Bay of Bengal Programme

Development of Small-Scale Fisheries

STUDY ON INCOME, INDEBTEDNESS AND SAVINGS AMONG FISHERFOLK IN ORISSA, INDIA

BOBP/WP/55



SWEDISH INTERNATIONAL DEVELOPMENT AUTHORITY



BAY OF BENGAL PROGRAMME Development of Small-Scale Fisheries

BOBP/WP/55 GCP/RAS/040/SWE

STUDY ON INCOME, INDEBTEDNESS AND SAVINGS AMONG FISHERFOLK OF ORISSA, INDIA

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Executing Agency:

Funding Agency:

Food and Agriculture Organization of the United Nations

Swedish International Development Authority

Development of Small-Scale Fisheries in the Bay of Bengal.

Madras, India, December 1987

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The BOBP has been active in extension work among coastal areas of Orissa during the past four years. A credit project for fisherfolk that initially benefited some 2,500 fisherfolk households, and was notable for very high loan recovery, is an example. (This has been reported in detail in BOBP/REP/32). This project helped strengthen the physical assets of fisherfolk. A savings project was then launched to improve the financial assets of fisherfolk. This paper discusses the project.

The paper presents the findings of a study on ownership, income, indebtedness and savings patterns in two Orissa fishing villages, Udayapur and Gopalpur. It is hoped that the data collected will help small-scale fisheries development activities in general and rural financial institutions in particular.

The study is one of the activities of the small-scale fisheries project of the Bay of Bengal Programme (BOBP) which started in 1979. During its first phase (1979—1986), the project was funded by SIDA (Swedish International Development Authority) and executed by FAO (Food and Agriculture Organization of the United Nations). Its main goals were to develop, demonstrate and promote technologies and methodologies to improve the conditions of small-scale fisherfolk in five member countries — Bangladesh, India, Malaysia, Sri Lanka and Thailand.

This document is a working paper and has not been cleared either by FAO or by the governments concerned.

CONTENTS

		Page
1.	Introduction	1
2.	Socio-economics and fishing features	2
3.	Survey Findings	5
4.	Summary and Conclusions	13
5.	References	14
Tables		
1.	Socio-economic and demographic data	2
2.	Distribution of family types	3
3.	Fishing seasons, common fish species, boats and gear at Udayapur	4
4.	Fishing seasons, common fish species, boats and gear at Gopalpur	4
5.	Distribution of boats and nets	5
6.	Valuable assets	5
7.	Average monthly earnings per household	6
8.	Duration of activities other than fishing	6
9.	Distribution of earning members among the households	7
10.	Distribution of (monthly) income	7
11.	Average annual non-production expenditure per household	8
12.	Average annual expenditure per household on production	8
13.	Pattern of indebtedness to traditional financiers	9
14.	Institutional credit	9
15.	Annual rate of interest	10
16.	Purpose of credit	10
17.	Habitofsaving	11
18.	Purpose of saving	11
19.	Appropriate times for deposit and withdrawal of money	12
20.	Relationship between income and ownership	12
21.	Income and indebtedness	13
Арр	endices	
1.	Questionnaires used in the survey	15
2.	Coastal districts of Orissa (Map)	22
Pub	olications of the Bay of Bengal Programme	23

1. INTRODUCTION

In collaboration with NABARD (National Bank for Agriculture and Rural Development), the BOBP started a credit project in Orissa in 1983. Through it Rs. 7.4 million was disbursed among 2500 fisherfolk families and the repayment rate recorded was 95% (BOBP/REP/32).

The credit project has shown that credit for artisanal fisherfolk can be a viable proposition and that the loanees are able to repay their loans in the stipulated time. Credit was given in the form of boats, nets and bicycles for transporting fish, ice boxes etc. Thus, the credit strengthened the physical assets of fisherfolk, raised their incomes and improved their economic condition.

The chances of Orissa fisherfolk building their financial assets through savings are now brighter than before. In consequence, a preliminary study was undertaken to assess ownership, earnings, spending, indebtedness and savings habits among the fisherfolk in two coastal villages of Orissa.

1.1 Objectives

The objectives of the study were:

- —to assess earning, spending, borrowing and saving patterns among fisherfolk;
- to study traditional saving methods;
- _ to identify the purposes of savings.

1.2 Methodology

A questionnaire (Appendix 1) with open and closed questions was prepared. The questionnaire evolved from the following basic questions:

- What are the earning, spending and saving patterns of artisanal fisherfolk?
- Do they earn enough to save?
- Do fluctuations in income alone (caused by changes in weather and sea conditions on the one hand and material constraints on the other) act as a disincentive to savings or are there any other factors?
- What are the traditional methods of depositing money among fisherfolk? What do they save money for? What is the scope for institutional savings?
- How does the mechanism of the traditional borrowing system, engineered and controlled by the money-lenders and the middlemen, function at the village level?

The method of purposive sampling was used, since one of the central aims of the study was to identify patterns. The basic idea behind purposive sampling is that cases can be selected and samples developed which could be representative and satisfactory for the purpose. Under the study, especially at the initial stage, four categories of households were interviewed on the basis of ownership of boats and nets. At a later stage, ie. after seeing the close link between ownership and income, households were grouped according to their income. To get an overall picture of a household's economic situation, income not only from fishing but also from non-fishing activities was taken into account. Eighty households from each of two villages were taken up for the sample study.

Four fresh university graduates $_$ two of them women $_$ were selected for the field survey. A one-week training programme was arranged for them. The training activities were as follows:

Explaining the objectives of the study.

- Providing an overall picture of the fisherfolk of Orissa: their traditions, festivals, rituals and day-to-day life
- Discussing interview techniques
- Providing a brief about the villages with particular reference to the questionnaire
- Scrutinizing secondary data on the villages with the help of marine extension officers of the respective villages.

The surveyors were instructed to collect relevant information in two ways. First, to record their observations relating to the subject in the space given in the interview schedule itself. Second, to interview the respondents and enter in a diary, any extra information about fisherfolk's activities, traditions, and day-to-day life.

After the data collection was over the answers to the open questions were categorized, coded and processed through a computer.

2. SOCIO-ECONOMICS AND FISHING FEATURES

2.1 Profile of the fishing villages

Two fishing villages—one in north Orissa called Udayapur, the other in the south, Gopalpur-on-Sea — were selected for field surveys.

Udayapur, situated on the border between Orissa and West Bengal (see map in Appendix **2),** represents the traditions, fishing methods and operational style of the northern fisherfolk. It exemplifies a pattern of life common to West Bengal and the northern half of Orissa. Fisherfolk of this village engage simultaneously in agriculture as well.

Gopalpur-on-Sea, located in south Orissa near the northern tip of Andhra Pradesh, typifies the pattern of life prevalent in the southern half of Orissa and in parts of Andhra Pradesh. Fishing is the predominant occupation of villagers here.

The two villages have had access to institutional finance through the BOBP credit project, and perhaps through other schemes as well. The bankin9 habit has already been instilled.

