## Marine Fisheries Census 2005

Part - I

## Contents

Message
Foreword
Preface
Preamble
Executive summary ..... 1
Marine Fisheries Census 2005 -
Genesis and Main Features ..... 3
Summary ..... 13
List of scientific and technical personnel involved in the Census ..... 18
Tables ..... 21
Figures ..... 51
Census Scenes ..... 99

# Marine Fisheries Census 2005 

## PART - I



Government of India
Ministry of Agriculture
Department of Animal Husbandry,
Dairying \& Fisheries, Krishi Bhavan, New Delhi


Central Marine Fisheries Research Institute, Cochin
(Indian Council of Agricultural Research, New Delhi)



28 June, 2006

## MESSAGE

Fisheries sector is a source of income and employment generation. It supports growth of a number of subsidiary industries and makes available cheap and nutritious food. At the same time it provides livelihood for a large section of economically backward population of the country. Marine fisheries sector has undergone vast changes with the introduction of modernized crafts, gears and other scientific equipment.

Management of marine fisheries is essentially an exercise in natural resource management. However, this natural resource, unlike other resources, is invisible, diverse, migratory, seasonal and subject to its own dynamics as well as impacts from anthropogenic and climatic interferences. Thus, managing such a resource is a difficult task. To make concerted efforts in this direction, the correct and updated information on the men and material available with the sector is a must.

I am happy to note that the Department of Animal Husbandry, Dairying and Fisheries took the initiative to conduct Census on Marine Fisheries in order to have a detailed database on the persons and material involved in marine fishing and its allied activities. I place on record my appreciation for the concerted efforts put in by Central Marine Fisheries Research Institute to accomplish the task of marine census assigned to them within time and for bringing out this publication. This census will definitely cater to the need of planners, administrators and other stakeholders of the fisheries sector for overall development of the sector.

(SHARAD PAWAR)

## FOREWORD

Fisheries sector plays a crucial role in the economy in terms of providing employment to over 14 million people and foreign exchange earnings. The annual marine fish produce is about 2.8 million tonnes against the harvestable potential of 3.93 million tonnes. The growth rate in marine fish production is only $1.8 \%$ as against $6.2 \%$ in inland fisheries.

The marine sector is dynamic and has undergone substantial changes over the years and supports the livelihood of millions of people. Major factors having visible impact on marine fisheries are introduction of mechanized trawlers and purse seiners, motorization of country craft, multi-day fishing crafts, etc. Modern electronic gadgets for positioning and fish finders have improved the efficiency of craft.

In order to formulate long term plan and to chalk out developmental strategies for the development of marine fisheries to face new challenges coming up, it is essential to have information on number of fishing villages, landing centres, fishers population, active fishermen, fishing crafts and gear including the status of infrastructural facilities in maritime States of India.

The need to have census on marine fisheries has been felt from time to time. Keeping in view the need and expertise available with Central Marine Fisheries Research Institute (CMFRI), the Department of Animal Husbandry, Dairying and Fisheries decided to entrust CMFRI the task to conduct Census on Marine Fisheries in mainland maritime states / UTs.

The marine fisheries census was conducted during April-June, 2005 in all maritime states except in Tamil Nadu and Pondicherry due to Tsunami relief operation and resettlement of fishermen. These States were covered during November-December, 2005.

I take this opportunity to express my thanks to officers of States \& UTs who have wholeheartedly cooperated in collecting the information. I also wish to place on record my appreciation of all officers \& staff of CMFRI especially FRA Division for conducting the census.

I hope that the information generated through the census will be found useful by planners, policy makers, research workers and others working for well being of the sector.

July 2006
Krishi Bhawan,
New Delhi
(P.M.A. HAKEEM)

Secretary
Department of Animal Husbandry, Dairying \& Fisheries, Ministry of Agriculture, Government of India.

## PREFACE

Indian marine fisheries has a long history of development from its subsistence fisheries during the pre 1950's to full fledged modernized industrial activities in the recent years. Many developments have taken place in marine sector and the methodology of catch has also undergone sea-change over the years with the introduction of modernized crafts, gears, fish finders and other scientific equipment. Though marine fish landings is almost stagnant at around 2.8 million tonnes for the last 4-5 years, still there is scope of enhancement of fish catch as the harvestable potential worked out for this sector is 3.93 million tonnes. With the passage of time, new developments like cage culture, sea ranching, etc. are being practiced in several countries and India needs to go ahead with all these activities for tapping the potential of marine fisheries.

In order to have a fresh database on the persons and material involved in the marine fisheries sector, requirement of conducting a census on marine fisheries was felt. This was made a component of the Central Sector Scheme on "Strengthening of Data Base and Information Networking for the Fisheries Sector" during Tenth Plan. The task to conduct the census on marine fisheries was entrusted with Central Marine Fisheries Research Institute (CMFRI), Kochi. The methodology for the census was approved by a Technical Monitoring Committee under the chairmanship of Director, Indian Agricultural Statistics Research Institute (IASRI) comprising the experts from IASRI, Indian Statistical Institute, National Sample Survey Organization, Planning Commission, Directors of Fisheries of all State/UT Governments, etc. The results of census have been brought out in this publication for the use of stakeholders, research institutes, state governments and other agencies.

The publication covers Executive Summary, scope, coverage and methodology on marine fisheries census, diagrams \& charts, schedules and instructions used for data collection. The data collected includes items such as population structure, education status, active fishermen, gender-wise fishing and allied activities, occupation profile, religion and community, membership in cooperatives, crafts owned by fisher folk, their sharing pattern, gears owned by fisher folk and their sharing pattern, electronic equipment, life saving equipment, fishers who received training, housing, education and other infrastructural facilities.

I appreciate the sincere effort put in by CMFRI especially the Fishery Resource Assessment Division to accomplish this mammoth task and for bringing out publication in a time bound manner. I hope and trust that the publication will fulfill the needs of all the stakeholders, research scholars, planners and other agencies related with fisheries sector.

