



Training Module of Fisheries Catch Assessment Survey



Fisheries Resources Survey System
Department of Fisheries, Bangladesh
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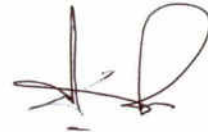
Preface

Department of Fisheries, Bangladesh is conducting catch assessment survey since 1983 for inland (both capture and culture) and marine fisheries. Annual fish production is being estimated on the basis of total catch assessment survey. Inland open water fisheries (capture) covers rivers and estuaries, sundarban, beels, Kaptai lake and floodplains. Inland closed water (culture) fisheries covers ponds, seasonal cultured waterbodies, baors, shrimp/prawn farms, water under pen culture and cage culture. On the other hand, marine fisheries cover industrial (trawl) and artisanal fisheries. The data accumulated for estimating annual fish production has collected from the field in various ways, field survey is one of them. DoF field offices are the primary places for data collection. The collected information is presented after necessary cleaning, editing and analysis.

During the data processing of the survey results, it is observed that there are various points to be improved in the survey methods for setting more reliable estimates. This module has been prepared for presenting details of the improved methods of the Catch Assessment Survey including improved survey forms.

I would like to express my sincerest gratitude and deepest sense of appreciation to all of my colleagues of Fisheries Resources Survey System (FRSS) of DoF for their tireless efforts, pleasant assistance and co-operation for preparing this training module.

I would be thankful for any suggestion written or oral for any improvement of this training module.



(Sk. Mustafizur Rahman)
Principal Scientific Officer
Department of Fisheries
Bangladesh.
Tel : 02-9561355
email : sumonazma@yahoo.com

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Schedule of Training

Duration of Training : 03 days

Ist day	Time	Topics
	09.00 - 10.00	Registration & Inauguration
	10.00 - 11.00	General discussion about Survey System
	11.00 - 11.15	Tea Break
	11.15 - 13.00	Riverine Fisheries
	Lunch Break	
	14.00 - 15.30	Pond Fisheries
	15.30 - 16.00	Exercise
2nd day	09.00 - 09.30	Discussion on the topics of previos day
	09.30 - 11.00	Beel Fisheries
	11.00 - 11.15	Tea Break
	11.15 - 12.00	Shrimp Farm Fisheries
	12.00 - 13.00	Subsistence/Flood plain Fisheries
	Lunch Break	
	14.00 - 15.00	Baor Fisheries
	15.00 - 16.00	Seasonal Cultured Waterbody
3rd day	09.00 - 09.30	Discussion on the topics of previos day
	09.30 - 11.00	Pen & Cage Culture
	11.00 - 11.15	Tea Break
	11.15 - 11.45	Sundarban Fisheries & Kaptai Lake Fisheries
	11.45 - 13.00	Marine Fisheries (Industrial & Artisanal)Exercise
	Lunch Break	
	14.00 - 15.00	Exercise
	15.00 - 15.30	Over all dicussion on all topics
	15.30 - 16.00	Closing Ceremony

Chapter 1. General Discussion about Survey System

1. Survey System

A catch assessment survey is formulated for catch of the different sectors of fisheries, which are shown in Table 1 entitled “Standard Classification of Fisheries for Statistical purposes in Bangladesh”.

Each of the catch assessment surveys is designed as a sample survey of three-stage or two-stage sampling for estimating total catches on the basis of sample catch data collected by the officers.

For selecting the first sampling units such as sample villages, and for calculating raising factors for estimating total catches by districts, a frame survey is to be conducted in advance of the initiation of each catch assessment survey to provide a complete list of the first sampling units such as fishing villages together with basic information such as the number of fishing boats.

2. Purpose of the catch assessment surveys.

Purpose of the catch assessment survey is to estimate total catch of different sector of fisheries by the following classifications which are necessary for compiling a Fisheries Statistical Report of Bangladesh every year comprising as

- (a) by districts
- (b) by months
- (c) by gear used &
- (d) by species

3. Fixed sample villages.

For keeping track of the annual trend and seasonally changes of total catches, sample villages are carefully selected and fixed for several years.

4. Data Processing by computer

Collected data of the catch assessment survey are being processed at headquarter. So, completed survey forms are to be thoroughly checked at field level and sent to headquarter accordingly.

5. Statistical items compiled

Although catch data are the major data to be compiled, the following two items are also compiled from survey results,

- a. the total number of the fishing units operated &
- b. the producer’s price of catches

Statistics on the total number of fishing units operated are compiled as fishing data and corresponding catch data are required for the stock assessment purposes. Statistics on the producer’s price of fish are required to evaluate the fishermen’s income. For this purpose, a column for the producer’s price is added in the survey form.

Estimated total catch could be found by multiplying Raising Factor (Total no. / sample no. = Raising Factor). Estimated total catch = Catch data from sample unit x Raising Factor.

6. Monthly Schedule

Since sample villages of the catch assessment survey for the riverine fisheries are fixed and sample days in every month are also fixed. So, monthly schedule of the officers become the same for every month. Only seasonal work and periodical work are to be distributed between the months appropriately.

7. Source of Data Collection :

Department of Fisheries usually collect data and information through FRSS mainly from three sources of fisheries resources to estimate yearly production. These three sectors have been considered as sixteen sub sectors of fisheries (Table-1).

Table 1. Standard Classification of Fisheries for Statistical Purposes in Bangladesh.

_Code No.	Sector of Fisheries	Definition
	I. Inland Fisheries	Fisheries within the sea coast line
	A. Inland Open Water (Capture)	Water opened to the other waters
01.	1. River & Estuary	Fisheries in rivers & estuarine waters
02.	2. Beels	Fisheries in beels
03.	3. Floodplain	Fisheries in flood lands including small canals around paddy fields
04.	4. Kaptai Lake	Fisheries in Kaptai lake only
05.	5. Sundarban	Fisheries in Sundarban only
06.	6. Subsistence fishing	Non-commercial fishing in inland waters
	B. Inland Closed water (Culture)	Water closed from the other waters
07.	1. Ponds	Fisheries in ponds and tanks
08.	2. Seasonal cultured water body	Fisheries in seasonal waterbody
09.	3. Baors	Fisheries in baors
10.	4. Lake	Fisheries in kaptai Lake only
11.	5. Shrimp Culture/Prawn farm	Shrimp culture in estuarine waters and prawn culture in fresh water
12.	6. Pen culture	Fisheries in pen
13.	7. Cage culture	Fisheries in cage
	II. Marine Fisheries	Fisheries out of the sea coast line
14.	A. Industrial Fisheries (Trawl)	Fisheries using large boats such as trawlers
	B. Artisanal Fisheries	Fisheries using smaller boats
15.	1. Mechanized	Fisheries using mechanized boats
16.	2. Non-mechanized	Fisheries using non-mechanized boats

BFDC, Forest Department and Marine section usually provide fish production of Kaptai Lake, Sundarban and Marine fisheries respectively. Fish production from other sources collected through Catch Assessment Survey by DOF officers at the field level. Carp hatchling/spawn production (artificial & natural), export of fish products etc. are also incorporated in the yearly report.

Table 2. Standard Classification of fishing grounds of Inland and Marine Artisanal Fisheries in Bangladesh.

District	Existing Type of Fisheries											Non mec
	River	Beels	Flood land	Ponds	Baors	Lake	Shrimp Culture	Other	Subsistence	Trawl	Mec	
Chittagong Division												
Chittagong	√	√	√	√			√	√	√	√	√	√
Bandarban	√	√	√	√				√	√	√	√	√
Brahmanbaria	√	√	√	√			√	√	√	√	√	√
Chandpur	√	√	√	√			√	√	√	√	√	√
Cox's Bazar	√	√	√	√			√	√	√	√	√	√
Comilla	√	√	√	√					√			
Noakhali	√		√	√					√	√	√	√
Feni	√	√	√	√					√			
Khagrachari	√	√				√			√			√
Lakshmipur	√	√	√	√					√			
Rangamati	√	√				√			√			√
Sylhet Division												
Sylhet	√	√	√	√					√			
Habiganj	√	√	√	√					√			
Moulvibazar	√	√	√	√					√			
Sunamganj	√	√	√	√					√			
Dhaka Division												
Dhaka	√	√	√	√					√			
Faridpur	√	√	√	√					√			
Gazipur	√	√	√	√					√			
Gopalganj	√	√	√	√					√			
Jamalpur	√	√	√	√					√			
Kishorganj	√	√	√	√					√			
Madaripur	√	√	√	√					√			
Manikganj	√	√	√	√					√			
Munshiganj	√	√	√	√					√			
Mymensingh	√	√	√	√					√			
Narayanganj	√	√	√	√					√			
Narsingdi	√	√	√	√					√			
Netrakona	√	√	√	√					√			
Rajbari	√	√	√	√					√			
Shariatpur	√	√	√	√					√			
Sherpur	√	√	√	√					√			
Tangail	√	√	√	√					√			
Barisal Division												
Barguna	√	√		√					√	√	√	√
Barisal	√	√		√					√	√	√	√
Bhola	√	√		√					√	√	√	√
Jhalokathi	√	√		√					√	√	√	√
Patuakhali	√	√		√			√	√	√	√	√	√
Pirojpur	√	√		√					√	√	√	√
Khulna Division												
Jessore	√	√	√	√	√		√	√	√			
Khulna	√	√	√	√	√		√	√	√	√	√	√
Kusthia	√	√	√	√	√				√			

District	Existing Type of Fisheries											
	River	Beels	Flood land	Ponds	Baors	Lake	Shrimp Culture	Other	Subsistence	Trawl	Mec	Non mec
Bagerhat	√	√	√	√	√		√	√	√	√	√	√
Chuadanga	√	√	√	√	√		√	√	√			
Jhenidah	√	√	√	√	√		√	√	√			
Magura	√	√	√	√	√		√	√	√			
Meherpur	√	√	√	√	√		√	√	√			
Narail	√	√	√	√	√		√	√	√			
Satkhira	√	√	√	√	√		√	√	√	√	√	√
Rajshahi Division												
Bogra	√	√	√	√					√			
Pabna	√	√	√	√					√			
Rajshahi	√	√	√	√					√			
Chapainawabgonj	√	√	√	√					√			
Joypurhat	√	√	√	√					√			
Naogaon	√	√	√	√					√			
Natore	√	√	√	√					√			
Sirajgonj	√	√	√	√					√			
Rangpur Division												
Dinajpur	√	√	√	√					√			
Gaibanda	√	√	√	√					√			
Kurigram	√	√	√	√					√			
Lalmonirhat	√	√	√	√					√			
Nilphamari	√	√	√	√					√			
Panchagar	√	√	√	√					√			
Thakurgaon	√	√	√	√					√			
Rangpur	√	√	√	√					√			

N.B. : √ - Existence of fishery

Note :1/ Landing of the industrial fisheries that is trawlers are made at Chittagong.

8. Source wise different Formats

Sl. No.	Sector	Monthly report	Half-yearly report	Yearly report
1.	River	Form River -1	-	Form River-2
2.	Pond	-	Form Pond	Form Pond
3.	Shrimp Farm	-	Form Shrimp	Form Shrimp
4.	Subsistence	-	Form Subsistence	Form Subsistence
5.	Beel	-	-	Beel-2,3A,3B,4
6.	Baor		Form Baor	Form Baor
7.	Seasonal CWB		Form SCW	Form SCW

9. Data Collection & sending report

Sl No.	Sector	Data collection	Report Submission	Remarks
1.	River	Twice a month	Monthly & Yearly report	Submission to FRSS headquarter
2.	Pond	Once a month	July-December; January-June & Yearly report	
3.	Shrimp Farm	Once a month	July-December; January-	

			June & Yearly report	
4.	Subsistence	Once a month	July-December & January-June report	
5.	Beel	Once a month	Yearly report	
6.	Baor	Once a month	July-December; January-June & Yearly report	
7.	Seasonal waterbody	Once a month	Yearly report	

10. Coding System

Data is being processed by FRSS software at headquarter. So, code of district, sample village, sample river, gear, species should be used properly as necessary. All of DOF staff involved with data collection has to follow district code strictly.

Districtwise Code No.

Division	District	Code No.	Division	District	Code No.
Dhaka Division	Dhaka	01	Rangpur Division	Dinajpur	34
	Faridpur	02		Gaibandha	35
	Gazipur	03		Kurigram	36
	Gopalganj	04		Lalmonirhat	37
	Jamalpur	05		Nilphamari	38
	Kishorganj	06		Panchagarh	39
	Madaripur	07		Rangpur	40
	Manikganj	08		Thakurgaon	41
	Munshiganj	09		Rajshahi Division	Bogra
	Mymensingh	10	Chapainawabganj		43
	Narayanganj	11	Joypurhat		44
	Narsingdi	12	Naogaon		45
	Netrakona	13	Natore		46
	Rajbari	14	Pabna		47
	Shariatpur	15	Rajshahi		48
	Sherpur	16	Sirajganj	49	
	Tangail	17	Chittagong Division	Bandarban	50
Khulna Division	Bagerhat	18		Brahmanbaria	51
	Chuadanga	19		Chandpur	52
	Jessore	20		Chittagong	53
	Jhenaidah	21		Comilla	54
	Khulna	22		Cox's Bazar	55
	Kushtia	23		Feni	56
	Magura	24		Khagrachari .	57
	Meherpur	25		Lakshmipur	58
	Narail	26		Noakhali	59
	Satkhira	27		Rangamati	60
Barisal Division	Barguna	28	Sylhet Division	Habiganj	61
	Barisal	29		Moulvibazar	62
	Bhola	30		Sunamganj	63
	Jhalokathi	31		Sylhet	64

Division	District	Code No.
	Patuakhali	32
	Pirojpur	33

Division	District	Code No.
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11. Population and Sampling :

When we think of the term '*population*' we usually think of people in our town, region, state or country and their respective characteristics such as gender, age, marital status, ethnic membership, religion and so forth. In statistics the term "population" takes on a slightly different meaning. The "*population*" in statistics includes all members of a defined group that we are studying or collecting information on for data driven decisions. A population is a collection of people, items, or events about which you want to make inferences. It is not always convenient or possible to examine every member of an entire population.

A part of the population is called a *sample*. It is a proportion of the population, a slice of it, a part of it and all its characteristics. A sample is a scientifically drawn group that actually possesses the same characteristics as the population – if it is drawn randomly. Population sampling is the process of taking a subset of subjects that is representative of the entire population. The sample must have sufficient size to warrant statistical analysis. A sample is a subset of people, items, or events from a larger population that you collect and analyze to make inferences. To represent the population well, a sample should be randomly collected and adequately large. The sample must have sufficient size to warrant statistical analysis. Sampling is done usually because it is impossible to test every single individual in the population. It is also done to save time, money and effort while conducting the research.

According to Mildred Parton, "Sampling method is the process or the method of drawing a definite number of the individuals, cases or the observations from a particular universe, selecting part of a total group for investigation."

