as applies]

From fishing ☐ → Q3cFrom other work ☐ [specify details]

(c) Thinking over the past year, about how much money do you earn from fishing during:

good months? [specify amount]

poor months? [specify amount]

/mo.

/mo.

(d) Thinking over the past year, how much would you say you earn on average per month

from fishing? [specify amount]

from other work/business? [specify amount]

/mo.

/mo.

(4) Land and productive assets:

Yes

No

(a) Do you own any land?

☐☐

→ Q4b

If YES, how many acres/hectares? [specify]

If YES, how do you use them? [specify]

(b) Do you own or have part share in any of the following items?

Owned/shared equipment:

Car/vehicles

Boats [specify type:]

Outboard engines

Fishing lamps

Other [specify:]

Owned/shared gear:

Hand lines

Long lines

Gill nets

Lusenga nets

Lift nets / Apollos [circle]

Day beach seines

Night beach seines

Chiromilla seines

Other [specify:]

	No.	Owned %	Item age yrs	Item present total value	Cash purchase All	Cash purchase Part	Credit purchase All	Credit purchase Part	Credit type code *
Car/vehicles									
Boats [specify type:]									
Outboard engines									
Fishing lamps									
Other [specify:]									
Owned/shared gear:									
Hand lines									
Long lines									
Gill nets									
Lusenga nets									
Lift nets / Apollos [circle]									
Day beach seines									
Night beach seines									
Chiromilla seines									
Other [specify:]									

Credit codes: R = from relative, B = from bank, P = from project, T = from trader, O = from other source [to be specified] → Section D

D. RESPONDENT OPINIONS/VIEWS**(1) If you had a choice, would you like to continue in your present occupation?**

Yes

No

No opinion

☐ → Q2☐ → Q1a☐

(a) If NO, what would you like to do? [response:]

(b) Why? [response:]

(2) If you had a choice, would you like to stay in this place?

Yes

No

No opinion

☐ → Q3☐ → Q2a☐

(a) If NO, where would you like to go? [response:]

(b) Why? [response:]

(3) If you had all the money usually earned from 1 year of fishing or business, saved up all together to spend or use now, on whatever you liked, what would be your first, second and third preference to do with it?

[response]

(first)

(second)

(third)

(4) Thinking about the catches when you first became involved with fishing compared with the catches now, have they:

Increased

Decreased

Stay same

No opinion

☐☐☐☐

(a) What do you think is the reason for this? [response:]

Increase

Decrease

Stay same

No opinion

☐☐☐☐**(5) Do you think that the catches over the next 5 yr will:**

(a) Why? [response:]

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(6) About those people who live around the lake, do you think that:

	Yes	No	No opinion
(a) Everybody should be able to catch as much fish as they like?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) In any place in the lake they like, even outside their own district?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) In any place in the lake they like, even outside their own country?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(7) Do you think that there will always be enough fish for everybody?

	Yes	No	No opinion
(a) For what reasons do you think this? [response:]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) What do you think of the following ideas for controlling fishing on the lake in the future:

	Agree	Disagree	No opinion
(a) Closed seasons/times when fishing is not allowed? (e.g. certain months to allow fish to breed/grow)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Permanent closed areas/places where fishing is never allowed? (e.g. river deltas and shallow sandy bays where fish may breed/grow) If you AGREE, can you suggest any specific areas? [response:]	<input type="checkbox"/> → R8b	<input type="checkbox"/>	<input type="checkbox"/>
(c) Limitation on the number of people who are allowed to fish? Who SHOULD be allowed to fish? [response:] Who should NOT be allowed to fish? [response:]	<input type="checkbox"/> → R8c	<input type="checkbox"/>	<input type="checkbox"/>

	Agree	Disagree	No opinion
(d) Restriction on mesh sizes (cannot be below a certain minimum)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For gill nets?	GN	<input type="checkbox"/>	<input type="checkbox"/>
For beach seines?	BS	<input type="checkbox"/>	<input type="checkbox"/>
For normal or apollo lift nets?	LN	<input type="checkbox"/>	<input type="checkbox"/>
For chiromilla seines?	CH	<input type="checkbox"/>	<input type="checkbox"/>
(e) Restriction on industrial gear? (operate only some places/times)	R ind	<input type="checkbox"/>	<input type="checkbox"/>
(f) Prohibition of industrial gear? (can never operate)	P ind	<input type="checkbox"/>	<input type="checkbox"/>
(g) Restriction on beach seines? (operate only some places/times)	R BS	<input type="checkbox"/>	<input type="checkbox"/>
(h) Prohibition of beach seines? (can never operate)	P BS	<input type="checkbox"/>	<input type="checkbox"/>
(i) Restriction on lift nets? (operate only some places/times)	R LN	<input type="checkbox"/>	<input type="checkbox"/>
(j) Prohibition of lift nets? (can never operate)	P LN	<input type="checkbox"/>	<input type="checkbox"/>
(k) Prohibit the use of 'katuli' ('beating the nets')?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(9) Should restrictions be decided only by government officers?

	Yes	No	No opinion
(a) Why/why not? [response:] Other suggestions: [response:]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(10) If rules in the lake are made in the future, how do you think they should be kept in force?

	Agree	Disagree	No opinion
(a) More government fishing patrol boats.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) More fishery assistants/fish scouts for enforcement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Involve the police more directly in fishery enforcement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Offending fishers should be punished somehow? (e.g. with fines, gear confiscation, withdrawal of fishing permit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Offending traders and consumers should be punished somehow? (e.g. with fines, product confiscation, withdrawal of trading permit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(11) What are the 3 biggest problems you face in your occupation as a fisher working here around the lake?

[Rank response in order as most, second most and third most serious]

(most serious) _____

(second most serious) _____

(third most serious) _____

FINISH TIME: _____

FORM 3: FISH PROCESSORS & TRADERS

Date:	Georef.:	Enumerator(s):
Start time:	Site code:	
Total duration visit:	Class No.:	Reviewer(s):
Village/landing site:	Area No.:	

A. RESPONDENT/UNIT IDENTIFICATION

- (1) Respondent is mostly engaged in:
- | | |
|-------------------------------|--------------------------|
| Processing (rarely marketing) | <input type="checkbox"/> |
| Processing + trading | <input type="checkbox"/> |
| Trading (rarely processing) | <input type="checkbox"/> |

- (2) Type of product handled:

	General	Most frequent
	[tick as applies]	[tick one]
Fresh fish	<input type="checkbox"/>	<input type="checkbox"/>
Dried fish	<input type="checkbox"/>	<input type="checkbox"/>
Smoked fish	<input type="checkbox"/>	<input type="checkbox"/>
Other [specify]		

- (3) The top three most frequent species handled are:

Most: _____

Second most: _____

Third most: _____

- (4) Usual processing method:

DNA	<input type="checkbox"/>	Dry on racks	<input type="checkbox"/>
Dry on sand	<input type="checkbox"/>	Dry on concrete	<input type="checkbox"/>
Dry on gravel/bare ground	<input type="checkbox"/>	Raised kiln	<input type="checkbox"/>
Dry on clay plaster surface	<input type="checkbox"/>	Pit kiln	<input type="checkbox"/>
Dry on grass mats	<input type="checkbox"/>	Chorkor' kiln	<input type="checkbox"/>
Other [specify]			

- (5) Are the processing facilities owned or rented?

DNA	<input type="checkbox"/>
Own facilities	<input type="checkbox"/>
Rented/borrowed from other	<input type="checkbox"/>

If, RENTED/BORROWED specify the arrangement:

- (6) For TRADERS, the area of operation is:

DNA	<input type="checkbox"/>
Local (5 km radius)	<input type="checkbox"/>
Non-local (> 5 km radius)	<input type="checkbox"/>
Both local & non-local	<input type="checkbox"/>

- (7) For NON-LOCAL TRADERS, the principal market destination is:

[specify]

- (a) The main way of transporting product to this market is:

DNA	<input type="checkbox"/>	Vehicle (bus, van, etc.)	<input type="checkbox"/>
Steamer	<input type="checkbox"/>	Bicycle	<input type="checkbox"/>
Transporter boat	<input type="checkbox"/>	Headload	<input type="checkbox"/>
Other [specify]			

B. RESPONDENT PERSONAL HISTORY

- (1) Gender:
- | | | | |
|--------|--------------------------|------|--------------------------|
| Female | <input type="checkbox"/> | Male | <input type="checkbox"/> |
|--------|--------------------------|------|--------------------------|

- (2) Age: [specify] YR

- (3) Formal education:

(a) Yrs primary school? [specify]

(b) Primary school certificate? Yes ☐ No ☐

(c) Yrs secondary school? [specify]

(d) Secondary school certificate? Yes ☐ No ☐

(e) Other formal education/training? [specify]

- (5) Religious affiliation:

Muslim	<input type="checkbox"/>
Christian catholic	<input type="checkbox"/>
Christian protestant	<input type="checkbox"/>
Other [specify]	<input type="checkbox"/>

- (4) Language fluency:

	Speaking	Writing
Kiswahili	<input type="checkbox"/>	<input type="checkbox"/>
Tabwa	<input type="checkbox"/>	<input type="checkbox"/>
Kibembe	<input type="checkbox"/>	<input type="checkbox"/>
Kiha	<input type="checkbox"/>	<input type="checkbox"/>
Fipa	<input type="checkbox"/>	<input type="checkbox"/>
Bemba	<input type="checkbox"/>	<input type="checkbox"/>
Lungu	<input type="checkbox"/>	<input type="checkbox"/>
Kirundi	<input type="checkbox"/>	<input type="checkbox"/>
Lingala	<input type="checkbox"/>	<input type="checkbox"/>
Mambwe	<input type="checkbox"/>	<input type="checkbox"/>
French	<input type="checkbox"/>	<input type="checkbox"/>
English	<input type="checkbox"/>	<input type="checkbox"/>

Other [specify]

- (6) Marital/Family status:

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

(a) Now married? (b) If male, No. of wives? [specify]

- (c) No. of dependent children <18yr? [specify]

- (d) No. of other dependants? [specify]

- (e) Living place of spouse/family? Here ☐ Elsewhere ☐

(7) Birth place:

(a) Born here (within 5 KM)?

Yes ☐ → Q8
 No ☐ → Q7b

(b) If NO, born within (in KM):

10 ☐ 50 ☐ 75 ☐ 100 ☐ >100 ☐

(c) In which place? [specify name]

[specify District]

[specify Region]

[specify Country]

(8) Residential history:

(a) If born HERE, ever lived other place?

Yes ☐ → R8a
 No ☐ → R8c

If YES, where? [specify]

If YES, why? [specify]

(b) If born SOMEWHERE ELSE, how long here?

[specify months, yrs]

Why came to this place? [specify]

(8) Residential history - continued:

(c) Now full time resident?

Yes, full time ☐ No, part time ☐ No, work only ☐
☐ → Q9 ☐ → Q8d ☐ → Q8d

(d) If NO, time/month spent here?

(Almost) all ☐ 3 wks/mo. ☐ 2 wks/mo. ☐ 1 wks/mo. ☐

(e) About the other place of residence:

Where? [specify]

Why? [specify]

(9) Living quarters here:

(a) None ☐ Rented ☐ Shared ☐ Own ☐
 (b) Structure: DNA ☐ Temp. ☐ Stand. ☐ CIS ☐ Block ☐
 Other [specify] ☐

(10) Living quarters other place:

(a) None ☐ Rented ☐ Shared ☐ Own ☐
 (b) Structure: DNA ☐ Temp. ☐ Stand. ☐ CIS ☐ Block ☐
 Other [specify] ☐

C. RESPONDENT OCCUPATIONAL INFO/INCOME STATUS**(1) Fishery employment history:**

(a) Are you involved in fish business (processing/trading) on full-time basis (takes most of your working time/month)?

Yes ☐
 No ☐

(b) How long have you been involved in this business? [specify] yrs

(c) Why did you start this business? [specify reasons]

(d) Were you involved with other work before this business?

Yes ☐
 No ☐ → Q1f

(e) Which work? [specify]

(f) What was/is the main work of your parents? [response]

(Note also any fish related work, even part-time)

Father:

Mother:

(2) Supply sources/sales:

(a) Where/from whom do you usually get your supplies of fish?

Other than indicated [specify]

Supplies from: Mostly from:
 Own family/fishing unit ☐ ☐
 Buy from fishers ☐ ☐
 Buy from processors ☐ ☐
 Buy from another trader ☐ ☐
 Buy from a fishing company ☐ ☐
 DNA ☐ Yes ☐ No ☐
☐ → Q2d ☐ → Q2c ☐ → Q2c

(b) Do you mostly buy your fish from particular fishers or processors?

(c) Why/why not? [specify]

(d) Do you ever help those you buy from with things like equipment (boat/gear, kilns, etc.) or loans?

If YES, specify your help:

DNA ☐ Yes ☐ No ☐
☐ → Q2e ☐ → R2d ☐ → Q2e

(e) Where/to whom do you usually sell your consignment of fish?

Other than indicated [specify]

Sales to: Most sales to:
 Local traders ☐ ☐
 Non-local traders ☐ ☐
 Direct to consumers ☐ ☐
 Local retail market ☐ ☐
 Fishing company ☐ ☐
 DNA ☐ Yes ☐ No ☐
☐ → Q2h ☐ → Q2g ☐ → Q2g

(f) Do you mostly sell to particular traders?

(g) Why/why not? [specify]

(3) Other work, income estimates:

(a) What other work/business do you have besides your fish business?

Farming for food only ☐
 Farming for food + cash ☐
 Fish trade ☐

[specify details]

Labour ☐ [specify details]Salary job ☐ [specify details]Business ☐ [specify details]

Other [specify details]

(b) Does most of the money you earn on average each month come from fish business or from some other work/business? [tick]

From processing/trading ☐ → Q3cFrom other work ☐ [specify details]

(c) Thinking over the past year, about how much money do you earn from fish business during good months? [specify amount]

/mo.

poor months? [specify amount]

/mo.

(d) Thinking over the past year, how much would you say you earn on average per month from fish business? [specify amount]

/mo.

from other work/business? [specify amount]

/mo.

(4) Land and productive assets:

(a) Do you own any land?

Yes ☐No ☐

→ Q4b

If YES, how many acres/hectares? [specify]

If YES, how do you use them? [specify]

(b) Do you own or have part share in any of the following items?

Owned/shared equipment:

Car/vehicles

Boats [specify type:]

Outboard engines

Fishing lamps

Other [specify:]

Owned/shared gear:

Hand lines

Long lines

Gill nets

Lusenga nets

Lift nets / Apollos [circle type]

Day beach seines

Night beach seines

Chiromilla seines

Other [specify:]

Credit codes: R = from relative, B = from bank, P = from project, T = from trader, O = from other source [to be specified]

→ Section D

D. RESPONDENT OPINIONS/VIEWS

(1) If you had a choice, would you like to continue in your present occupation?

Yes ☐

→ Q2

No ☐

→ Q1a

No opinion ☐

(a) If NO, what would you like to do? [response:]

(b) Why? [response:]

(2) If you had a choice, would you like to stay in this place?

Yes ☐

→ Q3

No ☐

→ Q2a

No opinion ☐

(a) If NO, where would you like to go? [response:]

(b) Why? [response:]

(3) If you had all the money usually earned from 1 year of your present occupation, saved up all together to spend or use now, on whatever you liked, what would be your first, second and third preference to do with it?

[response]

(first)

(second)

(third)

(4) Thinking about the catches when you first became involved with the fish business compared with the catches now, have they:

Increased ☐Decreased ☐Stay same ☐No opinion ☐

(a) What do you think is the reason for this? [response:]

(5) Do you think that the fish supply over the next 5 yr will:

Increased ☐Decreased ☐Stay same ☐No opinion ☐

(a) Why? [response:]

- (6) About those people who live around the lake, do you think that:
- | | Yes | No | No opinion |
|--|--------------------------|--------------------------|--------------------------|
| (a) Everybody should be able to catch as much fish as they like? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) In any place in the lake they like, even outside their own district? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) In any place in the lake they like, even outside their own country? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- (7) Do you think that there will always be enough fish for everybody?
- | | Yes | No | No opinion |
|---|--------------------------|--------------------------|--------------------------|
| (a) For what reasons do you think this? [response:] | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- (8) What do you think of the following ideas for controlling fishing on the lake in the future:
- | | Agree | Disagree | No opinion |
|---|--------------------------------|--------------------------|--------------------------|
| (a) Closed seasons/times when fishing is not allowed?
(e.g. certain months to allow fish to breed/grow) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Permanent closed areas/places where fishing is never allowed?
(e.g. river deltas and shallow sandy bays where fish may breed/grow) | <input type="checkbox"/> → R8b | <input type="checkbox"/> | <input type="checkbox"/> |
| If you AGREE, can you suggest any specific areas?
[response:] | Agree | Disagree | No opinion |
| (c) Limitation on the number of people who are allowed to fish?
Who SHOULD be allowed to fish?
[response:] | <input type="checkbox"/> → R8c | <input type="checkbox"/> | <input type="checkbox"/> |
| Who should NOT be allowed to fish?
[response:] | | | |

- | | Agree | Disagree | No opinion |
|--|--------------------------|--------------------------|--------------------------|
| (d) Restriction on mesh sizes (cannot be below a certain minimum)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| For gill nets? | GN | <input type="checkbox"/> | <input type="checkbox"/> |
| For beach seines? | BS | <input type="checkbox"/> | <input type="checkbox"/> |
| For normal or apollo lift nets? | LN | <input type="checkbox"/> | <input type="checkbox"/> |
| For chiromilla seines? | CH | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Restriction on industrial gear? (operate only some places/times) | R ind | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Prohibition of industrial gear? (can never operate) | P ind | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) Restriction on beach seines? (operate only some places/times) | R BS | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) Prohibition of beach seines? (can never operate) | P BS | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) Restriction on lift nets? (operate only some places/times) | R LN | <input type="checkbox"/> | <input type="checkbox"/> |
| (j) Prohibition of lift nets? (can never operate) | P LN | <input type="checkbox"/> | <input type="checkbox"/> |
| (k) Prohibit the use of 'katuli' ('beating the nets')? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- (9) Should restrictions be decided only by government officers?
- | | Yes | No | No opinion |
|-----------------------------------|--------------------------|--------------------------|--------------------------|
| (a) Why/why not?
[response:] | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other suggestions:
[response:] | | | |

- (10) If rules in the lake are made in the future, how do you think they should be kept in force?
- | | Agree | Disagree | No opinion |
|--|--------------------------|--------------------------|--------------------------|
| (a) More government fishing patrol boats. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) More fishery assistants/fish scouts for enforcement. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Involve the police more directly in fishery enforcement. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Offending fishers should be punished somehow?
(e.g. with fines, gear confiscation, withdrawal of fishing permit) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Offending traders and consumers should be punished somehow?
(e.g. with fines, product confiscation, withdrawal of trading permit) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- (11) What are the 3 biggest problems you face in your occupation as a fish trader or processor working here around this lake?
- [Rank response in order as most, second most and third most serious]
- | | (most serious) | (second most serious) | (third most serious) |
|--|----------------|-----------------------|----------------------|
| | | | |
| | | | |
| | | | |

FINISH TIME: _____

FORM 1: TATHMINI YA MSINGI KWA VIJILI/MIALO YA UVUVI

Tarehe:

Georef.:

Msalii/Mhojaji:

Muda wa kuanza:

Site code:

Muda uliotumika kuhoji:

Class No.:

Reviewer(s):

Kijiji/Mwalo:

Area No.:

Watu muhimu waliotembelewa (kwa nyadhifa zao katika jamii):

(a)

(d)

(b)

(e)

(c)

(f)

A. IDADI YA WATU & MAKAZI

(1) Makadirio ya idadi ya watu:

[tumia jedwali lililoambatanishwa]

Jumla ya idadi ya watu:

Idadi ya wanaume:

(watu wazima)

Idadi ya wanawake:

(watu wazima)

Idadi ya watoto wa umri chini ya miaka 18:

(2) Idadi ya watu miaka 5 iliyopit

Wachache kuliko sasa

Karibu sawa na sasa

Wengi kuliko sasa

(3) Sababu za kuongezeka/kupungua:

[taja]

(4) Majengo/kaya:

[tumia jedwali lililoambatanishwa]

Idadi ya majengo:

Idadi ya kaya:

(5) Ardhi ya makazi

Binafsi

Umma

Binafsi na umma

[maoni]

B. NJIA/USAFIRISHAJI

(1) Njia kwa nchi kavu:

Njia ya mguu tu

Barabara

(a)

☐ → Swali 1b☐ → Swali 1c

(b) Kama njia ni ya mguu tu, kuna umbali gani hadi barabara iendayo miji mikubwa mkoani?

KM

Jina la mji: [taja]

Swali 1f

(c) Aina ya barabara: [tick]

Ya udongo

Ya changarawe

Ya lami

(d) Je barabara hupitika wakati wote? [tick]

Hapana

☐ → Swali 1e

Ndiyo

☐ → Swali 1f

(e) Onyesha miezi ambayo barabara haipitiki: [zungushia mwezi]

J F M A M J J A S O N D

(f) Kuna usafiri wowote wa umma unaohudumia jamii?

Ndiyo

☐ → Sw 1g

Hapana

☐ → Sw2

(g) Kama ndiyo, toa maelezo yafuatayo:

Idadi ya huduma:

Aina ya usafiri:

Huduma kwenda/kutoka wapi:

1x/siku3x/wk

1x/wk<1x/wk

Mabasi makubwa

Malori/Magari makubwa

ya mizigo

Magari madogo ya

mizigo (Pick-up)

Taxi/Mabasi madogo

Baiskeli/mikokoteni/

wabeba mizigo

(2) Njia kwa maji:

(a) Kuna usafiri wowote wa majini kuhudumia jamii?