July 2006
Krishi Bhawan,
New Delhi

## (AJAY BHATTACHARYA)

Joint Secretary (Fisheries)<br>Department of Animal Husbandry, Dairying \& Fisheries<br>Ministry of Agriculture, Government of India

## PREAMBLE

That basic information on fishers, catches, craft and gear, fishing effort, prices and markets is of fundamental importance in marine fisheries governance and planning is a well recognized fact. Also required are information on landings, trends, species ratio and compositions, size at capture, length frequencies, catch per unit effort, yield per recruit, mortality rates and host of other parameters which also contribute to development of appropriate fisheries management interventions. Occasional census (frame surveys) and sample based fishery surveys conducted at regular intervals are to be viewed not as an end but as an important source for a wide range of activities which include estimation of total production, estimation of total value of fish production, price at landing, fishing effort, number of active fishers, human and financial resources etc. Thus fisheries census acquires a role as important as that of human population census, a fact well recognized by all countries who are concerned about managing their fishery resources based on knowledge based information system.

The earliest attempt to build up a planned survey of marine fishing villages and landings was carried out by the Central Marine Fisheries Research Institute (CMFRI) way back in 1948-49. The pilot survey conducted yielded information on village-wise data on total fishermen population, number of active fishermen, fishing units of different types, varieties of fish caught and fishing seasons. Successive such surveys were carried out during 1957-58 and 1961-62. All these contributed to development of an appropriate, reliable and scientifically tested methodology for collection of data on marine fish landings from the Indian seas. A similar survey was conducted in 197377 covering detailed information on number of mechanized boats, different categories of indigenous fishing crafts and gears in each maritime state, the details of which were published in Marine Fisheries Information Service No. 3 (1978). In the year 1980 the CMFRI undertook a massive and intensive exercise of carrying out a well organized and systematic marine fisheries census in all the maritime States in the mainland (except Maharashtra where the State Government had carried out the census in the previous year). This first ever systematic census of marine fisheries conducted in 1980 yielded much valuable micro level data covering all the maritime States. This census was carried out on a massive scale within a period of less than a month with the help of 165 staff of the Institute and 1,500 contract personnel. The team covered 2,132 marine fishing villages with 1,442 landing centres and 333,038 households. The summary results of the census have been published by CMFRI in Marine Fisheries Information Service No. 30 (1981).

Since 1980, no all India marine census was carried out because of various operational, personnel and financial reasons, although the need was much felt by researchers, planners and policy makers. The Central Marine Fisheries Research Institute (CMFRI) ventured into this arduous task with the funding support from the Dept. of Animal Husbandry, Dairying \& Fisheries, Ministry of Agriculture, Govt. of India in the year 2005. A great deal of planning, technical consultations, designing the various schedules and vetting had been carried out intensively before the onset of the census. Schedules for data collection and publicity materials such as posters and handouts were printed in the official languages of the respective maritime states concerned. Mock sample surveys were also conducted to free test the schedules and as a part of training of the enumerators. A software for data entry, validation and processing was developed in-house. The data entry was carried out by specially recruited trained data entry operators. The all India census was planned to be held within a month from April-May 2005 all along the Indian coast. However, the most unexpected tsunami during December 2004 destroyed several fishing villages, craft and gear and also resulted in loss of lives along the coastal regions of Tamil Nadu and Pondicherry. This resulted in rescheduling the census activities for the States of Tamil Nadu and Pondicherry. The spontaneity of the census is statistically mandatory and thus the entire census operation was planned from $15^{\text {th }}$ April to $15^{\text {th }}$ May 2005 for the marine States except Tamil Nadu and Pondicherry where the census was carried out during November-December 2005. The massive exercise coordinated by the network of dedicated officials of CMFRI, covering 3,202 fishing villages, $1,375_{\lambda}$ landing centres and 756,212 households all along the maritime states of the country resulted in a wealth of information which is presented in the present report. The very fact that the census has been conducted after a gap of two and half decades makes this information so valuable. A glance through the present report will throw much light on the marine fisheries scenario which has been undergoing tremendous change during the past two decades. The societal structure in the fishing villages has also undergone change with the emergence of a new category "craftlords" similar to landlords and the domination of fisher labourers in maritime states. The ownership pattern of crafts and gears have also changed. The changes in the pattern of employment and livelihood of fisher community also is interesting as well as family size and structure of households. Attempts have been made in this report to present summary information in the form of charts. Figures depicting some important aspects have also been provided. All these will enable the users to have a better understanding of the scenario. The report
is bound to have a lasting impact as an unique source of authentic information for research workers, planners and policy makers for many years.

It is my pleasure to record my deep sense of appreciation to the entire team of CMFRI sphereheaded by Dr. M. Srinath, Head of Division and National Team Leader, Marine Fisheries Census, 2005 and the staff of the Fishery Resources Assessment Division (FRAD) for the excellent planning, consultations, designing, recruiting trainees and organizing and conducting this massive exercise as per the plans in the most admirable way. The excellent job done through team work right from planning stage to the final publication of the report is a remarkable testimony of the strength that lies within the CMFRI for carrying out any task which is challenging and difficult. I thank the entire team, including the field staff who were on contract, who have done this job sincerely and with devotion. I also thank the Dept. of Animal Husbandry, Dairying \& Fisheries for the funding support, encouragement and cooperation for carrying out this onerous task. My Sincere gratitude is due to the Department of Fisheries of the various maritime states and Union Territories for support for the Census. I also thank the Indian Council of Agricultural Research (ICAR) for providing an enabling environment to carry out the marine fisheries census. I am confident that this report will serve as an important source of information for the strategic planning and intervention process aimed at development of marine fisheries in India.


Prof. Mohan J oseph Modayil Director, CMFRI

National Co-ordinator, National Marine Fisheries Census, 2005

## Contents

Message
Foreword
Preface
Preamble
Executive summary ..... 1
Marine Fisheries Census 2005 -
Genesis and Main Features ..... 3
Summary ..... 13
List of scientific and technical personnel involved in the Census ..... 18
Tables ..... 21
Figures ..... 51
Census Scenes ..... 99

## EXECUTIVE SUMMARY

For developing a comprehensive marine fisheries policy, it is essential not only to have reliable information on the status of marine fish resources along with fishing effort expended but also the number of fishing villages, landing centres, fisherfolk population, their occupation status, fishing crafts, fishing gears and other related parameters. Keeping this in view the Central Marine Fisheries Research Institute (CMFRI), Cochin has been conducting frame surveys at periodic intervals. Marine fisheries census on an all India basis was last conducted by CMFRI during May - July, 1980.