Table 1
Socio-economic and demographic data

	Udayapur	Gopalpur
Total population of the village	730	390
Average size (family members) of a household	5—6	4—6
Active (full-time) fishermen	200	90
Part-time fishermen	30	7
Dominant caste	Gokha	Vodabalija
Dominant religion	Hindu	Hindu
Main language written & spoken	Oriya	Telugu
Houses	Roof: Thatched	Thatched as well as tiled
	Walls: Mud	Mud as well as brick
Electrified?	No	Yes
Primary school in the village?	Yes	Yes
Health centre in the village?	No	Yes
Financial institutions in the village?	No	Yes

2.2 Family type

It is seen from Table 2 that the predominant type in both the villages is the lineally extended family, closely followed by the completely nuclear family, which together form 80 to 90 per cent of all types.

Table 2

Distribution of family types

Type of family	Description	Uda No.	ayapur (%)	Go _l No.	palpur (%)
Complete nuclear family	Parents and unmarried	30	(38)	27	(34)
Complete nuclear family	children	3	(4)	4	(5)
with dependents Incomplete nuclear family	One of the parents with un-	6	(7)		
Lineally extended family	married children Either or both grandparents living with married son or daughter and their children	39	(49)	37	(46)
Collaterally extendel family	Brothers or sisters with their families	1	(1)	1	(1)
Lineally and collaterally extended family	Either or both grandparents living with brothers or sisters and their family	1	(1)	1	(14)
Total		80	(100)	70	(100)

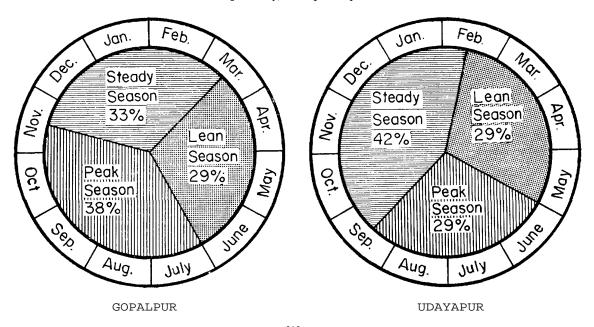
2.3 Fishing seasons, fish species, craft and gear combinations

The fishing season could be classified on the basis of abundance into three types.

Peak season Large quantities and high-value fish caught

Steady season Modest quantities, both low-value and high-value fish

Lean season Limited fishing activity, low quantity of fish.



Tables 3 and 4 highlight the various fish species, catching seasons and combinations of boats and nets.

Table 3
Fishing seasons, common fish species, boats and gear at Udayapur

Fishing season	Fish species	Craft & Gear Combination*
Peak season (June to August)	<pre>- Hilsa</pre>	Patia boat & Sarini andBhasani nets
Steady season (September to February)	Star fishSmall catfishSmall-sized hilsaBombay duck	Patia boat & Bhasani and Sarini nets
Lean season (March to May)	 Small-sized hilsa Silver bar Catfish Small shrimp Bombay duck Miscellaneous 	Patia boat & Sarini nets

Pat la boat—A non-motorized boat made of sal wood with a vertical stem and stern.
Sarini net— Net made of cotton having a length of 700 meshes and a depth of 460 meshes used in beach shore and inshore seining.
Bhasani nets— Nylon net with the smallest mesh size (32 mm).
(Mohapatra, 1983; Tietze, 1985)

Table 4 Fishing seasons, common fish species, boats and gear at Gopalpur

Fishing season	Fish species	Craft & Gear Combinations*
Peak season (July to October)	PrawnPomfretMackerelAnchovies	 Small & big teppa & Kilumala net
Steady season (November to March)	ShrimpSardinesAnchoviesMackerel	Small & bigteppa&Jagawala net
Lean season (April to June)	 Small Hilsa Catfish Pomfret Sardines Miscellaneous 	 Small & big teppa & Jagawala net

^{*} Teppa — Teppa is a log raft. It ranges from 4.2 to 8.5 m in length and is made of two, three or four log pieces. The biggest one is made of four logs.

Kilumala Net— PA Multifilament (white) surface driftnet with mesh size of 40—60 mm Jagawala Net $_$ PA Multifilament (white) $_$ cotton driftnet with a mesh size ranging from 60 to 70 mm.

(Mohapatra, 1983, Tietze, 1985).

3. SURVEY FINDINGS

3.1 Ownership patterns

In the surveyed areas at least four patterns of ownership were discovered. These are:

- individual ownership
- joint ownership among relatives/members of the family
- _ joint ownership without blood relationship
- _ rerted/hired ownership. The rent of a Patia is Rs. 1,500—2,000 a year.

The distribution of ownership of boats and nets is described in Table 5 and of other valuable assets in Table 6.

Table 5
Distribution of boats and nets

Turns of our arabin	No. of households				
Type of ownership	Uda No .	ayapur (%)	Gop No.	oalpur (%)	
Two or more boats and several nets	2	(2)	10	(13)	
Only one boat and nets	18	(23)	37	(46)	
Only nets	22	(27)	13	(16)	
No boat and no nets	38	(48)	20	(25)	
Total	80	(100)	80	(100)	

Most households have more than one asset, and jewels are the main asset among fisherfolk. This is especially true in Gopalpur, where the major saving is in the form of gold. Brass and silver utensils are also common assets in both the villages. The big difference between the two villages lies in the possession of agricultural land and in practising animal husbandry. In Udayapur, 58 (73%) households possess land and 21 (26%) households engage in animal husbandry; in Gopalpur, on the other hand, the numbers are insignificant.

Table 6
Valuable assets

Assets	No. of households		
Assets	Udayapur	Gopalpur	
Radios and watches	20	37	
Tape recorders	2	3	
Jewellery	32	64	
Utensils (mainly brass and silver)	43	52	
Land	58	5	
Oxen, cow and bulls	21	_	
Cash crops	6	1	
Goat and hens	3	4	
Cycles	5	2	
Other	3	6	

2 [5]

3.2 Earning patterns

Fishing is the main source of income. Non-fishing activities include net-making, poultry, animal husbandry and gardening. The average monthly earnings per household from both types of activities are shown in Table 7.

Table 7

Average monthly earnings per household

Course of Income	Uday	Gopalpur		
Source of Income	Rs.	(%)	Rs.	(%)
Fishing	1,197	(60)	1,542	(94)
Non-fishing activities	804	(40)	103	(6)
Total	2,001	(100)	1,645	(100)

Of the average total monthly income per household of Rs. 2,000 in Udayapur and Rs. 1,650 in Gopalpur, fishing alone accounts for Rs. 1,200 and Rs. 1,500 respectively. The comparatively higher fishing income in Gopalpur can be attributed to a longer peak season (Fig. 1).

The average income from non-fishing activities is As. 800 in Udayapur and Rs. 100 in Gopalpur. The relatively high income from non-fishing activities in Udayapur is mainly on account of agricultural activities (Table 6).

Non-fishing activities do not generate year-round income. Table 8 shows the time devoted to activities other than fishing.