Ndiyo

☐ → Sw2b

Hapana

☐ → Sc C

(b) Kama ndiyo, toa taarifa ifuatayo:

Idadi ya huduma:

Aina ya usafiri:

Huduma kwenda/kutoka wapi:

1x/siku3x/wk

1x/wk<1x/wk

Meli/boti ya mizigo

Boti za abiria/mzigo

C. TATHMINI YA HUDUMA MUHIMU

HUDUMA	SEHEMU YA KUHESABIA	JUMLA	MAONI (Matatizo ya upatikanaji/uendeshaji, n.k.) [tazama manual]	KAMA HAKUNA, YA KARIBU [km]
Huduma/vitu vya za rejareja				
(1) Viduka vya kudumu vilivyocekwa				
(2) Meza za kuuzia vitu sokoni				
(3) Maduka ya rejareja ya ya kuuza vitu mbalimbali				
(4) Maduka ya rejareja ya kuuza madawa				
(5) Viduka (kiosk) vya chakula na soda				
(6) Mikahawa ya chai na chakula				
(7) Baa za pombe				
(8) Mashine za kusaga				
(9) Maduka ya vyombo vya ujenzi na uselemara				
(10) Huduma ya mafuta ya Petroli na taa				
(11) Maduka ya zana za uvuvi				
(12) Mafundi wa kutengeneza injini za boti				
(13) Mafundi selemara/waundaji wa mitumbwi				
Huduma za umma				
(14) Huduma za maji	ya bomba <input type="checkbox"/> Visima <input type="checkbox"/> mto <input type="checkbox"/> Ziwa <input type="checkbox"/>			
(15) Umeme	Ndiyo <input type="checkbox"/> Hapana <input type="checkbox"/>			
(16) Hospitali/Kituo cha afya/Zahanati				
Kama kuna huduma za afya, ulizia kuhusu magonjwa matatu makubwa ukianzia na ugonjwa mkubwa zaidi	(a) (b) (c)			
17) Shule ya msingi				
18) Shule ya sekondari				
(19) Sinema zinazozungukia	Ndiyo <input type="checkbox"/> Hapana <input type="checkbox"/>		Mara ngapi, picha aina gani? [taja]	

HUDUMA	SEHEMU YA KUHESABIA		JUMLA	MAONI Shida mbalimbali na mengineyo [tazama manual]	KAMA HAKUNA YA KARIBU [KM]
(20) Huduma ya simu/simu ya upepo	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>			
(21) Kituo cha posta	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>			
(22) Ofisi ya uvuvi/ Ofisa wa uvuvi	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>			
(23) Kamati ya uvuvi/ Kiongozi wa mwalo	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>		Toa maelezo kuhusu utaratibu wa kamati na jinsi inavyofanya kazi.	
(24) Benki	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>			
(25) Miradi ya jamii	Orodhesha miradi yoyote ya maendeleo inayotekelezwa sehemu hiyo (k.m. miradi ya kujisaidia maji, afya, matengenezo ya barabara, n.k. Je, miradi hiyo hugharamiwa na kijiji au wafadhili kutoka nje? [Toa maelezo yanayohusika na miradi hiyo] (a) (b) (c) (d)				

D. UKAUSHAJI/ UZAJI WA SAMAKI

(1) Namna ya ukaushaji:

Rank order
of occurrence:

kukausha kwa jua	<input type="checkbox"/>
kukausha kwa chumvi juani	<input type="checkbox"/>
kukausha kwa moto halafu juani	<input type="checkbox"/>
kubanika na moshi	<input type="checkbox"/>
njia nyinginezo [taja]	<input type="checkbox"/>

(2) Aina za ubanikaji kwa moto

Matanuru ya juu	<input type="checkbox"/>
Matanuru ya ardhi	<input type="checkbox"/>
Tanuru za 'chokor'	<input type="checkbox"/>
Nyinginezo [taja]	<input type="checkbox"/>

(3) Njia zitumikazo kukausha

Rank order
of occurrence:

Juu ya mchanga	<input type="checkbox"/>
Juu ya udongo	<input type="checkbox"/>
Juu ya changarawe	<input type="checkbox"/>
Juu ya sakafu ya udongo	<input type="checkbox"/>
Juu ya majani	<input type="checkbox"/>
Juu ya sakafu ya simenti	<input type="checkbox"/>
Juu ya chanja (racks)	<input type="checkbox"/>
Njia nyinginezo [taja]	<input type="checkbox"/>

(4) Makadirio ya idadi ya wakaushaji na wafanyabiashara hal

[tumia jedwali]

	Idadi ya wakaushaji wa samaki	% Ukaushaji tu*
Wanawake		
wanaume		
Jumla		

	Idadi ya wafanya biashara ya samaki.	% Biashara tu**	Wafanyao biashara mwaioni tu	Wafanyao biashara ktik mzunguko km 5
Wanawake				
Wanaume				
Jumla				

*: Hukausha samaki tu bila kufanya biashara.

**: Hufanya biashara tu bila kukausha samaki.

(5) Njia muhimu za masoko (ya nje > km 5):

Aina ya zao	Sehemu muhimu linapoteleka	Usafiri mkuu tumia alama
Samaki wabichi		
Samaki wakavu		
Samaki walio kaushwa kwamoshi		
Aina nyingine [taja]		

Alama (codes) za usafiri: S=meli; T=boti za mizigo; R=barabara (basi,lori, pick-up, n.k)

B=kubeba kwa baiskeli; H=kubeba kichwani.

JEDWALI LA KUHEMABIA NYUMBA MIALONI

(Tumia majedwali zaidi kama ikibidi, yote yaunganishwe na FORM NO. 1, TATHIMINI YA MSINGI YA MIALO)

Orodha ya jengo	MATUMIZI YA JENGO					AINA YA JENGO			KAMA JENGO HUTUMIKA KWA KUISHI, TAJA IDADI					UMILIKAJI		MAONI
	[tick]					[tick]			[Na. & code]					[tick]		
	HH quarters	Stoo	Choo	Mengineyo	[Taja ^{NA}]	Ya muda	Kawaida	Mabati	Tofari za simenti	Wanaume wazima	Wanawake wazima	Watoto < 18 yr	Mwenyewe	Mpangaji		
1																
2																
3																
4																
5																
6																
7																
8																
9																
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
0																
JUMLA																

**: Code za matumizi ya majengo: K = jiko pekee yake, E = nyumba ya kulia chakula, R = nyumba ya mifugo.

Idadi ya majengo:

Site code:

Idadi ya kaya:

Area No.:

Class No.:

Pageof.....

FORM 2: WAVUVI

Tarehe:

Georef.:

Msaili/Mhojaji:

Muda wa kuanza:

Site code:

Muda uliotumika kuhoji:

Class No.:

Watathmini:

Kijiji/Mwalo:

Area No.:

A. UTAM BULISHO WA MHOJIWA / CHOMBO

(1) Chombo ni	Idadi boti za kuvulia	Idadi boti za taa	Idadi boti saidizi
Mtumbwi wa mti			
Mtumbwi wa mbao			
Mitumbwi ya kipe			
Mingineyo [taja]			

(2) Kinaendeshwa kwa

Kasia	<input checked="" type="checkbox"/>	Na. =
Injini ya kupachika	<input type="checkbox"/>	HP =
Tanga	<input type="checkbox"/>	
Njia nyinginezo [taja]		

(3) Zana za uvuvi ni:

	Idadi
Kachinga (handline)	
Kabambara (longline)	
Makira (gillnets)	
Kawesuro/Lusenga	
Kipe (liftnet)	
Apollo	
Mkwabo/Kokoro la mchana	
Mkwabo/Kokoro la usiku	
Nyingineyo [taja]	

(4) Mhojiwa ni:

Mwenye mali pia ni mvuvi	<input checked="" type="checkbox"/>	→ Swali 6
Mwenye mali lakini havui mwenyewe	<input type="checkbox"/>	→ Swali 6
Mvuvu/siyo mwenye mali (Captain, kiongozi)	<input type="checkbox"/>	→ Swali 5&6
Mvuvu/siyo mwenye mali (mvuvi wa kawaida)	<input type="checkbox"/>	→ Swali 5&6
Mmiliki wa mitumbwi ya taa	<input type="checkbox"/>	→ Swali 6

(5) Kama mwenye mali hayupo, ulizia habari zake:

(a) Mke ☐ Mume ☐

(b) Umri miaka

(c) Anakoishi [taja anakoishi]

(d) Kazi yake/zake kubwa [taja]**(6) Undeshaji chombo:**

(a) Habari kuhusu wavuvi	Idadi ya wavuvi	Umri mkubwa	Umri mdogo

	HH	Kukodi	Binafsi	Ubia	Idadi ya wabia,
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Umilikaji chombo:					
(c) Umilikaji injini:					
(d) Umilikaji wa zana muhimu					

Ndiyo Daima Ndiyo, wakati mwingine Hapana

(e) Je, wavuvi pia huleta zana zao? ☐ → Swali 6f ☐ → Swali 6f ☐ → Sc B

(f) Kama NDIYO, aina gani?

B. HISTORIA BINAFSI YA MHOJIWA

(1) Jinsia: Mke ☐ Mume ☐

(2) Umri: [taja] miaka**(3) Elimu ya darasani:**

(a) Miaka ya elimu ya msingi? (taja)

Ndiyo Hapana

(b) Cheti cha elimu ya msingi? ☐ ☐

(c) Miaka ya Elimu ya Sekondari? (taja)

Ndiyo Hapana

(d) Cheti ya Elimu ya Sekondari? ☐ ☐

(e) Mafunzo mengineyo? [taja]

(5) Dini:

Muslim	<input checked="" type="checkbox"/>
Mkristo Mkatoliki	<input type="checkbox"/>
Mkristo Mprotestanti	<input type="checkbox"/>
Nyinginezo (taja)	

(4) Lugha anazojua vizuri:

	kusema	kuandika
Kiswahili	<input type="checkbox"/>	<input type="checkbox"/>
Kitabwa	<input type="checkbox"/>	<input type="checkbox"/>
Kibembe	<input type="checkbox"/>	<input type="checkbox"/>
Kiha	<input type="checkbox"/>	<input type="checkbox"/>
Kifipa	<input type="checkbox"/>	<input type="checkbox"/>
Kibemba	<input type="checkbox"/>	<input type="checkbox"/>
Kilungu	<input type="checkbox"/>	<input type="checkbox"/>
Kirundi	<input type="checkbox"/>	<input type="checkbox"/>
Kilingala	<input type="checkbox"/>	<input type="checkbox"/>
Kimambwe	<input type="checkbox"/>	<input type="checkbox"/>
Kifaransa	<input type="checkbox"/>	<input type="checkbox"/>
Kiingereza	<input type="checkbox"/>	<input type="checkbox"/>

Nyingine (taja)

(6) Kuwa na Ndoa/Familia

(a) Ana Ndoa? ☐ Hapana ☐ (b) Kama mume, ana wake wangapi? [taja]

(c) Idadi ya watoto (chini ya miaka 18) wanaomtegemea? [taja]

(d) Idadi ya watu wengine wanaomtegemea? [taja]

Hapa Kwingine

(e) Mahali aishipo Mke/Familia? ☐ ☐

(7) Mahali pa kuzaliwa:

- (a) Umezaliwa hapa (ndani ya eneo KM 5)? Ndiyo ☐ → Swali 8
Hapana ☐ → Swali 7b
- (b) Kama hapana, umezaliwa katika eneo la KM ngapi? 10 ☐ 50 ☐ 75 ☐ 100 ☐ >100 ☐
- (c) Kama hapana, ni mahali gani? [taja jina la eneo] _____
[taja Wilaya] _____
[taja Mkoa] _____
[taja Nchi] _____ → Swali 8b

(8) Historia ya Makazi:

- (a) Kama umezaliwa hapa, je umewahi kuishi sehemu nyingine? Ndiyo ☐ → R8a
Hapana ☐ → Swali 8b
Kama ndiyo, wapi? [taja] _____
Kwa sababu gani [taja] _____
- (b) Kama umezaliwa sehemu nyingine, je umeishi hapa kwa muda gani? [taja miezi au miaka] _____
Kwa nini ulikuja hapa? [eleza] _____

C. MAELEZO YA MHOJIWA KUHUSU UVUVI/MAPATO**(1) Historia ya uvuvi**

- (a) Je unajishughulisha na uvuvi kwa muda wote? Ndiyo ☐ Hapana ☐
- (b) Je, umejishughulisha na kazi ya uvuvi kwa muda gani? [taja muda] _____ miaka _____
- (c) Kwanini ulichagua kazi ya uvuvi? [toa sababu] _____

(8) Historia ya makazi - inaendelea:

- (c) Sasa u mkazi wa kudumu? Ndiyo ☐ Hapana, kwa muda ☐ Hapana, kikazi tu ☐
- (d) Kama si mkazi wa kudumu, je unaishi kwa muda gani hapa? Karibu muda wote 3 wks/mwezi ☐ 2 wks/mwezi ☐ 1 wks/mwezi ☐
- (e) Kuhusu sehemu nyingine ya makazi: Wapi? [taja] _____
Kwa nini? [eleza] _____

(9) Nyumba ya kuishi hapa:

- (a) Sina ☐ kupanga ☐ kuchangia ☐ Yangu ☐
- (b) Muundo: Haihusiki ☐ Muda tu ☐ Kawaida ☐ Bati ☐ Tofali imara ☐
- Nyinginezo [taja] _____

(10) Nyumba ya kuishi mahali pengine:

- (a) Sina ☐ Kupanga ☐ Kuchangia ☐ Yangu ☐
- (b) Muundo: Haihusiki ☐ Muda tu ☐ Kawaida ☐ Bati ☐ Tofali imara ☐
- Nyinginezo [taja] _____

- (d) Je, uliwahi kufanya kazi nyingine kabla ya kujihusisha na uvuvi? Ndiyo ☐ Hapana ☐ → Sw1f
- (e) Kazi gani? [taja] _____
- (f) Kazi kubwa ya wazazi wako ilikuwa ipi au ni ipi? [jibu] _____
(Orodhesha kazi nyingine yoyote inayohusiana na uvuvi, hata ya muda)
Baba: _____ Mama: _____

(2) Mauzo/Matumizi ya samaki waliovuliwa.

- (a) Je, unawauzaje samaki uliowavua/uliogawiwa? Samaki huuzwa kwa: Mauzo makubwa kwa:
- | | | |
|--------------------------|--------------------------|--------------------------|
| Wachuuzi wa mwaloni | <input type="checkbox"/> | <input type="checkbox"/> |
| Ndugu kwa ajili ya kuuza | <input type="checkbox"/> | <input type="checkbox"/> |
| Sokoni | <input type="checkbox"/> | <input type="checkbox"/> |
| Walaji | <input type="checkbox"/> | <input type="checkbox"/> |
| Kampuni ya uvuvi | <input type="checkbox"/> | <input type="checkbox"/> |
- Njia nyingine [taja] _____

- (b) Unawategemea vipi wafanyabiashara [fafanua jibu lako] _____
Kwa mitumbwi/zana za uvuvi ☐ [fafanua jibu lako] _____
Kwa mikopo ☐

- (c) Je, humwuzia mfanya biashara yule yule daima? Kwa nini? [eleza] _____
Ndiyo ☐ Hapana ☐

- (d) Je, wewe au jamaa yako mnajishughulisha na ukaushaji wa samaki mvuao? Ndiyo ☐ → Swali 2e Hapana ☐ → Swali 3
- (e) Kama ndiyo, orodhesha aina tatu za samaki unaowakausha
- | Jina: | Aina ya ukaushaji | Matumizi ya nyumbani tu | Matumizi ya nyumbani na biashara |
|---------|-------------------|-------------------------|----------------------------------|
| Aina 1: | | | |
| Aina 2: | | | |
| Aina 3: | | | |

(3) Kazi nyingine, makadirio ya mapato :

(a) Una kazi/ biashara nyingine mbali na uvuvi?

Kilimo kwa chakula tu ☐

Kilimo kwa chakula + fedha ☐

Biashara ya samaki ☐

[toa maelezo]

Kibarua ☐

[toa maelezo]

Kazi ya mshahara (ajira) ☐

✓

[toa maelezo]

Biashara ☐

[toa maelezo]

Nyinginezo [taja]

(b) Kwa wastani fedha nyingi uipatayo hutokana na uvuvi, kazi au biashara nyingine?

Kutokana na uvuvi ☐ → Swali 3cKutokana na kazi nyingine ☐ [taja]

(c) Kutokana na kumbukumbu ya uvuvi wa mwaka jana, je ni kiasi gani cha fedha unaweza kupata kwa giza ?

Wakati wa msimu mzuri?

Tshs. _____ kwa mwezi

Msimu mbaya [taja viwango vya mapato]

Tshs. _____ kwa mwezi

(d) Ukichukulia uvuvi wa mwaka uliopita, ni kiasi gani cha fedha unaweza kupata kwa wastani kwa mwezi kutokana na uvuvi? [taja kiasi]

Tshs. _____ kwa mwezi

Kutokana na kazi/ biashara nyingine [taja kiwango cha fedha]

Tshs. _____ kwa mwezi

(4) Ardhi na zana za uzalishaji:Ndiyo ☐ Hapana ☐

(a) Je, unamiliki ardhi yoyote?

☐☐

→ Swali 4b

Kama ndiyo, eka/heкта ngapi? [taja]

Kama ndiyo, unaitumiaje hiyo ardhi? [elezea]

(b) Je, unamiliki au una ubia katika vyombo/ zana zifuatazo?

Vyombo:	Idadi	Umilikaji %	Umri wa kifaa (miaka)	Thamani ya kifaa kwa sasa hivi	Ununuzi wa taslimu Yote	Ununuzi kwa mkopo Yote	Sehemu	Sehemu	Aina ya mkopo *
Gari/magari									
Mitumbwi [taja aina ya mtumbwi]									
Injini ya kupachika									
Taa za kuvulia									
Vinginevyo [taja]									
Zana									
Kachinga (hand lines)									
Kabambara (long lines)									
Makila (gill nets)									
Lusenga/kawesuro (scoop net)									
Kipe/Apollos [zungushia jibu]									
Mikwabo/makokoro ya mchana									
Mikwabo/makokoro ya usiku									
Chiomilla									
Nyinginezo [taja]									

Aina ya mkopo: R = kutoka kwa jamaa/ndugu, B = kutoka benki, P = kutoka mradi, T = kutoka kwa mfanyabiashara,

→ Section D

O = kutoka sehemu nyingine [taja]

D. MAONI YA MUHOJIWA

(1) Kama ungekuwa na uhuru wa kuchagua, je ungependa kuendelea na kazi yako ya sasa?

Ndiyo ☐

→ Swali 2

Hapana ☐

→ Swali 1a

Sina maoni ☐

(a) Kama jibu ni hapana, ungependelea kufanya nini? [eleza]

(b) Kwa nini? [jibu]

(2) Kama ungekuwa na uhuru wa kuchagua, je ungependa kuendelea kuishi hapa?

Ndiyo ☐

→ Swali 3

Hapana ☐

→ Swali 2a

Sina maoni ☐

(a) Kama jibu ni hapana, ungependelea kwenda wapi? [eleza]

(b) Kwa nini? [jibu]

(3) Kama ungepata kwa mkupuo fedha yote inayotokana na uvuvi wa mwaka mzima, na ukawa na uhuru wa kuitumia upendavyo, je ungeitumia fedha hiyo kwa mambo gani makubwa matatu, ukianza na jambo la muhimu wa kwanza? [jibu]

(jambo la kwanza)

(jambo la pili)

(jambo la tatu)

(4) Ukifikiria mapato ya samaki wakati ulipoanza shughuli za uvuvi kwa mara ya kwanza na hivi sasa, je mapato yame:

Ongezeko ☐Pungua ☐Sawasawa ☐Sina maoni ☐

(a) Unafikiri ni kwa sababu gani? [eleza sababu]

Ongezeko ☐Pungua ☐Sawasawa ☐Sina maoni ☐

(5) Unafikiri mapato ya samaki katika miaka 5 ijayo yata:

(a) Unafikiri ni kwa sababu gani? [eleza sababu]

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(6) Kwa wale watu waishio kandokando ya ziwa, je, unafikiria kwamba : Ndiyo Hapana Sina maoni

(a) Kila mtu awe na uwezo wa kuvua kiasi chochote cha samaki apendavyo? ☐ ☐ ☐

(b) Kila mtu awe na uhuru kuvua popote pale hata nje ya wilaya yake? ☐ ☐ ☐

(c) Kila mtu awe na uhuru kuvua popote pale hata nje ya nchi yake? ☐ ☐ ☐

(7) Je, unafikiri daima kutakuwa na samaki wa kumtoshesheza kila mtu? ☐ ☐ ☐

(a) Ni sababu zipi zinafanya ufikirie hivyo? [jibu] _____

(8) Una maoni gani juu ya mawazo yafuatayo juu ya kudhibiti uvuvi ziwani huko mbeleni? Je, unakubaliana, hukubaliani au huna maoni yoyote?

(a) Kufunga uvuvi katika vipindi fulani/wakati ambao uvuvi hauruhusiwi kufanyika? Nakubali Sikubali Sina maoni
(k.m. miezi fulani kuruhusu samaki wazaliane/wakue) ☐ ☐ ☐

(b) Maeneo yaliyozuliwa kuvua daima/sehemu ambazo uvuvi hauruhusiwi kufanyika kamwe? ☐ → R8b ☐ ☐
(k.m. maingilio ya mito, sehemu zenye maji ya kina kifupi ambako samaki huzalia/hukulia)
Kama unakubali, je, waweza kupendekeza sehemu yoyote inayofaa kufungwa kuzuia uvuvi usifanyike kamwe?