Since the last census, the marine fisheries in India have witnessed both qualitative and quantitative changes. Post 1980 has also been a period where a number of management/policy interventions were made by the Government of India and the maritime states for ensuring sustainability, conservation of resources and to protect the interests of artisanal fishermen. Surely, the policies and interventions need to be reviewed and fine tuned in view of the highly dynamic nature of marine fisheries. For this a strong realtime and reliable database on various aspects of marine fisheries is essential. Recognising such a need, Department of Animal Husbandry, Dairying and Fisheries (DAHD\&F), Ministry of Agriculture (MOA), Govt. of India, has taken up during the $10^{\text {th }}$ Five Year Plan, a programme on Strengthening of Database and Information Networking for Indian Fisheries Sector in which Marine Fisheries Census is a major component. Recognising the expertise and experience of CMFRI in conducting such massive census surveys, the DAHD\&F, MOA has entrusted the task of conducting the All India Marine Fisheries Census in the mainland to CMFRI with a funding support of Rs. 80.5 lakhs. Fishery Survey of India, Mumbai was given the task of conducting such census in the Island territories of Lakhshadweep, Andaman \& Nicobar Islands.

Frame of the survey, namely, the marine fishing villages available with CMFRI was validated and updated with the latest information obtained from the respective maritime states. After identification of census parameters such as the population size, education, religion, occupation, number of crafts and number of gears etc., the necessary schedules were designed to collect information and these were approved by the Technical Monitoring Committee set up by DAHD\&F, MOA. 34,500 numbers of Schedule I (in vernacular and in English) to collect household information on identified parameters and 3,600 numbers of Schedule II to record village wise information on infrastructure and other details were printed. 13,900 posters and 34,700 handouts (both in vernacular) were also printed.

Since the post Tsunami relief operations and resettlement of fishermen were still in progress in Tamil Nadu and Pondicherry, the census could not be conducted

## Marine Fisheries Census 2005

simultaneously in all the maritime states. Thus, census was conducted in two phases with the first phase covering all the maritime states and Union Territories except Tamil Nadu and Pondicheery which were covered during second phase. The first phase was conducted during April-June, 2005 and the second during November-December, 2005. The formal launching of Census operation was officially signalled by Shri Ajay Bhattacharya, IAS, Joint Secretary, DAHD\&F, New Delhi at a brief function organized at the Central Marine Fisheries Research Institute, Cochin on the morning of 15 April 2005 and thereafter at the field level at Narakkal, near Cochin, Ernakulam district, Kerala. Director, CMFRI was the National Level Co-ordinator, assisted by the Head, Fishery Resources Assessment Division and all the Scientists-in-charge of various Regional/Research Centres of CMFRI. Over 300 CMFRI staff (Scientific and Technical) supervised the field level and zonal level census operations ensuring proper collection of relevant data. A total of 1492 field enumerators mostly drawn from the fishing communities/fishing villages covered 3202 marine fishing villages. After completion of the census in both the phases, the data were sent to headquarters for processing and preparation of reports. The software required for data entry, data validation and processing was developed by the scientists of F.R.A. Division, CMFRI. There are 3.52 million marine fisherfolk in 756,212 households in 3,202 marine fishing villages of the maritime states and Union Territories of the main land. Women form $48.6 \%$ of the population with 948 females for 1000 males. The average family size is 4.7. Nearly $56.5 \%$ of fisherfolk are educated with varying levels of education. Among males, the major fishery related occupations are, labour (39.2\%), mending of nets (28.6\%) and marketing ( $14.0 \%$ ). Among women, the major fishing associated activities are, marketing (41.8\%), labour ( $18.4 \%$ ) and curing/processing ( $18 \%$ ). About $46.8 \%(1,645,919)$ of fisherfolk are occupied with active fishing and fishery related activities. One out of five fisherfolk is a member of some co-operative society (fisheries or others). About $15 \%$ of the fisherfolk have membership in fisheries co-operative societies. There are 238,772 craft in the fishery of which 58,911 are mechanised, 75,591 are motorized and rest or non-motorised/non-mechansied. Out of 29,241 trawlers in the fishery, Gujarat $(8,002)$ accounts for the maximum followed by Tamil Nadu $(5,300)$, Maharshtra $(4,219)$, Kerala $(3,982)$ and other states. Nearly two-third of the motorized craft in the fishery are accounted by Tamil Nadu $(22,478)$, Andhra Pradesh $(14,112)$ and Kerala $(14,151)$. Out of 185,438 craft owned by fisherfolk, 35,806 are mechanised, 52,971 motorised and 96,661 are non-motorised/non-mechanised. Trawlers account for $39.6 \%$ of the mechanised craft owned, followed by gillnetters ( $31.3 \%$ ), dolnetters (19.2\%) and others. Nearly $62 \%$ of the fisherfolk families involved in fishing do not possess any craft. About $47 \%$ of the fisher families involved in fishing, possess neither any craft nor gear. In the maritime states, Kerala has $66 \%$ of such families, followed by West Bengal (49\%), Tamil Nadu (46\%) and others.

## MARINE FISHERIES CENSUS 2005GENESIS AND MAIN FEATURES

## Introduction

Recognising the need for an informed fisheries management regime, the Department of Animal Husbandry, Dairying and Fisheries (DAHD\&F), Ministry of Agriculture, Government of India has drawn up a scheme during the $10^{\text {th }}$ Five Year Plan for strengthening of database and information networking for the Indian Fisheries sector. Availability of reliable and latest data in time is an important requirement for evolving appropriate policies for fisheries management. To achieve this, a national level census on important attributes of marine fisheries has been envisaged as a precursor to developing a national database and establishing information network.