Table 8

Duration of activities other than fishing

Period of activities	Ud	dayapur	G	Gopalpur	
renou of activities		No.	(%)	No.	(%)
Less than 3 mg	onths	37	(46)	67	(84)
3—6 months		41	(51)	3	(4)
More than 6 m	onths	2	(3)	10	(12)
Total		80	(100)	80	(100)

The fairly high percentage of households engaged in non-fishing activities for 3—6 months in Udayapur reflects the land and animal holdings of that village. Otherwise, non-fishing activities are generally for less than three months in both the villages.

Another important factor germane to earnings is of course the number of earning members in the family.

Table 9 shows that a good percentage of households has only one earning member; there are also many households with two members. The two categories together account for 70%—80% of the total number of households.

Table 9

Distribution of earning members among the households

Earning members	No. of households			
Laming members	Ud: No.	ayapur (%)	Gop No.	oalpur (%)
One	42	(53)	33	(41)
Two	25	(31)	24	(30)
Three	10	(12)	13	(16)
More than three	3	(4)	10	(13)
Total	80	(100)	80	(100)

From the distribution of various income groups (Table 10), it may be seen that in both the villages the largest income group is in the Rs. 1,001-2,000 bracket; the next largest group is in the Rs. 501-1,000 range.

Table 10
Distribution of (monthly) income

	No. of households			
Income groups				
	Uda	ayapur	Gop	alpur
	No.	(%)	No.	(%)
Less than Rs. 500	4	(5)	3	(4)
Rs. 501—1,000	15	(19)	18	(23)
Rs. 1,001 —2,000	36	(45)	41	(51)
Rs. 2,001—3,000	11	(14)	14	(17)
More than Rs. 3,000	14	(17)	4	(5)
Total	80	(100)	80	(100)

3.3 Spending patterns

Expenditure was divided into two major categories:

- expenditure for production purposes
- non-production expenditure

The breakdown of expenditure by category on different items is given in Tables 11 and 12. Of the total average annual expenditure of about Rs. 13,500 at Udayapur and As. 15,500 at Gopalpur, a substantial proportion (about 80%) is spent for purposes other than production. Gopalpur fisherfolk spend more money than their Udayapur counterparts on food, clothing and liquor. On a monthly basis, against an average income of Rs. 2,000, the Udayapur household spends As. 1,100, leaving a surplus of Rs. 900; the Gopalpur household is left with a surplus of only As. 350, the income and expenditure being Rs. 1,650 and Rs. 1,300 respectively.

Table 11

Average annual non-production expenditure per household

Spending		No. of households				
·	openang	Udayapur		Gopa	lpur	
		Rs.	(%)	Rs.	(%)	
Basic needs:	food	7,059	(68)	8,255	(63)	
	clothing	572	(5.5)	1,057	(8)	
	medicine	629	(6)	356	(3)	
Social festivals:	marriage	1,077	(10)	862	(7)	
	childbirth	138	(1)	95	(0.5)	
	boats & nets inauguration	116	(1)	20	(0.2)	
	liquor	437	(4)	1,465	(11)	
	chewing tobacco and smoking	50	(0.5)	34	(0.3)	
Religious functio	ns: main poojas	383	(4)	864	(7) _	
Total		10,461	(100)	13,008	(100)	

Table 12

Average annual expenditure per household on production

Spending	No. of households			
Special Specia	Uday	apur	Gopa	alpur
	Rs.	(%)	Rs.	(%)
Purchase of boats and nets	1,988	(66)	2,017	(79)
Maintenance of boats and nets	490	(16)	524	(21)
Purchase & maintenance of agricultural implements	548	(18)	_	_
Total	3,026	(100)	2,541	(100)

3.4 Patterns of credit and indebtedness

Fishing communities know two distinct credit sources: the traditional/informal and the institutional/formal. Traditional sources include moneylenders, middlemen, fish traders, boat owners, shopkeepers and pawn brokers. Institutional sources are mainly banks and cooperatives. Within the informal credit system there are the professional moneylenders, who do not ask what the loan is meant for, and the fish traders, who lend money to secure fish supplies (especially during the prawn season, as in Gopalpur). Shopkeepers do not lend money directly but sell items like rice on credit. Pawn brokers mortgage jewellery. Boat owners usually give loans to capable crew who are employed by them; they also lend money to other boat owners and crew.

Table 13

Pattern of indebtedness to traditional financiers

Indebted to	No. of households				
mastea to	Udayapur		Goj	Gopalpur	
	No.	(%)	No.	(%)	
Money lender	13	(43)	11	(26)	
Fish trader	1	(3)	15	(36)	
Boat owner	_	_	6	(14)	
Pawn broker	_	_	1	(2)	
Shopkeeper	7	(23)	4	(10)	
Relatives and friends	9	(31)	5	(12)	
Total	30	(100)	42	(100)	

Moneylenders play the leading role so far as traditional finance goes. The success of any moneylender depends — apart from his lending methods that are tailored to local needs — on several factors: flexibility, timely disbursement of loan, simple procedures, ability to judge creditworthiness, and loans for both production and non-production purposes.

Table 13 shows that in the households interviewed, only 38% in Udayapur take credit from the traditional sector, the moneylender being the main source; in Gopalpur the figure is higher (53%): the moneylender and the fish trader advance the bulk of the needs.

Table 14
Institutional credit

Credit source		No. of households			
Credit source	Uda	ayapur	Gopalpur		
	No.	(%)	No. (%)		
Bank	20	(47)	40 (95)		
Cooperatives	23	(53)	2 (5)		
Total	43	(100)	42 (100)		

Comparing Tables 13 and 14, we see that of the 80 households surveyed in each of the two villages, 30 in Udayapur avail of non-institutional credit and 43 go to institutions like banks. In Gopalpur, an equal number of households (42) borrow from both the sources; in the institutional financing sector, almost all types of households optfor banks. In Udayapur, however, cooperatives are as popular as banks.

Table 15 shows the rate of interest and the repayment period pertaining to different credit sources. Moneylenders charge the highest rate of interest and cooperatives the least. There are substantial differences between the rate of interest charged by traditional lenders on the one hand and institutions on the other. The repayment period is also very different. In some cases, moneylenders intentionally get the repayment of the principal prolonged so that they obtain substantially more interest. Relatives and shopkeepers charge the lowest interest rate. Sometimes, relatives do not expect interest on loans. Shopkeepers charge very little interest, since borrowing is mainly in kind and for a short period. In most cases the shopkeepers supply rice on credit and collect 5 to 10 paise more than the normal market price.

Table 15
Annual rate of interest

Credit source	Interest rate	Duration of loan
Moneylenders	40—50	not fixed
Fish trader	3545	—do—
Boat owner	25—35	—do—
Relatives & friends	1 5—20	short period
Cooperatives	11 —12	1 —5 years
Banks	12—13	1—5 years

In both the villages, between 61% and 67% of the households surveyed use institutional credit for production purposes (Table 16). This is because the credit system adopted is purpose-tied. Money borrowed from moneylenders, relatives and friends is used for purposes other than production.