(c) Udhhibiti wa idadi ya wavuvi watakoruhusiwa kuvua? Nakubali Sikubali Sina maoni
Nani aruhusiwe kuvua? ☐ → R8c ☐ ☐
[jibu] _____
Nani azuliwe kuvua? ☐ ☐ ☐
[jibu] _____

(d) Uzuiaji wa macho ya nyavu yasiyotakiwa (macho ya wavu yasiwe chini ya kiwango fulani)? Nakubali Sikubali Sina maoni

Makira (gill nets)?	GN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mikwabo inayovuliwa mchana (traditional, day beach seines)?	TBS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kapenta (kapenta, night beach seines)?	KBS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kipe au apollo (normal or apollo lift nets)?	LN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chiromilla (chiromilla seines)?	CH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Uzuiaji wa uvuvi wa maboti makubwa? (wavue baadhi ya maeneo/nyakati fulani tu)	R ind	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Kupiga marufuku uvuvi wa maboti makubwa? (wasiruhusiwe kuvua kabisa)	P ind	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Uzuiaji wa uvuvi wa mkwabo? (wavue baadhi ya maeneo/nyakati fulani tu)	R BS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(h) Kupiga marufuku uvuvi wa mkwabo? (wasiruhusiwe kuvua kabisa)	P BS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(i) Uzuiaji wa uvuvi wa kipe? (wavue baadhi ya maeneo/nyakati fulani tu)	R LN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(j) Kupiga marufuku uvuvi wa kipe? (wasiruhusiwe kuvua kabisa)	P LN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(k) Kupiga marufuku uvuvi wa katuli? (kupiga maji kwa fimbo ili kuwastua samaki)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(9) Je, uzuiaji/upigaji marufuku wa uvuvi uamuliwe na maafisa wa serikali tu? Ndiyo Hapana Sina maoni

(a) Kwa nini wawe/siwe wao? ☐ ☐ ☐
[jibu] _____
Maoni mengine: _____
[toa] _____

(10) Kama sheria za uvuvi zitatungwa katika siku za usoni ili kudhibiti uvuvi katika ziwa, unashauri sheria hizi zisimamiwe kwa njia gani? Nakubali Sikubali Sina maoni

(a) Serikali iwe na boti nyingi zaidi za doria ☐ ☐ ☐

(b) Mabwana samaki wa kusimamia utekelzaji wa sheria za uvuvi wawe wengi zaidi ☐ ☐ ☐

(c) Kuwahusisha polisi moja kwa moja katika doria ☐ ☐ ☐

(d) Wahalifu waadhibiwe k.m. kwa kutozwa faini, kunyang'anywa zana au leseni ya kuvulia ☐ ☐ ☐

(e) Wafanyabiashara na walaji waharifu waadhibiwe k.m. kwa kuwatoza faini, kuwanyang'anya samaki na/au leseni ya biashara ☐ ☐ ☐

(11) Ni yapi matatizo makubwa matatu (tatizo la kwanza kwa ukubwa) _____
yanayokukabiri kama mvuvi _____
unaevulia katika ziwa hili? (tatizo la pili kwa ukubwa) _____
[Taja kwa kuanzia tatizo kubwa sana, _____
la pili kwa ukubwa halafu la tatu] (tatizo la tatu kwa ukubwa) _____

MUDA WA KUMALIZA: _____

FORM 3: WAKAUSHAJI/WABANIKAJI NA WAFANYABIASHARA WA SAMAKI

Tarehe:	Georef.:	Mhojaji/Msaili
Muda wa kuanza:	Site code:	
Total duration visit:	Class No.:	Reviewer(s):
Kijiji/Mwalo:	Area No.:	

A. UTAMBULISHO WA MSAILIWA / KIKUNDI:

(1) Mhojiwa anashughulika zaidi na:

Ukaushaji /ubanikaji (marachache biashara)	<input type="checkbox"/>
Ukaushaji /ubanikaji na biashara	<input type="checkbox"/>
Biashara (marachache ukaushaji)	<input type="checkbox"/>

(2) Aina ya zao linaloshughulikiwa

	Kwa kawaida	Maranyingi zaidi
	[tia tiki]	[tia tiki]
Samaki wabichi	<input type="checkbox"/>	<input type="checkbox"/>
Samaki wakavu	<input type="checkbox"/>	<input type="checkbox"/>
Samaki wa kubanikwa	<input type="checkbox"/>	<input type="checkbox"/>
Nyingine (taja)		

(3) Aina kuu tatu za samaki zinazoshughulikiwa zaidi ni?

Ya kwanza

ya pili

ya tatu

(4) Njia za ukaushaji samaki

haihusiki	<input type="checkbox"/>	kausha juu ya vichanja	<input type="checkbox"/>
kausha juu ya mchanga	<input type="checkbox"/>	kausha juu ya sakafu ya simenti	<input type="checkbox"/>
Kausha juu ya changarawe/udongo	<input type="checkbox"/>	tanuru la kawaida juu ya ardhi	<input type="checkbox"/>
Kausha juu ya udongo uliosilbwa	<input type="checkbox"/>	tanuru la kawaida chini ya ardhi	<input type="checkbox"/>
Kausha juu ya milago	<input type="checkbox"/>	tanuru la 'Chokor'	<input type="checkbox"/>
Njia nyinginezo (taja)			

(5) Sehemu hizi za ukaushaji ni za kwao au zimekodiwa?

Haihusiki	<input type="checkbox"/>
Za kwao	<input type="checkbox"/>
Zimeazimwa/zimekodiwa	<input type="checkbox"/>
Kama zimekodiwa/zimeazimwa (elezea utaratibu)	

(6) Kwa wafanyabiashara, maeneo ya biashara yao ni:

Haihusiki	<input type="checkbox"/>
Hapohapo (ndani ya km 5)	<input type="checkbox"/>
Nje ya kijiji (zaidi ya km 5)	<input type="checkbox"/>
Hapohapo na nje ya kijiji	<input type="checkbox"/>

(7) Kwa wafanyabiashara kutoka nje (non-local) soko lao kuu ni:

[taja]

(a) Njia kuu ya kusafirisha bidhaa kwenda soko hilo ni:

Haihusiki	<input type="checkbox"/>	Magari (basi,taxi, n.k.)	<input type="checkbox"/>
Meli	<input type="checkbox"/>	Baiskeli	<input type="checkbox"/>
Boti ya mizigo	<input type="checkbox"/>	Kwa kichwa	<input type="checkbox"/>
Njia nyingine (taja)			

B. HISTORIA BINAFSI YA MHOJIWA

	Mke	Mme
(1) Jinsia	<input type="checkbox"/>	<input type="checkbox"/>

(2) Umri: (taja) miaka

(3) Elimu ya darasani:

(a) Miaka ya elimu ya msingi?

(taja)

	Ndiyo	Hapana
(b) Cheti cha Elimu ya Msingi	<input type="checkbox"/>	<input type="checkbox"/>

(c) Miaka ya elimu ya sekondari

(taja)

	Ndiyo	Hapana
(d) Cheti cha sekondari	<input type="checkbox"/>	<input type="checkbox"/>

(e) Mafunzo mengineyo (taja)

(5) Dini:

Muislam	<input type="checkbox"/>
Mkristo Mkatoliki	<input type="checkbox"/>
Mkristo Mprotestanti	<input type="checkbox"/>
Nyinginezo (taja)	

(4) Lugha anazojua vizuri:

	Kusema	Kuandika
Kiswahili	<input type="checkbox"/>	<input type="checkbox"/>
Tabwa	<input type="checkbox"/>	<input type="checkbox"/>
Kibembe	<input type="checkbox"/>	<input type="checkbox"/>
Kiha	<input type="checkbox"/>	<input type="checkbox"/>
Kifipa	<input type="checkbox"/>	<input type="checkbox"/>
Kibemba	<input type="checkbox"/>	<input type="checkbox"/>
Kilungu	<input type="checkbox"/>	<input type="checkbox"/>
Kirundi	<input type="checkbox"/>	<input type="checkbox"/>
Kilingala	<input type="checkbox"/>	<input type="checkbox"/>
Kimambwe	<input type="checkbox"/>	<input type="checkbox"/>
Kifaransa	<input type="checkbox"/>	<input type="checkbox"/>
Kiingereza	<input type="checkbox"/>	<input type="checkbox"/>

Other [specify]

(6) Kuwa na Ndoa/Familia Ndiyo Hapana

(a) Ana ndoa?	<input type="checkbox"/>	(b) Kama mume, ana wake wangapi?	<input type="checkbox"/>
		(taja)	

(c) Idadi ya watoto (chini ya miaka 18) wanaomtegemea?

[taja]

(d) Idadi ya watu wengine wanaomtegemea

[taja]

	Hapa	Kwingine
(e) Mahali aishipo mke / familia	<input type="checkbox"/>	<input type="checkbox"/>

(7) Mahali pa kuzaliwa:

- (a) Umezaliwa hapa (ndani ya km 5)?
- | | | | | | |
|--------|--------------------------|------------|--|--|--|
| | | | | | |
| Ndiyo | <input type="checkbox"/> | → Swali 8 | | | |
| Hapana | <input type="checkbox"/> | → Swali 7b | | | |
- (b) Kama hapana, umezaliwa katika eneo la KM ngapi?
- | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10 | 50 | 75 | 100 | >100 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- (c) Kama hapana, ni mahali gani?
- [taja jina la eneo]
- [taja jina la wilaya]
- [taja jina la mkoa]
- [taja jina la nchi]

(8) Historia ya makazi:

- (a) Kama umezaliwa hapa, je umewahi kuishi sehemu nyingine? Wapi (taja)
- | | | |
|--------|--------------------------|------------|
| Ndiyo | <input type="checkbox"/> | → Swali 8a |
| Hapana | <input type="checkbox"/> | → Swali 8b |
- Kwa sababu gani? [taja]
- (b) Kama umezaliwa sehemu nyingine, je umeishi hapa kwa muda gani? [taja miezi au miaka]
- Kwa nini ulikuja hapa? [eleza]

(8) Historia ya makazi - inaendelea:

- (c) Sasa u mkazi wa kudumu?
- | | | | | | |
|-------|--------------------------|------------------|--------------------------|-------------------|--------------------------|
| Ndiyo | <input type="checkbox"/> | Hapana, kwa muda | <input type="checkbox"/> | Hapana, kikazi tu | <input type="checkbox"/> |
| | → Swali 9 | | → Swali 8d | | → Swali 8d |
- (d) Kama si mkazi wa kudumu, je unatumia muda gani kukaa hapa? Karibu muda wote
- | | | |
|--------------------------|--------------------------|--------------------------|
| wiki3/mwezi | wiki2/mwezi | wiki1/mwezi |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- (e) Kuhusu sehemu nyingine ya makazi: Wapi? [taja]
- Kwa nini? [eleza]

(9) Nyumba ya kuishi hapa:

- (a)
- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| Sina | Kupanga | Kuchangia | Yangu |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- (b) Muundo: Haihusiki
- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| Muda tu | Kawaida | Bati | Tofali imara |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- Nyinginezo [taja]

(10) Nyumba ya kuishi mahali pengine

- (a)
- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| Sina | Kupanga | Kuchangia | Yangu |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- (b) Muundo: Haihusiki
- | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| Muda tu | Kawaida | Bati | Tofali imara |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- Nyinginezo [taja]

C. MAELEZO YA MHOJIWA KUHUSU KAZI NA MAPATO:**(1) Historia ya ajira katika shughuli za uvuvi**

- (a) Umejijusisha na biashara muda wako wote?
- | | |
|--------|--------------------------|
| Ndiyo | <input type="checkbox"/> |
| Hapana | <input type="checkbox"/> |
- (b) Kwa muda gani umekuwa ukifanya shughuli hii? [taja] miaka
- (c) Sababu gani zilikufanya uanzishe shughuli hii? [taja]
- (d) Ulikuwa na kazi zingine kabla ya hii?
- | | |
|--------|--------------------------|
| Ndiyo | <input type="checkbox"/> |
| Hapana | <input type="checkbox"/> |
- (e) Kazi zipi? [taja]
- (f) Kazi kubwa ya wazazi ilikuwa ipi au ni ipi? (Orodhesha kazi nyingine yoyote inayohusiana na uvuvi, hata ya muda)
- Baba
- Mama

(2) Chanzo cha samaki / mauzo

- (a) Kwa kawaida unapata samaki kutoka wapi /kwa nani

Vyanzo vingine zaidi ya hivi ni vipi?

[vitaje]

	Kutoka	Zaidi kutoka
Chombo cha uvuvi cha familia	<input type="checkbox"/>	<input type="checkbox"/>
Kununua kutoka kwa wavuvi	<input type="checkbox"/>	<input type="checkbox"/>
Kutoka kwa wakaushaji/wabanikaji	<input type="checkbox"/>	<input type="checkbox"/>
Kwa mfanyabiashara mwingine	<input type="checkbox"/>	<input type="checkbox"/>
Kwa kampuni ya uvuvi	<input type="checkbox"/>	<input type="checkbox"/>
Haihusiki	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>

- (b) Unanunua samaki kutoka kwa wavuvi au wakaushaji maalum tu? ☐ → Swali 2d ☐ → Swali 2c ☐ → Swali 2c
- (c) Kwa nini ndiyo / hapana? [Eleza]

- (d) Umewahi kuwasaidia mitumbwi/zana, matanuru, mikopo wanaokuuzia samaki?
- | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Haihusiki | Ndiyo | Hapana |
| <input type="checkbox"/> → swali 2e | <input type="checkbox"/> → swali 2d | <input type="checkbox"/> → swali 2e |
- Kama ndiyo, fafaua msaada wako:

- (e) Wapi au nani ambaye kwa kawaida ananunua samaki wako?

Wengineo?

[taja]

	Wanauzwa kwa:	Zaidi wanauzwa kwa:
Wafanyabiashara wenyeji	<input type="checkbox"/>	<input type="checkbox"/>
Wafanyabiashara wa kutoka nje ya kijiji	<input type="checkbox"/>	<input type="checkbox"/>
Walaaji moja kwa moja	<input type="checkbox"/>	<input type="checkbox"/>
Masoko ya karibu ya rejareja	<input type="checkbox"/>	<input type="checkbox"/>
Kampuni ya uvuvi	<input type="checkbox"/>	<input type="checkbox"/>
Haihusiki	Ndiyo <input type="checkbox"/>	Hapana <input type="checkbox"/>

- (f) Je unauza samaki zaidi kwa wafanyabiashara maalum tu? ☐ → swali 2h ☐ → swali 2g ☐ → swali 2g
- (g) Kwa nini ndiyo au kwa nini hapana? [eleza]

(3) Kazi nyingine, makadirio ya mapato :

(a) Una kazi/ biashara nyingine mbali ya ukaushaji/ biashara ya samaki?

Kilimo kwa chakula tu ☐Kilimo kwa chakula + fedha ☐Uvuvi ☐Kibarua ☐

[toa maelezo]

[toa maelezo]

Kazi ya mshahara ☐ [toa maelezo]Biashara ☐ [toa maelezo]

Biashara nyinginezo (taja)

(b) Kwa wastani fedha nyingi uipatayo hutokana na biashara ya samaki au kazi/ biashara nyingine?

aji/ biashara ya samaki ☐ → Swali 3cKutokana na kazi nyingine ☐ [taja]

(c) Kutokana na kumbukumbu ya biashara ya samaki ya mwaka jana, je ni kiasi gani cha fedha unaweza kupata katika miezi ya biashara nzuri?

Wakati wa msimu mzuri?

Tshs.

kwa mwezi

Msimu mbaya [taja viwango vya mapato]

Tshs.

kwa mwezi

(d) Ukichukulia biashara ya samaki ya mwaka uliopita, ni kiasi gani cha fedha unaweza kupata kwa wastani kwa mwezi kutokana na biashara ya samaki? [taja kiasi]

Tshs.

kwa mwezi

Kutokana na kazi/ biashara nyingine [taja kiwango cha fedha]

Tshs.

kwa mwezi

(4) Ardhi na zana za uzalishaji:Ndiyo ☐Hapana ☐

(a) Je, unamiliki ardhi yoyote?

☐☐

→ Swali 4b

Kama ndiyo, eka ngapi? [taja]

Kama ndiyo, unaitumiaje hiyo ardhi? [elezea]

(b) Je, unamiliki au una ubia katika vyombo/ zana zifuatazo?

Vyombo:

Gari/magari

Mitumbwi [taja aina ya mtumbwi]

Injini ya kupachika

Taa za kuvulia

Vinginevyo [taja]

Zana

Kachinga (hand lines)

Kabambaro (long lines)

Makila (gill nets)

Lusenga/kawesuro (scoop net)

Kipe/Apollo (zungushia jibu)

Mikwabo/makokoro ya mchana

Mikwabo/makokoro ya usiku

Chiromilla

Nyinginezo [taja]

Aina ya mikopo: R = kutoka kwa jamaa/ndugu, B = kutoka benki, P = kutoka mradi, T = kutoka kwa mfanyabiashara, → Section D

O = kutoka sehemu nyingine [taja]

D. MAONI YA MUHOJIWA

(1) Kama ungekuwa na uhuru wa kuchagua, je ungependa kuendelea na kazi yako ya sasa?

Ndiyo ☐Hapana ☐Sina maoni ☐☐ → Swali 2☐ → Swali 1a

(a) Kama jibu ni hapana, ungependelea kufanya nini? [eleza]

(b) Kwa nini? [jibu]

(2) Kama ungekuwa na uhuru wa kuchagua, je ungependa kuendelea kuishi hapa?

Ndiyo ☐Hapana ☐Sina maoni ☐☐ → Swali 3☐ → Swali 2a

(a) Kama jibu ni hapana, ungependelea kwenda wapi? [eleza]

(b) Kwa nini? [jibu]

(3) Kama ungepata kwa mkupuo fedha yote inayotokana na biashara ya samaki kwa mwaka mzima, na ukawa na uhuru wa kuitumia upendavyo, je ungeitumia fedha hiyo kwa mambo gani makubwa matatu, ukianza na jambo la muhimu wa kwanza? [jibu]

(jambo la kwanza)

(jambo la pili)

(jambo la tatu)

(4) Ukifikiria mapato ya samaki wakati ulipoanza shughuli ya biashara ya samaki kwa mara ya kwanza na hivi sasa, je mapato yame:

Ongezeka ☐Pungua ☐Sawasawa ☐Sina maoni ☐

(a) Unafikiri ni kwa sababu gani? [eleza sababu]

(5) Unafikiri mapato ya samaki katika miaka 5 ijayo yata:

Ongezeka ☐Pungua ☐Sawasawa ☐Sina maoni ☐

(a) Unafikiri ni kwa sababu gani? [eleza sababu]

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(6) Kwa wale watu waishio kandokando ya ziwa, je, unafikiri kwamba :

	Ndiyo	Hapana	Sina maoni
(a) Kila mtu awe na uwezo wa kuvua kiasi chochote cha samaki apendavyo?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Kila mtu awe na uhuru kuvua popote pale hata nje ya wilaya yake?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Kila mtu awe na uhuru kuvua popote pale hata nje ya nchi yake?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(7) Je, unafikiri daima kutakuwa na samaki wa kumtoshesha kila mtu?

	Ndiyo	Hapana	Sina maoni
(a) Ni sababu zipi zinafanya ufikirie hivyo? [jibu]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) Una maoni gani juu ya mawazo yafuatayo juu ya kudhibiti uvuvi ziwani huko mbeleni? Je, unakubaliana, hukubaliani au huna maoni yoyote?

	Nakubali	Sikubali	Sina maoni
(a) Kufunga uvuvi katika vipindi fulani/wakati ambao uvuvi hauruhusiwi kufanyika? (k.m. miezi fulani kuruhusu samaki wazaliane/wakue)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Maeneo yaliyoziuliwa kuvua daima/sehemu ambazo uvuvi hauruhusiwi kufanyika kamwe? (k.m. maingilio ya mito, sehemu zenye maji ya kina kifupi ambako samaki huzalia/hukulia) Kama unakubali, je, waweza kupendekeza sehemu yoyote inayofaa kufungwa kuzulia uvuvi usifanyike kamwe?	<input type="checkbox"/> → R8b	<input type="checkbox"/>	<input type="checkbox"/>
(c) Udhhibiti wa idadi ya wavuvi watakoruhusiwa kuvua? Nani aruhusiwe kuvua? [jibu] Nani azuliwe kuvua? [jibu]	<input type="checkbox"/> → R8c	<input type="checkbox"/>	<input type="checkbox"/>

	Nakubali	Sikubali	Sina maoni
(d) Uzuiaji wa macho ya nyavu yasiyotakiwa (macho ya wavu yasiwe chini ya kiwago fulani)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Makira (gill nets)?	GN	<input type="checkbox"/>	<input type="checkbox"/>
Mikwabo inayovuliwa mchana (traditional, day beach seines)?	TBS	<input type="checkbox"/>	<input type="checkbox"/>
Kapenta (kapenta, night beach seines)?	KBS	<input type="checkbox"/>	<input type="checkbox"/>
Kipe au apollo (normal or apollo lift nets)?	LN	<input type="checkbox"/>	<input type="checkbox"/>
Chiomilla (chiomilla seines)?	CH	<input type="checkbox"/>	<input type="checkbox"/>
(e) Uzuiaji wa uvuvi wa maboti makubwa? (wavue baadhi ya maeneo/nyakati fulani)	R ind	<input type="checkbox"/>	<input type="checkbox"/>
(f) Kupiga marufuku uvuvi wa maboti makubwa? (wasiruhusiwe kuvua kabisa)	P ind	<input type="checkbox"/>	<input type="checkbox"/>
(g) Uzuiaji wa uvuvi wa mkwabo? (wavue baadhi ya maeneo/nyakati fulani)	R BS	<input type="checkbox"/>	<input type="checkbox"/>
(h) Kupiga marufuku uvuvi wa mkwabo? (wasiruhusiwe kuvua kabisa)	P BS	<input type="checkbox"/>	<input type="checkbox"/>
(i) Uzuiaji wa uvuvi wa kipe? (wavue baadhi ya maeneo/nyakati fulani)	R LN	<input type="checkbox"/>	<input type="checkbox"/>
(j) Kupiga marufuku uvuvi wa kipe? (wasiruhusiwe kuvua kabisa)	P LN	<input type="checkbox"/>	<input type="checkbox"/>
(k) Kupiga marufuku uvuvi wa katuli? (kupiga maji kwa fimbo ili kuwastua)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(9) Je, uzuiaji/upigaji marufuku wa uvuvi uamuliwe na maafisa wa serikali tu?