Such information, also provides, the sampling frame needed for the resources data collection programme for estimation of marine fish landings and fishing effort which are needed for fish stock assessment for different regions of the country. Further, periodic frame surveys are necessary to understand the socio-economic status of the traditional and small scale mechanised sectors, in view of the changing pattern of fishing industry. Central Marine Fisheries Research Institute has been conducting frame surveys at periodic intervals ever since 1948-49. The last census, on an all India basis was conducted in 1980 by the Institute. Two decades have elapsed since the last census on marine fishermen. There is an imperative need to collect this information in a most scientific manner, taking in view of the fact that such a census is scheduled within the shortest minimum possible time so as to obtain most accurate data on these aspects. The planners, researchers and managers do need the updated database. The National Level Review Committee constituted by Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Govt. of India, underscored the importance to carry out a census of fishermen population, fishing craft, gear etc. It was decided to make a beginning in this direction by early 1999 with one year action plan. CMFRI, Cochin is identified as the nodal agency to conduct a national level marine fisheries census. Due to paucity of funds and for other administrative reasons, the census could not be conducted in 2000. However, the Central Sector Scheme of DAHD\&F, MOA, Govt. of India, on Strengthening of database and information networking for the fisheries sector during the Tenth Plan, has marine fisheries census as one of the important components. Recognising the experience and expertise available with CMFRI, the Institute was entrusted with the task of conducting marine fisheries census of the main land. Coverage of Island territories of Lakshadweep, Andaman\&

## Marine Fisheries Census 2005

Nicobar Islands was earmarked for Fishery Survey of India, Mumbai.
The massive exercise (covering more than 3000 fishing villages and over 7 lakh households), with a budgetary provision to the tune of Rs. 80.5 lakhs, was conducted in two phases. In the first phase, conducted during April-June, 2005 all the maritime states and Union Territories were covered except Tamil Nadu and UT of Pondicherry (Tamil Nadu coast). The second phase of census was carried out during NovemberDecember, 2005.

## Scope

Any operation billed as a national exercise is bound to envisage issues and inquests generated by the main objectives of the operation. The very fact that this exercise is being carried out after a big gap of two decades and a half, pegs the area of coverage to be vast and virgin due to the obvious paucity of updated information. The fisheries census, as ordained in the present venture, had to focus on the real chunk of the coastal mass whose livelihood is entwined with fishing related operations. This clearly necessitates the unambiguous definition of the target mass as an important precursor. As the Census had been aimed to aid planning and policy making in the fishery sector, there is an imperative need to figure out the end users of such programmes. Taking view of this, this operation has adopted a twin strategy, one to cover the genuine dependants of this profession, who had to be subtly differentiated from the broader categorization of the beneficiaries of fishery, from their places of dwelling and the other to record the wherewithal wealth from the points of fishing operation. This gives the scope for rating the level of fishery related operations both from the fishing village point of view as well as the more commercial landing centre based angle. The Census data aggregation methodology has been divided at the very basic level of schedules and enumerators itself so as to address this two-pronged modus operandi. The collection, categorization and reporting of the Census information has been consistent while marking the difference between the fishery per se and fisher-folk.

The Census has also taken into account the sea change that has occurred in the 25 years since the last exercise, which is evident in the schedules designed. One such palpable difference is the effort to note down the ownership pattern of crafts and gears, which has not been attempted to so far. Further, the reports are devised to focus only on the physical status of the fishery inventory while making a conscious attempt to avoid inquiry about the economic status of the fishing folk. This was a premeditated effort to pep up the veracity and genuineness of the data collected. The Census figures in the form collected are supposed to be the dossier on manpower
involved in fishery for sustenance along with the status of their wherewithal. The report also focuses on other assorted information including electronic gadgets for communication and life saving equipment.

Apart from catering to the frame requirement for any future survey attempts targeting the fishers, this exercise is bound to give a solid insight into the state of affairs as regards the concept of core fishing and allied fishing activities by way of pointing out the proportion of human resources involvement. The craft and gear strength of different maritime states is presented from two important angles, which have always been glossed over. The fishery centered angle should serve more as status report of the infra structural facilities available at various landing centers along the coast. But the fishing village centered view is bound to give a different picture to the planners vis-à-vis the socio-economic package on the anvil targeting the mass per se. Either way this document is destined to have a cascading effect on the future plans designed for the fishery development.

The database erected out of this massive concerted effort is sure to serve as a grand statistical breeding ground by way of aiding curious browsers in churning out new derived parameters worth tracking. One obvious off shoot of this exercise would be to work out the ratio between craft wealth of mechanised, motorized and mon-mechanised sectors and to study their inter state disparities. These can further be juxtaposed with the other information like landing potential, exploitation status and even economic portends to generate value added doctrines.

In a nutshell the Census has been an exhaustive exercise aimed at accumulating frill free ground level information on the genuine portion of Indian population who eke out a living by venturing out into the sea or by marketing and processing the marine products.

## Objectives

The objectives are to

- determine population size and structure on a micro level
- assess the educational, socio-religious status of fisherfolk
- obtain their occupational status
- determine active fishermen engaged in fishing
- determine gender-wise occupation in fishery related activities
- determine the number of craft and gear owned by fisherfolk
- quantify the number of craft and gear in the fishery
- obtain information on infrastructure facilities such as landing centres etc.
- obtain information on other utilitarian facilities and social aspects


## Reference Date

The reference date for the conduct of Census was fixed as $15^{\text {th }}$ April. 2005 in the first phase and $15^{\text {th }}$ November, 2005 for the second phase.

## Methodology

Conducting a census involves a number of highly complex statistical processes. One must begin with a quality sampling frame, in which errors due to under-coverage, mis-classification and duplication are minimized. Before, the commencement of census, the list of marine fishing villages available with CMFRI was validated with the latest data on number and list of marine fishing villages obtained from each maritime state/ UT concerned. The field level supervisors (CMFRI staff) were then instructed to further verify and validate the list of marine fishing villages through field visits, to ascertain whether the listed villages could fall under the purview of marine fisheries census.

The census data were collected on two levels; one on a micro level covering individual household in each marine fishing village. These data were collected by field level enumerators. The enumerators were sent to all identified fisherfolk households in the coverage area and the detailed information was recorded in enumeration forms for those households. Complete enumeration by the interviewing method was applied. In the second level, data were collected on a village-wise basis chiefly aimed at obtaining information on the infrastructure facilities. This was carried out by the field level supervisors (CMFRI staff).