Characteristics of the sampling technique

1. Much cheaper, 2. Save time, 3. Much reliable, 4. Very suitable for carrying out different surveys & 5. Scientific in nature.

Advantages of sampling

1. Very accurate, 2. Economical in nature, 3. Very reliable, 4. High suitability ratio towards the different surveys, 5. Takes less time & 6. practical method for collecting the data.

Chapter 2. Riverine Fisheries

1. Purpose

Purpose of the catch assessment survey for the riverine fisheries is to collect sample catch data and producer's price data necessary for estimating total catches, their values and corresponding fishing effort by old districts as well as major rivers, by months, by types of gear used and by species.

2. Survey method

A. Sampling

The catch assessment survey for the riverine fisheries is designed as a sample survey of catch by three stages sampling as follows:

<u>Sample stage</u>	<u>Sample unit</u>
Primary sampling	Fishing village
Secondary sampling	Day
Tertiary sampling	Fishing unit

B. Selection of sample villages

Sample villages are selected at the headquarters and fixed for several years. A principle for the selection of sample villages in each district is as follows:

- (i) For each primary river, two largest villages and one medium sized village in terms of the number of fishing boats are selected.
- (ii) For the other rivers, two largest villages and one medium sized village are selected from all the rivers. Representativeness in terms of locations and types of gear used and also accessibility of the selected villages are to be checked.

C. Selection of sample days

Two sample days are selected in each month for each of the sample villages at the headquarters and fixed for several years. A principle for the selection of sample days for the selected sample villages is as follows :

- (i) For each sample village, two sample days are to be selected to have an interval of 15 days.
- (ii) Sample days of different sample villages are to be selected. So that, the survey can be conducted without problem. Sample villages and sample days selected are shown in Consecutive two says starting from the sample day may be spent for collection data of the sample day.

D. Selection of sample fishing units

Sample fishing units are to be selected by the officers as follows, when he visited the sample village on the sample day.

- (i) The data collector is to make contact with one or two well-informed fishermen to ask the number of fishing units by type of gear operating on that day. Such numbers are to be recorded in Survey Form 1;

Number of Fishing Units

In recording the number of fishing units, not only local units but also immigrant units are to be included. Those units operated at night are also to be added to those operated at day time.

The types of gear used are to be those of the standard classification shown in Table 3 and Table 4. This means all kinds of gill nets are to be grouped to the type of gear Gill net. However, when there are two type of gill net which are very much different in daily catch or in target fish, they should be separated two types, such as gill net (large) gill net (small).

Note : A fishing unit is defined as a minimum units necessary for fishing, usually consisting of a combination of a fishing boat, fishing and fishermen.

(ii) The number of sample fishing units for each type of gears is to be decided as shown on 10 and over 5 the right , and recorded on the <u>Survey Form 1 (River 1)</u>	<u>No of Fishing unit</u>	<u>No of sample fishing units</u>
	10 and above	5
	5 - 9	3
	2-4	2
	1	1

- (iii) Sample fishing units for each type of gear are to be selected at random or systematically as a principle. It is however difficult to apply this principle to the actual situation because fishing units sell their on the river. It is suggested to select the sample fishing units so that they are representative of all the fishing units operating.

3. Recording of catches.

The Officer has to record catches of the sample fishing units on Survey Form 2 (River 2)

- (i) **Observation of catches :** The data collector has to be on board of one or two sample fishing units to actually observe their catches before they are sold to buyers on the river.
- (ii) **Interview of catches :** The recorder has to interview to fishermen of the other sample fishing units to ask their catches, when they returned from their fishing.
- (iii) **Producer's price data :** The recorder has to ask fishermen of the sample fishing units about prices of fish caught and sold by them on that day, and record average prices on the Survey Form 2 (River 2).
- (iv) **Weighting fish caught**

The recorder has to weigh same fish every observation with a portable balance, in order to improve accuracy of his eye estimation of the weight of catch in the observation of catches mentioned in (a) above.

4. Submission of completed survey forms

The data collector has to thoroughly check the recorded on the Survey Forms 1 & 2. Fill up code numbers in appropriate columns and send them to the headquarters every month by the 10th of the next month.

5. Data processing

Data are being input, process and compile at headquarter and then estimation of catch is being done according to requirement by computer software as daily total catch, monthly total catch and also yearly. Then statistical standard output tables are prepared of total catch estimation by districts and gears and also as required.

6. Estimation Methods for the Catch Assessment Survey

(i) Storing input sample data

Sample catch data in columns of the input table are to be summed up to one column, and to be stored on a diskette file together with price data as well as the other data in the input table.

(ii) Estimation of daily total catch

The total of sample catch data thus obtained are to be extrapolated by a raising factor (daily raising factor), which is to be calculated by dividing the number of all fishing units operated by the number of sample fishing units of the type of fishing gear on that sample day to get an estimated daily total catch.

Estimated total catch of the day = Sample Total x Raising Factor

$$\text{Raising Factor} = \frac{\text{Number of total units operated in the day}}{\text{Number of sample units observed}}$$

District Total Catch for the month = Average Total Catch of Sample Villages X District Raising Factor X Days of the Month/1000 (MT)

District Raising Factor = District Total Boat of the River/Total Boat of Sample Villages

(iii) Compilation of the daily total catch table.

Daily total catch estimated for different types of fishing gear operated on the sample day are to be summarized on the standard summary table.

(iv) Compilation of the value of the daily total catch.

Value of daily total catches estimated for different types of fishing gear are to be summarized also on the standard summary table, by multiplying the estimated total catches by average prices of fish

(v) Estimated of monthly total catch.

In general, two sample days are selected in each month at each sample village. Estimated daily total catches on these two sample days appearing on the summary tables are to be added together, and multiplied by a raising factor (monthly raising factor) which is in general, calculated by dividing the number of days in the month by the number of sample days to get an estimated monthly total catch. The number of fishing units operated in sample days are also to be extrapolated by the same monthly raising factor.

(vi) Monthly Value data : Values are to be completed in the same way as catch data.

(vii) Estimation of District total catches.

The monthly total catch estimated for the sample villages in the District along the river are to be added together and multiplied by a raising factor (district raising factor), which is to be calculated by dividing the total number of fishing boats in the District along the river by the number of fishing boats in the sample villages, to get an estimated monthly total catch in the district. District raising factors will be given as constants for districts and rivers.

(viii) Summary tables of District estimated

Standard summary tables of the estimated total catches and values by districts are to be stored on computer. These data will be used for compiling annual statistics. Summary tables of the daily and monthly estimated catches and average prices (Value/Catch) for sample days and villages are to be presented only. Those tables by Districts are also to be presented.

Table 3. Standard Classification of Fishing Gear for Statistical Purposes in Bangladesh

<u>Code No</u>	<u>Type of Gear</u>	<u>Definition</u>
1. Inland Fisheries		
A. Net.		
01.	1. Gill Net	Fish are caught by mesh entangled around gill covers.
02.	2. Clap net	An elliptical net is hanged in the water, and is closed like a purse when fish enters to the net.
03.	3. Seine and drag	An area of water is encircled by a net and fish inside are caught by reducing the area.
04.	4. Lift net	A net with frame is dipped at bottom of water for sometimes, then it is lifted to catch fish.
05.	5. Set bag net	Two wings of net and a bag net at the center are settings a river. Fish enter into the bag net due to tidal current
06.	6. Cast ne	A conical shaped net is thrown to each fish.
07.	8. Long line	A long line with many hook and lines with some interval .
08.	8. Traps	Various types of traps.
09.	9. Others	Spear , by hand, dewatering & other
2. Marine Fisheries		
B. Net.		
10.	1. Trawl net.	Shrimp and fish at the bottom of the sea, or mid water, are caught with a bag net hauled by a large Vessel.
11.	2. Gill net	The same as for inland, also for the following.
12.	3. Seine net	
13.	4. Set bag net	
14.	5. Other net.	
15.	6. Long line	
16.	7. Others.	

Table 4. Fishing Gear and its local name in Bangladesh

<u>Code No</u>	<u>Type of Gear</u>	<u>Local name</u>
1. Inland Fisheries		
C. Net.		
01.	1. Gill net	Annaptta, Apsha, Bachon, Batta, Bash, Chandi, Chapila, Dora, Dasha, Galfa, Kata, Koi, Poa, Pye, Sada, Singi, Pangas, Illish, Bhasan, Vel ical etc.
02.	2. Clap net	Biri, Hanti, Honga, Kharki, Shangla, Shanga, Khosh, Hilsa, Jal, ikhot etc.
03.	3. Seine and drag net	Angta, Badai, Badar, Jhabki, Bachapine, Baraber, Jagatbar, Bhesha-Gulli, Chapa, Chella, Chanchi, Cheli, Chhotaber, Dal Dhop, Ghai-ber, Ghana-ber, Gulti, Jang Kati, Kochal, Patal, Patan, Pine, Tana Putipine, eora, Teeri, Moi-Jal etc.
04.	4. Lift net	Bhoal, Bel, Bhesal, Chhai Jal, Chhotki Dharma, Ghuchoin, Hath-Bauli, Heja, Ja Keehki, Khalloa, Khara, Pelon, Pona, Tarjal etc.
05.	5. Set bag net	Atan, Baga, Behuti, Bendi, Behundi, Bi Booti, Bentijal.
06.	6. Cast net	Bachari, Betka, Khepla, Jhanki, Dhundi, Khee, Chhetki, Dhan, Doon, Pheka, Oti Utar, Zhaki etc.
07.	7. Long line	Chara Barshi, Hazari Barshi, Barshi, Dh Barshi, Leth Barshi etc.
08.	8. Traps	Ahoka, Anta, Guchi, Benki, Bhair, Charo, Chata, Chouka, Chonga, Darki, Dhair, Dhak, Doar, Chai, Jhalanga, Jhurka, Kat Kholson, Paor, Paron, Polo, Thui, Thusi Bana, Pati, etc
09.	9. Others	Aro, Chal, EK-Katya, Juti, Panch Konch, Sat-Phala, Tenta, Ator, Thur Kunch etc. and others
3. Marine Fisheries		
D. Net.		
10.	1. Trawl net.	Shrimp and fish at the bottom of the sea, or mid water, are caught with a bag net hauled by a large Vessel.
11.	2. Gill net	The same as for inland, also for the following.
12.	3. Seine net	
13.	4. Set bag net	
14.	5. Other net.	
15.	6. Long line	
16.	7. Others.	

Table 5. Standard Classification of Fish Species for Statistical Purpose in Bangladesh.

<u>Code no.</u>	<u>Type of Fish</u>	<u>Local name</u>
Inland Fish		
01.	Major carp	Rui, Catla & Mrigel
02.	Exotic carp	Chinse Carp, Silver Carp, Grass Carp etc.
03.	Other carp	Kalbasu, Ghania, Kalia etc.
04.	Telapia	Telapia , Nilotica etc.
05.	Cat fish	Rita, Boal, Pangas, Silen, Air Becha etc.
06.	Shake heed	Shol ,Gagar, Taki etc.
07.	Live fish	Koi ,Singi, Magur ,Jagur
08.	Other inland fish	Poa,Punti, Chapila, Chela, Baila, Pabda, Bata, Keski & Annyana, Mach etc.
09.	Diadromus Fish : Hilsa	Illish, Illisha, Chandana , Illish etc.
Marine Fish		
10.	Bombay duck	Lotia
11.	Indian Salmon	Lauka
12.	Pomfret	Rupchanda,Hail Chanda, Makhan Chanda, Baila Chanda etc.
13.	Jew fish	Poa, Rupa poa, Loonbu, Kala Datina, Lalpoa etc.
14.	Sea cat fish	Kata mach
15.	Sharks and rays	Hangar, Katnot,Haturi, Hangar, Moishya, Hangar, Pitambari etc.
16.	Other marine fish	Chela,Churi,Tapassi and Annyaynya Mach
Crustacean		
17.	Big sprwns & shrimp	Icha Mach, Golda Chingri, Bagda Chingri etc.
18.	Small Shrimps	Icha Mach, Chotta Chingri, Chaka etc.
19.	Crabs	Kakra
Miscellaneous Aquatic Animals		
20	Turtle & tortoise	Kachhep

Table 6 : Standard Classification of Major Rivers for Statistical purposes in Bangladesh.

Code No.	Name of River	Districts along River
01.	Lower Meghna	Chandpur, Shariatpur, Lakhipur, Barisal, Noakhali
02.	Upper Meghna	Comilla, Brahmanbaria, Habigonj, Narsingdi, Narayangonj, Kishoregonj, Munshigonj
03.	Lower Padma	Rajbari, Faridpur, Manikgonj, Dhaka, Munshigonj, Madaripur, Shariatpur
04.	Upper Padma	Rajshahi, Chapainawabgonj, Natore, Pabna, Khustia, Rajbari
05.	Jamuna	Manikgonj, Pubna, Tangail, Sirajgonj, Bogra, Jamalpur, Gaibanda
06.	Brahmaputra	Jamalpur, Gaibanda, Kurigram.

Government of the People’s Republic of Bangladesh
 Fisheries Resources Survey System
 Department of Fisheries
CATCH ASSESSMENT SURVEY OF RIVER
Number of Fishing Units (Survey Form -1)

1. River----- Code Date

2. District----- Code

3. Upazila----- Name of Officer-----

4. Union-----

5. Village----- Code

Sl. No.	Name of gear used			Number of fishing units operated			Number of sample fishing units
	Local Name	Type	Code	Local	Immigrant	Total	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF RIVER
Sample Catch Record (Survey Form - 2)

1. River----- Code Date
2. District----- Code
3. Upazila----- *Name of Officer*-----
4. Union----- 5. Village----- Code
6. Type of gear used----- Code
7. Number of fishing units operate 8. Number of sample units
9. Raising Factor (**Fishing unit operated / sample unit**) -----

Sample catch observed		1	2	3	4	5	Total Catch	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman									
Number of fishermen on the boat									
Local name of gear used									
Code	Species	Kg	Kg	Kg	Kg	Kg	Kg	Kg	
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish								
14	Hilsa/Ilish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
Total									

Remarks: Estimated total catch of sample village for sample day = Total Catch X Raising Factor.

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF RIVER
Monthly Summary Sheet
(Principal River / Other River)

1. River ----- Code Month ----- Year-----
 2. District ----- Code
 3. Upazila ----- Name of Officer -----
 4. Total Boat of District-----

5. Total Boat of Sample Villages

	Name of Sample Village	No. of Boat of Sample Village
(a)		
(b)		
(c)		
(d)		
	Total	

6. District Raising Factor = District Total Boat of the River/Total Boat of Sample Villages -----

7. District Total Catch for the month = Average Total Catch of Sample Villages X District Raising Factor X Days of the Month/1000 (MT)

Code No.	Name of Species	Average Total Catch for One Day			District Total Catch for the Month MT
		Estimated Total of Sample-1	Estimated Total of Sample-2	Average Total	
		(A)	(B)	(A+B)/2	
		Kg	Kg	Kg	
1	Rui				
2	Catla				
3	Mrigal				
4	Kalibaus				
5	Bata				
6	Ghonia				
7	Pangas				
8	Boal/Air				
9	Shol/Gazar/Taki				
10	Koi				
11	Shingi/Magur				
12	Sarpunti				
13	Other Inland Fish				
14	Hilsa/Illish				
15	Galda				
16	Bagda				
17	Harina				
18	Chaka				
19	Other small shrimp/prawn				
	Total				

Remarks : A = Estimated total catch for beginning of the month.