	Ndiyo	Hapana	Sina maoni
(a) Kwa nini/Kwa nini isiwao? [jibu] Maoni mengine: [jibu]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(10) Kama sheria za uvuvi zitatungwa katika siku za usoni ili kudhibiti uvuvi katika ziwa, unashauri sheria hizi zisimamiwe kwa njia gani?

	Nakubali	Sikubali	Sina maoni
(a) Serikali iwe na boti nyingi zaidi za doria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Mabwana samaki wa kusimamia utekezaji wa sheria za uvuvi wawe wengi zaidi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Kuwahusisha polisi moja kwa moja katika doria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Wahalifu waadhibiwe k.m. kwa kupigwa faini, kunyanganywa zana au leseni ya kuvulia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Ukaguzi wa samaki wadogo/ vifaranga na samaki walioziuliwa katika masoko na kuwaadhibu waharifu k.v. faini, kunyang'anya mazao na/au leseni ya biashara ya samaki	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(11) Ni yapi matatizo makubwa matatu (tatizo la kwanza kwa ukubwa)
yanayokukabiri kama mfunyablashara wa
samaki/ mkaushaji unaefanya shughuli (tatizo la pili kwa ukubwa)
katika eneo hili la ziwa? [Taja kwa kuanzia tatizo
kubwa sana, la pili kwa ukubwa halafu la tatu] (tatizo la tatu kwa ukubwa)

MUDA WA KUMALIZA:

ANNEX 2.

LTR SOCIO-ECONOMIC SURVEY 1997

ENUMERATOR FIELD GUIDE

LTR SOCIO-ECONOMIC SURVEY 1997
ENUMERATOR FIELD GUIDE

GENERAL INTRODUCTION

Lake Tanganyika Research (GCP/RAF/271/FIN - Research for the Management of the Fisheries of Lake Tanganyika) is carrying out a socio-economic survey of fishers and fishing communities in all four national sectors of the lake -- Burundi, Democratic Republic of the Congo, Tanzania, and Zambia. These notes have been prepared as a guide to assist LTR survey supervisors and enumerators in the conduct of their fieldwork, which is expected to take place during June and July 1997.

The survey tools consist of three forms designed to collect information on basic features of sample villages/landing sites (Form 1) and the activities, experiences, and outlooks of fishers (Form 2) and fish processors and traders (Form 3). Form 1 data collection will typically involve contact with several key informants at each sample site, individual and/or group interviews, and direct observation by survey team members in the course of community 'walkabouts' as they count and measure various site features. Forms 2 and 3 will involve interviews with individual fishers (boat owners, unit leaders and captains, and crew/labourers) as well as processors and traders.

Upon arrival in a sample village/landing site, LTR team members should first acquaint local community leaders and residents with the purpose of their visit. Introductions will normally be the responsibility of team supervisors or those they designate, but all members of the team should be ready to explain their work. Emphasise the positive purposes being served by our community survey exercise. The LTR project is being carried out by the Food and Agriculture Organization of the United Nations as a regional project through which the four Tanganyika Basin states are co-operating to build a better understanding of the lake and its resources, and of the people who depend on its fisheries for their livelihoods. The overall aim of the project is to prepare a plan whereby the lake's fisheries resources can best be shared between all who now depend upon them and also will be depending upon them for many generations to come.

Make the point that the most effective way for members of the LTR team to gain an understanding of people's fishing activities, their experiences and way of living, and their views and opinions about the lake, is actually to go out and visit fishing villages and to talk directly with individual residents. Indeed it would be foolish to expect that one could learn much about local conditions by just sitting around in an office somewhere. To do the job right we need to try to visit as many landing sites and to talk with as many local fishers, fish processors, and fish traders as possible. But it is clearly not possible to visit all landings around the lake and talk to everybody. There are hundreds of villages and many thousands of people involved one way or another with fishing. So what we have to do is to select 'samples.' That is, we pick a smaller number of sites to visit and, within each of those sites, a few

individuals to interview.¹ Although it is necessary for us to talk directly to individuals in order to learn as much as we can about how people live, work, and think of themselves and the fisheries, we are only interested in using this information to build up an overall picture of the situation across the entire lake. We make no attempt to link the information we get through our interviews to the name or person of anyone. No names or data from personal identity documents whatsoever are recorded.

There are several basic points that survey team members should bear in mind as they approach the task of interviewing.

- a) Stick to agreed-upon procedures and interview questions, as laid out in this Guide and through the instructions of survey supervisors. The procedures for selecting sample landing sites and individual fishers, processors, and traders have been drawn up in such a way as to ensure that a fair cross-section of local fisherfolk and fishing communities will be covered. Follow the lead of survey supervisors who will designate which landing sites will be visited on given days, and which individual respondents should be contacted for interviewing. Refer any questions or suggestions about procedures to your supervisors.
- b) A good deal of planning and consultation has also gone into the preparation of the survey forms, and they have been further modified as a result of field testing. In carrying out interviews with your respondents, keep to the wording of each question as it appears on the forms. If in any doubt about the wording of a particular question, or about how to enter a particular response, consult your supervisor for advice.
- c) A special effort may be required in order to win the cooperation of some respondents, who may show initial reluctance because of lingering suspicions over the purpose of questionnaires. Try to establish confidence by repeating the reasons why the survey is being carried out (see notes above), and by reassuring them that all information is treated in a confidential manner and that it cannot be linked back to particular individuals.

¹ Although it will probably not be necessary to go into great detail in explaining how particular sites and individuals are selected to be included in the survey, it should be clear to all supervisors and enumerators that the selection is based on a systematic approach. All the landing sites along a particular stretch of shoreline are known from previous frame survey work, the lastest having been conducted in March 1995. For each defined stretch of shoreline (known as 'strata', but really just amounting to a specified geographical district or area), a limited number or 'sample' of sites can be selected by listing all site names on separate pieces of paper, mixing them up in a basket or hat, and then picking out a certain proportion of the papers at random (i.e. by luck or chance -- without looking). The number of sites selected in this way for any stretch of the coastline depends on the overall total of landing sites that exist. So, for example, when we want to visit 5% of the total landing sites in a particular district that we know has 100 sites in all, we pick 5 separate pieces of paper out of the basket or hat. Having selected our sample landing sites, we arrange our schedule to visit them one after the other. At each site, we introduce ourselves to the local residents and set up interviews. For the individual fisher interviews, we make an estimate of the total number of units of various categories (lift nets, gillnets, etc.) at each site. We then try randomly to select 25% of units in each category and interview representatives of these units, taking care to include in our interviews a mixture of owners, unit captains, and crew. For the processor/trader interviews, we have no way of estimating total numbers beforehand, so we simply contact [no. to be determined] per site [or per geographical area], taking care to ensure a mixture of processors, local traders, and long-distance traders.

- d) Do not lead your respondents into giving answers that may not be theirs. If you are too impatient, rushing to summarise in your own words what you think the respondent might be trying to say, then the respondent may passively accept your version instead of giving an answer that more truly reflects his/her personal position. At the same time, if responses are unclear or very slow in coming, you must be able to probe for answers in a neutral way, such as 'How do you mean....?' or 'Can you tell me more about...?'
- e) The survey exercise is a very large, complicated, and expensive operation, one that cannot be repeated very easily or very frequently. It is designed to collect information that is critical to our understanding of the whole lake and the fisherfolk who derive their living from it -- an understanding that is absolutely essential if there is to be effective management planning for the future of the lake. For these reasons, the survey must be conducted at all times in a serious professional way, with careful attention to accuracy and thoroughness in asking questions and recording answers and observations. At the same time, remember that there are a very large number of sites to visit and individual interviews to conduct. Work as swiftly as possible to complete each interview, therefore, without sacrificing your accuracy and thoroughness.
- f) Developing trust and good personal relations with local community residents are keys to successful fieldwork. Remember that you are guests and that you are asking your hosts (i.e. your respondents) to give up time to answer a lot of questions, some of them quite personal and private in nature. In general, common politeness, patience, and a modest attitude that respects sample community residents as equals will secure local acceptance of, cooperation with, and even genuine interest in the survey work.

I. FORM 1: VILLAGE/LANDING SITE BASIC INVENTORY

The **Village/Landing Site Basic Inventory** form should be used to collect certain background information about each of the sample landing sites and the settlements associated with them. One form should be filled out for each sample site. Use a No. 2 pencil to fill in the form, and have an eraser handy in case you need to correct mistakes.

Information will be gathered through a combination of direct observation on the part of enumeration team members and interviewing of local key informants, such as long-term residents of the community, landing site chairpersons/ head fishers, and/or local fisheries assistants/scouts. You must be able to identify the most suitable informants based on their knowledge of the locality.

Such people may be interviewed individually or as a group, depending on who is available at the time of the team visit. In the case of larger settlements, it may prove most effective to divide up the team so that different members move about the area talking with different community residents. It is particularly important for members of the enumeration team actually to walk about a settlement to see and ask about things directly. Information on key features (e.g. numbers of shops, market displays, domestic structures and inhabitants) would otherwise be difficult if not impossible to gather. Conducting a community inventory can be a very demanding job, especially in larger settlements. Team members will have to develop their skill at collecting information in a systematic and brisk fashion, as there is a lot of ground to cover and many details to be noted down. Try to carry out your 'walkabouts' in the company of one or more local residents who both know the community well and are well known and accepted by the other residents. Otherwise too much time will be taken up having to introduce yourself and your questions to everybody you meet. Work swiftly, but always politely. (See General Instructions.) You are a guest!

PRELIMINARY -- SITE IDENTIFICATION

Date: = Date of site visit.

Total duration visit: Total hours it took team to complete the inventory (to nearest quarter hour). Fill in at end of visit.

Georef: To be filled in beforehand by team supervisor.

Enumerator team: Note names of all those who collected information.

Village/Landing site: Enter site name.

Site code: To be filled in beforehand by team supervisor.

Review team: Note name(s) of form reviewer(s).

[N.B.:Review to be completed before team leaves site!]

Principal site contacts (by position in community): Note down all principal respondents who were interviewed to obtain site information. Do not enter actual names, but rather by respondents' positions in community, e.g. 'Head of fishing committee;' 'Local council member;' 'Community elder -- oldest female resident;' 'Veteran fish trader, 50+yrs old -- lifelong resident;' 'Fisheries assistant;' etc.

SECTION A. POPULATION & SETTLEMENT

- 1) **Population estimates.** Enter estimates for Adult Female, Adult Male, Children under 18 years, and Total community population in the spaces provided. Use totals figured through the **Landing Site Housecount Worksheets.**
- 2) **Pop. five years ago = Population five years ago.** Tick appropriate box according to the estimated change in population size that key informants say has occurred over the last five years.
- 3) **Reasons for change (increase/decrease).** If the population of the community has either increased or decreased within

the last five years, note the reasons given for such change by your respondent(s).

- 4) **Structures/households.** Enter the total number of separate structures and total number of separate households, respectively, in spaces provided. Use totals figured through the **Landing Site Housecount Worksheets.**
- 5) **Settlement land is.** Find out if the land upon which the settlement is situated is private land or public land (Central Government, Local council, forest reserve, etc.) Under **Remarks,** note the terms under which people have settled (tenants paying rent, owners with free title, spontaneous settlement with no formal arrangements, etc.).

SECTION B. ACCESS/TRANSPORTATION

1) Access by land.

- 1a) **Access by.** Tick appropriate box for land access by **footpath only** [then do Q.1b] or by **road** [then go directly to Q.1c].
- 1b) **If path only.** Enter in the spaces provided the distance in kilometres to the nearest road that connects to the major town/marketing centre of the district, and the name of this town/centre. [then go directly to Question 1f]
- 1c) **Type access road?** If access road exists, tick appropriate box for type of surface (dirt track only; or murram/gravel surfaced; or tarmac/paved surfaced). [Then do Question 1d]
- 1d) **Is road always passable?** Tick 'No' if road is seasonal only [then do Question 1e]; or tick 'Yes' if road is always open [then go directly to Question 1f].
- 1e) **Indicate season(s)** when road usually **not passable** by circling the appropriate month abbreviations.
- 1f) **Is there any public transport.** Tick 'Yes' if any transport services to the community, either by road or path) [then do Question 1g]. If 'No', tick as such [then go directly to Question 2].
- 1g) [If 1f YES] **Provide following information.** For each category of transport shown in the lefthand column, note in the next column **Service To/From Where** the name of the place to and from which the service is provided. (In case of more than one place, note **only** the place with most of the traffic.) Under **No. services at least**, enter in the appropriate cell the number of separate transport operations providing services at least once a day, 3 times a week, once a week, and/or less than once a week.

2) Access by water.

- 2a) **Is there any public lake transport...** Tick box 'Yes' if there is any public lake transport serving the community [then do Question 2b]; if 'No', tick as such [then go directly to Section C].
- 2b) [If 2a YES] **Provide following information.** Complete table in same manner as for Question 1g above.

SECTION C) BASIC FACILITIES INVENTORY

This section consists of a table listing various community facility or service features in the lefthand **Column 1**. For each feature, the total number of units should be noted in **Column 3**. For some features, such as market stalls, open vendor displays, and retail shops, there may be numerous individual units. Use the space provided in **Column 2** to tally up the individual units as you walk through the settlement. E.g.:

		=	12
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Use the '**REMARKS**' space in **Column 4** to note any special observations concerning the feature or features. **Here you must make a particular effort to observe things and to listen to and note down the comments of your informant(s).** For example, there be a petrol station or a shop selling fuel (Item 10) in the

village; but in your talks with locals you discover that it only operates two or three days a month because supplies are only rarely delivered from outside sources (e.g. a distributor in a distant major market centre). In Column 4, you would therefore make a note of this information. If a feature does not exist in the settlement at all, you would enter '0' (Zero) in Column 3 (Tot. No.) and find out from your informant(s) the name of and distance to the closest town or market centre having this particular facility or service. Enter the name of the closest location of the feature in the Column 4 space ('REMARKS'), and in **Column 5** enter the distance in kilometres.

Explanatory notes for each of the facility/service items of the inventory are given below.

Retail goods/services

- 1) **Roofed, permanent market stalls.** Large central public covered markets usually found in larger towns. Chances are that few if any will be encountered in the small settlements that will mostly be visited by the survey teams. In cases where such a permanent market does exist, count the number of individual stalls and under 'Remarks' specify if it operates on a daily basis or only on certain days. Also make a note of the usual items/commodities that are sold by vendors (e.g. vegetables, fruit, dried fish, used clothing, etc.).
- 2) **Open, temporary market vendor displays.** Small informal or temporary displays often found in open areas around commercial sections of settlements. Count the number of individual displays and under 'Remarks' specify if the open market operates on a daily basis or only on certain days. Also make a note of the usual items/commodities that are sold by vendors (e.g. vegetables, fruit, dried fish, used clothing, etc.).
- 3) **General retail shops.** Small shops selling all variety of processed (packaged, canned) foods, clothes, small household goods, etc., often clustered together around an open central marketing area.
- 4) **Retail drug/medicine shops.** Local shops specialising in (usually) non-prescription medicines (aspirin preparations, anti-malaria drugs, etc.).
- 5) **Food/soda kiosks.** Often seen as temporary shelters in which vendors are selling soda, snacks, cigarettes, etc.
- 6) **Tea rooms/ Restaurants.** With benches, chairs, and tables where customers can sit down to be served tea, food.
- 7) **Bars.** Places primarily serving bottled beer and soda. If some food is served, this can be noted.
- 8) **Maize mill.** Mill where local residents can get maize or other grain ground to flour (posho, mealie meal).
- 9) **Hardware shop.** Selling such items as nails, fastenings, wire, iron sheets, etc.
- 10) **Fuel supply.** Station or store selling petrol/gas/essence or kerosene/paraffin. Specify type of operation, if supplies reliable, etc.
- 11) **Fishing gear supply.** Specify type of gear available.
- 12) **O/Board engine mechanic.** Specify if regular, established operation or occasional, casual service.

- 13) **Carpenter/boat building & repair.** Specify if regular, established operation or occasional, casual service.

Public services/utilities

- 14) **Water supply.** Indicate by ticking appropriate box whether drinking water supply is from piped source, drawn from a well or a stream, or simply comes from the lake. Is it given any chemical treatment before use? If there is any treated/protected supply (piped or from well), is it generally available for public use? If there is no protected water supply (piped or from well), note where and how far away the nearest such supply can be found.
- 15) **Electricity.** Specify whether YES (Present) or NO (Absent). If YES, from national grid or locally generated? Supplies reliable? Generally available for public use?
- 16) **Hospital/Clinic/ Dispensary.** Specify which type of facility and whether Government or private (e.g. church mission) operated. Generally open to public? Any operational problems? If any medical facility exists, contact a senior staff member and ask about the three most serious local health problems encountered. List as first, second, and third most common.
- 17) **Primary school.** Specify if has classes to all levels, whether Government or private (e.g. church mission) operated. Any problems?
- 18) **Secondary school.** Specify if has classes to all levels, whether Government or private (e.g. church mission) operated. Any problems?
- 19) **Mobile cinema.** Specify whether YES (Present) or NO (Absent). If YES, how often does cinema visit community? Which type of shows are screened?
- 20) **Telephone service/ Radiocall.** Specify whether YES (Present) or NO (Absent). If YES, operations reliable? Generally available for public use?
- 21) **Post office.** Specify whether YES (Present) or NO (Absent). Any problems? If none, note nearest.
- 22) **Bank.** Specify whether YES (Present) or NO (Absent). Any problems? If none, note nearest.
- 23) **Fishery Office/ Fishery staff.** Specify whether YES (Present) or NO (Absent). Specify number of staff available and ranks. Any problems? In no resident staff, note nearest and whether landing site ever receives visits from fisheries staff. Provide as many details as possible.
- 24) **Fisher committee/ Landing site head.** Specify whether YES (Present) or NO (Absent). Specify arrangements (how selected, number of representatives if committee, duties of committee or head). Any problems? Provide as many details as possible.
- 25) **Community projects.** List any community development work now underway in the area (e.g. self-help water scheme, health project, road improvement, etc. Note whether these projects have been funded locally or by an outside agency. Any problems? Provide as many details as possible.

SECTION D. FISH PROCESSING/TRADING

- 1) **Forms of processing practised.** Tick appropriate boxes for each of the different forms of processing that are

practised in the community. Then rank in order of importance according to the quantities of fish processed through each form. For example, if local processors preserve fish in three ways, by sun drying, salting/sun drying, and frying in palm oil, then the 'Sun drying' and 'Salt/sun drying' and 'Other' boxes would be ticked. 'Frying in palm oil' would be noted in the space under 'Other.' If most fish are processed by sun drying, some through salting /sun drying, and a small amount by frying, then the rank order for these forms would be entered as '1'. '2', and '3' respectively.

- 2) **Total active processing facilities.** Enter totals for each type of facility listed. If necessary, in larger landing sites, a tally can be kept for the different types by using the **Landing Site Housecount Worksheet**.
- 3) **Drying methods used.** Tick appropriate boxes for each of the different processing platforms observed. Then rank them in order of importance according to the quantities of fish processed, as in Question D1 above.
- 4) **Estimated total active processors and traders.** Fill in table cells as indicated.
 For **PROCESSORS** operating on a regular basis in the settlement (do fish processing as a usual way of earning money), enter figures for total women, total men, and combined total. For both women and men processors, obtain estimates of the percentage of those who usually do processing only without trading.
 For **TRADERS** operating on a regular basis in the settlement (do fish trading as a usual way of earning money), enter figures for total women, total men, and combined total. For each group, obtain estimates of numbers who are operating in the immediate area only, and of numbers who are operating beyond the neighbourhood area, i.e. beyond a radius of 5 kilometres. For both women and men processors, obtain estimates of the percentage of those who usually do processing only without trading.
- 5) **Principal market channels (non-local trade).** For each type of fish product listed in **Column 1**, note down in **Column 2** the name of the principal non-local marketing destination (i.e. destinations beyond a radius of 5 kilometres), and the main form of transport used by traders to deliver the product to this destination. Use the codes provided to indicate in **Column 3** the main modes of transport for the products.

INSTRUCTIONS ON USE OF LANDING SITE HOUSECOUNT WORKSHEET

This worksheet is designed as an aid for determining the number and type of residential and other structures in a sample village/landing site, along with the total number of community inhabitants. It should be used as a way of keeping track of information gathered in the course of a walking tour of a sample site in the company of one or more local people who both know the community well and are well known and accepted by the community. Try to map out your tour of the settlement in a systematic way, taking it section by section with clear starting and ending points so as to avoid confusion in the counting process. In large settlements, where it may be necessary for two

or more team members to divide the work, partition the site up into easily identifiable sections for each sub-team to cover.

Use extra worksheets as required as you tour through a sample site, taking care to note the SITECODE and page numbers in the lower righthand corner of each sheet. Large settlements will obviously require multiple sheets.

There will be cases where structures are attached together in rows (side-by-side), or back-to-back, often owned by one person or family. Indicate the physical connection by drawing a line around the consecutive unit numbers involved. For example, if Unit Nos. 11, 12, 13, and 14 comprise four separate rooms or apartments in a row with shared walls but with separate outside doors, and all joined together under a common roof, then you would circle a line around these unit numbers to so indicate.

10)
11)
12)
13)
14)
15)

Structure/Unit Use

Beginning with the first dwelling, lodging room, or other structure or feature as 'Unit No. 1', enter information as appropriate across the columns from left to right. Thus, if the structure serves as a dwelling, i.e. as Household Quarters or a Rest House (used by a person or group during fishing periods, so as not to have to travel every day between another home and the landing site), put a tick in the 'HH Qtrs/Rest Hse' column. Similarly, if the structure functions as a store or a latrine, tick in the appropriate column. Tick in the 'Other' column if the unit combines some other purpose (such as a shop run by those living on the premises) or represents some other type of feature (such as a fish smoking kiln or drying area, or a kitchen, office, mosque, church, etc.). In the case of 'Other,' explain in the 'REMARKS' column on the far righthand side.