Non-sampling errors are always present, and generally can be expected to increase as the number of contacts and the complexity of questions increases. Since censuses generally have many contacts and fairly involved data collection instruments, one can expect them to generate a fairly high level of non-sampling error. Two categories of non-sampling error are response error and error due to non-response. It is understandable that in this census, where the education and socio-economic status of the target population is not high, there are bound to be non-sampling errors (or response error) that could be due to unwillingness to report correctly for a number of reasons (e.g. taboos, fear of taxation, etc). Every effort was made to reduce these errors. One of the main features of this census was the selection of field level enumerators. Almost all the enumerators were from the fisher communities and mostly
from the same villages that were being enumerated. As the enumerators were from the same village and better acquainted with the local situations, it is expected that errors could be minimal. The three tier supervision as mentioned earlier also facilitated in minimization of errors.

## Organisation

The census organization is structured as follows:


The census operation was supervised by a three tier system of around 300 personnel of CMFRI propped up by the Institute's sprawling resource assessment network extending from Contai in West Bengal to Veraval in Gujarat. The overall coordination was vested with the Director, CMFRI who was assisted by the Head, Fishery Resources Assessment Division and the various Scientists-in-charge of the regional and research centres of CMFRI. Fishery Resources Assessment Division of CMFRI is the Nodal Division that has been primarily responsible for designing and printing of schedules for data collection, data processing and the publicity material besides planning and execution of the census.

## Census items and definitions

The items were
> Respondent's name
Religion
$>$ Community
$>\mathrm{SC} / \mathrm{ST}$
> Family size (genderwise adults and children)
> Educational status
Occupational status

- Active fishing (full time, part time or occasional)
- Fishery related (marketing, labour, net making etc) activities
- Other than fishing

Membership in co-operatives

- Fisheries
- Others
$>$ Number of crafts owned or shared, dimension and capacity (if mechanised or motorized)
- Mechanised
- Trawlers
- Gillnetters
- Purse-seiners
- Ring-seiners
- Dolnetters
- Liners
- Others
- Traditional craft -motorised and non motorized
(Owned or shared and dimension)
- Catamarans
- Dugout boats
- Plank-built boats
- Ring-seiners
- Fibre-glass boats
- Ferro-cement boats
- Others
> Number of gears - owned or shared
- Trawl net
- Dolnet
- Ring-seine
- Purse-seine
- Gillnet
- Driftnet
- Boat-seine
- Bagnet
- Shore-seine
- Hooks \& Lines
- Troll Line
- Others
> Electronic gadgets
> Life saving equipment


## Definitions

1. House hold: A household consists of a person or a group of persons who live together in the same house (pucca or kutcha), share the same house-keeping arrangements and are catered for as one. It is important to remember that members of a household are not necessarily related (by blood or marriage) as, for instance, maidservants may form part of household. On the other hand, not all those related in the same house are necessarily members of the same household, two brothers who live in the same house with their wives and children may or may not form separate households depending on their catering arrangements. Thus, in many cases, a house may be broken into separate households (families).
2. Marine fisherman: A person who is engaged in marine fishing or any other activity associated with marine fishery or both. (A person here means a man or a woman).
3. Marine fishing village: An assemblage of houses/dwelling place where marine fishermen live.
4. Fish landing centre: The place or harbour where fishermen land their craft with catch.
5. Fishermen family: A family in which at least one member is engaged in marine fishing or associated activities or both.

Family size

1. Adult: Adult refers to a person who has attained the age of 15 and above.
2. Children: Those who are below 15 years of age.

## Occupation

1. Actual fishing: Fisherman engaged in fishing. (Fishing includes seed collection also in this context). A fisherman engaged in actual fishing/ seed collection can be included in any one of the three categories, viz. Full Time or Part-time or Occasional.
2. Full-time: A fisherman who spends at least $90 \%$ of his working time for fishing.
3. Part-time: A fisherman who spends at least $30 \%$ of his working time, but less than $90 \%$ of his time in fishing.
4. Occasional: Includes those who spend less than $30 \%$ of their time in fishing.

## Education

1. Primary includes those who studied upto V standard of schooling.
2. Secondary refers to those who have studied upto X standard.
3. Above Secondary refers to those who have continued their education above X standard.

## Design of Schedules

Two types of Schedules were designed to collect various parameters identified for collecting the items of information at the field level; one, for the house-hold information and the other, village-level items, mainly on the availability of infrastructure facilities. The household schedule contains 243 columns which was intended to cover population size with details on male, female, adult, children on each family. Their social and educational status; their involvement in co-operatives together with occupation in the fishing and related activities. The inventory of crafts and gears, of different types and sizes, owned and shared by each family was also enumerated upon. The Schedule I has been printed bilingually, in English and in eight vernaculars used in the maritime states.

## Training of supervisors

Intensive training programmes were arranged by Senior Officers of Fishery Resources Assessment Division at 6 different places, three along the east coast and three on the west coast. On the east coast, it started on $27^{\text {th }}$ January, 2005 at Mandapam Camp; at Chennai on $31^{\text {st }}$ January, 2005 and at Visakhapatnam on $3^{\text {rd }}$ February, 2005. Simultaneously, on the west coast, at Mangalore, it commenced on $3^{\text {rd }}$ Feb 2005, at Mumbai on $7^{\text {th }}$ Feb 2005 and Cochin on $14^{\text {th }}$ February 2005. The training was intended for the Senior Level Officers and Supervisors identified for the Census operation.The officers of Fishery Survey of India, Mumbai also attended the training programmes. The various inputs to Schedule I and Schedule II were thoroughly discussed with the help of detailed instructions.

## Appointment and training of Enumerators

For the conduct of the census 1,492 enumerators were appointed and the enumerators (with education level of higher secondary or above) were drawn from the fishing communities and mostly from the fishing villages concerned. Enumerators were trained by the field level supervisors to collect household information, prior to
the actual census operation, and thereafter, field level collection of various items of Schedule I commenced on a trial basis. On validation and making necessary corrections, the actual census operation was started.

## Instructions

Exhaustive instructions in the vernacular for the field level enumerators to collect and fill up all the columns were prepared and distributed to the enumerators.

## Publicity and media coverage

Publicity materials in all the vernaculars were distributed through posters and other handouts. The print and visual media extended wide coverage for the Census programme.