Remarks : B = Estimated total catch for ending of the month.

Signature

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System, Department of Fisheries

River-4

CATCH ASSESSMENT SURVEY OF RIVER
Yearly Summary Sheet (Principal River / Other River)

1. River----- Code Year----- 2. District----- Code Name of Officer-----

(Figure in Metric Ton)

Code	Species	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	Total
01	Rui													
02	Catla													
03	Mrigal													
04	Kalibaus													
05	Bata													
06	Ghonia													
07	Pangas													
08	Boal/Air													
09	Shol/Gazar/Taki													
10	Koi													
11	Shingi/Magur													
12	Sarpunti													
13	Other Inland Fish													
14	Hilsa/Ilish													
15	Galda													
16	Bagda													
17	Harina													
18	Chaka													
19	Other small shrimp/prawn													
	Total													

Signature

Example of Estimation River Production

Sheet A-1

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna* Code Date *06/05/2015*
2. District—*Narsingdi* Code
3. Upazila—*Raipura* Name of Survey Officer -----
4. Union—*Moheshpur*
5. Village—*Algi* Code
6. Type of gear used—*Seine & Drug (Ber)* Code
7. Number of fishing units operated
8. No. of sample units
9. Raising Factor $8/5 = 1.6$

Sample catch observed	1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg	
Name of head fisherman	Suklal	Prodip	Radha	Shamol	Jiban				
Number of fishermen on the boat	6	5	6	6	6				
Local name of gear used	Jagat Ber								
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air		1.00		0.75	1.75	2.80	300/-	
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	13	10	11	8	14	56	89.60	220/-
14	Hilsa/Illish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
	Total	13	11	11	8.75	14	57.75	92.40	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna* Code Date *06/05/2015*
2. District—*Narsingdi* Code
3. Upazila—*Raipura* Name of Survey Officer-----
4. Union—*Moheshpur*
5. Village—*Algi* Code
6. Type of gear used—*Seine & Drug (Moi Jal)* Code
7. Number of fishing units operated
8. No. of sample units
9. Raising Factor $10/5 = 2$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Ram	Palash	Jadu	Rubel	Santos			
Number of fishermen on the boat		1	1	1	1	1			
Local name of gear used		Moi jal							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	0.75	1.0	0.75	1.0	0.8	4.3	8.60	220/-
14	Hilsa/Ilish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total		0.75	1.0	0.75	1.0	0.8	4.3	8.60	

- Gear of similar type but different size to be separated as different type of gear likely gill net (large) & gill net (small).
- Estimated total catch of sample village for sample day = Total catch x Raising Factor

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna* Code Date *06/05/2015*
2. District—*Narsingdi* Code
3. Upazila—*Raipura* Name of Survey Officer-----
4. Union—*Moheshpur*
5. Village—*Algi* Code
6. Type of gear used— *Gill Net* Code
7. Number of fishing units operated
8. No. of sample units
9. Raising Factor $10/5 = 2$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Rubel	Dilip	Susil	Tapan	Jiban			
Number of fishermen on the boat		1	1	1	1	1			
Local name of gear used		Fash jal							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki			0.5		0.6	1.1	2.20	
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	1.0	1.5	0.75	1.6	0.8	5.65	11.30	
14	Hilsa/Illich								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total		1.0	1.5	1.25	1.6	1.4	6.75	13.50	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna*code Date *07/05/2015*2. District—*Narsingdi*code 3. Upazila—*Narsingdi Sadar*

Name of Survey Officer-----

4. Union—*Piker Char*5. Village—*North Char Bhasania* code 6. Type of gear used—*Seine & Drug (Ber)* code 7. Number of fishing units operated 8. No. of sample units 9. Raising Factor $4/2 = 2$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Joydeb	Ram	Asad	Joydeb	Ram			
Number of fishermen on the boat		6	5	6	6	5			
Local name of gear used		Ber Jal							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui	1.25	0				1.25	2.50	
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	8	9				17.0	34.00	
14	Hilsa/Illish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total		9.25	9.0				18.25	36.50	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna* Code Date *22/05/2015*
2. District—*Narsingdi* Code
3. Upazila—*Raipura* Name of Survey Officer -----
4. Union—*Moheshpur*
5. Village—*Algi* Code
6. Type of gear used—*Seine & Drug (Ber)* Code
7. Number of fishing units operated
8. No. of sample units
9. Raising Factor $9/5 = 1.8$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Suklal	Prodip	Radha	Shamol	Jiban			
Number of fishermen on the boat		6	5	6	6	6			
Local name of gear used		Jagat Ber							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	11	9	14	10	12	56	100.80	
14	Hilsa/Ilish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total		11	9	14	10	12	56	100.80	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna* Code Date *22/05/2015*
2. District—*Narsingdi* Code
3. Upazila—*Raipura* Name of Survey Officer-----
4. Union—*Moheshpur*
5. Village—*Algi* Code
6. Type of gear used—*Seine & Drug (Moi Jal)* Code
7. Number of fishing units operated
8. No. of sample units
9. Raising Factor $7/5 = 1.4$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Suklal	Prodip	Radha	Shamol	Jiban			
Number of fishermen on the boat		1	1	1	1	1			
Local name of gear used		Moi jal							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	0.75	1	0.75	1.25	1.25	5.00	7.00	
14	Hilsa/Ilish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total=		0.75	1.00	0.75	1.25	1.25	5.00	7.00	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna* Code Date *22/05/2015*
2. District—*Narsingdi* Code
3. Upazila—*Raipura* Name of Survey Officer -----
4. Union—*Moheshpur*
5. Village—*Algi* Code
6. Type of gear used— *Gill Net* Code
7. Number of fishing units operated
8. No. of sample units
9. Raising Factor $8/5 = 1.6$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Suklal	Prodip	Radha	Shamol	Jiban			
Number of fishermen on the boat		1	1	1	1	1			
Local name of gear used		Fash jal							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	1.25	1.5	0.75	0.8	0.75	5.05	8.08	
14	Hilsa/Illish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total=		1.25	1.50	0.75	0.80	0.75	5.05	8.08	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF RIVER

1. River- *Upper Meghna*code Date **23/05/2015**2. District—*Narsingdi*code 3. Upazila—*Narsingdi Sadar*

Name of Survey Officer-----

4. Union—*Piker Char*5. Village—*North Char Bhasania* code 6. Type of gear used—*Seine & Drug (Ber)* code 7. Number of fishing units operated 8. No. of sample units 9. Raising Factor $4/2 = 2$

Sample catch observed		1	2	3	4	5	Total Catch in Kg	Estimated Total Catch of Sample Village	Producer Price in Tk/Kg
Name of head fisherman		Suklal	Prodip						
Number of fishermen on the boat		6	5						
Local name of gear used		Ber jal							
Code No.	Species	Kg	Kg	Kg	Kg	Kg			
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Pangas								
08	Boal/Air/Guizza Air								
09	Shol/Gazar/Taki								
10	Koi								
11	Shingi/Magur								
12	Sarpunti								
13	Other Inland Fish	10	7				17	34.00	
14	Hilsa/Illish								
15	Galda								
16	Bagda								
17	Harina								
18	Chaka								
19	Other small shrimp/prawn								
20	Crab								
Total=		10	7				17	34.00	

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
Catch Assessment Survey of River
RIVER-WISE MONTHLY SYMMARY SHEET
(Principal River / Other River)

1. River *Upper Meghna* Code

002

2. Distric *Narsingdi* Code

12

3. Month **May/2015**
4. Total Boat of the District= **2533**
5. Total Boat of Sample Villages

	Name of Sample Village	No. of Boat of Sample Village
(a)	Algi	30
(b)	North Char Bhasania	166
	Total	196

6. District Raising Factor = **District Total Boat of the River/Total Boat of Sample Villages =196/2533=12.92**

7. District Total Catch for the month = **Average Total Catch of Sample Villages X District Raising Factor X Days of the Month/1000 (MT)**
= **Average Total Catch of Sample Villages X 12.92 X 31/1000 MT**

Code No.	Name of Species	Average Total Catch for One Day			District Total Catch for the Month
		Estimated Total Catch of Sample-A	Estimated Total Catch of Sample-B	Average Total Catch (A+B)/2	
		Sheet A(1+2+3+4)	Sheet B(1+2+3+4)		
		Kg	Kg	Kg	
01	Rui	2.50	0.00	1.25	0.50
02	Catla	0.00	0.00	0.00	0.00
03	Mrigal	0.00	0.00	0.00	0.00
04	Kalibaus	0.00	0.00	0.00	0.00
05	Bata	0.00	0.00	0.00	0.00
06	Ghonia	0.00	0.00	0.00	0.00
07	Pangas	0.00	0.00	0.00	0.00
08	Boal/Air	2.80	0.00	1.40	0.56
09	Shol/Gazar/Taki	2.20	0.00	1.10	0.44
10	Koi	0.00	0.00	0.00	0.00
11	Shingi/Magur	0.00	0.00	0.00	0.00
12	Sarpunti	0.00	0.00	0.00	0.00
13	Other Inland Fish	143.50	149.88	146.69	58.75
14	Hilsa/Illich	0.00	0.00	0.00	0.00
15	Galda	0.00	0.00	0.00	0.00
16	Bagda	0.00	0.00	0.00	0.00
17	Harina	0.00	0.00	0.00	0.00
18	Chaka	0.00	0.00	0.00	0.00
19	Other small shrimp/prawn	0.00	0.00	0.00	0.00
20	Crab	0.00	0.00	0.00	0.00
	Total=	151.00	149.88	150.44	60.25

Remarks: A= Estimated total catch of all sample villages for beginning of the month.
B= Estimated total catch of all sample villages for ending of the month.

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
YEARLY SUMMARY SHEET OF RIVER

1. River--- *Upper Meghna*
2. District—*Narsingdi*

Year: 2014-15

Figure in Metric Ton

Code No.	Species	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	Total
01	Rui	0.84	0.00	0.36	0.48	0.60	0.88	0.48	0.98	0.00	0.38	0.50	0.60	6.11
02	Catla	0.00	0.54	0.00	0.40	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00	1.72
03	Mrigal	0.00	0.30	0.00	0.36	0.40	0.00	0.95	0.28	0.00	0.00	0.00	0.00	2.29
04	Kalibaus	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.24
05	Bata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06	Ghonia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07	Pangas	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.76
08	Boal/Air/Guizza Air	0.00	0.42	0.00	0.26	0.00	0.20	0.60	0.40	0.00	0.46	0.56	0.00	2.91
09	Shol/Gazar/Taki	0.00	0.00	0.00	0.22	0.00	0.20	0.00	0.00	0.00	0.00	0.44	0.00	0.86
10	Koi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Shingi/Magur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Sarpunti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Other Inland Fish	89.93	74.62	76.41	85.54	78.82	82.89	93.00	84.83	76.55	67.99	58.75	85.60	954.95
14	Hilsa/Illish	3.64	1.66	2.79	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	3.83	17.19
15	Galda	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.02	0.00	0.00	0.00	0.00	0.13
16	Bagda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Harina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Chaka	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.04
19	Other small shrimp/prawn	0.00	0.00	0.00	0.00	0.00	0.88	0.62	0.07	0.00	0.00	0.00	0.00	1.57
20	Crab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total=	94.42	77.91	79.57	89.01	81.58	87.94	95.69	86.59	76.55	68.84	60.25	90.43	988.78

Table 7: Name of River of Bangladesh and its Type

River Code	River Name	River Type
01	Lower Meghna	Principal
02	Upper Meghna	Principal
03	Lower Padma	Principal
04	Upper Padma	Principal
05	Jamuna	Principal
06	Brahmaputra	Principal
11	Halda	Major
12	Karnafuli	Major
13	Matamuhuri	Major
14	Moheskhal Channel	Major
15	Naf	Major
16	Dakatia	Major
17	Dhangoda-Gumati	Major
18	Big Feni	Major
19	Muhuri	Major
20	Kushiyara	Major
21	Surma	Major
22	Dhaleswari	Major
23	Lakhya	Major
24	Arial Khan	Major
25	Gorai Modhumati Baleswar Kocha	Major
26	Bangsi	Major
27	Dhanu	Major
28	Kangsa	Major
29	Old Brahmaputra	Major
30	Someswari	Major
31	Barisal-Khairabad-Buriswar	Major
32	Biskhali-Gajalia	Major
33	Kharkhana-Lohalia-Galachipa	Major
34	Tentulia	Major
35	Rupsa	Major
36	Sibsa	Major
37	Mohananda	Major
38	Dharla	Major
39	Tista	Major
40	Pasur	Major
41	Bagkhali	Minor
42	Sangu	Minor
43	Gomati	Minor
44	Titas	Minor
45	Little Feni	Minor
46	Selonai	Minor
47	Baulai	Minor
48	Dhalai	Minor
49	Gopla	Minor

River Code	River Name	River Type
50	Kalni	Minor
51	Khowai	Minor
52	Manu	Minor
53	Sutang	Minor
54	Buriganga	Minor
55	Ghior	Minor
56	Kaliganga	Minor
57	Turag	Minor
58	Kumar	Minor
59	Lower Kumar	Minor
60	Banar	Minor
61	Ghorautra	Minor
62	Jhenai	Minor
63	Mongla	Minor
64	Duarchar Kajal	Minor
65	Patuakhali	Minor
66	Srimanta	Minor
67	Sarupkati	Minor
68	Beganati	Minor
69	Betna-Kholpetoa	Minor
70	Bhadra	Minor
71	Bhairab	Minor
72	Chitra	Minor
73	Kobadak	Minor
74	Nabaganga	Minor
75	Mathabanga	Minor
76	Bangali	Minor
77	Ichamati	Minor
78	Jamuna (small)	Minor
79	Korotoya	Minor
80	Nagar	Minor
81	Atrai	Minor
82	Depa	Minor
83	Korma	Minor
84	Punarbhaba	Minor
85	Talma	Minor
86	Tangan	Minor
87	Baral	Minor
88	Ichamati-(2)	Minor
89	Siva-Barnai-Gurnai	Minor
90	Buri-Tista	Minor
91	Dudkumar	Minor
92	Ghagat	Minor
93	Jamuneswari	Minor
94	Jamuna-Atrai	Minor