Structure Type

Designate the type of materials out of which the structure has been built by ticking the appropriate column. 'Temp' = Temporary, i.e. wall and roofing materials such as grass, reeds, plastic, etc. that have been put together as a rough temporary shelter. 'Std' = Standard, i.e. the typical domestic construction in most areas around the lake: mud walls with a grass thatched roof. 'CIS' = Corrogated Iron Sheet, i.e. any structure (except 'Blk') with a metal roof. 'Blk' = Block, either cement or fired brick.

If HH, No. Residents

If the structure serves as a household dwelling, determine the number of adult male, adult female, and children (those under 18 years old) usually occupying it by asking the residents themselves or their neighbours. Remember that the definition of a 'Household' is taken as 'Those who normally live together in one dwelling or compound and prepare and eat their meals in common.'

Ownership

For HH Qtrs/Rest Hse cases only, tick the appropriate column according to whether the dwelling is occupied by the owner/owner family or by tenants (non-owners). If residents are tenants (non-owners), note in the 'REMARKS' column the arrangements under which the quarters are used (i.e. pay rent, share with family/friends, etc.).

N.B.: Be sure that the form is carefully checked for completeness and accuracy before turning it over to your supervisor for review.

II. FORM 2: FISHERS

The **Fisher** form should be used to record information from individual interviews with fishing unit owners, unit leaders or captains, and unit crew or labourers. You will be informed beforehand of how many respondents in each category should be interviewed at any particular site. One form should be filled out for each sample site. Use a No. 2 pencil to fill in the form, and have an eraser handy in case you need to correct mistakes. Work swiftly, yet be thorough and accurate in recording answers of the form. Take the effort to record special or interesting points of information in the margins or on the back pages of the forms, when needed.

Remember that you are asking the respondent to give of his/her time to sit and answer your many questions, some of which probe personal matters. Be courteous and patient, putting the respondent at ease and making sure he/she understands the purpose of the survey (see General Instructions). You are a guest!

PRELIMINARY -- SITE IDENTIFICATION

Date: = Date of site visit.

Start time: Note time interview start.

Georef: To be filled in beforehand by team supervisor.

Enumerator team: Note name of interviewer.

Village/Landing site: To be filled in beforehand by team supervisor.

Resp. code: To be filled in beforehand by team supervisor.

Reviewer(s): Note name(s) of form reviewer(s).

[N.B.: Review to be completed before team leaves site!]

SECTION A. RESPONDENT/UNIT ID.

- 1) **Unit is.** Fill in appropriate boxes with numbers of each type of craft comprising the unit according to their use either as fishing boats, light boats, or auxiliary boats. In the case of auxiliary boats, specify in the 'Other' space the purpose for which they are used (e.g. net pulling, beach seine supervision). Also use this space to specify if a boat is of a different type than those mentioned (e.g. fibreglass, metal, other construction).
- 2) **Propulsion is.** Fill in appropriate boxes with numbers of each type of propulsion tool. In case of outboard engine(s), specify the horsepower (HP) in the space provided. Use space under 'Other' if necessary.
- 3) **Main gear is.** Tick appropriate box for main gear used. If gear is of a different type than those mentioned, specify in 'Other' space.
- 4) **Respondent is.** Tick appropriate box:
'Owner' = Owners of craft who don't participate in fishing trips [then go directly to Q.6];
'Owner/Op' = owners who do participate in fishing trips [then go directly to Q.6];

- 'Operator'** = fishers who do not own units but who act as leaders or captains [then **do Q. 5**];
- 'Crew/Labourer'** = fishers who work unit but are neither owners nor operators [then **go directly to Section B**].
- 5) **If absentee unit owner...** If Owner not available, ask 'Operator' to supply personal details about this person, as indicated (sex; age; place lives; main occupation(s)). Enter details in spaces provided.
- 6) **Unit operations.**
- 6a) Enter figures for **total number of crew (not including Own/Op or Operator)**, Age of **oldest** crew member, and age of **youngest** crew member.
- 6b, 6c, 6d) Provide information on **ownership of unit elements (craft, engine, main gear)** as indicated. **DNA** = Does not apply; **Rented** = Something paid or exchanged for use (specify amount and arrangements in space provided); **Individual** = Entirely property of 'Owner' or 'Owner/Op'; **Shared** = Owned on share basis between two or more partners (specify number of partners in space provided).
- 6e) **Crew ever bring own gear?** Tick box '**Yes**' if operator and/or crew ever take their own gear along on fishing trips [then **do Q. 6f**]; if '**No**', tick as such [then **go directly to Section B**].
- 6f) [If 6e YES] **Which kind(s)?** Tick boxes as appropriate. Specify under 'Other' any gear not listed.

SECTION B. RESPONDENT PERSONAL HISTORY

- 1) **Gender.** Tick box female or male.
- 2) **Age .** Enter age of respondent (years old).
- 3) **Formal Education.**
- 3a) **Yrs. Primary School?** Enter number of years primary school completed.
- 3b) **Prim. Sch. Cert.?** Does respondent have Primary School Certificate. Tick box '**Yes**' or '**No.**'
- 3c) **Yrs. Secondary Sch.?** Enter number of years secondary school completed.
- 3d) **Secondary Cert.?** Does respondent have Secondary School Certificate. Tick box '**Yes**' or '**No.**'
- 3e) **Other formal Education.** If respondent has had any other formal education or training (vocational training, any special courses, etc.), specify type and duration.
- 4) **Languages known.** Ask respondent which languages he/she can speak and understand well (can conduct routine conversations in) , and tick appropriate box(es). Then ask which languages he/she can read and write well (can easily read newspaper and write a letter in) , and tick appropriate box(es).
- 5) **Religions affiliation?** Ask respondent's religion and tick appropriate box. If 'Other' than those listed, specify in space provided.
- 6) **Marital/Family status.**
- 6a) **Now married?** Tick box '**Yes**' or '**No.**'
- 6b) **If male, number wives?** Indicate number in space provided.
- 6c) **No.Depend. Chld <18Yrs.** (Number of dependant children under 18 years old.) Indicate number in space provided.

- 6d) **No. Other Dependants?** (Number of other people (besides wife/wives and dependant children) who are members of respondent's household and rely on him/her for support.) Indicate number in space provided.
- 6e) **Spouse/ family.** Does the respondent's spouse (husband or wife) live with respondent here or stay elsewhere? Tick appropriate box.

7) Birthplace

- 7a) **Born here?** Tick box '**Yes**' if respondent born within radius of 5 km. from site [then **go directly to Q.9**]. Tick box '**No**' if born beyond 5 km radius [then **do Q.7b**].
- 7b) [If 7a '**No**'] **Born within?** Tick appropriate box for approximate distance of respondent's birthplace from site [then **do Q.7c**].
- 7c) **In which place?** Note down name of district, region, and country of respondent's birthplace [then go directly to Q. 8b].

8) Residential history

- 8a) **If born here,** ever lived somewhere else? Tick box '**Yes**' if respondent has ever lived in another place, and note details of **where** (name of other place) and **why** (for what reason(s) resident in other place) in the spaces provided. If '**No**' tick as such [then **do Q.8b**].
- 8b) **If born somewhere else, how long here?** Enter number of **months** or **years** in space provided, and also ask reason(s) **why** respondent came to this place, noting answer in space provided.
- 8c) **Now full-time resident here?** If '**Yes**' (full time resident here), tick as such [then **go directly to Q.9**]. If '**No**' (part-time resident here) tick as such [then **do Q.9d**]. If '**No**' (works here only) tick as such [then **do Q.8d**].
- 8d) [If 9c '**No**'] **Time/month spent here?** Indicate by ticking appropriate box approximately how much time per month respondent spends at site. [then **do Q.8e**].
- 8e) **Other place residence.** Note **where** (name) of other place of residence and reason(s) **why** resident there.

9) Living quarters here.

- 9a) Tick appropriate box if '**None**' (i.e. living quarters in other place), '**Rented**', '**Shared**' (with family or friends), or '**Own**'.
- 9b) **Structure type here.** Indicate type of building material out of which **living quarters in this site** are constructed. '**DNA**' = Does Not Apply; '**Temp**' = Temporary, i.e. wall and roofing materials such as grass, reeds, plastic, etc. that have been put together as a rough temporary shelter. '**Std**' = Standard, i.e. the typical domestic construction in most areas around the lake: mud walls with a grass thatched roof. '**CIS**' = Corrogated Iron Sheet, i.e. any structure (except '**Blk**') with a metal roof. '**Blk**' = Block, either cement or fired brick.

10) Living quarters other place.

- 10a) Tick appropriate box if '**None**' (i.e. living quarters in other place), '**Rented**', '**Shared**' (with family or friends), or '**Own**'.

10b) Structure type other. Indicate type of building material out of which **living quarters in other place** this site are constructed. '**DNA**' = Does Not Apply; '**Temp**' = Temporary, i.e. wall and roofing materials such as grass, reeds, plastic, etc. that have been put together as a rough temporary shelter. '**Std**' = Standard, i.e. the typical domestic construction in most areas around the lake: mud walls with a grass thatched roof. '**CIS**' = Corrogated Iron Sheet, i.e. any structure (except '**Blk**') with a metal roof. '**Blk**' = Block, either cement or fired brick.

SECTION C. RESPONDENT FISHING INFO/INCOME STATUS

1) Fishing history

- 1a) Are you involved in fishing on full-time basis (fishing takes most of working time/month? Tick box 'Yes' or 'No' as appropriate.
- 1b) How long have you been involved in fishing? Enter number of years in space provided.
- 1c) Why did you start fishing? Note reason(s) given in space provided.
- 1d) Were you involved with other work before fishing? If 'Yes' tick as such [and continue with Q.1e]. If 'No' tick as such [and go directly to Q.1f].
- 1e) [If 1d 'Yes'] Which work? Specify which work respondent did before fishing in space provided.
- 1f) What was/is the main work of your parents? Note down the work reported by respondent for both **Father** and **Mother**. Also note any fish-related work, even if done by parents on part-time basis.

2) Sale/use of catch

- 2a) After a fishing trip, how do you sell your catch/share of catch? Tick appropriate boxes for each of the different categories of people to whom respondent may sell/give catch after a fishing trip. Then rank in order of importance according to the quantities of fish sold/given to each category. For example, say that the respondent usually has transactions with beach traders, a family member, and consumers buying directly from the boat. In this case the 'Beach traders,' 'Family member to sell,' and 'Consumer direct' boxes would be ticked. If most fish are sold to beach traders, some through a family member, and a small amount to consumers direct, then the rank order for these categories would be entered as '1', '2', and '3' respectively.
 - 2b) How do you rely on traders. Tick appropriate box. If fisher relies on traders for boat/gear, and/or for loans, be sure to specify the arrangements in the space provided.
 - 2c) Do you generally sell to the same trader? Tick 'Yes' or 'No' as the case may be, and ask for reason(s) why or why not, noting response in space provided.
 - 2d) Do you/household members ever process fish caught? If 'Yes', tick as such [and continue with Q.2e]. If 'No', tick as such [and go directly to Q.3].
 - 2e) [If 2d 'Yes'] Specify the three most important types of fish processed in household. For each type, in order of most important in terms of quantity processed (Type 1) to least important (Type 3), specify the name of fish, mode of processing employed (drying, smoking, etc.), and indicate by a tick whether the product is used for home consumption only or for both home and sale.
- ### 3) Other work; Income estimates
- 3a) What other work/business do you have besides fishing? Tick appropriate box or boxes. Be sure to note in details where indicated.
 - 3b) Does most of the money you earn on average each month come from fishing or from some other work/ business? If

'From fishing', tick as such [and **continue with Q.3c**]. If **'From other'**, tick as such and **specify details** in space provided.

3c) **Thinking over the past year, about how much money do you earn from fishing during...** Mentioning that the income a person receives each month will of course vary depending upon conditions, ask the respondent to estimate as accurately as possible how much money he/she earns during **good months**, and enter figure (in national currency units) in space provided. Do the same for **poor months**.

3d) **Over the past year, about how much would you say you earn on average per month.** Now ask the respondent to provide a figure on average income per month, first **from fishing**, and then, if applicable, from any **other work or business** he/she has.

4) **Land & productive assets.**

4a) **Do you own any land?** If **'Yes'**, specify **number of acres or hectares** [Be sure to indicate which unit of measurement!]. Also specify **how this land is used** (e.g. for farming, house plot, business/shop plot, etc.).

4b) **Do you own or have part share in any of the following equipment/gear?** For each of the items listed in the left-hand column that the respondent owns or holds a part share ownership in, fill in the information across the columns to the left in each row as indicated. For **No. of units**, specify number for lamps, gillnets, and lines. Count major items like boats, outboards, liftnets, or vehicles separately, using the **'Other'** space to enter details. For example, if a respondent owns two outboard engines, note details of the first in the **'Outboard engines'** row. Then, specify **'Outboard 2'** in the space provided for **'Other'**, and note details for this second outboard as indicated in this row. For **% Owned**, enter **'100%'** for full ownership, **'50%'** for half ownership share, **'33%'** for a third ownership share, etc. For **'Item age'** enter number of years as reported by respondent. For **'Item replacement cost'**, enter amount (in units of national currency) that it would cost to replace item by another of the same type. For **'Cash purchase'** and **'Credit purchase'**, tick as appropriate for **'All'** or **'Part'** purchase through cash and/or credit. For **'Credit type'**, in case of all or part credit purchase, use codes indicated at the base of the table.

SECTION D. RESPONDENT OPINIONS/VIEWS

This section is intended to collect information on the respondent's opinions and views about fishing and the lake, including his/her perceptions of recent and possible future changes in fishing and reasons for such changes, and what he/she thinks about possible ways to regulate fishing in the lake in the years ahead. Explain carefully to your respondent that there are no **'right answers'** to any of these questions. They are only asked to help understand what local people themselves are thinking about their occupations and overall conditions of the fisheries.

The questions should be addressed to the respondent as they appear. Take care to mark the answer boxes clearly, and to note down responses fully where open-ended questions are asked (Q. 1a-1b, 2a-2a, 3 4a, 5a, 6a-6c, 7a, 8a-8c & 8c.1, 9, and 11.

Finish time: Enter time interview completed.

Total time: Refer back to Start time, subtract from finish time, and note in minutes.

<p>N.B.: Be sure that the form is carefully checked for completeness and accuracy before turning it over to your supervisor for review.</p>
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III. FORM 3: FISH PROCESSORS AND TRADERS

The Processor/Trader form should be used to record information from individual interviews with fish processors and traders. You will be informed beforehand of how many respondents should be interviewed at any particular site. One form should be filled out for each sample site. Use a No. 2 pencil to fill in the form, and have an eraser handy in case you need to correct mistakes. Work swiftly, yet be thorough and accurate in recording answers of the form. Take the effort to record special or interesting points of information in the margins or on the back pages of the forms, when needed.

Remember that you are asking the respondent to give of his/her time to sit and answer your many questions, some of which probe personal matters. Be courteous and patient, putting the respondent at ease and making sure he/she understands the purpose of the survey (see General Instructions). You are a guest!

PRELIMINARY -- SITE IDENTIFICATION

Date: = Date of site visit.

Start time: Note time interview start.

Georef: To be filled in beforehand by team supervisor.

Enumerator team: Note name of interviewer.

Village/Landing site: To be filled in beforehand by team supervisor.

Resp. code: To be filled in beforehand by team supervisor.

Reviewer(s): Note name(s) of form reviewer(s).

[N.B.: Review to be completed before team leaves site!]

SECTION A. RESPONDENT ID.

- 1) **Respondent mostly engaged in.** Tick appropriate box according to whether respondent mostly engaged in **Processing** (i.e. rarely involved in trading), **Processing + Trading** (i.e. does both processing and trading on a regular basis), or **Trading** (i.e. rarely involved in processing).
- 2) **Type of product handled.** Under the '**General**' column, tick all product types that are handled by respondent. If '**Other**' than those listed, specify in space provided. Under the '**Most frequent**' column, tick the one product that is handled the most.
- 3) **Top three 'most frequent' species?** List down the to three most frequent species of fish handled by the respondent, and list down in order (first, second, third most frequent).
- 4) **Usual processing method.** Tick appropriate box for the processing method most commonly used by respondent. **DNA** = Does Not Apply. **Pit kiln** = fire built in hole in ground with wire mesh to hold fish; **Standard kiln** = simple elevated kiln with wire mesh to hold fish; **Chorkor** = 'improved' kiln with enclose fire box and stacking trays

- so that fish can be rotated around. If 'Other' than those listed, specify in space provided.
- 5) **Processing facilities own/rented?** Indicate whether processing facilities (kilns, drying areas, etc.) are directly **owned** by respondent or are **rented/ borrowed** from another person. If rented/borrowed, specify the arrangement (amount paid or traded for use, conditions of borrowing, etc.).
 - 6) **For traders, area of operation is.** Tick appropriate box according to **DNA** = Does Not Apply; **Local** = trades within a 5 km radius of site; **Non-local** = trades beyond a 5 km radius of site; or **Both** = trades both locally and non-locally.
 - 7) **For non-local traders, principal market destination is.** Specify in the space provided the name of the place where the respondent usually takes fish to trade, and its distance in kilometres from site. [then do Q.7a].
 - 7a) **Main way of transporting product to this market is.** Tick appropriate box according to **DNA** = Does Not Apply; **Steamer** = Passenger or cargo ship; **Boat** = local transport boat/ 'water taxi'; Motor **vehicle** = bus, van, pickup truck, etc.; **Bicycle**; or **Headload**. If 'Other' than those listed, specify in space provided.

SECTION B. RESPONDENT PERSONAL HISTORY

- 1) **Gender.** Tick box female or male.
- 2) **Age .** Enter age of respondent (years old).
- 3) **Formal Education.**
 - 3a) **Yrs. Primary School?** Enter number of years primary school completed.
 - 3b) **Prim. Sch. Cert.?** Does respondent have Primary School Certificate. Tick box 'Yes' or 'No.'
 - 3c) **Yrs. Secondary Sch.?** Enter number of years secondary school completed.
 - 3d) **Secondary Cert.?** Does respondent have Secondary School Certificate. Tick box 'Yes' or 'No.'
 - 3e) **Other formal Education.** If respondent has had any other formal education or training (vocational training, any special courses, etc.), specify type and duration.
- 4) **Languages known.** Ask respondent which languages he/she can speak and understand well (can conduct routine conversations in) , and tick appropriate box(es). Then ask which languages he/she can read and write well (can easily read newspaper and write a letter in) , and tick appropriate box(es).
- 5) **Religions affiliation?** Ask respondent's religion and tick appropriate box. If 'Other' than those listed, specify in space provided.
- 6) **Marital/Family status.**
 - 6a) **Now married?** Tick box 'Yes' or 'No.'
 - 6b) **If male, number wives?** Indicate number in space provided.
 - 6c) **No.Depend. Chld <18Yrs.** (Number of dependant children under 18 years old.) Indicate number in space provided.
 - 6d) **No. Other Dependants?** (Number of other people (besides wife/wives and dependant children) who are members of

respondent's household and rely on him/her for support.)
Indicate number in space provided.

- 6e) **Spouse/ family.** Does the respondent's spouse (husband or wife) live with respondent here or stay elsewhere?
Tick appropriate box.

7) **Birthplace**

- 7a) **Born here?** Tick box '**Yes**' if respondent born within radius of 5 km. from site [then **go directly to Q.9**]. Tick box '**No**' if born beyond 5 km radius [then **do Q.7b**].
- 7b) [If 7a '**No**'] **Born within?** Tick appropriate box for approximate distance of respondent's birthplace from site [then **do Q.7c**].
- 7c) **In which place?** Note down name of district, region, and country of respondent's birthplace [then go directly to Q. 8b].

8) **Residential history**

- 8a) **If born here,** ever lived somewhere else? Tick box '**Yes**' if respondent has ever lived in another place, and note details of **where** (name of other place) and **why** (for what reason(s) resident in other place) in the spaces provided. If '**No**' tick as such [then **do Q.8b**].
- 8b) **If born somewhere else, how long here?** Enter number of **months** or **years** in space provided, and also ask reason(s) **why** respondent came to this place, noting answer in space provided.
- 8c) **Now full-time resident here?** If '**Yes**' (full time resident here), tick as such [then **go directly to Q.9**]. If '**No**' (part-time resident here) tick as such [then **do Q.9d**]. If '**No**' (works here only) tick as such [then **do Q.8d**].
- 8d) [If 9c '**No**'] **Time/month spent here?** Indicate by ticking appropriate box approximately how much time per month respondent spends at site. [then **do Q.8e**].
- 8e) **Other place residence.** Note **where** (name) of other place of residence and reason(s) **why** resident there.

9) **Living quarters here.**

- 9a) Tick appropriate box if '**None**' (i.e. living quarters in other place), '**Rented**', '**Shared**' (with family or friends), or '**Own**'.
- 9b) **Structure type here.** Indicate type of building material out of which **living quarters in this site** are constructed. '**DNA**' = Does Not Apply; '**Temp**' = Temporary, i.e. wall and roofing materials such as grass, reeds, plastic, etc. that have been put together as a rough temporary shelter. '**Std**' = Standard, i.e. the typical domestic construction in most areas around the lake: mud walls with a grass thatched roof. '**CIS**' = Corrogated Iron Sheet, i.e. any structure (except '**Blk**') with a metal roof. '**Blk**' = Block, either cement or fired brick.

10) **Living quarters other place.**

- 10a) Tick appropriate box if '**None**' (i.e. living quarters in other place), '**Rented**', '**Shared**' (with family or friends), or '**Own**'.
- 10b) **Structure type other.** Indicate type of building material out of which **living quarters in other place** this site are constructed. '**DNA**' = Does Not Apply; '**Temp**' = Temporary, i.e. wall and roofing materials such

as grass, reeds, plastic, etc. that have been put together as a rough temporary shelter. 'Std' = Standard, i.e. the typical domestic construction in most areas around the lake: mud walls with a grass thatched roof. 'CIS' = Corrogated Iron Sheet, i.e. any structure (except 'Blk') with a metal roof. 'Blk' = Block, either cement or fired brick.