## Launch of Census operation

The formal launching of Census operation was officially signalled by Shri Ajay Bhattacharya, IAS, Joint Secretary, Department of Agriculture, Animal Husbandry, Dairying and Fisheries, New Delhi at a brief function organized at the Central Marine Fisheries Research Institute, Cochin on the morning of 15 April 2005 and thereafter at the field level at Narakkal, near Cochin, Ernakulam district, Kerala. At the function arranged at Narakkal, Shri. Ajay Bhattacharya, Joint Secretary appealed to the fishermen to provide all the information sought for by the field enumerators. As relief operations in the tsunami hit regions of Tamil Nadu and Pondicherry were still in progress, the census of these states could not be held simultaneously with the rest of the country. So, the second phase of census covering Tamil Nadu and Pondicherry was started on 15 November, 2005.

## Data entry, validation, processing and report generation

After completion of census work in different states, the data schedules were sent to CMFRI headquarters at Cochin. Because of the volume of information associated with a census data collection, it becomes very important to automate as many of these to edit and process. Editing and analysis must include the ability to examine individual records for consistency and completeness. This is often referred to as "micro" editing or "input" editing. For this a software for data entry, data validation and report generation was developed. Database (MS-ACCESS) for each maritime state was created. Thirty data entry operators were appointed. After completion of data entry, the validation checks were run for each database. Reports in the form of different tables covering each of the census items aggregated over Taluk/District/State level were prepared. All India summary of various parameters of the census are presented in the ensuing sections.

## SUMMARY

## 1. Population

1.1. There are 3,202 marine fishing villages with a total population of 3.52 million living in 756,212 households (Table 1).
1.2. Maximum number of marine fishing villages are in Orissa (641) and the least in the Union Territory of Daman \& Diu (22).
1.3. The number of households per village on all India basis is 236 with a maximum of 543 in Kerala and a minimum of 50 in Goa.
1.4. Women form $48.6 \%$ of the population with 948 females for 1000 males. This ratio is maximum in Kerala (980) and minimum in West Bengal (898).
1.5. The average family size is 4.7 with a minimum of 3.7 in UT of Pondicherry and a maximum of 5.7 in Karnataka (Table 2).

## 2. Education

2.1. Nearly $56.5 \%$ of fisherfolk are educated with varying levels of education (Table 3).
2.2. About $28.6 \%$ of the fisherfolk have primary level of education, $22.2 \%$ with secondary and $5.6 \%$ with above secondary level of education.
2.3. Nearly $43.5 \%$ of the population has no education at all.
2.4. Maximum percentage of educated (72.8\%) among fishefolk is in Kerala.
2.5. Maximum percentage (67.5\%) of uneducated among fisherfolk is in Andhra Pradesh.

## 3. Occupation

3.1. About $46.8 \%(1,645,919)$ of fisherfolk are occupied with active fishing and fishery related activities (Table 4).
3.2. About $25.7 \%(889,528)$ of the fisherfolk are actively engaged in fishing of which $80.7 \%(717,999)$ have fishing as a fulltime occupation.
3.3. Tamil Nadu accounts for $23.3 \%$ of active fishermen in India followed by Kerala (15.8\%).
3.4. Maximum percentage (27.2\%) of fisherfolk actively engaged in fishing within a state, is in Andhra Pradesh.
3.5. About $21.5 \%$ of fisherfolk are engaged in fishing related activities. Of
this, those working as labourers form $29.2 \%$ and those associated with marketing are $27.4 \%$ (Table 5).
3.6. Women account for $48.3 \%$ of the fisherfolk in fishing associated activities (Table 6).
3.7. Among those engaged in marketing $73.6 \%$ are women.
3.8. Nearly $80 \%$ of those engaged in repair and making of nets are males.
3.9. About $69.5 \%$ of labourers in fishing activities are men.
3.10. About $75.7 \%$ of those involved in curing and processing are women.
3.11. Among males, the major fishery related occupations are, labour (39.2\%), mending of nets (28.6\%) and marketing (14.0\%).
3.12. Among women, the major fishing associated activities are, marketing (41.8\%), labour ( $18.4 \%$ ) and curing/processing (18\%).
3.13. About $54.2 \%$ of fisherfolk engaged in fishing related activities belong to Orissa (20\%), Andhra Pradesh (20.2\%) and Tamil Nadu (13.8\%).
3.14. Nearly $58.5 \%$ of those repairing/making of net belong to Orissa (28.8\%), Andhra Pradesh (17.1\%) and Tamil Nadu (13.6\%).
3.15. Andhra Pradesh (32.5\%), Orissa (32.0\%) and Maharashtra (10.6\%) account for more than $75 \%$ of those engaged in curing and processing.
3.16. Kerala accounts for $35 \%$ of those engaged in peeling.

## 4. Religion

4.1. Hindus constitute $74.1 \%$ of the total fisherfolk families followed by Christians (16.6\%) and Muslims (9.2\%) (Table 7).
4.2. In Kerala, Christians (42.4\%) dominate the fisherfolk families, followed by Hindus (30.7\%) and Muslims (26.9\%).
4.3. In Goa (37.3\%) and Tamil Nadu (34.6\%) also, Christians form a significant portion.

## 5. Schedule castes and tribes

5.1. Only $16.8 \%$ of the fisherfolk families belong to SC/ST (Table 7).
5.2. In Orissa, Maharashtra and West Bengal they form nearly half or more than half of the fisherfolk families within each state.

## 6. Membership in co-operatives

6.1. One out of five fisherfolk is a member of some co-operative society (fisheries or others). About 15\% of the fisherfolk have membership in fisheries co-operative societies (Table 8).
6.2. Significant percentage of cooperative memberships was recorded in Tamil Nadu, Pondicherry, Kerala and Karnataka.

## 7. Craft

The details of different types of craft each in the categories of mechanised, motorised and non-motorised are collected in two levels. One on the macro level that indicates the district-wise fleet strength in the fishery aggregated over villages. This information was collected by the field level supervisors (CMFRI staff) from village/ district records and by actual count where ever possible. The State-wise summary is given in Table 9. The other on micro-level, pertains to the crafts owned by the fisherfolk and this information was collected from the individual household survey as per the Schedule-I (Table 10). The sharing pattern of craft was also collected (Table 11).