Table 8 : District-wise Total Boat & Sample Boat of Principal River

District Code	District Name	Village Code	Village Name	River Code	River Name	Sample Boat	Total Boat
1	Dhaka	1001	Narisa	3	Lower Padma	15	177
2	Faridpur	2001	U.D.C Madhabdia	3	Lower Padma	146	2348
4	Gopalganj	4001	Gourisar	3	Lower Padma	50	
5	Jamalpur	5001	Kumarpara	5	Jamuna	4	178
5	Jamalpur	5002	Norpara	5	Jamuna	12	
5	Jamalpur	5003	Sarulia	6	Brahmaputra	9	49
6	Kishoreganj	6001	Chandiber	2	Upper Meghna	68	3230
7	Madaripur	7001	----	3	Lower Padma		121
8	Manikganj	8002	Ramkrishnapur	3	Lower Padma	19	125
8	Manikganj	8003	Hemgonj	3	Lower Padma	3	
8	Manikganj	8004	Daskandi	3	Lower Padma	15	
8	Manikganj	8005	Teota	5	Jamuna	7	332
9	Munshiganj		-----	2	Upper Meghna		55
9	Munshiganj	9002	Kantia	3	Lower Padma	250	1788
9	Munshiganj	9003	Mandra	3	Lower Padma	70	
11	Narayanganj	11001	Satbyapara	2	Upper Meghna	49	1193
12	Narsingdi	12001	Algi	2	Upper Meghna	235	4839
12	Narsingdi	12002	Uttar Char Bhasania	2	Upper Meghna	78	
14	Rajbari	14001	Uttar Dauladia	3	Lower Padma	134	863
14	Rajbari	14002	Lakshmikul	4	Upper Padma	21	
14	Rajbari	14003	-----	4	Upper Padma	21	
14	Rajbari	14004	-----	4	Upper Padma	21	
15	Shariatpur	15002	Daserjanganl	1	Lower Meghna	3	54
15	Shariatpur	15001	Painpara	3	Lower Padma	100	910
15	Shariatpur	15003	Tarabunia	3	Lower Padma	150	
15	Shariatpur	15004	Garisar	3	Lower Padma	50	
17	Tangail	17001	Kanabari	5	Jamuna	25	314
17	Tangail	17003	Falisa	5	Jamuna	4	
23	Kushtia	23001	Paschim Bairchar	4	Upper Padma	9	554
23	Kushtia	23004	Kumarkandi	4	Upper Padma	26	
29	Barisal	29001	-----	1	Lower Meghna		1739
30	Bhola	30001	Gazipur	1	Lower Meghna	42	2270
30	Bhola	30002	Char Newton	1	Lower Meghna	179	
30	Bhola	30003	Mirzakhali	1	Lower Meghna	24	
35	Gaibandha	35001	-----	5	Jamuna		27
35	Gaibandha	35002	Rasulpur	6	Brahmaputra	265	567
36	Kurigram	36001	Ramna	6	Brahmaputra	100	405
36	Kurigram	36002	Rasulpur	6	Brahmaputra	15	
42	Bogra	42001	Bagbari	5	Jamuna	35	183
42	Bogra	42002	Dighapara	5	Jamuna	16	
43	C. Nawabganj	43005	Char Raninagar	4	Upper Padma	3	162
46	Natore	46001	Lalpur	4	Upper Padma	7	64
46	Natore	46002	Bilmarie	4	Upper Padma	8	
46	Natore	46003	Golardair	4	Upper Padma	6	
46	Natore	46004	Kazipara	4	Upper Padma	5	

District Code	District Name	Village Code	Village Name	River Code	River Name	Sample Boat	Total Boat
47	Pabna	47001	Satbaria	4	Upper Padma	26	957
47	Pabna	47002	Shara	4	Upper Padma	9	
47	Pabna	47003	-----	5	Jamuna		315
48	Rajshahi	48001	Harisankarpur	4	Upper Padma	45	437
48	Rajshahi	48002	Matikata	4	Upper Padma	22	
49	Sirajganj	49001	Dhanbandi	5	Jamuna	40	695
49	Sirajganj	49002	Karamgram	5	Jamuna	60	
49	Sirajganj	49003	Singrabari	5	Jamuna	7	
51	Brahmanbaria	51003	Nasirabad	2	Upper Meghna	50	3168
52	Chandpur	52001	Haimchar	1	Lower Meghna	100	2320
52	Chandpur	52002	Char Bhairabi	1	Lower Meghna	65	
52	Chandpur	52003	Lalpur	1	Lower Meghna	24	
52	Chandpur	52005	Eklaspur	1	Lower Meghna	60	
54	Comilla	54002	Sreepatirchar	2	Upper Meghna	71	610
58	Laksmipur	58001	Char Ramani	1	Lower Meghna	160	3187
58	Laksmipur	58002	Char Alexander	1	Lower Meghna	140	
58	Laksmipur	58003	Char Kachia	1	Lower Meghna	194	
59	Noakhali	59001	-----	1	Lower Meghna		
61	Habiganj	61001	Madna	2	Upper Meghna	50	1976
61	Habiganj	61002	Ajmirigonj	2	Upper Meghna	1625	
61	Habiganj	61003	Rahni	2	Upper Meghna	105	

Table 9 : District-wise Total Boat & Sample Boat of Other River

District Code	District Name	Village Code	Village Name	River Code	River Name	Sample Boat	Total Boat
1	Dhaka	1002	Fulbari	22	Dhaleswari	38	883
1	Dhaka	1003	Barisur	54	Buriganga	110	
2	Faridpur	2002	Ibrahimdi	58	Kumar	30	661
2	Faridpur	2003	Hasamdia	58	Kumar	23	
2	Faridpur	2004	Chandra	24	Arial Khan	25	
3	Gazipur	3001	Naindia Sangan	60	Banar	31	619
3	Gazipur	3002	Sapaisri	60	Banar	20	
3	Gazipur	3003	Mulgaon	23	Lakhya	20	
4	Gopalganj	4002	Patgate	25	Gorai Modhumati	32	767
4	Gopalganj	4003	Domoria	25	Gorai Modhumati	10	
4	Gopalganj	4004	Baitikamari	58	Kumar	13	
4	Gopalganj	4005	Dignagar	58	Kumar	11	
5	Jamalpur	5004	Kalikapur	29	Old Brahmaputra	50	372
5	Jamalpur	5005	Sadarpara	29	Old Brahmaputra	50	
6	Kishoreganj	6002	Kaliarchar	61	Ghorautra	166	2533
6	Kishoreganj	6003	Dighirpar	61	Ghorautra	30	
7	Madaripur	7002	Durgakhola	24	Arial Khan	7	340
7	Madaripur	7003	Mostafapur	58	Kumar	62	
8	Manikganj	8001	Katigram	22	Dhaleswari	8	5267
9	Munshiganj	9003	Binodpur	22	Dhaleswari	20	56
10	Mymensingh	10001	Kalirbazar	29	Old Brahmaputra	16	864
10	Mymensingh	10002	Kushtia	29	Old Brahmaputra	29	
10	Mymensingh	10003	Bakhi	28	Kangsa	15	
10	Mymensingh	10004	Sarshapur	28	Kangsa	11	
11	Narayanganj	11002	Kachpur	23	Sitalakhya	30	346
11	Narayanganj	11003	Kashipur	22	Dhaleswari	25	
12	Narsingdi	12003	Charshindur	23	Sitalakhya	13	232
13	Netrakona	13001	Takurkona	28	Kangsa	20	400
13	Netrakona	13002	Sarishtola	28	Kangsa	15	
14	Rajbari	-----	-----	-----	-----	-----	-----
15	Shariatpur	-----	-----	-----	-----	-----	-----
16	Sherpur	16001	Marishpuran	28	Kangsa	9	100
16	Sherpur	16002	Kamerchar	29	Old Brahmaputra	60	
16	Sherpur	16003	Narayankhola	29	Old Brahmaputra	4	
16	Sherpur	16004	Pichla	28	Kangsa	20	
17	Tangail	17004	Purabari Kendua	22	Dhaleswari	30	155
17	Tangail	17002	Gugni	22	Dhaleswari	14	
18	Bagerhat	18001	Harghati	63	Mongla Pharanana	20	7763
18	Bagerhat	18002	Barabati	63	Mongla Pharanana	65	
18	Bagerhat	18003	Srifaltala	64	Mongla	45	
18	Bagerhat	18004	Srennikhali	65	Ghorikhali	65	
18	Bagerhat	18005	Sriphaltala	64	Mongla	45	
19	Chuadanga	19001	Gargaria	75	Mathabanga	15	190
19	Chuadanga	19002	Alukdia	75	Mathabanga	16	
19	Chuadanga	19003	Puratan Matmura	75	Mathabanga	19	
19	Chuadanga	19004	Perkrishnapur	75	Mathabanga	14	
20	Jessore	20001	Misidewra	73	Kobadak	10	804
20	Jessore	20002	Dhalgram	71	Bhairab	32	
20	Jessore	20003	Digalsinghi	73	Kobadak	30	

District Code	District Name	Village Code	Village Name	River Code	River Name	Sample Boat	Total Boat
21	Jhenaidah	21001	Chanderpol	72	Chitra	57	1068
21	Jhenaidah	21002	Badurgacha	72	Chitra	312	
21	Jhenaidah	21003	Ektarpur	72	Chitra	2	
21	Jhenaidah	21004	Fadilpur	72	Chitra	52	
21	Jhenaidah	21005	Charbakarbag	25	Gorai Modhumati	22	
22	Khulna	22001	Bidharbahar	35	Rupsa-Pasur	30	2818
22	Khulna	22002	Chuknagar	70	Bhadra	27	
22	Khulna	22003	Khalisa	35	Rupsa-Pasur	83	
22	Khulna	22004	Sahos	35	Gangril	42	
23	Kushtia	23002	Dharampur	25	Gorai Modhumati	9	138
23	Kushtia	23003	Khohsa Janipur	25	Gorai Modhumati	5	
24	Magura	24001	Dhupuria	25	Gorai Modhumati	30	533
24	Magura	24002	Gangaramkhali	25	Gorai Modhumati	3	
24	Magura	24003	Kachondi	25	Gorai Modhumati	13	
24	Magura	24004	Alokdia	58	Kumar	10	
25	Meherpur	25001	Puratonmatmura	75	Mathabanga	19	67
26	Narail	26001	Kamthana	25	Gorai Modhumati	16	1622
26	Narail	26002	Mahajan	25	Gorai Modhumati	250	
26	Narail	26003	Kandashi	25	Gorai Modhumati	65	
26	Narail	26004	Talarampur	72	Chitra	30	
26	Narail	26005	Afra	71	Bhairab	9	
27	Satkhira	27001	Buria	73	Kobaka	35	977
27	Satkhira	27002	Mubarakpur	73	Kobaka	55	
28	Barguna	28001	Kewarabunia	31	Pyra	75	2001
28	Barguna	28002	Kakchira	32	Biskhali	50	
28	Barguna	28003	Betagi	32	Biskhali-Gajalia	40	
29	Barisal	29002	Niamati	32	Biskhali-Gajalia	53	5003
29	Barisal	29003	Cahr Bukhainagar	24	Arial Khan	40	
29	Barisal	29004	Sayestabad	24	Arial Khan	44	
29	Barisal	29005	Sikaripara	25	Gorai Modhumati	42	
29	Barisal	29006	Baduria	34	Tentulia	105	
30	Bhola	30004	Gangapur	34	Tentulia	700	3518
30	Bhola	30005	Gosserhat	34	Tentulia	75	
31	Jhalokati	31001	Chandkhali	32	Biskhali-Gajalia	16	508
31	Jhalokati	31002	Nalcihiti	32	Biskhali-Gajalia	30	
31	Jhalokati	31003	Aurakathalia	32	Biskhali-Gajalia	30	
31	Jhalokati	31004	Amua	32	Biskhali-Gajalia	38	
32	Patuakhali	32001	Lebukhali	31	Buriswar	155	3996
32	Patuakhali	32002	Boalia	34	Tetulia	35	
32	Patuakhali	32003	Nimdi	34	Tetulia	90	
33	Pirojpur	33001	Jhalabari	25	Gorai Modhumati	30	3135
33	Pirojpur	33002	Badura	25	Gorai Modhumati	100	
33	Pirojpur	33003	Tushkhali	25	Gorai Modhumati	40	
34	Dinajpur	34001	Mohanpur	81	Atrai	30	501
34	Dinajpur	34002	Janjira	81	Atrai	41	
34	Dinajpur	34003	Nichpara	86	Tangan Dhepa	60	
35	Gaibandha	35002	Godarhat	92	Ghagat	18	387
35	Gaibandha	35003	Sathpata	94	Jamuna-Karotoya	50	
35	Gaibandha	35004	Sundargonj	90	Buti-Tista	15	
36	Kurigram	36003	Panchgachi	38	Dharla	15	305
37	Lalmonirhat	-----	-----	-----	-----	-----	59

District Code	District Name	Village Code	Village Name	River Code	River Name	Sample Boat	Total Boat
38	Nilphamari	38001	Uttar Dorakoti	93	Jamuneswari	1	13
38	Nilphamari	38002	Hrish Chandra Pat	93	Jamuneswari	1	
38	Nilphamari	38003	Kachukata	93	Jamuneswari	1	
38	Nilphamari	38004	Purba Baragary	93	Jamuneswari	1	
39	Panchagarh	39001	Tulardauga	79	Korotoya	3	31
39	Panchagarh	39002	Jagdan	79	Korotoya	6	
39	Panchagarh	39003	Yakubpur	86	Tangan	5	
40	Rangpur	40001	Harekrisnapur	93	Jamuneswari	5	111
40	Rangpur	40002	Arsadpur	92	Ghagat	5	
40	Rangpur	40003	Thakurdas	39	Tista	4	
41	Thakorgaon	-----	-----	-----	-----	-----	-----
42	Bogra	42003	Chaknandan	76	Bangali	51	351
43	C. Nawabganj	43001	Baragharia	37	Mohananda	150	480
43	C. Nawabganj	43002	Gobratola	37	Mohananda	11	
43	C. Nawabganj	43003	Kasigram	84	Punarbhaba	14	
43	C. Nawabganj	43004	Sontoshpur	37	Mohananda	100	
44	Joypurhat	44001	Bagjana	81	Atrai	4	17
44	Joypurhat	44002	Paturia	81	Atrai	9	
44	Joypurhat	44003	Maghipara	81	Atrai	4	
44	Joypurhat	44004	Bagjana	81	Atrai	4	
45	Naogaon	45001	Sultanpur	94	Jamuna-Atrai	13	439
45	Naogaon	45002	Chakkbir	94	Jamuna-Atrai	25	
45	Naogaon	45003	Rasulpur	94	Jamuna-Atrai	10	
45	Naogaon	45004	Kashinapur	94	Jamuna-Atrai	20	
46	Natore	-----	-----	-----	-----	-----	-----
47	Pabna	47004	Poina	87	Baral	14	765
48	Rajshahi	-----	-----	-----	-----	-----	639
49	Sirajgonj	-----	-----	-----	-----	-----	-----
50	Bandarban	50001	Kalaghathi	42	Sangu	25	1213
50	Bandarban	50002	Miazpara	13	Mathamuhuri	3	
51	Brahmanbaria	51001	Gokarnaghat	44	Titas	75	761
51	Brahmanbaria	51002	Amodabad	44	Titas	25	
52	Chandpur	52004	North Icholi	16	Dakatia	7	
52	Chandpur	52006	Baishpur	17	Dhangoda-Gumati	22	3620
52	Chandpur	52007	Makinabad	16	Dakatia	10	
53	Chittagong	53001	Kadurkhil	12	Karnafuli	340	391
53	Chittagong	53002	Moishkaram	11	Halda	27	
53	Chittagong	53003	Shymapara	12	Karnafuli	220	
54	Comilla	54001	Sattyanandi	43	Gomoti	15	355
54	Comilla	54003	Chanderbag	45	Little Feni	12	
55	Coxs Bazar	55001	Batakhali	13	Mathamuhuri	67	355
55	Coxs Bazar	55002	Choufuldandi	14	Moheshkhali Channel	86	
55	Coxs Bazar	55003	Khurushkul	14	Moheshkhali Channel	35	