Table 1 6 indicates that every household in Udayapur and Gopalpur is in debt for some reason or the other. But Tables 13 and 14, which analyzed traditional and institutional credit sources, seem to indicate that at least seven households in Udayapur are not in debt to any one. The reason for this discrepancy could not be fathomed. Information on loan amounts and on how many tapped both types of credit sources, is not available.

Table 16

Purpose of credit

Durnogo	No. of households			
Purpose	Ud No.	ayapur (%)	Gop No.	oalpur (%)
Purchase of boats and nets	29	(36)	29	(36)
Purchase of nets	8	(10)	11	(14)
Maintenance of boats and nets	10	(12)	5	(6)
Other productive investments (land, agri. materials, betel leaf business)	7	(9)	4	(5)
Food and other household consumption	11	(14)	10	(12)
Religious and social festivals	4	(5)	5	(6)
Accidental expenses, medicines, sickness, etc.	11	(14)	16	(21)
Total	80	(100)	80	(100)

3.5 Savings

It is widely believed that artisanal fisherfolk in general do not save or have no inclination to save, because they lack physical or financial assets and because they are too poor. But this study has proved this assumption false. It shows that rural folk do save, and save in different ways depending on what production assets they own.

The fisherfolk patronize chit funds — a popular fund-raising system under which a certain amount of money is pooled from contributors at regular intervals of time — often monthly — and loaned as a lump sum to one of the contributors. Other systems include domestic savings anJ savings in the form of assets (gold ornaments, other forms of jewellery, silver, steel and brass vessels). Some also invest in land, in cows and goats, etc. Interest in bank savings is increasing, there is the hope that it will lead to bank credit.

Of the 160 households interviewed in the two villages, 136 were found to save in some form or the other. In Udayapur, there are 66 households that save; 40 households save through banks and cooperative societies, 38 save through chit funds and at home. In Gopalpur, there are 70 households that save; 33 save through banks and cooperative societies, 54 through chit funds and at home. Obviously 26 households in the first village and seven in the second use both non-institutional and institutional channels. The term "saving" used here should be understood in the right perspective. The question posed to the respondents was whether they do save; if the answer was "yes", irrespective of the frequency, purpose and pace, it was taken as a positive response. The term "savings" may even cover repayment of loans taken from institutional sources.

Households who engage in both agriculture and fishing and settle in one village have a greater propensity to save than those who live near the beach and depend only on fishing.

Table 17
Habit of saving

	Savings	No. of hou	ıseholds
	Savings	Udayapur	Gopalpur
Traditional	at home	37	53
	chit fund	1	1
Institutional	bank	40	32
	cooperative	7	1
	post office	11	

It was found that households that save for short-term purposes use the money mainly for religious and social festivals. Long-term savings are meant for daughters' weddings or children's education, or at generating interest or at a future investment in a production asset.

Table 18

Purpose of saving

Purpose		No. of households			
	i dipoco	Uda No .	yapur (%)	Gop.	alpur (%)
			, ,		,
Long-term	marriage	14	(21)	14	(20)
	earn interest	11	(17)	2	(2.5)
	education of children	10	(15)	2	(2.5)
Short-term	immediate use (religious				,,
	functions, social festivals etc.)	30	(46)	41	(59)
Others		1	(1)	11	(16)
Total		66	(100)	70	(100)

Of the 80 households interviewed in each of the villages, 69% are in favour of a deposit mobilization drive and are willing to start or continue their institutional savings. Of the 69% actual and potential savers, 51% prefer door-to-door collection of deposits and some, on-the-spot with-drawal facilities.

In both the villages, more than 80% of the savers and potential savers are keen on deposit mobilization because it may expand credit facilities for them.

Deposit mobilization depends on the nature of the season and the time of day. Different hours of the day were suggested to the villagers, and their responses were as follows:

Table 19
Appropriate times for deposit and withdrawal of money

Suggested time	No. of ho	No. of households		
Suggested time	Udayapur	Gopalpur		
9 a.m12 noon	4	6		
12 noon—3 p.m.	46	37		
3 p.m6 p.m.	24	23		
Anytime	6	14		
Total households	80	80		

The most appropriate time is apparently the afternoon: it is preferred by 75% to 90% of the households, because of landings during the forenoon.

3.6 Relation between income and ownership

There was a direct relationship in both villages between income and ownership of boats: the possession of boats led to a higher income (Table 20). In Udayapur, where agriculture is an additional source of income, the ratio of number of boats per household was 0.8 in the highest income group, whereas a stronger relationship of 1.0 is seen in Gopalpur, where income is derived entirely from fishing.

Table 20

Relationship between income and ownership (U =Udayapur, G=Gopalpur)

Income Group	No. of households		No. of boats			Boats per household	
(As.)	U	G	U	G	U	G	
Less than 500	4	3	1	_	0.3	_	
501—1000	15	18	5	9	0.3	0.5	
1001 -2000	36	41	20	16	0.6	0.9	
2001—3000	11	14	10	11	0.9	0.9	
More than 3000	14	4	11	4	0.8	1.0	

3.7 Relation between income and indebtedness

The average indebtedness ranges between a minimum of Rs. 1,400 and a maximum of Rs. 3,000 per year. In Udayapur, the lowest income group suffers the highest indebtedness; it generally declines in the higher income groups. In Gopalpur, such a progressive decline is not observed; in fact there seems to be no correlation between indebtedness and income (Table 21).

Table 21
Income and Indebtedness

Ingomo grauno	Udayapur		Gopalpur		
Income groups (Rs.)	No. of households	Average indebtedness (Rs.)	No. of households	Average indebtedness (As.)	
Lessthan 500	4	3000	3	2000	
501—1000	15	1933	18	1889	
1001—2000	36	1722	41	2497	
2001—3000	11	1414	14	1875	
Morethan 3000	14	1678	4	2275	

4. SUMMARY AND CONCLUSIONS

To assess patterns of ownership, earning, spending, indebtedness and savings among fishing families, a preliminary study was conducted in two fishing villages in the state of Orissa, one in the north, and one in the south.

Boats and nets are the major assets of fisherfolk in the survey areas. Other assets include lands, houses, plantations (coconuts, mango, cashewnut). Jewellery, brass and silver utensils are found to be other forms of capital.

There were two main sources of income: fishing, and other activities.

The average monthly income per household was As. 2,000 in Udayapur (Rs. 1,200 from fishing, **Rs.** 800 from non-fishing activities) and Rs. 1,650 in Gopalpur (Rs. 1,500 from fishing, Rs. 150 from non-fishing activities). The earnings differ from one household to another according to:

- _ the extent of possession of boats and nets;
- the sharing system prevalent in the area;
- factors like good and lean catching seasons;
- the type of fish available;
- activities other than fishing.

The range of income is from less than Rs. 500 to more than Rs. 3,000 per month.

Expenditure can be classified by purpose: productive or non-productive. The major part of the expenditure, 80%, is devoted to non-productive spending: especially basic needs like food, clothing and medicine, followed by expenditure on marriages, social festivals and religious functions. The amount spent on lignor and tobacco is also significant.