SECTION C. RESPONDENT FISHING INFO/INCOME STATUS

1) Fishery employment history

- 1a) Are you involved in fish business (processing/trading) on full-time basis (takes most of working time/ month? Tick box 'Yes' or 'No' as appropriate.
- 1b) How long have you been involved in this business? Enter number of years in space provided.
- 1c) Why did you start this business? Note reason(s) given in space provided.
- 1d) Were you involved with other work before starting this business? If 'Yes' tick as such [and continue with Q.1e]. If 'No' tick as such [and go directly to Q.1f].
- 1e) [If 1d 'Yes'] Which work? Specify which work respondent did before fishing in space provided.
- 1f) What was/is the main work of your parents? Note down the work reported by respondent for both **Father** and **Mother**. Also note any fish-related work, even if done by parents on part-time basis.

2) Supply sources/sales

- 2a) Where/from whom do you usually get your supplies of fish? Under the 'Supplies from' column, tick all sources used by respondent. If 'Other' than those listed, specify in space provided. Under the 'Mostly from' column, tick the one source of supply that is used the most.
- 2b) Do you mostly buy your fish from particular fishers or processors? (i.e. usually from the same individual(s)?) Tick 'Yes' or 'No' as the case may be [and continue with Q.2c].
- 2c) [If 2b 'Yes' or 'No'] Why or why not? Ask for reason(s) why or why not from particular fishers or processors, noting response in space provided.
- 2d) Do you ever help those you buy from with things like equipment (boat/gear, kilns, etc.? or loans? Tick appropriate box. If 'DNA' or 'No', tick as such [then go to Q.2e]. If 'Yes', be sure to specify the arrangements in the space provided.
- 2e) Where/from whom do you sell your consignments of fish? Under the 'Sales to' column, tick all buyer categories that apply. If 'Other' than those listed, specify in space provided. Under the 'Most sales to' column, tick the one buyer category that most frequently applies.
- 2e) Do you mostly sell to particular traders? Tick 'Yes' or 'No' as the case may be [and continue with Q.2c]. If 'DNA', tick as such [and go to Q.3].
- 2f) [If 2e 'Yes' or 'No'] Why or why not? Ask for reason(s) why or why not transactions usually with particular traders, noting response in space provided.

3) Other work; Income estimates

- 3a) **What other work/business do you have besides your fish business?** Tick appropriate box or boxes. Be sure to note in details where indicated.
- 3b) **Does most of the money you earn on average each month come from fish business or from some other work/business?** If 'From fish business', tick as such [and continue with Q.3c]. If 'From other', tick as such and specify details in space provided.
- 3c) **Thinking over the past year, about how much money do you earn from fish business during...** Mentioning that the income a person receives each month will of course vary depending upon conditions, ask the respondent to estimate as accurately as possible how much money he/she earns during **good months**, and enter figure (in national currency units) in space provided. Do the same for **poor months**.
- 3d) **Over the past year, about how much would you say you earn on average per month.** Now ask the respondent to provide a figure on average income per month, first **from fish business, and then, if applicable, from any other work or business** he/she has.
- 4) **Land & productive assets.**
- 4a) **Do you own any land?** If 'Yes', specify number of acres or hectares [Be sure to indicate which unit of measurement!]. Also specify how this land is used (e.g. for farming, house plot, business/shop plot, etc.).
- 4b) **Do you own or have part share in any of the following equipment/gear?** For each of the items listed in the left-hand column that the respondent owns or holds a part share ownership in, fill in the information across the columns to the left in each row as indicated. For **No. of units**, specify number for lamps, gillnets, and lines. Count major items like boats, outboards, liftboats, or vehicles separately, using the 'Other' space to enter details. For example, if a respondent owns two outboard engines, note details of the first in the 'Outboard engines' row. Then, specify 'Outboard 2' in the space provided for 'Other', and note details for this second outboard as indicated in this row. For **% Owned**, enter '100%' for full ownership, '50%' for half ownership share, '33%' for a third ownership share, etc. For **'Item age'** enter number of years as reported by respondent. For **'Item replacement cost'**, enter amount (in units of national currency) that it would cost to replace item by another of the same type. For **'Cash purchase'** and **'Credit purchase'**, tick as appropriate for **'All'** or **'Part'** purchase through cash and/or credit. For **'Credit type'**, in case of all or part credit purchase, use codes indicated at the base of the table.

SECTION D. RESPONDENT OPINIONS/VIEWS

This section is intended to collect information on the respondent's opinions and views about fishing and the lake, including his/her perceptions of recent and possible future changes in fishing and reasons for such changes, and what he/she thinks about possible ways to regulate fishing in the lake should this be proposed in the years ahead. Explain carefully

to your respondent that there are no 'right answers' to any of these questions. They are only asked to help understand what local people themselves are thinking about their occupations and overall conditions of the fisheries.

The questions should be addressed to the respondent as they appear. Take care to mark the answer boxes clearly, and to note down responses fully where open-ended questions are asked (Q. 1a-1b, 2a-2a, 3 4a, 5a, 6a-6c, 7a, 8a-8c & 8c.1, 9, and 11.

Finish time: Enter time interview completed.

Total time: Refer back to Start time, subtract from finish time, and note in minutes.

<p>N.B.: Be sure that the form is carefully checked for completeness and accuracy before turning it over to your supervisor for review.</p>
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ANNEX 3.

**LTR SOCIO-ECONOMIC SURVEY 1997
ENUMERATOR FIELD GUIDE ANNEX**

NOTES FOR TEAM SUPERVISORS

**LTR SOCIO-ECONOMIC SURVEY 1997
ENUMERATOR FIELD GUIDE ANNEX**

NOTES FOR TEAM SUPERVISORS

The LTR SEC Survey is to be carried out simultaneously by teams operating in each of the four national sectors of the lake -- Burundi, Democratic Republic of the Congo, Tanzania, and Zambia -- during the month of July 1997. Events in both Burundi and the DRC in the last several months have rendered survey planning for those sectors very problematical. Nevertheless, LTR is currently (as of late June 1997) moving ahead with necessary training and logistical preparations for survey work along both shorelines. National teams of LTR associates have been assembled and should be fully engaged in the field by the second week of July 1997. Whilst details of geographical stratification and coverage as well as sampling proportions to be used are still being finalised, the exercise in both Burundi and the DRC will be conducted along the lines already set for Zambia and Tanzania.¹

This annex to the **Enumerator Field Guide** contains further instructions on site visit and sampling procedures for team supervisors and the enumerator group leaders they designate.

TEAM COMPOSITION

As presently composed, team membership is as follows:

Tanzania **Bosma** (LTR Kigoma), **Supervisor**
 Verburg, (LTR Kigoma), **Supervisor**
 Chitamwebwa (TAFIRI/Kigoma), **Group leader**
 Katonda (TAFIRI/Kigoma), **Group leader**
 Sobo (DoF, Dar), **Enumerator**
 Kalangali (TAFIRI/Kigoma), **Enumerator**
 Muhoza ((TAFIRI/Kigoma), **Enumerator**
 Venance (DoF/Kigoma C.C.), **Enumerator**
 [+ one extra DoF staff to join team in Rukwa Region]
 [Travel/accomodation on *RV Explorer*]

Zambia **Langenberg** (LTR/Mpulungu), **Supervisor**
 Chitembure (DoF/Chilanga), **Group leader**
 Chomba (DoF/Mpulungu), **Enumerator**
 Chimanga (DoF/Mpulungu), **Enumerator**
 Lukwesa (DoF/Mpulungu), **Enumerator**
 Mwenda (DoF/Mpulungu), **Enumerator**
 [Travel on *R/V Silvershoal*]
 [+ Mpulungu-based team of Lukwesa (DoF) and Muhenda
(DoF) for data entry]

Burundi **Paffen** (LTR/Mpulungu - outposted) **Supervisor**
 Kanyaru (DoF/Bujumbura), **Group leader**
 Bashirwa (DoF/Bujumbura), **Group leader**
 Ndorimana (DoF/Bujumbura), **Enumerator**

¹ As these survey details for Burundi and the DRC are settled, this annex will be revised accordingly.

Tumba (DoF/Bujumbura), Enumerator
 Ndimunzigu (DoF/Bujumbura), Enumerator
 Sintuye (DoF/Bujumbura), Enumerator
 Sinunguka (DoF/Bujumbura), Enumerator
 Nibigira (DoF/Bujumbura), Enumerator
 Hakizimana (DoF/Bujumbura), Enumerator
 [+ Buja-based team of Butoyi, Nikomeze, Tumba, and
 Gahungu (DoF/Bujumbura) for data entry]

DRC **Mulimbwa (CRRH/Uvira), Supervisor**
 Mukirana (CRRH/Uvira), Enumerator
 Kitungano [or Bwebwa] (CRRH/Uvira), Enumerator
 Bulambo (CRRH/Uvira), Enumerator
 Nyiringani (CRRH/Uvira), Enumerator
 Asani (CRRH/Uvira), Enumerator
 [Hired transport boat for team travel, arrangements to
 be confirmed]
 [Data entry to be carried out at LTR/Buja upon return]

GENERAL POINTS

- 1) As a Team Supervisor, you have overall responsibility for ensuring the success of the LTR SEC Survey in your assigned national sector. In other words, you are in charge of all survey logistical arrangements (scheduling, transport, team accomodation, survey form and enumerator equipment supplies, etc.) and field administration procedures (notification relevant regional/district/local officials, site verification, community introductions, team member interview or site inventory assignments, respondent identification/selection, final review of survey forms for thoroughness and accuracy, coding of answers, and filing and custody of completed forms).
- 2) During field missions, you must also act as a general technical backstopper and problem-solver since enumerators will be counting on you to sort out any questions or difficulties they encounter.
- 3) Thoroughly acquaint yourself with the contents of the **Enumerator Field Guide**. Get to know the procedures and instructions outlined therein '**frontwards and backwards**,' as this will put you in the best position to assist and advise the team members working with you.
- 4) Plan out your 'campaign' of site visits to make the most efficient use of the resources you have available. With reference to the '**Site Information Table**' covering your sector of the lake, organise the day-by-day movement of your team systematically, so that work commences at one end of your sector and moves through consecutive sites without having to double back. Where two pre-selected fishing villages lie in close proximity to each other and are each of relatively small size, it may be possible to divide your team into two groups and so survey both sites in one day.

- 5) Notify LTR HQ and the SEC Survey Coordinator of your proposed fieldwork schedule, and, once the survey mission has started, maintain a radiocall schedule (for research vessel-based teams) or periodic call-in arrangement in order to keep those in Bujumbura briefed on your progress, problems that need addressing, etc.
- 6) Follow the suggestions laid out in the **General Introduction** of the **Guide** in making contact with sample site community leaders and residents to explain the purpose of the survey exercise and gain their co-operation.
- 7) Try as much as possible to assign specific enumerators with responsibility for specific forms. This will facilitate familiarity with particular form routines and thus maintain a good pace at which the survey work is performed.
- 8) At the same time, encourage versatility in at least some members of your team, so that they will be able to switch over upon completion of their assignments at any given site in order to help out with other work.. For instance, if 'Form 1 enumerators' have completed their site inventory 'walkabouts,' and if any Form 2 and/or Form 3 interviews have still to be carried out, then the Form 1 group should immediately begin to help with the latter.
- 9) Do not leave a survey site without first having carefully reviewed all forms filed by enumerators, to check for any mistakes or oversights. **Once the team has departed a site, it will be too late for follow-ups or cross-checks to confirm or correct the forms.**
- 10) You should insofar as possible **on a daily basis get the questionnaire responses coded into the Excel data files** that have been developed for this purpose. Adopting this coding routine of quick transfer from the questionnaire into the data files will facilitate your review of each and every form as enumerators turn them in.

SAMPLE VILLAGES/LANDING SITES (Form 1)

During the 1997 SEC Planning Workshop in Kigoma (mid-April to mid-May '97), participants agreed that the total number of active fishers (FI) classified at each landing site during FS 95 should be used as a proxy for the distribution of general population and socio-economic activity around the lakeshore -- both critical features that ought to be reflected in the proposed SEC survey sample structure. From this point, the sampling strategy evolved as follows.

In order to ensure geographical representation, area stratification is carried out on the basis of coastline divisions already defined by the respective DoFs as well as previous FS exercises. Within each area, representation of different sizes of landing sites (i.e. different socio-economic realities) is ensured by sorting the landing sites into size classes. In other words, stratification is both by area of

shoreline and according to class of landings within a given area. The procedure is as follows.

In the frequency distribution of the number of landing sites sorted by number of FI, as determined during FS 95 in Tanzania and Zambia, four main classes of landing sites are distinguished. Thus:

Class 1 = 1-24 FI
Class 2 = 25-74 FI
Class 3 = 75-149 FI
Class 4 = 150 FI

One landing site per class of landing sites is randomly chosen per area. The results of this selection procedure are shown in the **Site Information Sheets** already distributed. Note that for some areas not all size classes may be represented. Total sites selected for survey visits in Zambia and Tanzania are:

Zambia: 13 sites distributed across 4 areas.
Tanzania (Kigoma): 22 sites distributed across 6 areas.
Tanzania (Rukwa): 19 sites distributed across 6 areas.
Burundi: 5 sites distributed across 2 areas.
DRC (Sud Kivu): 9 sites distributed across 3 areas.
DRC (Shaba): 12 sites distributed across 3 areas.

Form 1 (Village/Landing Site Basic Inventory) needs to be completed for each of the selected sites.

IDENTIFYING AND SELECTING INDIVIDUAL FISHERS FOR INTERVIEW (Form 2)

Background

On the basis of pilot interviewing (pre-tests) run in Tanzania and Zambia, it is known that each Fisher interview (Form 2) and Processor/Trader interview (Form 3) is going to take 30-40 minutes on average. The SEC Survey Co-ordination Group therefore had to settle on some sort of estimate as to how many separate interviews could be managed by the various national teams within the allotted period of fieldwork. After considering different options, it was decided that the best strategy would be to sample fractions of total fishing units within each national sector based on several assumptions. Namely,

Total numbers of active fishing units are as indicated in results of the LTR '95 FS.
Proportions of 'artisanal' (lift net, apollo lift net, chiromilla, day beach seine, etc.) vs. 'traditional' (gillnet, longline, handline, lusenga, etc.) fishing units are as indicated in results of the LTR '95 FS.
Numbers of operators/crew average 3 persons for artisanal and 1.5 persons for traditional fishing units.

This procedure yielded the following sample population of individual fishers to be interviewed.

(Step 1.)

Zambia fishing unit sampling fraction: 15% of all traditional and artisanal fishing vessels in Zambia = **116 units** (distributed across 13 sites), to be further broken down in proportions of a **0.3 artisanal** vs. **0.7 traditional** split.

Tanzania (Kigoma Region) fishing unit sampling fraction: 5% of all traditional and artisanal fishing vessels = **117 units** (distributed across 6 sites), to be further broken down in proportions of a **0.6 artisanal** vs. **0.4 traditional** split.

Tanzania (Rukwa Region) fishing unit sampling fraction: 5% of all traditional and artisanal fishing vessels = **68 units** (distributed across 6 sites), to be further broken down in proportions of a **0.6 artisanal** vs. **0.4 traditional** split.

Burundi fishing unit sampling fraction: 7.5% of all traditional and artisanal fishing vessels = **64 units** (distributed across 5 sites), to be further broken down in proportions of a **0.7 artisanal** vs. **0.3 traditional** split.

DRC² (Sud Kivu) fishing unit sampling fraction: 5% of all traditional and artisanal vessels = **107 units** (distributed across 9 sites), to be further broken down in proportions of a **0.4 artisanal** vs. **0.6 traditional** split.

DRC (Shaba) fishing unit sampling fraction: 5% of all traditional and artisanal vessels = **117 units** (distributed across 12 sites), to be further broken down in proportions of a **0.2 artisanal** vs. **0.8 traditional** split.

(Step 2.)

(1)	(2)	(3)	(4)	(5)	(6)
Country/Region	Tot. sample artisanal units (AU)	Est. No. respondents (AU x 3)	Tot. sample traditional units (TU)	Est. No. respondents (TU x 1.5)	Tot. all respondents
Zambia	35	105	81	122	227
Tanz./Kigoma	71	223	46	69	292
Tanz./Rukwa	41	123	27	41	164
Burundi	45	135	19	29	164
DRC (Sud Kivu)	43	128	64	96	224
DRC (Shaba)	23	70	94	140	210

² Data on vessels for the DRC include transport and auxiliary craft. Also, vessel sample numbers for the DRC were figured on the basis of zone (i.e. strata) totals of craft, whereas in the other national sectors sample numbers were figured on the basis of total fishing vessel counts.

Form 2 (Fishers) needs to be completed within each national sector/region for the total number of individual respondents noted in columns (3) and (5) above.

Directed sampling

In order to achieve these quotas it is very important for you as a Team Supervisor to keep the following suggestions in mind:

- 1) You clearly will have to ensure that sampling is directed according to whether individual fishers are associated with artisanal or traditional units. As you and your group leader(s) organise for individual fisher interviews at a given site, reference to the **Site Information Sheets** will quickly provide an indication of how many units will be needed to fill out the 'fishing unit sampling fraction' requirement (e.g. 15% in the case of Zambian sites, 5% for Tanzanian sites). For most sites, this will amount to only a few units (in almost all cases between 5-10).
- 2) As it will generally not be possible to find all individuals associated with all units available at a given site during the survey visit (making a truly random selection of respondents impossible), your team will simply have to identify respondents out of the collection of those they happen to find at the time. You and your team members should also try to learn from asking local fishers at a given landing site about the different types of gear that are in use, and ensure that sampling is guided to include as many of these different types as possible.
- 3) To give an example, suppose that the quota of fishing units to be sampled at Site X is 10, and you are adhering to a 0.3 artisanal vs. 0.7 traditional split in the proportion of units to be selected (as in the case of Zambia). Your team will need to interview ($10 \times 0.3 \times 3 =$) about 9 individuals associated with (ca.) 3 artisanal units, and ($10 \times 0.7 \times 1.5 =$) about 10.5 individuals associated with (ca.) 7 traditional units. Suppose further that of the artisanal units on site, there are several light boats and a mixture of lift net units and beach seine units; and that of the traditional units, gillnetters, longliners, and lusenga scoop netters are all found. Your team should make sure that this array of gear types is represented amongst those interviewed.
- 4) The easiest method for enumerators to employ is to try conduct separate interviews with each of the individuals they find on a selected unit. On an artisanal unit, for example, if all three or four members of its working team are found together (sitting in a catamaran doing repairs, say, or just resting and talking with each other) at the time of survey visit, interviews would be run separately with each of them.
- 5) On the other hand, not all members of different fishing unit teams may be available at survey time. In such cases, it may prove necessary for your team to fill out the artisanal and/or traditional quotas by identifying additional suitable individuals for interview. For example, suppose your

enumerators find respondents who are attached to 5 different catarmaran units, but only 10 of a projected 15 interviews have been managed because other members of the different fishing teams have gone away from the landing site for the day. In such a case, enumerators should simply identify other suitable substitute candidates for interview from other units.

- 6) Suitable substitutes are those who function in the same role as individuals who were 'missing' in the original units sampled. Thus, if an additional five interviews need to be carried out, they should be arranged with 'Crew/labourers' if that is the category that needs to be made up, or 'Operators' and/or 'Owners' and/or 'Owner/Ops' as the case may be. [Operators, Owners, and Owner/Ops (see Guide for distinctions) are regarded as interchangeable categories in such instances and are estimated together to account for about 33% of the artisanal unit fisher population and about 66% of the traditional unit fisher unit population.]
- 7) Now, 'reality' will not always be neatly divided according to the estimated proportions projected above at each and every landing site, but at least try to maintain your artisanal vs. traditional unit quotas broadly within areas. In other words, your team will be visiting a maximum of four sites within a given area. If you see, for example, that at some of these sites it is difficult to find sufficient representatives of traditional fishing units, according to the overall projection, simply fill out the numbers at the next closest available site in the area.
- 8) (Optional) You may find it useful to draw up 'quota tables' to help in your directed sampling decisions in each geographical area. One kind of table could record overall quotas to be attained within the artisanal and traditional fisheries broken down by gear types known or expected for each.

AREA 'X' [Grand total interviews required = ?]

Traditional units			Artisanal units		
Unit types	Tally clm., interviews done	Tally tot.	Unit types	Tally clm., interviews done	Tally tot.
Gillnet		=	Lift net	=	
Longline		=	Apollo	=	
Handline		=	Beach seine	=	
Lusenga		=	etc.	=	
etc.		=		=	
Tot. interviews required = ?	←Should agree→	Tot. interviews done = ?	Tot. interviews required = ?	←Should agree→	Tot. interviews done = ?

A second kind of table could help keep track of the different employment categories represented by the respondents being interviewed.

AREA 'X' [Grand total interviews required]

Traditional units			Artisanal units		
Employment category	Tally clm., interviews done	Tally tot.	Employment category	Tally clm., interviews done	Tally tot.
Owner		=	Owner	=	
Owner/Op		=	Owner/Op	=	
Operator		=	Operator	=	
Crew/Labourer		=	Crew/Labourer	=	
Tot. interviews required = ?	←Should agree→	Tot. interviews done = ?	Tot. interviews required = ?	←Should agree→	Tot. interviews done = ?
Of which Crew/Labourer to = ca. 33%	←Should agree→	Of which % Crew/Labourer = ?	Of which Crew/Labourer to = ca. 66%	←Should agree→	Of which % Crew/Labourer = ?