### 7.1. Craft in the fishery

7.1.1. There are 238,772 craft in the fishery of which 58,911 are mechanised, 75,591 are motorized and rest or non-motorised/non-mechansied.
7.1.2. Maharashtra $(13,053)$ and Gujarat $(13,047)$ account for $44.5 \%$ of the mechanised craft in the fishery.
7.1.3. Out of 29,241 trawlers in the fishery, Gujarat $(8,002)$ accounts for the maximum followed by Tamil Nadu $(5,300)$, Maharashtra $(4,219)$, Kerala $(3,982)$ and other states.
7.1.4. Dolnetters $(8,862)$ are mainly observed in Maharashtra $(4,409)$, Gujarat $(2,425)$ and West Bengal $(1,692)$.
7.1.5. The states of West Bengal $(4,355)$, Maharashtra $(2,550)$, Gujarat $(2,363)$ and Orissa $(1,760)$ account for $80 \%$ of gillnetters $(13,864)$ in the fishery.
7.1.6. Nearly two-third of the motorized craft in the fishery are accounted by Tamil Nadu $(22,478)$, Andhra Pradesh $(14,112)$ and Kerala $(14,151)$.
7.1.7. The maritime states on the east coast account for about $73 \%$ of the non-motorised/non-mechanised craft, Andhra Pradesh $(24,386)$ and Tamil Nadu $(24,231)$ being the lead states.

## Marine Fisheries Census 2005

### 7.2. Craft owned by the fisherfolk

7.2.1. Out of 185,438 craft owned by fisherfolk, 35,806 are mechanised, 52,971 motorised and 96,661 are non-motorised/non-mechanised.
7.2.2. Trawlers account for $39.6 \%$ of the mechanised craft owned, followed by gillnetters (31.3\%), dolnetters (19.2\%) and others.
7.2.3. Gujarat $(4,300)$, Tamil Nadu $(3,274)$ and Maharashtra $(2,526)$ are the leading states in respect of trawlers owned by fisherfolk.
7.2.4. West Bengal $(4,409)$, Maharashtra $(2,164)$, Gujarat $(1,591)$ and Orissa $(1,496)$ account for bulk of the gillnetters owned by fisherfolk in India.
7.2.5. About $95.4 \%$ of dolnetters owned are accounted by Maharashtra $(3,998)$, Gujarat $(1,513)$ and West Bengal $(1,128)$.
7.2.6. Out of 52,971 motorised craft owned about $48 \%$ are Fibre Glass boats followed by plank-built boats (22\%), catamarans (20\%) and rest others.
7.2.7. Tamil Nadu $(18,643)$, Andhra Pradesh $(8,989)$ and Kerala $(8,436)$ are the leading states.
7.2.8. Out of non-motorised/non-mechanised craft owned, $44 \%$ are plank-built, $37 \%$ are catamarans and $13 \%$ are dugout canoes.

## 8. Other salient features

8.1. The ownership and sharing pattern of gears among families in each state is given in Table 12-13.
8.2. The number of fisherfolk families possessing electronic equipments, life saving equipments and details of training acquired are given in Table 14.
8.3. Nearly $62 \%$ of the fisherfolk families involved in fishing, do not possess any craft (Table 15).
8.4. About $49 \%$ of the families involved in fishing, do not possess any gear.
8.5. Nearly $47 \%$ of the fisher families involved in fishing possess neither any craft nor gear. In the maritime states, Kerala has $66 \%$ of such families, followed by West Bengal (49\%), Tamil Nadu (46\%) and others.
8.6. In $10 \%$ of the fisherfolk families of Maharashtra, only women are involved in fishing or fishing allied activities and in All India level its about 5\%.
8.7. An account of various infrastructural facilities available in and around the fishing villages are given in Tables (16-18).
8.8. The housing pattern amidst fisherfolks gives a picture which is wholly divergent and mutually opposite in apportioning. For example the proportion of kutcha houses varies from $91 \%$ in West Bengal to $8 \%$ in Maharashtra.
8.9. The availability of educational institutions of various categories has been recorded in Table 16. Kerala, Karnataka, Maharashtra and Gujarat top the list in case of primary educational institutions.
8.10. Among the states Kerala, Karnataka and Maharashtra have near complete electrification of villages where as West Bengal and Orissa languish at the bottom of the list. (Table 17).
8.11. Almost a similar pattern is noticed when the approachability to the fishing villages was panned with Orissa faring better on that count.
8.12. Health infrastructure as indicated by the number of Primary Health Centers/ Hospitals show much is to be desired from states like West Bengal, Orissa and Andhra Pradesh.
8.13. Very high prevalence of financial institutions was recorded in Kerala, Karnataka, Maharashtra and Gujarat.
8.14. Co-operative institutions have been found to be ubiquitous with Andhra Pradesh having the maximum.
8.15. The boat repairing and fish processing facilities available in different States and Union Territories are depicted in Table 18.
8.16. Kerala has 112 boat building yards followed by Karnataka (32).
8.17. The availability of cold storage facilities to the fishermen shows complementary trend with the number of ice factories, which cater to their needs.
8.18. Freezing plants are maximum in Kerala.
8.19. As per the Marine Products Export Development Authority (MPEDA, www.mpeda.com) sources there are 399 processing plants and 471 cold storage facilities in India. There are 176 EU approved processing and cold storage facilities of which 50 are processing plants. And also 303 EU and Non-EU approved (following HACCP standards) processing and cold storage units in the country.
8.20. An overall glimpse of the various post harvest facilities available in different States and Union Territories indicates a clear delineation between more commercialized zones (Gujarat and Kerala) and the rest.