3 [13]

The average monthly expenditure per household was about Rs. 1,100 in Udayapur and As. 1,300 in Gopalpur, indicating a surplus per household of As. 900 and Rs. 350 in the respective villages.

Two types of credit systems operate in fishing communities: the traditional and the institutional. Traditional sources comprise moneylenders, middlemen, fish traders etc. They charge an interest rate between 40% and 50% per annum. The elasticity of the interest rate is determined by the urgency of the demand for loans, on the one hand, and the number of moneylenders in the community on the other. The traditional lending system, tailored to the community's needs, is still the strongest in fisherfolk villages.

Of the 80 households surveyed in each village, between 47% and 54% have borrowed from banks and cooperatives, paying interest at the rate of 11—13% per annum. 61% to 68% of the households have borrowed for production-related activities. It was found that the money for consumption expenditure is borrowed from moneylenders, relatives and friends.

Although the survey indicates that fisherfolk do want to save, their savings are mostly for short-term needs and on a day-to-day basis. This is particularly true of domestic savings.

In general, households who engage in both fishing and non-fishing activities have a higher propensity to save than beach-based fishermen without any other source of income.

As for the scope for savings in future, the prospects are the best with the highest income groups. Group savings are more appropriate and helpful for lower income groups. Credit facilities and new income-generating activities boost incomes and motivate higher savings.

5. REFERENCES

Bay of Bengal Programme, 1984	Marine small-scale fisheries of Orissa: A General Description. Bay of Bengal Programme, BOBP/INF/7, Madras, India.
Mohapatra, P. 1983	Traditional marine fishing craft and gear of Orissa. Bay of Bengal Programme, BOBP/WP/24. Madras, India.
Kalavathy, M.H. and U. Tietze 1984	Artisanal marine fisheries in Orissa: A tec/7no-demographic study. Bay of Bengal Programme, BOBP/WP/29, Madras, India.
Sentiz 1 986	Research methods in social relations. London, Holt
Kerlinger, F.N. 1977	Foundations of behavioural research: London, Holt, Holt International Edition.
Yunus, M. 1983	Group-based savings and credit for the rural poor. Dhaka Grameen Bank.
Tietze, U. 1985	Artisanal marine fisherfolk of Orissa. Cuttack, Vidyapuri.

Appendix 1

QUESTIONNAIRES USED IN THE SURVEY

Name of the village

			Date:
1. \	Village Profile		
٦	To the village headman		
1 .1	Road to reach the village		
	Paved roads		
	Gravel roads		
	Dirt roads		
1 .2	What is the main means of transpo	ortation?	
	Bus		
	Truck		
	Footpath		
	Rail/road		
	Any others	What?	
1 .3	Type of housing	and number	
	Mud walls and tiles		
	Mud walls & thatched roofs		
	Thatched roof & thatched walls (w	vith straw)	
	Brick walls		
	Area of the house in sq.m	or no. of rooms	
1 .4	Does the village have electricity?		
	Yes	No	
	If yes, public street lights		
	Houselights	How many houses?	
1.5	Source of drinking water supply?		
	_ Pipe water from the tube well		
	_ Pump water from the tube well		
	Open wells		
	 Ponds, rivers, springs 		

1.6 School in the village distance to the village Day care centre hours walk or km Primary school hours walk or km hours walk or km Upper primary school Secondary school hours walk or km hours walk or km College 1.7 Do children go to school from this village? Yes If yes, how many children go to school? 1.8 Health facilities hrs walk or km Primary health centre Community health centre hrs walk or km Clinic hrs walk or km hrs walk or km Hospital hrs walk or km None hrs walk or km Others 1.9 Does the staff from the health centre visit the village? Yes How often 7 No 1.10 Isthere distance from the village Post Office hrs walk or km hrs walk or km Coops. hrs walk or km Bank How many people have moved to this village in the last two years and how many moved 1.11 out Moved into Moved out from Many Some A few None 1.12 If there is mobility in the village the people migrate to and immigrate from

1.	Personal Data	of Responder	nt			
	Respondent sex	·	Male	Female		
1.1	What is your re	What is your religion?				
	Hindu					
	Muslim					
	Any other					
1.2	What is your ca	aste?				
	Kaibarta					
	Gokha					
	Rajbansi					
	Jalari					
	Vodabalija					
	Any other		What?			
1.3	What language	What languages do you speak?				
	Hindi					
	Oriya					
	Telugu					
	Any others		What?			
1.4	Have you any skill other than fishing?					
	Yes	No	If Yes, What?			
1.5	.5 Can you read and write?					
	Yes	No	If yes, what standa	ard have you completed in school?		
1.6	Family member	re				
1.0	No.		the head of the famil	lv.		
	110.	reduction to	The rioda of the farm	y		
2.	Earning Patter	ns (including o	wnership/possession)			
2.1	·	•	pers earn an income p	per month ?		
Total amount Rs						
2.2	Do you have a	iny income gene	rating occupation apa	art from fishing?		
	Yes		No			
	If yes, for how many months do you engage yourself in the Occupation					
	and how much earn out of it?					

3-A [17]

2.3 Which months are:

Good catch seasons (GS)

Lean seasons (LS)

Off seasons (OS)

insert GS/LS/OS

JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC

2.4 What kind of fish species do you usually catch?

What is the average daily catch in kg. etc. (complete the table)

JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC

Fish Species

JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC

Av. Day income from the catch

Max. income/ day from the catch

Craft-gear combination used

Estimated daily catch in kg

Estimated daily income from catch

2.5 Possessions:

Items Local Number Individually Jointly owned No. of hired possessed name (pieces) owned number & how persons many of you are related

Kinds of boat(s) Kinds of net(s)

2.6 Are there any other kinds of assets owned by the family like:

Radio

Tape recorder

Watches

Jewellery

Utensils (brass)

Others What?

3.	Spending patterns						
3.1	How much do you spend on religious festivals (last year)?						
	List of religious festivals		Month	Average spent perfamily	Spent on items		
3.2	How much do you spend on rituals and other social functions (e.g. marriage, childbirth, launching of boats, death) (last year)?						
	List of rituals & other social functions		Occasions	Average spent per family	Spent on items		
3.3	How much does the family spend on an average on						
	_ Food (month)			per year o	per year or		
	_ Clothes			per year or			
	_ Durable goods like radio, gold			—do			
	 Purchasing of boats & 	nets		—do—			
	_ Purchase of agri. inputs like seeds, fertilizers etc			—do—			
	_ Maintenance/repair of	_ Maintenance/repair of nets & boats					
	_ Maintenance of agri. equipments			—do—			
4.	Savings Patterns						
4.1	Do you/your family save	?					
	No Why Not?						
	Yes						
4.2	How often do you save?						
	Daily						
	Weekly						
	Monthly						
4.3	For what purpose do you save?						
	For purchasing What?			at?			
	Immediate use						
	Education for children						
	Marriage of daughter						
	To earn interest						
	Others Wh			at?			
4.4	Do you save differently for different purposes?						
	Yes	No					