District Code	District Name	Village Code	Village Name	River Code	River Name	Sample Boat	Total Boat
56	Feni	56001	Fazilpur	19	Muhuri	14	342
56	Feni	56002	Aurarkhil	45	Little Feni	10	
56	Feni	56003	Char Darbesh	45	Little Feni	22	
56	Feni	56004	Char shabhikari	45	Little Feni	13	
57	Khagrachuri	-----	-----	-----	-----	-----	-----
58	Laksmipur	-----	-----	-----	-----	-----	-----
59	Noakhali	59002	Charlengta Machghat	49	Bamni	15	15
60	Rangamati	-----	-----	-----	-----	-----	-----
61	Habiganj	-----	-----	-----	-----	-----	1787
62	MaulviBazar	62001	Hamerkona	20	Kushiyara	70	1355
62	MaulviBazar	62002	Manumuk	20	Kushiyara	28	
62	MaulviBazar	62003	Pramnagar	52	Manu	30	
62	MaulviBazar	62004	Atangiri	49	Gopla	15	
63	Sunamganj	63001	Khidirpur	21	Surma	110	2051
63	Sunamganj	63002	Joykalas	21	Surma	60	
63	Sunamganj	63003	Uzanlalpur	21	Surma	30	
64	Sylhet	64001	Mirzagaon	21	Surma	95	2321
64	Sylhet	64002	Karchapara	20	Kushiyara	37	
64	Sylhet	64003	Uzangongapur	20	Kushiyara	40	

Chapter 3. Pond Fisheries

1. Purpose

Purpose of the catch assessment survey of the pond fisheries (Pond and Tank Survey) is to collect sample catch data for estimating the average annual catch per hectare of pond by district, by conditions of ponds and by species.

2. Survey method

(i) Sampling

(a) Sample village

Two sample villages are to be selected in each Upazila. They are to be selected as representative as possible of all villages in terms of ponds. In other words, the average catch per hectare of ponds in the two sample villages is to be close to that in the whole Upazila.

(b) Sample ponds

(i) Listing of ponds :

Before selecting sample ponds, hundred ponds are to be listed in each sample village by using *Form 1*. Condition of the ponds by Extensive, Semi-extensive, Intensive, Highly intensive and Derelict category pond are to be decided by actual observation. Listing is to be made according to the order of location. If one village can not cover 100 ponds then neighbouring village is to be added to the list until the number becomes 100.

Sl. No.	Culture Method	Production Range
1.	Extensive	<1.5MT/Ha
2.	Semi-intensive	1.5- 4 MT/Ha
3.	Intensive	4>-10MT/Ha
4.	Highly Intensive	10 > MT/Ha

No. of sample ponds should be at least five for each category. When the number of ponds of any category is less than five, ponds in the neighboring village are to be added to the list until the number becomes five. Sample ponds must be representative.

(ii) Fixed Samples

In order to trace the situation of ponds, sample villages and sample ponds cannot be changed for several years. If the condition of a sample pond is changed from extensive to intensive for example , it is to be kept as a sample pond of new condition.

(C) Pond condition survey

On the first day of survey of each year, the Officer is to survey pond condition of each of the fifteen sample ponds in the sample village by using *Pond - 2*.

(D) Catch Survey

The responsible person for data collection is to visit the sample village once every month for conducting the catch assessment survey of the pond fishery. For this purpose a certain day of

the month is to be selected as a survey day for each sample village. The survey day is to be the same day for every month. So, the Officer will visit sample pond once a month. The Officer has to conduct interview survey to pond operators on fish catch and input for fish culture during previous month (*Pond -3*).

Pond-1

Government of the People's Republic of Bangladesh
 Fisheries Resources Survey System
 Department of Fisheries

Form P1 : Listing of Ponds

1. District----- 2. Upazila----- Date : -----
 3. Union----- 4. Village ----- Name of Officer -----

Sl. No.	Name of Owner	Location of Pond	Water Area (Ha)	Culture Method				Remarks
				Extensive	Semi-intensive	Intensive	Highly-intensive	
1	2	3	4	5	6	7	8	9

**Government of the People’s Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
Identification and general information of Pond**

1. District-----

2. Upazila-----

3. Union-----

4. Village-----

Name of Investigator-----

Date : -----

4. General Information:

a)	Ownership	Government/ Private/Other Organization
b)	Name of owner	-----
c)	Water area (Ha)	Winter season-----
		Rainy season-----
		Dry season-----
d)	Average Depth (meter)	Winter season-----
		Rainy season-----
		Dry season-----
e)	Embankment Condition	Complete
		Broken
		Opening
f)	Vegetation	Floating vegetation covered----- %
		Sub-merged vegetation covered----- -%
g)	Culture Method	Extensive
		Semi-intensive
		Intensive
		Highly-intensive

Extensive <1.5MT/Ha
Intensive 4>-10MT/Ha

Semi-intensive 1.5-4 MT/Ha
Highly-intensive 10 > MT/Ha

Signature

Government of the People's Republic of Bangladesh
 Fisheries Resources Survey System
 Department of Fisheries

CATCH ASSESSMENT SURVEY OF POND

1. District----- Code 2. Upazila----- 3. Union-----
 4. Village ----- 5. Name of Owner-----
 6. Name of Farmer/Operator----- 7. Water Area----- (Ha)
 8. Average Depth----- (Meter) 9. Tenure: Owned/Rented
 10. Type of Pond : Extensive/ Semi-intensive/ Intensive/ Highly-intensive Pond

11. Stocking of Fry

Species	July - December		January - June		Total Tk.
	Number	Size (cm)	Number	Size (cm)	
Rui					
Catla					
Mrigal					
Kalibaus					
Bata					
Silver Carp					
Grass Carp					
Mirror/Common Carp					
Pangas					
Koi/Shingi/Magur					
Galda/Bagda					
Tilapia					
Thai Punti					
Others					
Total					

12. Fertilizer & Feeding

Item	July - December		January - June		Total Tk.
	Quantity (Kg).	Tk.	Quantity (Kg).	Tk.	
Chemical Fertilizer					
Cow-dung					
Lime					
Feed					
Total					

13. Other Cost

Item	July - December	January - June	Total Tk.
	Tk.	Tk.	
Management Cost			
Maintenance Cost			
Harvesting Cost			
Rent			
Total			
Total Cost (11+12+13)			

Extensive <1.5MT/Ha
Intensive 4>-10MT/Ha

Semi-intensive 1.5-4 MT/Ha
Highly-intensive 10 > MT/Ha

MONTHLY CATCH ASSESSMENT SURVEY OF POND

Sp. Code	Species	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	Total	Av. Selling Rate	Total Price
		Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Tk/Kg	Tk
01	Rui															
02	Catla															
03	Mrigal															
04	Kalibaus															
05	Bata															
06	Ghonia															
07	Silver Carp															
08	Grass Carp															
09	Mirror/Common Carp															
10	Other Exotic Carp															
11	Pangas															
12	Boal/Air															
13	Shol/ Gazar/Taki															
14	Koi															
15	Singi/ Magur															
16	Big shrimp/prawn															
17	Small shrimp/prawn															
18	Tilapia/Nilotica															
19	Sarpunti/Thai Sharpunti															
20	Other Inland Fish															
	Total															

Total Cost-----Tk
 Selling Price per kg of fish-----Tk/Kg
 Total Feed Used-----Kg

Production cost per kg of fish-----Tk/Kg
 Total Production-----Kg
 Food Conversion Rate----- (Feed Used / Fish Produced)

Total selling price-----Tk
 Production per Ha-----Kg/Ha

Signature

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Fisheries Resources Survey System
Department of Fisheries

Pond-4

UPAZILA-WISE SAMPLE CATCH RECORD OF POND

District :

Upazila :

Year :

1. Type of Pond	Extensive	Semi-intensive	Intensive	Highly Intensive	Average Price
2. Production Range	<1.5MT/Ha	1.5-4 MT/Ha	4>-10MT/Ha	10> MT/Ha	(Tk/Kg)
3. Name of Farmer					
4. Water Area (Ha)					
5. Total Fry Stocking (No)					
6. Chemical Fertilizer (Kg)					
7. Cow-dung Used (Kg)					
8. Feed Used (Kg)					
9. Yearly Production (Kg)	(Kg)	(Kg)	(Kg)	(Kg)	(Tk/Kg)
(01) Rui					
(02) Catla					
(03) Mrigal					
(04) Kalibaus					
(05) Bata					
(06) Ghonia					
(07) Silver Carp					
(08) Grass Carp					
(09) Mirror/Common Carp					
(10) Other Exotic Carp					
(11) Pangas/Thai Pangas					
(12) Boal/Air					
(13) Shol/ Gazar/Taki					
(14) Koi					
(15) Singi/ Magur					
(16) Big shrimp/prawn					
(17) Small shrimp/prawn					
(18) Tilapia/Nilotica					
(19) Thai Sarpunti					
(20) Other Inland Fish					
Total=					
Unit Production MT/Ha					

**Signature
SUFO/UFO**

Chapter 4 : Beel Fisheries

Purpose of the catch assessment survey for the beel fisheries is to collect sample catch data of beel as for estimating the annual total catch of beels by districts and by species.

1. Selection of sample Beel

Two sample beels should be selected for each Upazila. The selected two beels must be representative for that Upazila in terms of fish production, condition, management, fishing practice etc. It could be followed that one beel is greater than 20 acres and another less than 20 acres. Fingerlings have been releasing under different DOF's programs and projects. Besides, leaseholder or different cooperatives take initiative to release fingerlings to beels. So, one beel should be selected from natural beel and one beel from stocked beel/beel nursery where fingerlings have been stocked. On the other hand, one beel has to be selected from productive beel and another from less productive.

2. Physical Condition of Beel & Information

Identification, physical condition and general information has to be collected following format Beel-1. During visiting of beel, the responsible person for data collection has to interview with leaseholder, cooperative, manager of the fishing and fishers to accumulate information of beel. Beel area, management, no. of fishing unit, fishers, no. of gear & type, no. of boat, no. of katta etc. should be incorporated to this form.

3. Catch Data Collection

Beel fishery is being done usually by two ways as Katta fishing and other fishing, where fish is caught by gear & other units.

A. Other fishing :

- During the visit the sample fishing beel, the Officer has to collect data on fish catch by species wise once in a month during fishing period of beel.
- He has to collect data on the visiting day and also previous day (Format Beel-2).
- Sample unit of fishing has to be selected for each type of gear.
- Estimate average production of two days.
- Gear wise total production has to estimated (Average production x Raising Factor)
- Total catch of sample day' has to be estimated (Format Beel-3) for all gears.
- Total catch for the whole season on the basis of total no. of fishing days and sample data has to be estimated (Format Beel - 4)

B. Katta Fishing :

- At stage of declining water of beel, katta fishing usually started.
- Firstly, total katta has to be listed.
- Sample size of katta is to determined for collection information.
- Total catch has to be estimated by using Raising Factor (Format Beel -5)

4. Estimation of Annual Production :

Annual total fish production can be estimated from (Format Beel-6) other fishing and katta fishing.

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 Fisheries Resources Survey System
 Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
(Identification and general information of Beel)

1. District----- 2. Upazila-----
 3. Union----- 4. Village-----
 Year ----- Name of Officer-----

5. General Information:

a)	Name of Beel	-----
b)	Water area (Ha)	Winter season ----- Rainy season ----- Dry season -----
c)	Average Depth (meter)	Winter season ----- Rainy season ----- Dry season -----
d)	Link with other water body	River/ Cannel/ Beel/None
e)	Leasing arrangement	Fisherman co-operative Private party Other organization
f)	Vegetation	Floating vegetation covered-----% Sub-merged vegetation covered-----%
g)	Description of development work recently done	Re-excavation Construction of embankment Clearance of vegetation
h)	Fry stocking by	Beel Nursery Project Fry released program Leasing party None
i)	Fishing Period	From-----to-----
j)	Fishing Method	Katta Fishing Other Fishing Both
k)	Number of kata(if any)	No.-----
l)	Description of Fisherman	Number of Fisherman----- Number of Boat ----- Number of gear by type----- -----

Signature

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Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
Catch Data of Sample Day

1. District----- Code Date
2. Upazila----- 3. Union-----
- Name of Officer----- 4. Type of fishing : Katta Others
- . Name of Beel----- 5. Water area in winter season -----Ha
7. Type of gear used

Name of Gear	Total Unit	Sample Unit	Raising Factor

8. Sample catch data observed in Kg

Name of Head Fisherman/Catcher :									
Name of Gear									
Sp. Code	Species	Previous day	Sample day	Previous day	Sample day	Previous day	Sample day	Previous day	Sample day
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Silver Carp								
08	Grass Carp								
09	Mirror/Com Carp								
10	Other Exotic Carp								
11	Pangas								
12	Boal/Air								
13	Shol/ Gazar/Taki								
14	Koi								
15	Singi/ Magur								
16	Big shrimp/prawn								
17	Small shrimp/prawn								
18	Tilapia/Nilotica								
19	Sarpunti/Thai Punti								
20	Other Inland Fish								
	Total=								

Remarks: **Raising Factor = Total Unit operated / Sample Unit**

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Fisheries Resources Survey System, Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
Estimated Total Catch of Sample Day

1. District----- Code Date
 2. Upazila----- 3. Union-----
 4. Name of Beel----- Name of Officer -----
 5. Water area in winter season -----Ha 6. Type of fishing : Kata Others
 7. Type of gear used

Name of Gear	Total Unit	Sample Unit	Raising Factor

8. Estimated total catch of sample day in Kg

Name of Gear										Estimated total catch of sample day (Kg)
Sp. Code	Species	Average catch	Total catch	Average catch	Total catch	Average catch	Total catch	Average catch	Total catch	
01	Rui									
02	Catla									
03	Mrigal									
04	Kalibaus									
05	Bata									
06	Ghonia									
07	Silver Carp									
08	Grass Carp									
09	Mirror/Com Carp									
10	Other Exotic Carp									
11	Pangas									
12	Boal/Air									
13	Shol/ Gazar/Taki									
14	Koi									
15	Singi/ Magur									
16	Big shrimp/prawn									
17	Small shrimp/prawn									
18	Tilapia/Nilotica									
19	Sarpunti/Thai Punti									
20	Other Inland Fish									
	Total=									