IDENTIFYING AND SELECTING INDIVIDUAL PROCESSORS/TRADERS FOR INTERVIEW (Form 3)

Background

The selection of fish processors and traders for individual interviews using Form 3 is a relatively easy and straightforward process. Since there is no basis for estimating total numbers beforehand (as was possible with the fisher population), overall processor/trader sample size is simply a matter of settling on the number of interviews the teams can reasonably be expected to conduct within the timeframe fixed for the survey exercise. Different possibilities were considered by the SEC Survey Coordination Group. It was decided in the end to use the sampling rates determining fisher interview numbers as a convenient index for processor/trader sampling. Thus, one processor or trader interview is to be conducted per fisher unit-based interview.

This translates into the following sample population of fish processors and traders to be interviewed using Form 3:

Zambia= 116 processors/traders.

Tanzania (Kigoma Region) = 117 processors/traders.

Tanzania (Rukwa Region) = 68 processors/traders.

Burundi = 64 processors/traders.

DRC (Sud Kivu) = 107 processors/traders.

DRC (Shaba) = 117 processors/traders.

Directed sampling

As in the case of the fisher respondent selection process, your team generally will not find it possible to organise a truly random selection of processors/traders for interview at a given site during the survey visit. Therefore you and your enumerators will again have to resort to 'opportunity sampling' to fill out the required quotas within each survey area.

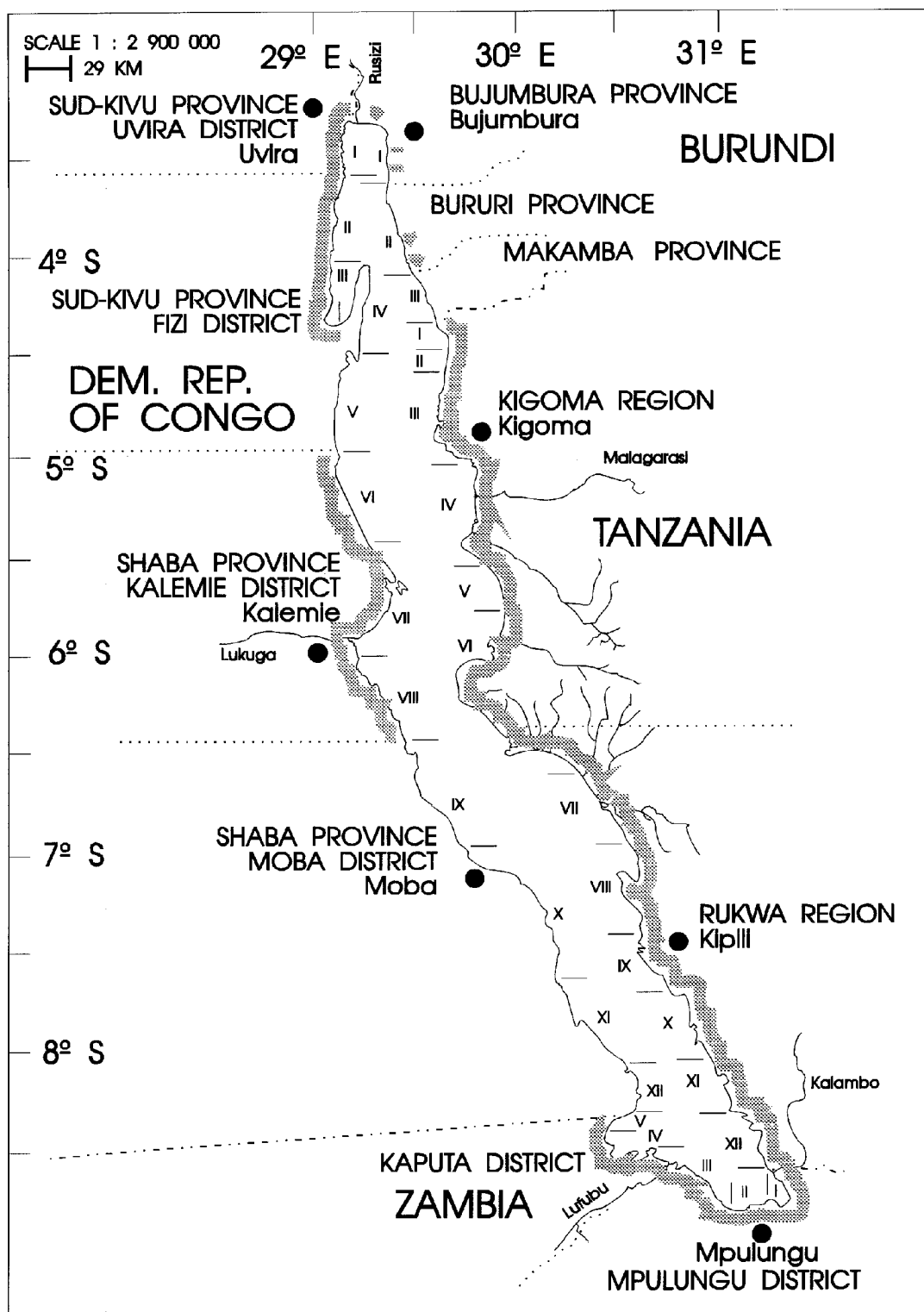
Care should be taken, however, to **direct sampling** such that there are at least **equal numbers of processors and traders** represented, and that, for the **sub-sample of traders**, at least **half** are '**local**' traders (operating within a 5 km radius of a given survey site), and **half** '**long-distance**' traders (operating beyond a 5 km radius of a given site).

As an option, in the manner already illustrated for the fisher interviews, you may want to make use of a simple 'quota table' to help with your directed sampling of processors and traders.

ANNEX 4.

LTR SOCIO-ECONOMIC SURVEY 1997

- **MAP OF SURVEY AREAS**
- **SAMPLE SELECTION INFORMATION SHEETS**



MAP OF LTR LAKEWIDE SEC SURVEY AREAS, 1997

Enumerez 7.5% des unités de pêche/bateaux de pêche, i.e. 30% des unités traditionnelle et 70% des unités artisanale. Essayez de trouver un maximum nombre des types d'engins différentes, i.e. prenez les engins moins populaires comme les palangrottes, lusengas et les sennes de plages quand vous les trouvez sur les plages choisi. Interrogez le maximum nombre des catégories des pêcheurs par unité de pêche, i.e. pour les unités artisanales, on peut trouver c. 3 catégories, et pour les unités traditionnelles on peut trouver c. 1.5 catégories.

BURUNDI: PECHEURS ET BATEAUX TRADITIONELLES ET ARTISANALES

Province				FORMULAIRE 2						F. 3	FORMULAIRE 1		
	Nbre de plages	Nbre de pêcheurs (PC)	5% de pêcheurs	Nbre de bateaux de pêche	7.5% de bateaux de pêche	0.3 Proportion traditionnelle	Nbre de interlocuteurs trad.	0.7 Proportion artisanale	Nbr. de interlocuteurs art.	Total de interloc., form. 2	Nbre de proc. et march.	Plages ouvert	Nbre de bateaux de pêche
	ZONE TOTAL			Nbre	Nbre	x1.5	Nbre	x3	Somme	x1	PLAGES OUVERT		
troisième partie du total				129	10	3	4	7	20	25	10	Kadjaga	?
troisième partie du total				129	10	3	4	7	20	25	10	Nyamugari	?
troisième partie du total				129	10	3	4	7	20	25	10	Gitaza	?
Bujumbura	26	979	49	388	29	9	13	20	61	74	29		
deuxième partie du total				233	17	5	8	12	37	44	17	Rumonge	?
deuxième partie du total				233	17	5	8	12	37	44	17	Karonda	?
Bururi & Makamba	28	1042	52	465	35	10	16	24	73	89	35		
BURUNDI TOTAL:	54	2021	101	853	64	19	29	45	134	163	64	5 plages ouverte en total	

Equippe pour Bujumbura:

Fidèle Bahirwa Form. 1
 Bernard Ndimunzigo Form. 2
 Michel Bangirimana Form. 2
 Louis Sintuye Form. 3
 Chauffeur

Equippe pour Bururi:

Roger Kanyaru Form. 1
 Jean marie Tumba Form. 2
 Jean marie Niybiriga Form. 2
 Gordien Ndorimano Form. 2/3
 Serge Hakizimana Form. 3
 Chauffeur

Enumérez 5% des unités de pêche/bateaux de pêche, i.e. en Sud-Kivu: 60% des unités traditionnels et 40% des unités artisanales, et en Shaba: 80% des unités traditionnels et 20% des unités artisanales. Essayez de trouver un maximum nombre des types d'engins différentes, i.e. prenez les engins moins populaires comme les palangrottes, lusengas, sennes de plages et Apollos quand vous les trouvez sur les plages choisis. Interrogez le maximum nombre des catégories des pêcheurs par unité de pêche, i.e. pour les unités artisanales, on peut trouver c. 3 catégories, et pour les unités traditionnelles on peut trouver c. 1.5 catégories.

SUD-KIVU PROVINCE: PECHEURS ET BATEAUX TRADITIONNELS ET ARTISANAUX

SUD-KIVU PROVINCE: PECHEURS ET BATEAUX TRADITIONNELS ET ARTISANAUX													FORMULAIRE 2		F. 3	FORMULAIRE 1								
Zone et classe	Nbre de plages	Nbre de pecheurs (PC)	5% de pecheurs	Nbre de bateaux de pêche	5% de bateaux de pêche	0.6 Proportion traditionnel	Nbre de interlocuteurs trad.	0.4 Proportion artisanal	Nbr. de interlocuteurs art.	Total de interloc., form. 2	Nbre de proc. et march.	Plages choisie	Code géographique	Nbre de bateaux de pêche	Nbre de pecheurs									
																ZONE TOTAL							PLAGES CHOISIE	
																No.	No.	x1.5	No.	x3	Somme	x1		
Classe 1 (1-24 PC)	1	70	4	56	3	2	3	1	3	6	3	Kabimba	U7-I	56	70									
Classe 2 (25-74 PC)	4	524	26	225	11	7	10	5	14	24	11	Kasenga	U3-I	42	144									
Classe 3 (75-149 PC)	4	1026	51	480	23	14	21	9	28	48	23	Kivovo	U6-I	130	168									
Zone 1 total:	9	1620	81	741	37	22	33	15	44	78	37													
Classe 1 (1-24 PC)	9	156	8	86	4	3	4	2	5	9	4	Bitobolo	F32-II	10	19									
Classe 2 (25-74 PC)	12	802	30	361	18	11	16	7	22	38	18	Sanza	F23-II	13	29									
Classe 3 (75-149 PC)	5	480	24	212	11	6	10	4	13	22	11	Babungwe	F16-II	72	94									
Classe 4 (> 150 PC)																								
Zone 2 total:	26	1238	62	659	33	20	30	13	40	69	33													
Classe 1 (1-24 PC)	16	227	11	149	7	4	7	3	9	16	7	Changwena	F61-III	9	11									
Classe 2 (25-74 PC)	12	513	26	263	13	8	12	5	16	28	13	Kisokwe	F55-III	23	50									
Classe 3 (75-149 PC)	8	727	36	320	16	10	14	6	19	34	16	Kafinga	F65-III	31	84									
Classe 4 (> 150 PC)																								
Zone 3 total:	36	1467	73	732	37	22	33	15	44	77	37													
ZONE 1-3 TOTAL:	71	4325	216	2132	107	64	96	43	128	224	107	9 plages choisie en Sud-Kivu												
SOUS-ECHANTILLONAGE DE ZONES: les 3 zones au nord, de 5 en total (zone 1-5)																								
SUD KIVU TOTAL:	139	6292	315	3395	170	102	153	68	204	356	170													

SHABA PROVINCE: PECHEURS ET BATEAUX TRADITIONNELS ET ARTISANALS

SHABA PROVINCE: PECHEURS ET BATEAUX TRADITIONNELS ET ARTISANAUX																FORMULAIRE 2		F. 3	FORMULAIRE 1			
Zone et classe	Nbre de plages	Nbre de pecheurs (PC)		Nbre de bateaux de pêche	5% de bateaux de pêche	0.8 Proportion TRADITIONNEL		Nbre de interlocuteurs trad.		0.2 Proportion ARTISANAL		Nbr. de interlocuteurs art.	Total de interloc., form. 2	Nbre de proc. et march.	Plages choisie	Code géographique	Nbre de bateaux de pêche	Nbre de pecheurs				
		5% de pecheurs				No.	No.	x1.5	No.	x3												
	ZONE TOTAL				No.	No.	x1.5	No.	x3	Somme	x1		PLAGES CHOISIE									
Classe 1 (1-24 PC)	14	190	10	145	7	6	9	1	4	13	7	Karagwe	K164-VI	12	11							
Classe 2 (25-74 PC)	12	578	29	303	15	12	18	3	9	27	15	Kalindje	K156-VI	9	27							
Classe 3 (75-149 PC)	6	532	27	216	11	9	13	2	6	19	11	Etho	K154-VI	37	89							
Classe 4 (>150 PC)	1	220	11	95	5	4	6	1	3	9	5	Kitoke	K166-VI	95	220							
Zone 6 total:	33	1520	76	759	38	30	46	8	23	68	38											
Classe 1 (1-24 PC)	22	253	13	133	7	5	8	1	4	12	7	Kashombeyi	K218-VII	4	9							
Classe 2 (25-74 PC)	18	754	38	414	21	17	25	4	12	37	21	Kabimba	K174-VII	36	36							
Classe 3 (75-149 PC)	2	259	13	63	3	3	4	1	2	6	3	Milima	K190-VII	27	128							
Classe 4 (>150 PC)	4	1050	53	304	15	12	18	3	9	27	15	Athenée	K215-VII	72	317							
Zone 7 total:	46	2316	116	914	46	37	55	9	27	82	46											
Classe 1 (1-24 PC)	10	109	5	79	4	3	5	1	2	7	4	Ompolo	K253-VIII	4	9							
Classe 2 (25-74 PC)	17	646	32	304	15	12	18	3	9	27	15	Kikonde	K255-VIII	26	27							
Classe 3 (75-149 PC)	5	508	25	144	7	6	9	1	4	13	7	Mulomgo	K244-VIII	30	100							
Classe 4 (>150 PC)	3	508	25	140	7	6	8	1	4	13	7	Rutuku	K230-VIII	35	175							
Zone 8 total:	35	1771	89	667	33	27	40	7	20	60	33											
ZONE 6-8 TOTAL:	114	5607.1	280	2340	117	94	140	23	70	211	117	12 plages choisie en Shaba										
SOUS-ECHANTILLONAGE DE ZONES: les 3 au nord en Kalamie, de 7 en total (zones 6-12)																						
SHABA TOT. (zone 6-12):	276	18469	923	6857	343	274	411	69	206	617	343	21 plages choisie en total										
CONGO TOT. (zone 1-12):	415	24761	1238	10252	513	410	615	103	308	923	513											

Strategy table: Guidelines for the supervisor(s) of the SE teams.

Results of the sim. FS, March 1995. Geographical areas coincide with DoF enumerator stations, station names are provided. Indicated are: (a) the area and site-class totals and (b) the chosen sites per site-class and area.

Sample 5% of the fishing vessels as indicated per site, namely: 0.6 vs. 0.4 proportion of artisanal vs. traditional units.

Choose as many different artisanal and traditional units as possible, i.e. single out less common gears such as chiromilla seines, apollo lift nets, lusenga scoop nets and long lines when encountered at the landing sites chosen.

Interview as many categories of FI as possible per unit. For art. units, 3 or 4 categories of FI may be found, namely:

owner of gear/not operator, captain, labourer puller and light boat owner operating together with the unit.

For traditional units, 1 or 2 categories of FI may be found, namely: owner of gear/operator and labourer.

KIGOMA REGION - INFORMATION ON TRADITIONAL AND ARTISANAL FISHERMEN, VESSELS, GEAR

Area	No. of villages/Landing sites	No. of act. fishers	5% of No. of act. fishers	No. of fish. ves. (act. + inact.)	5% of fish. ves. (act. + inact.)	0.6 Proportion artisanal units	0.4 Proportion traditional units	Chosen landing site/village	CHOSEN SITE TOTALS				Art. gear at site				Trad. gear at site									
									No. of act. fishers	No. of fishing ves. (act. + inact.)	No. of auxiliary boats (act. + inact.)	No. of transporters (act. + inact.)	No. of day beach seines	No. of chiromilla seines	No. of lift nets	No. of apollo lift nets	No. of gill nets	No. of scoop nets	No. of long lines	No. of hand lines						
AREA AND CLASS TOTALS									CHOSEN SITE TOTALS																	
Class 1 (1-24 FI)	3	38	2	24	1	1	0	Zashe	24	21	0	0	0	0	0	0	0	0	0	0	31					
Class 2 (25-74 FI)	7	339	17	56	3	2	1	Mwibore	42	5	7	0	1	0	4	0	0	0	0	0	0					
Class 3 (75-149 FI)	3	256	13	25	1	1	1	Kahono	76	5	22	0	5	0	0	0	0	0	0	0	0					
Class 4 (>150 FI)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Area 1 total:	13	633	32	105	5	3	2	Kagunga station total:	-	-	-	-	26	0	31	0	0	0	0	0	62					
Class 1 (1-24 FI)	2	34	2	9	0.5	0.3	0.2	Kahama	16	1	6	0	1	0	0	0	0	0	0	0	0					
Class 2 (25-74 FI)	6	305	15	50	3	2	1	Nyaburembo	46	21	0	0	0	0	1	0	0	0	0	0	40					
Class 3 (75-149 FI)	7	716	36	139	7	4	3	Kitwe	76	3	30	0	3	0	0	0	0	0	0	0	0					
Class 4 (>150 FI)	2	432	22	61	3	2	1	Karande	192	14	53	0	11	0	1	0	0	0	0	0	0					
Area 2 total:	17	1487	74	259	13	8	5	Mwangongo station total:	-	-	-	-	69	0	21	0	0	0	0	0	407					
Class 1 (1-24 FI)	4	54	3	34	2	1	1	Rutale	11	9	0	0	0	0	0	0	53	0	0	0	5					
Class 2 (25-74 FI)	1	40	2	9	0.5	0.3	0.2	Kananiye	40	9	6	0	2	0	1	0	0	0	0	6	0					
Class 3 (75-149 FI)	5	603	30	122	6	4	2	Kalalangabo	120	13	40	0	4	0	1	0	0	0	0	0	0					
Class 4 (>150 FI)	4	840	42	233	12	7	5	Luanza	177	40	0	0	0	0	36	0	0	0	0	0	0					
Class 4 ind. site:	55	3	3	3	3	3	3	Figures for the industrial fisheries classified in Luanza in FS 95 that were excluded.																		
Area 3 total:	14	1592	80	398	20	12	8	Mtanga - Ujiji station total:	-	-	-	-	38	0	157	1	397	6	8	220	0					
Class 1 (1-24 FI)	6	88	4	51	3	2	1	Mafundikani	12	5	0	0	1	0	1	0	0	0	0	0	3					
Class 2 (25-74 FI)	11	561	28	215	11	6	4	Kimba	68	44	0	2	1	0	1	0	0	29	0	0	0					
Class 3 (75-149 FI)	4	346	17	148	7	4	3	Bongobeach	77	20	0	0	0	0	17	0	5	2	0	34						
Class 4 (>150 FI)	2	677	34	297	15	9	6	Muyobozi	421	225	0	3	0	0	69	0	40	63	0	532						
Area 4 total:	23	1672	84	711	36	21	14	Kaseke - Sunuka stat. total:	-	-	-	-	13	0	243	1	594	166	30	921	0					
Class 1 (1-24 FI)	3	50	3	33	2	1	1	Kafyanta	24	9	0	0	0	0	6	0	0	0	0	0	4					
Class 2 (25-74 FI)	14	648	32	330	17	10	7	Kahama	32	12	0	0	0	0	8	0	0	0	0	14						
Class 3 (75-149 FI)	3	334	17	116	6	3	2	Itigi	128	37	0	0	0	0	26	0	0	6	0	20						
Class 4 (>150 FI)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Area 5 total:	20	1032	52	479	24	14	10	Kaparamsenga station total:	-	-	-	-	3	0	188	0	208	77	0	244	0					
Class 1 (1-24 FI)	4	81	4	51	3	2	1	Rukoma	23	16	0	0	2	0	0	0	40	0	0	0	5					
Class 2 (25-74 FI)	8	355	18	145	7	4	3	Kanyase	39	16	0	0	0	0	9	0	0	0	0	3						
Class 3 (75-149 FI)	2	189	9	57	3	2	1	Buhingu	78	26	0	0	1	0	16	0	68	0	0	15						
Class 4 (>150 FI)	2	603	30	143	7	4	3	Sibwesa	257	44	0	2	23	0	4	0	66	0	0	8						
Area 6 total:	16	1228	61	386	20	12	8	Sibwesa station total:	-	-	-	-	67	0	120	0	749	13	0	91	0					
KIGOMA REGION:	103	7644	382	2348	117	70	47	Total vessels:	595	216	0	760	2	1948	252	38	1945	0	0	0	0					
								Total sites:	22																	

The landing sites/villages all have separate names.

FS 95 definition of active fisher = any crew member

FS 95 definition of active vessel = any vessel that was not under repair (IN and OUT)

FS 95 definition of fishing vessel = any vessel from which fishing gear was operated

Strategy table: Guidelines for the supervisor(s) of the SE teams.

Results of the sim. FS, March 1995. Geographical areas coincide with DoF enumerator stations, station names are provided. Indicated are: (a) the area and site-class totals and (b) the chosen sites per site-class and area.

Sample 5% of the fishing vessels as indicated per site, namely: 0.6 vs. 0.4 proportion of artisanal vs. traditional units. Choose as many different artisanal and traditional units as possible, i.e. single out less common gears such as chiromilla seines, apollo lift nets, lusenga scoop nets and long lines when encountered at the landing sites chosen.

Interview as many categories of FI as possible per unit. For art. units, 3 or 4 categories of FI may be found, namely: owner of gear/not operator, captain, labourer puller and light boat owner operating together with the unit. For traditional units, 1 or 2 categories of FI may be found, namely: owner of gear/operator and labourer.