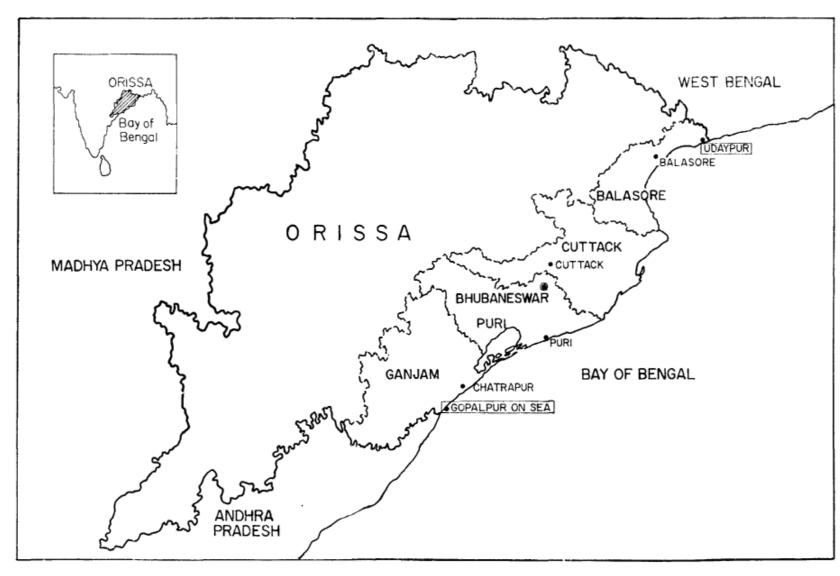
[19]

4

	If yes, for what purposes?						
	One for						
	Other for						
4.5	For how long have you intended	to save (by purpose)?					
	Months						
	Year(s)						
	Continuous						
4.6	6 Where do you save (by purpose)?						
	Bank	Chit fund					
	Post-office	Co-ops.					
	At home	In other form	What?				
4.7	If there is a bank/post office in the	ne village to collect savings are	you in a position to save?				
	Yes						
	No						
4.8	From your point of view, whom	do you think suitable and practic	al to collect savings?				
	 Bank personnel 						
	 Extension officers 						
	 Locally elected man/woman 						
	 To go to bank/post office you 	rself					
4.9	If savings is collected in door-to	o-door system do you also want	local withdrawal facility?				
	Yes	If yes, why?					
	No						
4.10	What kind of benefit do you e	xpect to gain from your saving	s bank?				
	Interest						
	Credit facility						
	Security						
	Some incentives						
	Others						
4.11	What time of the day is convewithdraw?	enient for you to go to bank or	post office to deposit or				
	Between 9 and 12 hrs.						

Between 12 and 15 hrs.

	Between 15 and 18 hrs.	
	Other time, say	
5.	Credit and Indebtedness	
5.1	Have you borrowed money in the last year?	
	Yes	
	No	
5.2	If yes,	
	How much?	
	For what purpose?	
5.3	From whom have you borrowed?	
	Bank	
	Boatowner	
	Fish trader/middleman	
	Private money lender	
	Pawn broker	
	Local shops	
	Relatives/friends	
	Coop societies	
	Others	
5.4	How much interest?	per cent per month
	Mode of payment	
	(only interest no principal)	
	Repayment period	



Publications of the Bay of Bengal Programme (BOBP)

The BOBP brings out six types of publications.

Reports (BOBP/REP/....) describe and analyze completed activities such as seminars, annual meetings of BOBP's Advisory Committee, and projects in member-countries for which BOBP inputs have ended.

Working Papers (BbBP/WP/...) are progress reports that discuss the findings of ongoing BOBP work.

Manuals and Guides (BOBP/MAG/...) are instructional documents for specific audiences.

Miscellaneous Papers (BOBPJMIS/...) concern work not originated by BOBP — but which is relevant to the Programme's objectives.

Information Documents (BOBP/INF...) arc bibliographies and descriptive documents on the fisheries of member-countries in the region.

J'fcwsletters (Bqy of Bengal News), issued quarterly, contain illustrated articles and features in non-technical style on BOBP work and related subjects.

A list of publications follows.

Reports (BOBP/REP/...)

- Report of the First Meeting of the Advisory Committee. Colombo, Sri Lanka, 28—29 October 1976.
 (Published as Appendix I of IOFC/DEV/78/14.1, FAO, Rome, 1978)
- 2. Report of the Second Meeting of the Advisory Committee. Madras, India, 29—30 June 1977. (Published as Appendix 2 of IOFC/DEV/78/44.1, FAO, Rome, 1978)
- Report of the Third Meeting of the Advisory Committee. Chittagong, Bangladesh, 1-10 November 1978 Colombo, Sri Lanka, 1978.
 (Reissued Madras, India, September 1980)
- 4. Role of Women in Small-Scale Fisheries of the Bay of Bengal. Madras, India, October 1980.
- 5. Report of the Workshop on Social Feasibility in Small-Scale Fisheries Development. Madras, India, 3–8 September 1979. Madras, India, April 1980.
- Report of the Workshop on Extension Service Requirements in Small-Scale Fisheries. Colombo, Sri Lanka, 8—12 October 1979. Madras, India, Jisne 1980.
- Report of the Fourth Meeting of the Advisory Committee. Phuket, Thailand, 27—30 November 1979. Madras, India, February 1980.
- Pre-Feasibility Study of a Floating Fish Receiving and Distribution Unit for Dubla Char, Bangladesh. G. Eddie, M. T. Nathan. Madras, India, April 1980.
- Report of the Training Course for Fish Marketing Personnel of Tamil Nadu. Madras, India, 3—14 December 1979. Madras, India, September 1980.
- 10.1 Report of the Consultation on Stock Assessment for Small-Scale Fisheries in the Bay of Bengal. Chistagong, Bangladesh, 16–21 June 1980. Volume 1: Proceedings. Madras, India, September 1980.
- 10.2 Report of the Consultation on Stock Assessment for Small-Scale Fisheries in the Bay of Bengal. Chittagong, Bangladesh, 16–21 June 1980. Volume 2: Papers. Madras, India, October 1980.
- II. Report of the Fifth Meeting of the Advisory Committee. Penang, Malaysia, 4–7 November 1980. Madras, India, January 1981.
- 12. Report of the Training Course for Fish Marketing Personnel of Andhra Pradesh. Hyderabad, India, 11–26 November 1980. Madras, India, September 1981.
- Report of the Sixth Meeting of the Advisory Committee. Colombo, Sri Lanka, 1–5 December 1981.
 Madras, India, February 1982.
- Report of the First Phase of the "Aquaculture Demonstration for Small-Scale Fisheries Development Project" in Plsang Nga Province, Thailand. Madras, India, March 1982.
- 15. Report of the Consultation-corn-Workshop on Development of Activities for Improvement of Coastal Fishing Families. Dacca, Bangladesh, October 27—November 6,1981. Madras, India, May 1982.
- Report of the Seventh Meeting of the Advisory Committee. New Delhi, India, January 17—21, 1983.
 Madras, India, March 1983.
- 17. Report of Investigations to Improve the Kattumaram of India's East Coast. Madras, India, July 1984.
- 18. Motorization of Country Craft, Bangladesh. Madras, India, July 1984.
- Report of the Eighth Meeting of the Advisory Committee. Dhaka, Bangladesh, January 16—19, 1984.
 Madras, India, May 1984.