Remarks: Average catch = (Catch of previous day + Catch of Sample day)/2
 Total catch = Average catch of each gear x Raising Factor of corresponding gear
 Estimated total catch of sample day = Total catch of all Gear

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Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
Catch Data of Other Fishing and Estimated Total Catch

1. District ----- Code
2. Upazila ----- 3. Union-----
4. Name of Beel----- Name of Officer -----
5. Water area in winter season -----Ha 6. Type of fishing : Katta Others
7. Fishing period: from-----to ----- = -----days (N)
8. Number of sample days ----- (n)
9. Raising Factor : N/n

Sp. Code	Species	Estimated total catch of sample days (kg)						Sample Total (kg)	Estimated total catch for season (kg)
		1 st day	2 nd day	3 rd day	4 th day	5 th day	6 th day		
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Silver Carp								
08	Grass Carp								
09	Mirror/Common Carp								
10	Other Exotic Carp								
11	Pangas								
12	Boal/Air								
13	Shol/ Gazar/Taki								
14	Koi								
15	Singi/ Magur								
16	Big shrimp/prawn								
17	Small shrimp/prawn								
18	Tilapia/Nilotica								
19	Sarpunti/Thai Sharpunti								
20	Other Inland Fish								
	Total=								

Remarks : Estimated total catch for whole season = Sample Total x Raising Factor

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL

Catch Data of Katta Fishing and Estimated Total Catch

1. District----- Code
2. Upazila----- 3. Union-----
4. Name of Beel----- Name of Officer -----
5. Water area in winter season -----Ha
6. Type of fishing: Katta Others
7. Total number of kata for whole season----- (N)
8. Number of sample kata observed ----- (n)
9. Raising Factor = N/n = -----

Sp. Code	Species	Catch of Sample Kata observed (kg)						Sample Total (kg)	Estimated total catch for season (kg)
		1	2	3	4	5	6		
01	Rui								
02	Catla								
03	Mrigal								
04	Kalibaus								
05	Bata								
06	Ghonia								
07	Silver Carp								
08	Grass Carp								
09	Mirror/Common Carp								
10	Other Exotic Carp								
11	Pangas								
12	Boal/Air								
13	Shol/ Gazar/Taki								
14	Koi								
15	Singi/ Magur								
16	Big shrimp/prawn								
17	Small shrimp/prawn								
18	Tilapia/Nilotica								
19	Sarpunti/Thai Sharpunti								
20	Other Inland Fish								
	Total =								

Remarks : Estimated total catch for Season = Sample Total x Raising Factor

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Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
ESTIMATED TOTAL CATCH FOR THE WHOLE SEASON

1. District----- Code Year-----
2. Upazila----- 3. Union-----
4. Name of Beel----- Name of Investigator-----
5. Water area in winter season ----- Ha

Sp. Code	Species	Estimated total catch for the whole season (kg)		
		Other Fishing	Katta Fishing	Total catch
01	Rui			
02	Catla			
03	Mrigal			
04	Kalibaus			
05	Bata			
06	Ghonia			
07	Silver Carp			
08	Grass Carp			
09	Mirror/Common Carp			
10	Other Exotic Carp			
11	Pangas			
12	Boal/Air			
13	Shol/ Gazar/Taki			
14	Koi			
15	Singi/ Magur			
16	Big shrimp/prawn			
17	Small shrimp/prawn			
18	Tilapia/Nilotica			
19	Sarpunti/Thai Sharpunti			
20	Other Inland Fish			
Total=				

Production per Hectare-----Kg/Ha

Signature

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
Estimated Total Catch of Sample Day

1. District : *Narsingdi* Code- *12* Date : **27/08/2014**
2. Upazila : *Palash*
3. Union : *Jinardi* Name of Officer -----
4. Name of Beel : *Kuraitali Beel*
5. Water area in winter season : **38.00 Ha**
6. Type of fishing : *Others Fishing*
7. Type of Gear used

Type of Gear	Local Name of Gear	Total Unit	Sample Unit	Raising Factor
Seine and Drug	Ber Jal	2	1	2
Gill	Fash Jal	7	1	7
Trap	Ghuni	4	1	4

8. Estimated total catch of sample day in Kg

Name of Gear		Ber jal		Fash Jal		Ghuni				Estimated total catch of sample day
Code No.	Species	Average catch	Total catch	Average catch	Total catch	Average catch	Total catch	Average catch	Total catch	(Kg)
01	Rui	1.75	3.5	0.2	1.4					4.90
02	Catla	0.8	1.6							1.60
03	Mrigal	2.4	4.8	0.425	2.975					7.78
04	Kalibaus	0.75	1.5	0.125	0.875					2.38
05	Bata									
06	Ghonia									
07	Silver Carp	2.8	5.6							5.60
08	Grass Carp	0.65	1.3							1.30
09	Mirror/Com Carp	3.3	6.6			0.125	0.5			7.10
10	Other Exotic Carp									
11	Pangas									
12	Boal/Air	1.35	2.7	0.25	1.75					4.45
13	Shol/ Gazar/Taki	0.8	1.6	0.25	1.75	0.125	0.5			3.85
14	Koi			0.05	0.35					0.35
15	Singi/ Magur			0.1	0.7					0.70
16	Big shrimp/prawn									
17	Small shrimp/prawn	3.3	6.6			1.375	5.5			12.10
18	Tilapia/Nilotica									
19	Sarpunti/Thai Punti	0.4	0.8	0.1	0.7	0.05	0.2			1.70
20	Other Inland Fish	3.55	7.1	1.1	7.7	1	4			18.80
	Total=	21.85	43.70	2.60	18.20	2.68	10.70			72.60

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
Catch Data of Sample Day

1. District : *Narsingdi* Code- *12* Date : **25/01/2015**
2. Upazila : *Palash*
3. Union : *Jinardi* Name of Officer -----
4. Name of Beel : *Kuraitali Beel*
5. Water area in winter season : **38.00 Ha**
6. Type of fishing : *Others Fishing*
7. Type of Gear used

Type of Gear	Local Name of Gear	Total Unit	Sample Unit	Raising Factor
Seine and Drug	Ber Jal	2	1	2
Gill	Fash Jal	9	1	9
Trap	Ghuni	4	1	4

8. Sample catch data observed in Kg

Name of Head Fisherman/Catcher		Ber jal		Fash Jal		Ghuni			
Code No.	Species	Previous day	Sample day	Previous day	Sample day	Previous day	Sample day	Previous day	Sample day
01	Rui	1.20	1.50		0.40	0.50			
02	Catla	0.50	1.40						
03	Mrigal	1.00	0.30	0.30					
04	Kalibaus			0.20					
05	Bata								
06	Ghonia								
07	Silver Carp	1.50	2.60						
08	Grass Carp	0.50	1.20						
09	Mirror/Com Carp	2.00			0.20				
10	Other Exotic Carp								
11	Pangas								
12	Boal/Air	1.50		0.20					
13	Shol/ Gazar/Taki	1.00			0.10				
14	Koi					0.10			
15	Singi/ Magur						0.10		
16	Big shrimp/prawn								
17	Small shrimp/prawn	2.00	3.60			1.50	0.50		
18	Tilapia/Nilotica								
19	Sarpunti/Thai Punt	1.00			0.10				
20	Other Inland Fish	4.00	7.50	0.70	0.50	1.00	0.20		
	Total=	16.20	18.10	1.40	1.30	2.60	0.80		

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries
CATCH ASSESSMENT SURVEY OF BEEL
Estimated Total Catch of Sample Day

1. District : *Narsingdi* Code- *12* Date : **25/01/2015**
2. Upazila : *Palash*
3. Union : *Jinardi* Name of Officer -----
4. Name of Beel : *Kuraitali Beel*
5. Water area in winter season : **38.00 Ha**
6. Type of fishing : *Others Fishing*
7. Type of Gear used

Type of Gear	Local Name of Gear	Total Unit	Sample Unit	Raising Factor
Seine and Drug	Ber Jal	2	1	2
Gill	Fash Jal	9	1	9
Trap	Ghuni	4	1	4

8. Sample catch data observed in Kg

Name of Gear		Ber jal		Fash Jal		Ghuni				Estimated total catch of sample day
Code No.	Species	Average catch	Total catch	Average catch	Total catch	Average catch	Total catch	Average catch	Total catch	(Kg)
01	Rui	1.35	2.70	0.20	1.80	0.25	1.00			5.50
02	Catla	0.95	1.90	0.00	0.00					1.90
03	Mrigal	0.65	1.30	0.15	1.35					2.65
04	Kalibaus			0.10	0.90					0.90
05	Bata									
06	Ghonia									
07	Silver Carp	2.05	4.10							4.10
08	Grass Carp	0.85	1.70							1.70
09	Mirror/Com Carp	1.00	2.00	0.10	0.90					2.90
10	Other Exotic Carp									
11	Pangas									
12	Boal/Air	0.75	1.50	0.10	0.90					2.40
13	Shol/ Gazar/Taki	0.50	1.00	0.05	0.45					1.45
14	Koi					0.05	0.20			0.20
15	Singi/ Magur					0.05	0.20			0.20
16	Big shrimp/prawn									
17	Small shrimp/prawn	2.80	5.60			1.00	4.00			9.60
18	Tilapia/Nilotica									
19	Sarpunti/Thai Punti	0.50	1.00	0.05	0.45					1.45
20	Other Inland Fish	5.75	11.50	0.60	5.40	0.60	2.40			19.30
	Total=	17.15	34.30	1.35	12.15	1.95	7.80			54.25

CATCH ASSESSMENT SURVEY OF BEEL

Catch Data of Kata Fishing and Estimated Total Catch

1. District : *Narsingdi* code- *12* Date : **27/02/2015**
2. Upazila : *Palash*
3. Union : *Jinardi* Name of Officer : -----
4. Name of Beel : *Kuraitali Beel*
5. Water area in winter season- *38.00 Ha*
6. Type of fishing : *Kata Fishing*
7. Total number of kata for whole season *13 (N)*
8. Number of sample Kata observed *02 (n)*
9. Raising Factor $N/n = 13/2 = 6.5$

Code No.	Species	Sample Catch Data of Kata Fishing						Sample Total (kg)	Estimated total catch for season (kg)
		1	2	3	4	5	6		
		(kg)	(kg)	(kg)	(kg)	(kg)	(kg)		
01	Rui	30.00	14.00					44.00	286
02	Catla	14.00	16.00					30.00	195
03	Mrigal	26.00	35.00					61.00	397
04	Kalibaus	4.00	1.00					5.00	33
05	Bata							0.00	0
06	Ghonia	2.00	1.00					3.00	20
07	Silver Carp	12.00	5.00					17.00	111
08	Grass Carp	4.00	7.00					11.00	72
09	Mirror/Common Carp	6.00	2.00					8.00	52
10	Other Exotic Carp							0.00	0
11	Pangas							0.00	0
12	Boal/Air	11.00	3.00					14.00	91
13	Shol/ Gazar/Taki	6.00	4.00					10.00	65
14	Koi	1.00	0.50					1.50	10
15	Singi/ Magur	1.50	0.50					2.00	13
16	Big shrimp/prawn		0.50					0.50	3
17	Small shrimp/prawn	34.50	16.00					50.50	328
18	Tilapia/Nilotica							0.00	0
19	Sarpunti/Thai Sharpunti	2.00	3.50					5.50	36
20	Other Inland Fish	85.00	55.00					140.00	910
	Total=	239.00	164.00					403.00	2620

Remarks : Estimated total catch for Season = Sample Total x Raising Factor

Chapter 5. Shrimp Farm Fisheries

Purpose of the catch assessment survey for the shrimp farm fisheries is to collect sample catch data of shrimp farms as well as sample data for calculating the increase rate of the total area of shrimp farms, necessary for estimating the annual total catch of shrimp farms by districts and by species.

The reports of shrimp farm, shrimp production and shrimp farm area are being collected from Chingri Cell of DOF. Actually Chingri Cell compiled this type of report and supply to FRSS. Besides, Officers also collect data in relation to Shrimp farms using Shrimp Farm *Form-1* & 2.

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

Form-1

CATCH ASSESSMENT SURVEY OF SHRIMP/ PRAWN FARM

1. District-----Code 2. Upazila-----
3. Union-----4. Mouza/Village-----Name of Officer----- 5.
- Name of Farm/Owner----- 6. Name of Farmer/Operator-----
- Year ----- 7. Water Area----- (Ha) 8. Average Depth----- (Meter)
9. Type of Culture (1) Exclusively shrimp/prawn (2) Mixed

10. Stocking of Fry/Juvenile

	Species	July - December		January - June		Total Tk.
		Number	Size (cm)	Number	Size (cm)	
Shrimp/ Prawn	(1) Bagda					
	(2) Harina					
	(3) Chaka					
	(4) Galda					
	(5) Natural Input					
	Shrimp/Prawn Total					
Fish	(6) Rui					
	(7) Catla					
	(8) Mrigal					
	(9) Kalibaus					
	(10) Bata					
	(11) Ghonia					
	(12) Silver Carp					
	(13) Grass Carp					
	(14) Mirror/Common Carp					
	(15) Other Exotic Carp					
	(16) Pangas					
	(15) Koi/Shingi/Magur					
	(16) Tilapia					
	(17) Thai Punti					
(18) Others						
Fish Total						

MONTHLY CATCH ASSESSMENT SURVEY OF SHRIMP/PRAWN FARM

Form-2

Sp. Code	Species	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	Total	Av. Price	
		Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Tk
1	Bagda															
2	Harina															
3	Chaka															
4	Galda															
5	Other Shrimp/Prawn															
	Shrimp/Prawn Total =															
6	Rui															
7	Catla															
8	Mrigal															
9	Kalibaus															
10	Bata															
11	Ghonia															
12	Silver Carp															
13	Grass Carp															
14	Mirror/Common Carp															
15	Other Exotic Carp															
16	Pangas															
17	Boal/Air															
18	Shol/ Gazar/Taki															
19	Koi/															
20	Singi/ Magur															
21	Tilapia/Nilotica															
22	Thai Sharputi															
23	Other Fish															
	FishTotal =															
	Grand Total =															

Total Production-----MT

Production per Ha-----MT/Ha

Signature

CATCH ASSESSMENT SURVEY OF SUBSISTENCE FISHING

1. District-----Code Year----- Month-----
2. Upazila----- 3. Union-----
4. Village----- Name of Officer-----
5. Name of head of household----- 6. Number of members of household
7. Number of total catcher 8. Number of adult catcher
9. Number of children catcher (under 1