RUKWA REGION - INFORMATION ON TRADITIONAL AND ARTISANAL FISHERMEN, VESSELS, GEAR

Area	AREA AND SITE-CLASS TOTALS						CHOSEN SITE TOTALS						Art. gear at site				Trad. gear at site			
	No. of villages/Landing sites	No. of act. fishers	5% of No. of act. fishers	No. of fish. ves. (act. + inact.)	5% of fish. ves. (act. + inact.)	0.6 Proportion artisanal units	0.4 Proportion traditional units	Landing site	No. of act. fishers	No. of fishing ves. (act. + inact.)	No. of auxiliary boats (act. + inact.)	No. of transporters (act. + inact.)	No. of day beach seines	No. of chiromilla seines	No. of lift nets	No. of apollo lift nets	No. of gill nets	No. of scoop nets	No. of long lines	No. of hand lines
Class 1 (1-24 FI)	9	111	6	36	2	1	1	Kakese	2	1	0	0	0	0	0	0	2	0	0	3
Class 2 (25-74 FI)	5	233	12	70	4	2	1	Kasilamunyanga	66	13	3	0	3	0	9	0	0	0	2	1
Class 3 (75-149 FI)	2	266	14	127	6	4	3	Sumbwa	137	34	0	1	2	0	30	0	3	0	0	13
Class 4 (>150 FI)	1	208	10	107	5	3	2	Karema	208	107	4	1	6	0	21	2	51	9	0	59
Area 7 total:	17	838	42	340	17	10	7	Karema station total:					42	0	91	2	159	13	67	143
Class 1 (1-24 FI)	6	365	18	92	5	3	2	Kapitola	49	14	2	0	4	0	10	0	3	1	0	0
Class 2 (25-74 FI)	7	72	4	1				<i>Figures for the industrial fisheries classified in Kirando in FS 95 that were excluded.</i>												
Class 3 (75-149 FI)	8	884	44	189	9	6	4	Karibwe	113	26	9	5	5	0	17	0	24	1	310	0
Class 4 (>150 FI)	1	152	8	30	2	1	1	L. Maalaba	152	30	6	4	10	0	20	0	0	0	0	0
Area 8 total:	15	1401	70	311	16	9	6	Karibwe station total:					91	0	109	0	241	6	310	4474
Class 1 (1-24 FI)	11	138	7	27	1	1	1	Ngolwe	4	2	0	0	0	0	0	0	0	0	0	4
Class 2 (25-74 FI)	9	420	21	89	4	3	2	Kapamba	31	5	5	0	3	0	0	0	0	0	0	0
Class 3 (75-149 FI)	1	95	5	13	0.7	0.4	0.3	Namansi	95	13	13	2	10	0	0	0	0	0	0	0
Area 9 total:	21	653	33	132	7	4	3	Kipili station total:					48	0	15	0	37	0	1	23
Class 1 (1-24 FI)	14	194	10	79	4	2	2	Mkililinga	18	12	2	0	0	0	4	0	0	0	0	0
Class 2 (25-74 FI)	7	298	15	84	4	3	2	Katenga	54	20	1	0	1	0	6	0	47	0	0	0
Class 3 (75-149 FI)	3	277	14	90	5	3	2	Mwinza	77	28	2	5	3	0	10	0	23	0	0	0
Area 10 total:	24	769	38	263	13	8	5	Kizumbi station total:					31	0	76	0	229	0	0	35
Class 1 (1-24 FI)	6	92	5	22	1	1	0	Katanti	16	3	2	0	1	0	1	0	10	0	0	0
Class 2 (25-74 FI)	4	205	10	57	3	2	1	Kala	59	10	6	2	6	0	1	0	0	0	0	0
Class 3 (75-149 FI)	2	215	11	49	2	1	1	Mpasa	136	41	0	2	3	0	29	0	0	0	0	0
Area 11 total:	12	512	26	128	6	4	3	Kala station total:					27	0	71	0	10	0	0	23
Class 1 (1-24 FI)	3	46	2	18	1	1	0	Molve	18	7	1	0	1	0	0	0	15	0	0	3
Class 2 (25-74 FI)	8	363	18	81	4	2	2	Kapele	32	9	0	4	3	0	0	0	0	0	4	4
Class 3 (75-149 FI)	3	272	14	92	5	3	2	Kilewani	102	34	1	0	7	0	2	0	36	0	0	17
Area 12 total:	14	681	34	191	10	6	4	Samazi station total:					41	0	36	0	293	0	4	104
RUKWA REGION:	103	4854	243	1356	68	41	27	Total vessels:	408				280	0	398	2	969	19	372	4802
TANZANIA:	206	12498	625	1617	185	111	74	Total sites:	19											

The landing sites/villages all have separate names.

FS 95 definition of active fishers = any crew member
 FS 95 definition of active vessel = any vessel that was not under repair (IN and OUT)
 FS 95 definition of fishing vessel = any vessel from which fishing gear was operated

Guidelines for the supervisor(s) of the SE teams.

Results of the sim. FS, March 1995. Geographical areas as decided in the SE Workshop. Sorted landing sites per area by No. of fishers (FI). 5% Of No. of active fishers & 15% of fishing vessels indication per class, per area. Sample 15 % of fishing vessels: half traditional units, half artisanal units. With uneven number take more art. units. Direct sampling such that all gears indicated will be sampled according to their popularity. Choose units at random by choosing vessels at the beach. Interview as many categories of FI as possible per unit. For art. units, 3 or 4 categories of FI may be found: e.g. owner of gear/not operator, captain, labourer puller and light boat owner operating together with the unit. For trad. units, 1 or 2 categories of FI may be found: e.g. owner of gear/operator and labourer.

ZAMBIA - INFORMATION ON TRADITIONAL AND ARTISANAL FISHERS, VESSELS, GEAR

Area	Area and class totals					Chosen site totals					Other at site			Art. gears at site				Trad. gears at site					
	Landing sites/villages	No. of act. fishers	5% of No. of act. fishers	No. of act. fishing vessels	15% of No. of act. fishing ves.	Landing site/village	Code see map	Permanency	No. of act. fishers	No. of act. fishing vessels	No. of act. lamp carriers	No. of other act. auxiliary ves.	No. of act. transporters	No. of night beach seines	No. of day beach seines	No. of chironomilla seines	No. of liftnets	No. of gillnets	No. of long lines	No. of hand lines			
Class 1 (1-24 FI)	4	64	3	13	2	Kakoma	11	p	22	7	0	0	0	1	0	0	0	15	0	4			
Class 2 (25-74 FI)	6	289	14	67	10	Chipwa	1	p	64	10	13	0	5	2	0	0	0	16	0	13			
Class 2 ind. site:	1	13		1		:Figures for the industrial fisheries classified in Isanga bay in FS 95 that were excluded.																	
Class 3 (75-149 FI)	4	393	20	89	13	Itongo	12	p	89	18	9	0	1	4	2	0	0	2	1	12			
Class 4 (> 150 FI)	1	152	8	39	6	Chisanza A+B	9+10	p	152	39	4	0	8	5	1	1	5	129	0	24			
Area I total:	15	898	45	208	31	East coast total:									29	10	6	8	574	1	251		
Class 1 (1-24 FI)	11	163	8	44	7	Changwena	30	p	16	2	4	0	1	1	0	1	0	0	0	0			
Class 2 (25-74 FI)	9	410	21	103	15	Chilla	25	p	60	7	14	0	0	6	0	0	0	2	0	0			
Class 3 (75-149 FI)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Class 4 (> 150 FI)	1	187	9	54	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Class 4 ind. sites:	2	541		15		:Figures for the industrial fisheries classified in Mbila and Kasisi that were excluded.																	
Area II total:	21	760	38	231	35	South coast total:									31	6	1	15	1119	14	276		
Class 1 (1-24 FI)	18	246	12	65	10	Pungwa	60	t	22	5	3	0	0	2	0	0	0	1	0	4			
Class 2 (25-74 FI)	9	372	19	94	14	Kabyolwe	48	p	42	11	0	0	0	0	2	0	0	47	0	5			
Class 3 (75-149 FI)	2	264	13	29	4	Kapembwa	56	p	124	18	18	2	0	11	0	0	0	14	0	10			
Class 4 (> 150 FI)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Area III total:	29	882	44	188	28	West coast up to Nsumbu park total:									51	4	0	1	666	1	133		
Class 1 (1-24 FI)	12	151	8	40	6	Kachese A+B	83+8	p	14	5	0	0	0	0	0	0	0	121	0	0			
Class 2 (25-74 FI)	6	234	12	40	6	Chibanga	107	p	42	16	6	0	4	1	0	0	1	5	0	26			
Class 3 (75-149 FI)	5	431	22	53	8	Kapulmuko	89	p	85	8	19	1	0	4	3	1	0	5	0	0			
Class 4 (> 150 FI)	1	155	8	13	2	Kamafuta	106	t	155	13	33	2	4	6	0	4	1	6	0	3			
Area IV total:	24	971	49	146	22	West coast up to Zairean border total:									43	10	9	3	591	8	71		
						Total vessels: 146																	
						Total sites: 12																	
Zambian total:	89	3511	176	774	116											154	30	16	27	2950	24	731	

The landing sites/villages all have separate names.

The sites that were classified under the same name during FS 95 (e.g. Chisanza A + B) were grouped before classification.

FS 95 definition of active fisher = any crew member
 FS 95 definition of active vessel = any vessel that was not under repair
 FS 95 definition of fishing vessel = any vessel from which fishing gear was operated

ANNEX 5.

LTR SOCIO-ECONOMIC SURVEY 1997

EXAMPLE PRINTOUTS, COMPUTER DATA ENTRY WORKSHEETS

Example for form 1 village/landing site basic inventory -results of SE survey 97.

Use the columns as indicated. For example, A1 = section for question A 1 on form 1. Fill in the number as requested by No. and a code as requested by for example (1-4). The lowest code number, e.g. 1, always coincides with the first possible answer after the question (i.e. the highest or the most left placed thick). The highest code number, e.g. 4, always coincides with the last possible answer after the question (i.e. the lowest or the most right placed thick). Look at the form copies that include the codes demanded here. In case another answer was given than the ones indicated on the form, widen the column and write the name (codes for 'other' will be given later). An example is given in row 11 to 20 in italics.

FILE FOR FORM 1						A. POPULATION & SETTLEMENT								B. ACCESS/TRANSPORTATION						
Start date	Total duration	Site No.	Country	Area No.	Class	A1				A2	A3	A4		A5	B1a	B1b	B1c	B1d	B1d	B1e
						Inhabitants	Males	Females	Children	5 yrs ago	Reason	Buildings	Households	Settlement land	Access by land	Nearest road	Type of road	Passability	Impassable mo.	Public l. transp.
d/m/yr	hrs		(1-4)		(1-4)	No.	No.	No.	No.	(1-4)		No.	No.	(1-3)	(1-2)	km	(1-3)	(1-2)	mo.	(1-2)
02-Jul-97	4	1	4	1	1	40	ETC.													
01-Jul-97	6	2	4	1	2	100	ETC.													
02-Jul-97	4	3	4	1	3	150	ETC.													
03-Jul-97	8	4	4	1	4	300	ETC.													
06-Jul-97	3	5	4	2	1	80	ETC.													
06-Jul-97	4	6	4	2	2	150	ETC.													
04-Jul-97	6	7	4	2	3	200	ETC.													
05-Jul-97	9	8	4	2	4	400	ETC.													
	4	9	4	3	1	80	ETC.													
		10	4	3	2	90	ETC.													
SAVE THE FILE WITH YOUR DATA AS FOLLOWS AND KEEP THIS ONE EMPTY OF REAL DATA.																				
Country:		Code:	Save as:																	
Burundi		1	SETAB1A.XLS																	
Congo		2	SETAB1B.XLS																	
Tanzania		3	SETAB1C.XLS																	
Zambia		4	SETAB1D.XLS																	

Country code:						5 yrs ago code:						Settlement land code:			Type of road code:			Type of transport code:					
1 = Bur, 2 = Congo, 3 = Tanz, 4 = Zambia						1 = less than now						1 = private			1 = dirt track only			1 = large bus (overland)					
Site class code:						2 = about the same						2 = public			2 = murram/gravel			2 = lorry/large truck					
1 = 1-24 fishers in FS 95						3 = more						3 = both private&public			3 = paved/tarmac			3 = pick-up truck					
2 = 25-74 fishers in FS 95												Access by land code:			Passability code:			4 = taxi/mini bus					
3 = 75-149 fishers in FS 95												1 = foodpath only, 2 = road			1 = no, seasonally			5 = bicycle/wheelbarrow/port					
4 = 150 and more fishers in FS 95															2 = yes, always								
FILE FOR FORM 1						A. POPULATION & SETTLEMENT							B. ACCESS/TRANSPORTATION										
Start date	Total duration	Site No.	Country	Area No.	Class	A1				A2	A3	A4		A5	B1a	B1b	B1c	B1d	B1d	B1e	B1g		
						Inhabitants	Males	Females	Children	5 yrs ago	Reason	Buildings	Households	Settlement land	Access by land	Nearest road	Type of road	Passability	Impassable mo.	Public l. transp.	Type of transport	Service	Times per week
d/m/yr	hrs		(1-4)		(1-4)	No.	No.	No.	No.	(1-3)		No.	No.	(1-3)	(1-2)	km	(1-3)	(1-2)	mo.	(1-2)	(1-5)	Name	(1-4)

Example for form 2 data on fishers -results of SE survey 97.

Use the columns as indicated. For example, A1 = section for question A 1 on form 2. Fill in the number as requested by No. and a code as requested by Sex absent owner code:
 1 = female
 2 = male

for example (1-4). The lowest code number, e.g. 1, always coincides with the first possible answer after the question (i.e. the highest or the most left placed thick). The highest code number, e.g. 4, always coincides with the last possible answer after the question (i.e. the lowest or the most right placed thick).
 Look at the form copies that include the codes demanded here. In case another answer was given than the ones indicated on the form, widen the column and write the name (codes for 'other' will be given later). An example is given in row 11 to 20 in italics. Code explanation in rows 1 to 6.

FILE FOR FORM 2											A. RESPONDENT/UNIT IDENTIFICATION																					
Start date	Interview duration	Site No.	Country	Area No.	Site class	Unit number	A1						A2			A3						A4	A5									
							Fish. dugout	Fish. canoe	Fish. catamaran	Light dugout	Light canoe	Aux. dugout	Aux. canoe	Propulsion	Outb. engines	HP	Hand line	Long line	Gillnet	Lusanga net	Lift net		Apollo	Day beach seine	Night beach s.	Chironilla seine	Respondent	Sex absent owner	Age absent owner	Living place	Main occupation	
d/m/yr	min.		(1-4)		(1-4)		No.	No.	No.	No.	No.	No.	(1-3)	No.	HP	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	(1-5)	(1-2)	yrs	Name	Name	
01-Jul-97	60	1	4	1	1	1	1						2	1	10											2			<i>Kapenta seine unit,</i>			
01-Jul-97	60	1	4	1	1	1	1						2	1	10											3			<i>with outboard engine and 4 categories of</i>			
01-Jul-97	55	1	4	1	1	1	1						2	1	10											4			<i>fishers present: owner (non-operator),</i>			
01-Jul-97	55	1	4	1	1	1	1						2	1	10											5			<i>captain, pullers and light boat owner.</i>			
01-Jul-97	55	1	4	1	1	2	1						1													2			<i>Kapenta seine unit with 3</i>			
01-Jul-97	55	1	4	1	1	2	1						1													3			<i>categories of fishers present: owner/</i>			
01-Jul-97	50	1	4	1	1	2	1						1													4			<i>captain and pullers.</i>			
01-Jul-97	50	1	4	1	1	3	1						1													1			<i>Gill net unit with 2 categories</i>			
01-Jul-97	50	1	4	1	1	3	1						1													4			<i>of fishers: owner/captain and labourer</i>			
01-Jul-97	45	1	4	1	1	4	1						1													3			<i>Lift net unit with 2 categories</i>			
01-Jul-97	45	1	4	1	1	4	1						1													4			<i>of fishers present: captain, labourer.</i>			
01-Jul-97	45	1	4	1	1	4	1						2	2	15											2			<i>Apollo lift net unit with 4 categories</i>			
01-Jul-97	45	1	4	1	1	4	1						2	2	15											3			<i>of fishers present: owner (non operator),</i>			
01-Jul-97	45	1	4	1	1	4	1						2	2	15											4			<i>captain, labourer, and additional light</i>			
01-Jul-97	45	1	4	1	1	4	1						2	2	15											5			<i>boat owner.</i>			
01-Jul-97	40	1	4	1	1	4	1						1													1			<i>Hand line unit with a single</i>			
																													<i>category: owner/captain.</i>			
SAVE THE FILE WITH YOUR DATA AS FOLLOWS AND KEEP THIS ONE EMPTY OF REAL DATA.																																
Country:	Code:	Save as:																														
Burundi	1	SETAB2A.XLS																														
Congo	2	SETAB2B.XLS																														
Tanzania	3	SETAB2C.XLS																														
Zambia	4	SETAB2D.XLS																														

Country code:				Propulsion code:				Sex absent owner code:				Craft, engine and main gear ownership code:																			
1 = Bur, 2 = Congo, 3 = Tanz, 4 = Zambia				1 = paddles, 2 = outb. eng., 3 = sail				1 = female				1 = DNA																			
Site class code:				Respondent code:				2 = male				2 = rented																			
1 = 1-24 fishers in FS 95				1 = gear owner/operator								3 = individual																			
2 = 25-74 fishers in FS 95				2 = gear owner/non-operator								4 = shared																			
3 = 75-149 fishers in FS 95				3 = captain/non-gear owner																											
4 = 150 and more fishers in FS 95				4 = labourer, 5 = light BOAT owner																											
FILE FOR FORM 2												A. RESPONDENT/UNIT IDENTIFICATION																			
Start date		Duration		Site No.		Country		Area No.		Site class		Unit number		A1		A2		A3				A4		A5		A6a		A6b-d			
d/m/yr		hrs		(1-4)		(1-4)		No.		No.		No.		No.		No.		No.		No.		No.		No.		No.		No.		No.	

Example for form 3 data on processors and traders - results of SE survey 97.

Use the columns as indicated. For example, A1 = section for question A 1 on form 3. Fill in the number as requested by No. and a code as requested by for example (1-4). The lowest code number, e.g. 1, always coincides with the first possible answer after the question (i.e. the highest or the most left placed thick). The highest code number, e.g. 4, always coincides with the last possible answer after the question (i.e. the lowest or the most right placed thick). Look at the form copies that include the codes demanded here. In case another answer was given than the ones indicated on the form, widen the column and write the name (codes for 'other' will be given later). An example is given in row 11 to 20 in italics. Code explanation in rows 1 to 6.

FILE FOR FORM 3									A. RESPONDENT/UNIT IDENTIFICATION							
Start date	Interview duration	Site No.	Country	Area No.	Site class	Processor number	both trad. + proc. no.	Trader number	A1 Most engaged in	A2 General product Most frequent		A3 Most freq. spp.	Second most	Third most	A4 Processing mode	A5 Proc. facilities
d/m/yr	hrs		(1-4)		(1-4)				(1-3)	(1-3)	(1-3)	Name	Name	Name	(1-10)	(1-3)
01-Jul-97	60	1	4	1	1	1			1	2;3	2					
01-Jul-97	60	1	4	1	1		1		2	2	2					
01-Jul-97	60	1	4	1	1			1	3	1;2	1					
01-Jul-97	50	1	4	1	1	2			1	2	2					
01-Jul-97	50	1	4	1	1		2		2	2;3	2					
01-Jul-97	50	1	4	1	1			2	3	1;2	1					
01-Jul-97	40	1	4	1	1	3			1	2	2					
01-Jul-97	40	1	4	1	1		3		2	2;3	2					
01-Jul-97	40	1	4	1	1			3	3	2	2					
SAVE THE FILE WITH YOUR DATA AS FOLLOWS AND KEEP THIS ONE EMPTY OF REAL DATA.																
Country:	Code:	Save as:														
Burundi	1	SETAB3A.XLS														
Congo	2	SETAB3B.XLS														
Tanzania	3	SETAB3C.XLS														
Zambia	4	SETAB3D.XLS														

Country code:								Most engaged code:				Processing mode code:				Trader area code:				Gender code:						
1 = Bur, 2 = Congo, 3 = Tanz, 4 = Zambia								1 = processing, 2 = processing and trading				1 = DNA, 2 = dry on sand, 3 = dry on bare gr.				1 = DNA, 2 = local (<5 km)				1 = female, 2 = male						
Site class code:								3 = trading				4 = dry on mud-flats, 5 = dry on grass				3 = non-local, 4 = both				Certificate code:						
1 = 1-24 fishers in FS 95												6 = dry on racks, 7 = dry on concrete				Transport there code:				1 = yes						
2 = 25-74 fishers in FS 95												8 = kiln above, 9 = kiln under, 10 = chokor				1 = DNA, 2 = steamer				2 = no						
3 = 75-149 fishers in FS 95																3 = transporter, 4 = vehicle										
4 = 150 and more fishers in FS 95												1 = fresh fish, 2 = dried fish, 3 = smoked fish				Processing facilities code:										
												1 = DNA, 2 = own fac., 3 = rented/borr.				5 = bicycle, 6 = headload										
FILE FOR FORM 3								A. RESPONDENT/UNIT IDENTIFICATION																		
								A1		A2		A3			A4		A5		A6		A7		B1		B2	
Start date	Interview duration	Site No.	Country	Area No.	Site class	Processor number	both trad. + proc. no.	Trader number	Most engaged in	General product	Most frequent	Most freq. spp.	Second most	Third most	Processing mode	Proc. facilities	Arrangement	TRADER area	NON-LOCAL dest.	Transport there	Gender	Age	Primary school			
d/m/yr	hrs		(1-4)		(1-4)				(1-3)	(1-3)	(1-3)	Name	Name	Name	(1-10)	(1-3)	Specify	(1-4)	Name	(1-6)	(1-2)	yrs	yrs			