- Coastal Aquaculture Project for Shrimp and Finfish in Ban Merbok, Kedah, Malaysia. Madras, India, December 1984.
- Income-Earning Activities for Women from Fishing Communities in Sri Lanka. B. Drewes. Madras, India, September 1985.
- Report of the Ninth Meeting of the Advisory Committee. Bangkok, Thailand, February 25—26, 1985.
 Madras, India, May 1985.
- Summary Report of BOBP Fishing Trials and Demersal Resources Studies in Sri Lanka. Madras, India. March 1986.
- Fisherwomen's Activities in Bangladesh: A Participatory Approach to Development. P. Natpracha Madras, India, May 1986.
- Attempts to Stimulate Development Activities in Fishing Communities of Adirampattinam, India.
 P. Natpracha, V.L.C. Pietersz. Madras, India, May 1986.
- Report of the Tenth Meeting of the Advisory Committee.
 Male. Maldives. 17–18 February 1986. Madras, India, April 1986.
- Activating Fisherwomen for Development through Trained Link Workers in Tamil Nadu, India.
 B. Drewes. Madras, India, May 1986.
- Small-Scale Aquaculture Development Project in South Thailand: Results and Impact. E. Drewcs. Madras, India, May 1986.
- Towards Shared Learning: An Approach to Non-formal Adult Education for Marine Fisherfolk of Tamil Nadu, India. L. S. Saraswathi and P. Natpraclsa. Madras, India, July 1986.
- 30. Summary Report of Fishing Trials with Large-Mesh Driftnets in Bangladesh. Madras, India, May 1986.
- In-Service Training Programme for Marine Fisheries Extension Officers of Orissa, India.
 U. Tietze. Madras, rndia, August 1986.
- 32. Bank Credit for Artisanal Marina Fisherfolk of Orissa, India. U. Tietze. Madras, rndia, May 1987.
- Non-formal Primary Education for Children of Marine Fisherfoik in Orissa, India. U. Tietze, Namita Ray. Madras, India, December 1987.
- The Coastal Set Bagnet Fishery of Bangladesh—Fishing Trials and Investigations. S.E. Akerman. Madras, India, November 1986.
- 35. Brackishwater Shrimp Culture Demonstration in Bangladesh. M. Kariin. Madras, India, January 1987.
- 36. Hilsa Investigations in Bangladesh. Colombo, Sri Lanka, June 1987.
- 37. High-opening Bottom Trawling in Tamil Nadu, Gujarat and Orissa, India: A Summary of Effort and Impact. Madras, rndia, February 1987.
- Report of the Eleventh Meeting of the Advisory Committee. Bangkok, Thailand, March 26—29, 1987.
 Madras, India, June 1987.

Working Papers (BOBP/WP/. ...)

- Investment Reduction and Increase in Service Life of Kattumaram Logs.
 R. Balan. Madras, India, February 1980.
- Inventory of Kattumarams and their Fishing Gear in Andhra Pradesh and Tamil Nadu. T. R. Menon. Madras, India, October 1980.
- Improvement of Large-Mesh Driftnets for Small-Scale Fisheries in Sri Lanka. G. Pajot. Madras, India, June 1980.
- 4. Inboard Motorisation of Small G.R.P. Boats in Sri Lanka. Madras, India, September 1980
- Improvement of Large-Mesh Driftnets for Small-Scale Fisheries in Bangladesh. G. Pajot. Madras, India, September 1980.
- Fishing Trials with Bottom-Set Longlines in Sri Lanka.
 G. Pajot, K. T. Weerasooriya. Madras, India, September 1980.
- 7. Technical Trials of Beachcraft Prototypes in India.
 - 0. Gulbrandsen, G. P. Gowing, R. Ravikumar. Madras, India, October 1980.
- Current Knowledge of Fisheries Resources in the Shelf Area of the Bay of Bengal B. T. A. Raja. Madras, India, September 1980.
- 9. Boatbuilding Materials for Small-Scale Fisheries in India. Madras, India, October 1980.
- Fishing Trials with High-Opening Bottom Trawis in Tamil Nadu, India. G. Pajot, J. Crockett. Madras, India, October 1980.
- The Possibilities for Technical Cooperation between Developing Countries (TCDC) in Fishejies.
 E. H. Nichols. Madras, India, August 1981.
- Trials in Bangladesh of Large-Mesh Driftnets of Light Construction. G. Pajot, T. K. Das. Madras, India, October 1981.