10. Monthly data on subsistence fishing

Month (Delete unused)		July/ January	August/ February	September/ March	October/ April	November/ May	December/ June	
Caught fish Yes/No								
Fishing ground								
Type of gear								
Number of fishing days								
Average number of catchers								
Species Code	Catch in previous fishing day by species	kg	kg	kg	kg	kg	kg	Total
01	Rui							
02	Catla							
03	Mrigal							
04	Kalibaus							
05	Bata							
06	Ghonia							
07	Silver Carp							
08	Grass Carp							
09	Mirror/Common Carp							
10	Other Exotic Carp							
11	Pangas							
12	Boal/Air							
13	Shol/ Gazar/Taki							
14	Koi							
15	Singi/ Magur							
16	Big shrimp/prawn							
17	Small shrimp/prawn							
18	Tilapia/Nilotica							
19	Sarpunti/Thai Sharpunti							
20	Other Inland Fish							
Total=								

Fishing Ground: Large river, small river, pond, beel, baor, canal, ditch, swamp, paddy field or flood water. **Signature**

Table 10 : Subsistence House Hold Frame

District Code	District Name	Upazila Code	Village Code	Village Name	House holds	Total Sh	Tot sub H hold
01	Dhaka	256	01	Ati pachdona	1788	61	1091
02	Faridpur	235	02	Pana dubi	345	39	135
03	Gazipur	276	03	Ecuria	443	80	354
04	Gopalganj	224	05	Chowcha	217	46	100
05	Jamalpur	292	06	Ruhuli	481	85	409
06	Kishoreganj	325	07	Betrati	528	65	343
07	Madaripur	226	08	Chatar para	232	76	176
08	Manikganj	248	09	Mahadebpur	277	85	235
08	Manikganj	251	32	Hogla bonia	277	62	172
09	Munshiganj	260	10	Sikenpur	251	40	100
10	Mymensingh	306	11	Char durlabha	965	68	656
11	Narayanganj	268	12	Banti	444	84	373
12	Narsingdi	274	13	Dhukundi	388	71	275
13	Netrakona	333	14	Balijuree	406	80	325
14	Rajbari	246	04	Ujanchara	189	68	129
15	Shariatpur	234	15	Chakdha	213	80	170
16	Sherpur	299	16	Karua	297	80	238
17	Tangail	284	17	Baluchara	727	56	407
18	Bagerhat	176	18	Chapatala	322	86	277
19	Chuadanga	135	22	Santoshpur	223	36	80
20	Jessore	151	23	Tolagolder para	521	66	344
21	Jhenaidah	139	25	Moharajpur	332	75	249
22	Khulna	172	26	Hossainpur	494	79	390
23	Kushtia	124	27	Angdia	375	63	236
24	Magura	143	28	Shachani	161	79	127
25	Meherpur	130	29	Malsadaha	136	64	87
26	Narail	148	30	Dhabbhog	140	32	45
27	Satkhira	158	33	Mirzapur	390	40	156
28	Barguna	185	19	Basbunia	179	58	104
29	Barisal	206	20	Rahmatpur	475	59	280
30	Bhola	197	21	Odipur	329	63	207
31	Jhalokati	211	24	Uttar South Para	146	82	120
32	Patuakhali	191	31	Patuakhali	288	83	239
33	Pirojpur	---	---	---	---	---	---
34	Dinajpur	016	35	Rajapukur	576	95	547
35	Gaibandha	055	36	Babanipur	493	80	394
36	Kurigram	037	38	Chandipur	397	79	314
37	Lalmonirhat	034	39	Barabaria	242	64	155

District Code	District Name	Upazila Code	Village Code	Village Name	House holds	Total Sh	Tot sub H hold
38	Nilphamari	029	43	Dalagach	333	47	157
39	Panchagarh	002	45	Buripara	178	96	171
40	Rangpur	050	47	Hariharpur	580	47	273
41	Thakurgaon	007	49	Futkibari	256	58	148
42	Bogra	067	34	Baigoni	687	85	584
43	C.Nawabgonj	110	42	Mokrapur	275	41	113
44	Joypurhat	061	37	Nazirpara	203	75	152
45	Naogaon	102	40	Hapunia	540	80	432
46	Natore	098	41	Patkole	337	80	270
47	Pabna	089	44	Bhabanipur	442	86	380
48	Rajshahi	116	46	Shilimpur	498	56	297
49	Sirajgonj	079	48	Chalkchowbila	563	80	450
50	Bandarban	442	50	Mazeepara	59	40	24
51	Brahmanbaria	378	51	Shahpur	432	52	225
52	Chandpur	395	52	Ladergaon	423	77	326
53	Chittagong	419	53	Enayetpur	1235	62	766
54	Comilla	387	54	Pipulia	831	57	474
55	Cox's bazar	432	55	Chandighore	294	40	118
56	Feni	410	56	Mirzapur	213	93	198
57	Khagrachuri	---	---	---	---	---	---
58	Laksmipur	402	59	Battali	288	66	190
59	Noakhali	405	61	Sreepur	455	89	405
60	Rangamati	---	---	---	---	---	---
61	Habiganj	370	57	Shrirampur	322	75	242
62	Maulvibazar	363	60	Gobindapur	292	96	280
63	Sunamganj	345	63	Sadarpur	345	83	286
64	Sylhet	350	64	Muhammadpur	420	83	349

Chapter 7 : Baor Fisheries

Purpose of the catch assessment survey for the baor fisheries is to collect sample catch data and producer's price of baor for estimating total catches and their values by months and by species. There are some baors at Dhaka division and Khulna division. Out of these, some baors are managed by the government and others are managed privately.

Dhaka Division	Khulna Division	
Faridpur	Bagerhat	Kushtia
Gopalganj	Chuadanga	Magura
Madaripur	Jessore	Meherpur
Rajbari	Jhainaidha	Narail
	Khulna	Satkhira

Data Collection :

A. Government Management Baor

Respective Baor Manager will provide necessary yearly production data of Govt. managed baor (6 baors) by specieswise (*Form - Baor-1 & Baor -2*).

List of Government Management Baor

SL. No.	District	Name of Baor	Area (Ha)
1	Jessore	Morjad Baor	253
2	Jessore	Bergobindapur	217
3	Jhenaidah	Baluhar	281
4	Jhenaidah	Fatepur	47
5	Jhenaidah	Joydia	189
6	Jhenaidah	Kathgora	150
	Total		1137

A. Private Management Baor

Sample baor (1 to 3 nos.) could be selected for each district for accumulating data. The Investigator will visit baor once a month and talk to leasholder, cooperative and fishers to collect information.

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF BAOR

1. District-----Code
2. Upazila----- Year -----
3. Name of Baor----- Name of Officer-----
4. Name of Organization/ Manager-----
5. Water Area in 1st January ----- (Ha) 6. Average Depth-----ft
7. Management by : Government./Private

9. Stocking of Fry/Fingerlings

Species	July - December		January - June		Total Tk.
	Number	Size (cm)	Number	Size (cm)	
Rui					
Catla					
Mrigal					
Kalibaus					
Bata					
Silver Carp					
Grass Carp					
Mirror/Common Carp					
Pangas					
Koi/Shingi/Magur					
Galda/Bagda					
Tilapia					
Thai Punti					
Others					
Total					

CATCH ASSESSMENT SURVEY OF BAOR

Baor-2

10. Monthly Catch

Sp. Code	Species	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	Total	Av. Price
		Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Tk
01	Rui														
02	Catla														
03	Mrigal														
04	Kalibaus														
05	Bata														
06	Ghonia														
07	Silver Carp														
08	Grass Carp														
09	Mirror/Common Carp														
10	Other Exotic Carp														
11	Pangas														
12	Boal/Air														
13	Shol/ Gazar/Taki														
14	Koi														
15	Singi/ Magur														
16	Big shrimp/prawn														
17	Small shrimp/prawn														
18	Tilapia/Nilotica														
19	Sarpunti/Thai Sharpunti														
20	Other Inland Fish														
	Total														

Production per Ha-----Kg/Ha

Signature

Chapter 8 : Seasonal Cultured Waterbody

Purpose of the catch assessment survey for the baor fisheries is to collect sample catch data from seasonal cultured waterbody, where fish is cultured seasonally at paddy field and floodplain. Besides, there is also seasonal cultured practice of fish at boropit, polder etc.

SCW

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF SEASONAL CULTURED WATER BODY

1. District-----Code 2.. Upazila-----
 3. Name of Waterbody----- Name of Officer -----
 4. Village----- 5. Type of water body (a) Floodplain (b) Paddy Field (c) Boropit (d) Polder
 6. Water Area ----- (Ha) 7. Average Depth ----- ft
 8. Name of Owner/Farm----- Year -----

9. Stocking of Fry/Fingerlings

Species	July - December		January - June		Total Tk.
	Number	Size (cm)	Number	Size (cm)	
Rui					
Catla					
Mrigal					
Kalibaus					
Bata					
Silver Carp					
Grass Carp					
Mirror/Common Carp					
Pangas					
Koi/Shingi/Magur					
Galda/Bagda					
Tilapia					
Thai Punti					
Others					
Total					

CATCH ASSESSMENT SURVEY OF SEASONAL CULTURED WATER BODY

10. Monthly Catch

Sp. Code	Species	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	Total	Av. Price	
		Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Tk
01	Rui															
02	Catla															
03	Mrigal															
04	Kalibaus															
05	Bata															
06	Ghonia															
07	Silver Carp															
08	Grass Carp															
09	Mirror/Common Carp															
10	Other Exotic Carp															
11	Pangas															
12	Boal/Air															
13	Shol/ Gazar/Taki															
14	Koi															
15	Singi/ Magur															
16	Big shrimp/prawn															
17	Small shrimp/prawn															
18	Tilapia/Nilotica															
19	Sarpunti/Thai Sharpunti															
20	Other Inland Fish															
	Total=															

Production per Ha-----Kg/Ha

Signature

Chapter 9 : Pen and Cage Culture

In most places, there is increasing practice of fish culture at Pen and Cage. Purpose of the catch assessment survey for the Pen and Cage fisheries is to collect sample catch data from Pen and Cage.

PC-1

Government of the People's Republic of Bangladesh
Fisheries Resources Survey System
Department of Fisheries

CATCH ASSESSMENT SURVEY OF Pen and Cage Culture

1. District-----Code 2.. Upazila-----
3. Name of Waterbody----- Name of Officer -----
4. Village----- 5. Water Area ----- (Ha) 6. Average Depth -----ft
7. Name of Owner/Farm----- Year -----

8. Type of Fish Culture : Pen / Cage Culture

9. Stocking of Fry/Fingerlings

Species	July - December		January - June		Total Tk.
	Number	Size (cm)	Number	Size (cm)	
Rui					
Catla					
Mrigal					
Kalibaus					
Bata					
Silver Carp					
Grass Carp					
Mirror/Common Carp					
Pangas					
Koi/Shingi/Magur					
Galda/Bagda					
Tilapia					
Thai Punti					
Others					
Total					

CATCH ASSESSMENT SURVEY OF SEASONAL CULTURED WATER BODY

10. Monthly Catch

Sp. Code	Species	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	Total	Av. Price	
		Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Tk
01	Rui															
02	Catla															
03	Mrigal															
04	Kalibaus															
05	Bata															
06	Ghonia															
07	Silver Carp															
08	Grass Carp															
09	Mirror/Common Carp															
10	Other Exotic Carp															
11	Pangas															
12	Boal/Air															
13	Shol/ Gazar/Taki															
14	Koi															
15	Singi/ Magur															
16	Big shrimp/prawn															
17	Small shrimp/prawn															
18	Tilapia/Nilotica															
19	Sarpunti/Thai Sharpunti															
20	Other Inland Fish															
	Total=															

Production per Ha-----Kg/Ha

Signature

Chapter 10 : Kaptai Lake Fisheries and Sundarbans Fisheries

A. Kaptai Lake Fisheries

Purpose of the catch assessment survey for the Kaptai Lake fisheries is to collect data on catch and fishing effort of the fisheries for estimating the total catch my months, fishing gear and by species.

Bangladesh Fisheries Development Corporation (BFDC) usually provides yearly total production of Kaptai Lake fisheries. After compilation of catch statistics of Kaptai lake, it is included in the Fisheries Statistical Report of Bangladesh by utlization already collected by BFDC.

B. Sundabans Fisheries

The pupose of this compilation of catch statistics of Sundarbans Fisheries is to yearly compile such statistics for inclusion in the Fisheries Statistical Report of Bangladesh by utilizing data already collected by the Diviosional Forest Officer.

Chapter 11. Marine Industrial Fisheries (Trawlers).

1. Purpose

Purpose of the catch Assessment Survey of the Marine Industrial Fisheries (Trawlers) is to collect catch and effort data of trawlers for compiling statistics on the monthly total catch of Trawlers by types of fishing (Shrimp trawlwers, fish trawlers and mixed trawlers) and by species and their corresponding fishing effort such as the total number of fishing days.

2. Survey organization

The Marine Fisheries Sector of Department of Fisheries, Chittagong is to conduct the survey with its inspectors. A copy of the survey results are to be sent to the Fisheries Resources survey system, Dhaka within one month after the end of the survey year.

3. Survey method

(A) Introduction

(i) Complete coverage and reliable data

It is assumed that catch reports of trawlers submitted after each trip cover all trips made and Catch data reported are reliable. Inspectors, therefore, should make every effort ot secure complete coverage and reliable data.

(ii) Catch statistics

Statistics to be compiled from this survey are catch statistics as economic statistics, that is, quantity of catch which were economically utilized and expressed in live weight. Quantity of shrimp which have already been processed on board and may have already been moved to another vessel should be all reported and converted into live weight. Quantity of fish catch is to be reported by species, but fish catch discarded to the sea is not to be included in

the report. Reliable data on the quantity of discarded fish can be collected only by sending inspectors to commercial trawlers to be on board and observe discarding of fish during the fishing trip. In implementing this survey in addition to the catch assessment survey six sample trips are to be selected every month, by selecting two sample trips from each of the three types of trawlers, that is , shrimp, fish and mixed trawlers.

(B) Catch report survey

(i) The purpose of the catch report survey is to collect catch and effort data of each trip made by trawlers at their arrival.

(ii) Report form

A report form shown as (Form MI-1) is to be used for reporting catch and effort data of each trip made by trawlers. This report form should not be changed for several years in order to secure comparable time series data. When additional information become necessary, only a few items are to be added to the present report form.

(iii) Request for reporting

Inspectors of the Marine Fisheries Department are to visit trawl fishing companies before the beginning of each fiscal year and request to distribute the report form to captains of their trawlers and instruct to prepare on report at the end of each trip for submitting it to the inspector at their arrival at the port.

(iv) Collection of reports

The inspector is to attend each arrival of trawlers from their fishing trip and request the captain to submit the completed catch report form. The inspector should check the data reported in the form, and if there is any deficit in the data he should correct it by asking the captain. The catch data are also to be checked with export data appearing in the invoice when it becomes available.

(4) Fishing trip survey

(i) Purpose

The purpose of the fishing trip survey is to collect complete information of all fishing trip made by trawlers during the survey year in order to check complete coverage of the catch report survey.

(ii) Survey form

A survey form shown as Form MI-2 is to be used for this survey. All fishing trips made by Trawlers of each company are to be recorded as periods of trip expressed by the data of departure connected with the date of arrival. Trips are to be recorded in the columns of months in the order of the date of arrival and in the column of month of the date of arrival.

(iii) Request for recording

When the inspector visits companies before the beginning of each survey year to request the catch report survey, he is also to request recording of all fishing trips made by their trawlers on the survey form of this survey.

(iv) Checking and collection of forms

The inspector is to visit companies every month to see recording of the fishing trip survey form and check completeness of the coverage of catch reports by comparing with the fishing trips recorded. At the end of the survey year, completed forms are to be collected for thorough checking of the catch reports for the whole year.

(5) Data processing

(i) Checking of catch reports

Catch reports collected are to be checked in the following two aspects:

- (a) Checking of the coverage of all fishing trips made. This can be done by comparing with the Fishing trip survey forms collected.
- (b) Checking data reported in catch reports. Catch data reported are to be checked with export data appearing in invoice document.

(ii) Manual tabulation

(a) Re arrangement of catch reports.

Catch reports collected for the whole survey year are to be re-arranged according to the following sort keys.

- A. Month..... July, August ,May, June.
- B. Type of fishingShrimp trawlers, fish trawlers and mixed trawlers.
- C. Company..... .In the order of companies listed in the list.
- D. Trawler.....;.....In the order of trawlers listed in the list.
- E. Trip..... . In the order of the date of arrival of the trip.

(b) Tabulation of catch reports.

Data on the catch reports thus re-arranged are to be transcribed to the tabulation form shown as Form MI-3 for each month for each type of fishing. Data transcribed re to be added to the total columns.

(c) Statistical table for monthly total catch.

Total catch by month by type of fishing thus summarized in the tabulation form are to be Transcribed to the statistical table form shown as Form-MI-4. This is the statistical table required for monthly total catch statistics.

(d) Annual total catch

An annual total catch table is to be prepared by accumulating the monthly total catch data of twelve months to an annual table by using the same form as monthly table.

6. Submission of statistics

The Marine Fisheries Department, DoF is to submit one copy of all the forms completed of this survey to Fisheries Resources Survey System by the end of the first month after the end of the survey year.

Government of Bangladesh
Marine Fisheries Department
Department of Fisheries
Agrabad, Chittagong.

Inspection/Observation Report of Sea Fishing Trawlers.

(Official use only)

Date of inspection.....

1. Name of the Trawler inspected
2. Name and address of the owner/Company:
3. Type of trawler: Shrimp trawler/Fish trawler/Mixed trawler
4. Gross tonnage :M. tons. 5. Whether possessing valid fishing license: Yes/No.

OBSERVATION

6. (a) Date of departure for the last fishing trip:.....
(b) Date of arrival from the last fishing trip:
7. Number of actual fishing days: (9) Fishing ground :
8. Average number of hauls per day :..... Latitude..... N.
Average hours of each haul LongitudeE.
10. Catch data of the last fishing trip :

(a) Shrimp

Species	Weight in Kg.	
	H. L.	H.O.
Tiger shrimp		
White shrimp		
Pink shrimp		
Brown shrimp		
Small shrimp		
Lobster		
Shrimp total		

(b) Fish

Species	Weight in Kg.
Pomfret	
Jew fish	
Indian salmon	
Snapper	
Grunt	
Flat/sole fish	
Cat fish	
Mackeral	
Tuna	
Sharks/rays	
Squids/Cuttle fish	
Others	
Fish total	

11. Number of shrimp nets used
Mesh size at cod-end.....mm
Number of fish nets used.....
Mesh size at cod-end:.....mm.

Length of head rope.....

Gear used: Single/double.

12. Number of Officers and crew on board:

	<u>Local</u>	<u>Foreign</u>
Officer
Crew
Total

13. Expect date of departure for the next fishing trip.....

14. Remarks:

Name and signature of inspecting officer:

Date:

Government of Bangladesh
Marine Fisheries Department
Department of Fisheries
Agrabad, Chittagong.

Fishing Trip Survey of Trawlers

Year

Company

Period of Trips					
Name of Vessel					
Type of Fishing					
July					
August					
September					
October					
November					
December					
January					
February					
March					
April					
May					
June					

Remarks :

1. Period of Trips = Date of Departure - Date of Arrival
2. Period of each trip is to be recorded in the column of the month of the date of arrival.
3. Period July 5 - July 15 is to be recorded as 5/7 - 15/7.

Government of Bangladesh
 Marine Fisheries Department
 Department of Fisheries
 Agrabad, Chittagong.

Tabulation Form of Inspection/Observation Report of Sea Trawlers

Month Type of Fishing

Name of Vessel							
Name of Company							
Date of Departure							
Date of Arrival							
No. of Fishing days							
Fishing La. ground Ln.							
Shrimp catch (Kg.)							
Tiger Shrimp							
White Shrimp							
Pink Shrimp							
Brown Shrimp							
Lobster							
Other shrimp							
Shrimp Total							
Fish Catch (kg)							
Pomfret							
Jew Fish							
Indian Salmon							
Snapper							
Grant							
Flat/solo fish							
Cat fish							
Mackerel							
Tuna							
Sharks/rays							
Squids/Cuttlefish							
Others							
Fish Total							
Grand Total							

Government of Bangladesh
Marine Fisheries Department
Department of Fisheries
Agrabad, Chittagong.

Monthly/Annual Total Catch of Tralers

Month/Year :

Type of Fishing	Shrimp Trawlers	Fish Trawlers	Mixed Trawlers	Total
No. of Trips				
No. fishing days				
Shrimp catch (Kg.)				
Tiger Shrimp				
White Shrimp				
Pink Shrimp				
Brown Shrimp				
Lobster				
Other shrimp				
Shrimp Total				
Fish Catch (kg)				
Pomfret				
Jew Fish				
Indian Salmon				
Snapper				
Grant				
Flat/solo fish				
Cat fish				
Mackerel				
Tuna				
Sharks/rays				
Squids/Cuttlefish				
Others				
Fish Total				
Grand Total				

Remarks :

1. Data by types of fishing are to be transcribed from the total column of the Tabulation Form (Form - MI-3).
2. Annual total catch are to be calculated by accumulating monthly total catch data.

Chapter 11. Marine Artisanal Fisheries

1. Purpose

Purpose of the catch assessment survey for the marine artisanal fisheries is to collect sample catch data and producer's price data necessary for estimating total catches, their values and corresponding Fishing effort by former districts, by months, by types of gear and by species.

A. Survey method

1. Frame Survey

In order to provide a frame from which sample landing sites of the catch assessment survey are selected and data on the total number of fishing units actually operated each month, a frame survey for the marine artisanal fisheries is to be conducted at least once every three years, preferably once every year. Data on the number of fishing units will be used for estimating the total catch .

2. Types of gear used

For providing catch statistics by types of gear used, gear used is classified by the following types. Selection of sample landing sites and estimation of the average catch per trip are to be made by such types.

- i) Gill net
- ii) Set bag net
- iii) Long line
- iv) Seine net
- v) Cast net
- vi) Miscellaneous.

3. Sampling .

(a) Sample landing centers.

Sample landing centers are selected from larger centers for each typ of gear as follows:

- (i) Gill net Chittagong, Cox's Bazar, Khulna.
- (ii) Set bag net
Large size Sonadia Island. Kunkanta, Doubla Islsnd (Seasonal)
Small size Sandip Island, Hatia Island, Kumira & Cox's Bazar.
- iii) Long line
Jew fish long line Three landing sites selected from jew fish processing plants in
(Seasonal) Cox's Bazar.
- iv) Seine net, cast net and miscellaneous.....
The sea coast is divided into six sections as follows. Cox's Bazar, South of Chittagong,
North of Chittagong, Sandip Island, Hatis Islan in each section.

(b) Sample days

i) Gill net

For each landing center, four sample days are to be selected in a month with an internal of

8 days. (for example: 3rd , 11th , 19th and 27th). The sample days thus selected are to be the same every month.

ii) Other types of gear

For each landing center, two sample days are to be selected in a month with an interval of 15 days. (for example, 7th and 22nd). The sample days thus selected are to be the same every month.

(C) Sample landing

When the concern Officer visits a sample landing center of a certain type of gear on a sample day, first he is to make a contact with a well informed fisherman and ask the expected number of landings (boat arrival for landing) of that particular type of gear during the sample day. This number is to be recorded in the column “No of all landings” on Survey Form MA - 1.

Maximum five sample landings are to be selected from all the expected landing during the sample day. The expected number of landings recorded in the column “ No of all landings ” is to be corrected to the actual number of landings at the end of the sample day.

When the survey officer visits a sample fishing village, first he is to make contact with a well informed fisherman and ask what types of fishing gear are being used and how many fishing units are being operated during the sample day. These information are to be recorded Survey Form MA - 2.

For each type of fishing gear used, maximum five sample fishing units are to be selected. The number of sample fishing units for each type of fishing gear is to be decided as follows:

<u>Number of fishing units in operation</u>	<u>Number of sample fishing units to be selected</u>
10 and over	5
5-9	3
2-4	2
1	1

The sample fishing units are to be selected from all the fishing units in operation by the method of systematic sampling.

4. Observation of sample landings

Since the purpose of observation of sample landings is to record sample catch data of one trip of fishing, if any sample landing consists of catches by more than one fishing unit or only a part of catch by one fishing unit the concern officer has to ask the fisherman catch by only one fishing unit and record it. If it is impossible the sample landing is to be changed to the next landing. The concern officer is to interview to the head fisherman on the fishing trip, observe the landing of fish, and record catch data on Survey Form MA-1.

The concern Officer is observe landings of the sample fishing units and interview to the head fisherman for asking on his fishing operation and record such data on Form-MA-1 for each type of fishing gear used. Accuracy of eye-estimation of the quantity of landings is to be improved by actually weighing fish With a portable balance once in a while.

5. Submission of survey results.

Survey results are to be submitted to the DoF headquarter (FRSS section) by the 15th of the following month of the survey month.

6. Estimation of monthly total catches.

Monthly total catches by types of fishing gear used are to be estimated by Districts as follows :

(Estimated monthly total catch)

= (Average catch per fishing unit per month obtained by the catch assessment survey).

x (Total number of fishing units by former District obtained by the Frame Survey).

The average catch per fishing unit per month is to be calculated as follows:

(Average catch per fishing unit per month).

= (Average catch per trip obtained as an average of observed sample catch data).

x (Average number of trips per fishing unit per month obtained as an average of sample data on the number of trips per month).

7. Data Processing.

Data processing of survey results is made by computer at the Headquarters.

Government of Bangladesh
Marine Fisheries Department
Department of Fisheries
Agrabad, Chittagong.

Catch Assessment Survey of Marine Artisanal Fisheries

Fishing Units Record

District :

Date :

Upazila :

Name of Officer

Fishing Village

Name of Gear Used			No. of Fishing Units Operated	No. of Sample Fishing Units
Local name	Type	Code		

Note : A minimum unit for operating fishing of a type of fishing gear, usually consisting of a combination of a fishing boat, fishing gear and fishermen.

Government of Bangladesh
Marine Fisheries Department
Department of Fisheries
Agrabad, Chittagong.

Sample Catch Record Marine Artisanal Fisheries

District :

Date :

Upazila :

Name of Officer

Landing Center or Fishing Village

Type of gear used	<input type="text"/>	No. of all landings	<input type="text"/>	No. of Sample landings	<input type="text"/>
Serial No.					
No. of fishermen on board					
Fishing boat moterized/n.mot.					
Local name of gear used					
No. of days of this trip					
No. of trips during past 15 days					
No. of days on the sea during past 15 days					
No. of setbag nets					
Catch by species	Kg.	Kg.	Kg.	Kg.	Kg.
Hilsa					Producer's price in Tk/Kg
Bombay Duck					
Indian salmon					
Pomfret					
Sharks & rays					
Jew fish					
Snapper					
Mackerel					
(Specify) :					
Small shrimp					
Micellaneous					
Total					

District-wise Annual Catch of Marine Fisheries (Year : 2014-2015)

Form : MA - 3

Sl. No.	District	Trawl Fishing				Artisanal Fishing				Total			
		Shrimp	Hilsa	Other Fish	Total	Shrimp	Hilsa	Other Fish	Total	Shrimp	Hilsa	Other Fish	Total
1	Bagerhat												
2	Khulna												
3	Satkhira												
	Khulna Division												
4	Barguna												
5	Barisal												
6	Bhola												
7	Jhalokathi												
8	Patuakhali												
	Pirojpur												
	Barisal Division												
10	Chittagong												
11	Cox's Bazar												
12	Feni												
13	Laksmipur												
14	Noakhali												
	Ctg. Division												
	TOTAL												

Signature

FRSS Chart-1
Sector-wise Annual Fish Production in Open Water for 2015-2016

Name of District :

Area in Hectare

Production in Metric Ton

Sl. No.	Name of Upazila	River		Marine		Beel				Haor		Floodplain				Total Production (4+5+6+7+9+11 +13+15 +18)			
						Natural		Under Beel Nursery Program				Natural		Under fry released Program					
		Area	Production	Production	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod.	Area	No of Fry Released (Lakh)	Prod.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	Total																		

FRSS Chart-2
Annual Fish Production in Pond Culture for 2015-2016

Name of District:		Area in Hectare											Production in Metric Ton							
Sl. No.	Name of Upazila	Pond																		
		*Culture Method												Derelict Pond			Total			
		Extensive <1.5MT/Ha			Semi-intensive 1.5-4.0 MT/Ha			Intensive 4>-10 MT/Ha			Highly Intensive 10> MT/Ha									
		No.	Area	Prod.	No.	Area	Prod.	No.	Area	Prod.	No.	Area	Prod.	No.	Area	Prod.	No.	Area	Prod.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	Total																			

***Culture Method:**

1) Extensive	< 1.5 MT/Ha
2) Semi-intensive	1.5 - 4.0 MT/Ha
3) Intensive	4.0> - 10.0 MT/Ha
4) Highly Intensive	10.0> MT/Ha

Signature
District Fisheries Officer

FRSS Chart-3
Sector-wise Annual Fish Production in Other Closed Water for 2013-2014

Name of District:

Area in Hectare

Production in Metric Ton

Sl. No.	Name of Upazila	Shrimp/Prawn Farm											Fish Culture in Floodplain/Paddy Field		Boropit/Polder/Creek		Baor		Cage Culture			Pan Culture		Total Prod (13+17+1+22+2)
		Golda Farm				Bagda Farm				Total		Area					Pro.	No	Av. area/Cage (Sq. meter)	Pro.	Area	Pro.		
		Area	Production			Area	Production			Area	Prod.													
			Golda	Other Shrimp	Fish		Bagda	Golda	Other Shrimp			Fish												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Total																							

Signature

District Fisheries Officer