- 13. Trials of Two-Boat Bottom Trawling in Bangladesh. G. Pajot, J. Crockett. Madras, India, October 1982.
- 14. Three Fishing Villages in Tamil Nadu. E. Drewes. Madras, India, February 1982.
- 15. Pilot Survey of Driftnet Fisheries in Bangladesh. M. Bergstrom. Madras, India, May 1982.
- 16. Further Trials with Bottom Longlines in Sri Lanka. Madras, India, July 1982.
- Exploration of the Possibilities of Coastal Aquaculture Development in Andhra Pradesh. Soleh Samsi, Sihar Siregar and Martono. Madras, India, September 1982.
- Review of Brackishwater Aquaculture Development in Tamil Nadu. Kasemsant Chalayondeja and Anant Saraya. Madras, India, August 1982.
- Coastal Village Development in Four Fishing Communities of Adirampattinam, Tamil Nadu, India. F. W. Blase. Madras, India, December 1982.
- Further Trials of Mechanized Trawling for Food Fish in Tamil Nadu.
 G. Pajot, J. Crockett, S. Pandurangan, P. V. Ramamoorthy. Madras, India, December 1982.
- Improved Deck Machinery and Layout for Small Coastal Trawlers. G. Pajot, J. Crockett, S. Pandurangan,
 P. V. Ramamoorthy. Madras, India, June 1983.
- The Impact of Management Training on the Performance of Marketing Officers in State Fisheries Corporations.
 U. Tietze. Madras, India, June 1983.
- Review of Experiences with and Present Knowledge about Fish Aggregating Devices.
 M. Bergstrom, Madras, India, November 1983.
- 24. Traditional Marine Fishing Craft and Gear of Orissa. P. Molsapatra. Madras, India, April 1986.
- 25. Fishing Craft Development in Kerala: Evaluation Report. O. Gulbrandsen. Madras, India, June 1984.
- 26. Commercial Evaluation of IND-13 Beachcraft at Uppada, India. R. Ravikumar. Madras, India, June 1984.
- 27. Reducing Fuel Costs of Small Fishing Boats. O. Gulbrandsen. Madras, India, July 1986.
- Fishing Trials with Small-Mesh Driftnets in Bangladesh.
 G. Pajot and T. K. Das. Madras, India, March 1984.
- Artisanal Marine Fisheries of Orissa: a Techno-Demographic Study. M. H. Kalavathy and U Tietze. Madras, India, December 1984.
- 30. Mackerels in the Malacca Straits. Colombo, Sri Lanka, February 1985.
- 31. Tuna Fishery in the EEZs of India, Maldives and Sri Lanka. Colombo, Sri Lanka, February 1985.
- Pen Culture of Shrimp in the Backwaters of Killai, Tamil Nadu: A Study of Techno-economic and Social Feasibility. R. N. Roy, Madras, India, January 1985.
- Factors that Influence the Role and Status of Fisherwomen. K. Anbarasan. Madras, India, April 1985.
- 34. Pilot Survey of Set Bagnet Fisheries of Bangladesh. Abul Kashern. Madras, India, August 1985.
- Pen Culture of Shrimp in the Backwaters of Killai, Tamil Nadu. M. Karim and S. Victor Chandra Bose. Madras, India, May 1985.
- 36. Marine Fishery Resources of the Bay of Bengal. K. Sivasubramaniam. Colombo, Sri Lanka, October 1985.
- 37. A Review of the Biology and Fisheries of *Hilsa ilisha* in the Upper Bay of Bengal. B. T. A. Raja. Colombo, Sri Lanka, October 1985.
- Credit for Fisherfolk: The Experience in Adirampattinam, Tamil Nadu, India.
 R. S. Anbarasan and O Fernandez. Madras, India, March 1986.
- The Organization of Fish Marketing in Madras Fishing Harbour. M. H. Kalavathy. Madras, India, September 1985.
- Promotion of Bottom Set Longlining in Sri Lanka. K. T. Weerasooriya, S. S. C. Pieris, M. Fonseka. Madras, India, August 1985.
- 41. The Demersal Fisheries of Sri Lanka. K. Sivasubramaniam and R. Maldeniya. Madras, India, December 1985.
- 42. Fish Trap Trials in Sri Lanka. (Based on a report by T. Hammerman). Madras, India, January 1986.
- 43. Demonstration of Simple Hatchery Technology for Prawns in Sri Lanka. Madras, India, June 1986.
- 44. Pivoting Engine Installation for Beachlanding Boats. A. Overa, R. Ravikumar. Madras, India, June 1986.
- Further Development of Beachlanding Craft in India and Sri Lanka.
 A. Overa, R. Ravikumar, O. Gulbrandsen, G. Gowing. Madras, India, July 1986.
- Experimental Shrimp Farming in Ponds in Polekurru, Andhra Pradesh, India.
 A.J.Janssen, T. Radhakrishna Murthy, B. V. Raghavulu, V. Sreekrishna. Madras, India, July 1986.
- 47. Growth and Mortality of the Malaysian Cockle (Anadara Granosa) under Commercial Culture: Analysis through Length-Frequency Data. Ng Fong Oon. Madras, India, July 1986.

- Fishing Trials with High-Opening Bottom Trawis from Chandipur, Orissa, India. G. Pajot and B. B. Mohapatra. Madras, India, November 1986.
- Pen Culture of Shrimp by Fisherfolk: The BOBP Experience in Killai, Tamil Nadu, India. E. Drewes, G. Rajappan. Madras, India, April 1987.
- Experiences with a Manually Operated Net-Braiding Machine in Bangladesh. B.C. Gillgren. Madras, India, November 1986
- Hauling Devices for Beachianding Crai't. A. Overa, P. A. Hemminghyth. Madras, India, August 1986.
- Experimental Culture of Seaweeds (Grailaria Sp.) in Pcnang, Malaysia. (Based on a report by Maxwell Doty and Jack Fisher.) Madras, India, August 1987.
- Atlas of Deep Water Demersal Fishery Resources in the Bay of Bengal. T. Nishida and K. Sivasubramaniam. Colombo, Sri Lanka, September 1986.
- Experiences with Fish Aggregating Devics in Sri Lanka. K.T. Weerasooriya. 54 Madras, India, January 1987.
- Study on Income, Indebtedness and Savings among Fisherfolk of Orissa, India. 55 T. Mammo, Madras, India, December 1937.
- Fishing Trials with Bcachlanding Craft at Uppada, Andhra Pradesh, India. L. Nyberg. Madras, India, June 1987.
- Identifying Extension Activities for Fisherwomen in Visakhapatnans District, Andhra Pradcsh, India. Diana Tempelman. Madras, India, August 1987.

Manuals and Guides (BOBP/MAG/. .

- 1. Towards Shared Learning: Non-formal Adult Education for Marine Fisherfolk. Trainers' Manual. Madras, India, June 1985.
- 2. Towards Shared Learning: Non-formal Adult Education for Marine Fisherfolk. Animators' Guide, Madras, India, June 1985.
- Fishery Statistics on the Microcomputer: A BASIC Version of Hasselblad's NORMSEP Program. D. Pauly, N. David, J. Hertel-Wulif. Colombo, Sri Lanka, June 1986.
- 4. Separating Mixtures of Normal Distributions: Basic Programs for Blsattacharya's Method and Their Applications to Fish Population Analysis. H. Goonetilleke, K. Sivasubramaniam. Madras, India, November 1987.
- Bay of Bengal Fisheries Information System (BOBFINS): User's Manual. Madras, india, September 1987.

Miscellaneous Papers (BOBP/MIS/. . .

- I. Fishermen's Cooperatives in Kerala: A Critique. John Kurien. Madras, India, October 1980.
- Consultation on Social Feasibility of Coastal Aquaculture. Madras, India, 26 November—1 December 1984. Madras, India, November 1985.
- Studies on Mesh Selectivity and Performance: the New Fish-cum-Prawn Trawl at Pesalai, Sri Lanka. M.S.M. Siddeek. Madras, india, September 1986.
- Motorization of Dinghy Boats in Kasafal, Orissa. S. Johansen and O. Gulbrandsen Madras, India, November 1986.

Information Documents (BOBP/INF/. .

- Women and Rural Development in the Bay of Bengal Region: Information Sources. Madras, India, February 1982.
- 2. Fish Aggregation Devices: Information Sources. Madras, India, February 1982.
- 3. Marine Small-Scale Fisheries of India: A General Description. Madras, India, March 1983.
- 4. Marine Small-Scale Fisheries of Andhra Pradesh: A General Description. Madras, India, June 1983.
- Marine Small-Scale Fisheries of Tarnil Nadu: A General Description. Madras, India, December 1983. 5.
- Marine Small-Scale Fisheries of Sri Lanka: A General Description. Madras, India, November 1984. 6.
- Marine Small-Scale Fisheries of Orissa: A General Description. Madras, India, December 1984.
- Marine Small-Scale Fisheries of Bangladesh: A General Description. Madras, India, September 1985.
- Food and Nutrition Status of Small-Scale Fisherfolk in India's East Coast States: A Desk Review and Resource Investigation. V. Bhavani. Madras, India, April 1986.

Newsletters (Bay of Bengal News):

28 issues quarterly from January 1981 to December 1987.

Published by the Bay of Bengal Programme, FAO, 91, St. Mary's Road, Abhiramapuram, Madras 600 018 India. Printed at Amra Press, 600 041.