# List of Scientific \& Technical staff of CMFRI involved in Marine Fisheries Census operation 

## Scientists

Prof. (Dr.) Mohan Joseph Modayil
Dr. M.Srinath
Shri. K.Balan
Dr. T.V.Sathianandan
Dr. J. Jayasankar
Dr. Somy Kuriakose
Shri. Wilson.T.Mathew
Smt K.G.Mini
Dr. E.Vivekanandan
Dr. P.Kaladharan
Dr. P.Jayasankar
Dr. V.P.Vipinkumar
Dr. Kajol Chakraborty
Smt. Rekha Devi Chakraborty
Dr. C.Ramachandran
Dr. H.Mohamad Kasim
Dr. G.Mohanraj
Dr. Joe Kizhakudan
Dr.(Mrs). P.S.Swathilekshmi
Dr. G.Syda Rao
Dr. R.Narayana Kumar
Dr. G.Maheswarudu
Dr. K.Vijayakumaran
Dr. N.Kaliaperumal

## Technical Personnel

Smt V.P.Annam
Shri. J.Srinivasan
Smt P.L.Ammini

Dr. A.Raju
Dr. M. Rajamani
Dr. A.C.C.Victor
Dr. A.P. Lipton
Dr. N.Ramachandran
Dr. P.N. Radhakrishnan Nair
Shri. K.K.Philipose
Dr. Gulshad Mohammed
Shri. M. Sivadas
Dr. C.Muthiah
Dr. P.U.Zacharia
Dr. Prathiba Rohith
Dr. V.S.Kakati
Smt S.Jasmine
Dr. V.D.Deshmukh
Dr. M.Z.Khan
Dr. (Smt.) Miriam Paul
Shri. S.G.Raje
Dr. V.V.Singh
Dr. K.V.Somasekharan Nair
Dr. P.K.Asokan
Dr. K.K.Joshi
Dr. E. Dhanwanthari

Shri. V.A.Narayanankutty
Shri. S. Haja Najeemudeen
Shri. C.J.Prasad

| Smt K.Ramani | Dr K.Muniyandi |
| :--- | :--- |
| Smt M.R.Beena | Shri. V.Rajendran |
| Smt Lata .R. Khambadkar | Shri. T.S.Balasubramanian |
| Smt Sindhu .K. Augustine | Shri. L.Chidambaram |
| Shri. K.P.George | Shri. S.Chandrasekhar |
| Shri. M.B.Seynudheen | Shri. P.Jaiganesh |
| Shri. K.Anandan | Shri. S.Selvanidhi |
| Shri. G.Subbaraman | Shri. V.Thanapathi |
| Shri. Pulin Behari Dey | Shri. S.Sankaralingam |
| Shri. Bijoy Krishna Burman | Shri. T.Nagalingam |
| Shri. Swapan Kumar Kar | Shri. M.Manivasagam |
| Shri. Sapan Kumar Ghosh | Shri. A.Kumar |
| Shri. K.Ram Mohan | Shri. V.Sivaswamy |
| Shri. P.Venkatakrishna Rao | Shri. R.Somu |
| Shri. Phalguni Pattnaik | Shri. N.Vaithianathan |
| Shri. K.Chittibabu | Shri. A.Ramakrishnan |
| Shri. Sukhdev Bar | Shri. A.Gandhi |
| Shri. S.Satya Rao | Shri. V.Sethuraman |
| Shri. K.Dhanaraju | Shri. P.Villan |
| Shri. H.Kather Batcha | Shri. N.Boominathan |
| Shri. V.Achutha Rao | Shri. M.Bose |
| Shri. S.V.Subba Rao | Shri. B.Thangaraj |
| Shri. R.V.D.Prabhakar | Shri. M.Chellappa |
| Shri. R.R.Chudasama | Shri. A.Prosper |
| Shri. J.P.Polara | Shri. P.Paul Sigamony |
| Shri. J.Bhuvaneswara Verma | Shri. P.Palani |
| Shri. M.Samuel Sumithrudu | Shri. D.Pughazhendi |
| Shri. M.Prasada Rao | Shri. N.Rudhramurthy |
| Shri. T.Nageswara Rao | Shri. K.Diwakar |
| Shri. K.Dhanaraju | Shri. V. Abbulu |

Shri. K.C.Pandurangachar
Shri. Y.V.S.Suryanarayana
Shri. T.Dhandapani
Shri. P.Venkataramana
Shri. C.H.Ellithathayya
Shri. T.Chandrasekhara Rao
Shri. P.Achayya
Shri. N.Burayya
Shri. S.Subramani
Shri. G.Sudhakar
Shri. V.S.Gopal
Shri. S.Rajan
Shri. J.S. Hotagi
Shri. A.Y.Mestry
Shri. C.K.Sajeev
Shri. M.Chandrasekhar
Shri. B.V.Makadia
Shri. J.D.Vanvi
Shri. M.S.Zala
Shri. Y.D.Savaria
Shri. Joseph Andrews
Shri. K.K.Suresh
Shri. K.Sasidharan Pillai
Shri. Thomas Kuruvila
Shri. Sijo Paul
Shri. A.Y.Jacob
Shri. J.Narayanaswamy
Shri. K.C.Hezhakiel
Shri. K.G.Baby
Shri. K.Chellappan
Shri. C.K.Krishnan
Shri. K.Chandran
Shri. P.P.Pavithran

Shri. K.C.Purushothaman
Shri. K.K.Balasubramanian
Shri. K.C.Pradeepkumar
Shri. M.Chaniappa
Shri. V.Lingappa
Shri. R.Appayya Naik
Shri. M.E.Durgekar
Shri. Ganesh Bhatkal
Shri. Udaya.V.Arghekar
Shri. S.S.V.Pai
Shri. C.G.Ulvekar
Shri. Prakash.C.Shetty
Shri. V.M.Dhareswar
Shri. Kishore B Wagmare
Shri. C.J.Josekutty
Shri. S.D.Kamble
Shri. D.D.Sawant
Shri. K.R.Mainkar
Shri. R.B.Rao
Shri. B.G.Kalbate
Shri. A.D.Sawant
Shri. Dias Johny
Shri. B.B.Chavan
Shri. B.A.Shiledar
Shri. Umesh Hari Rane
Shri. B.N.Katkar
Shri. S.K.Kamble
Shri. J.D.Sarang
Shri. H.K.Dhokia
Shri. A.A.Ladani
Shri. B.P.Thumber
Shri. H.M.Bhint
Shri. K. Narayana Rao

_।

## List of tables

1. State profile
2. Population structure
3. Educational status
4. Active fishermen
5. Gender-wise fishing allied activities
6. Occupational profile
7. Religion and community (No. of families)
8. Membership in co-operatives
9. Fishing craft - coastal states and union territories (in the fishery)
10. Craft owned by fisherfolk
11. Sharing pattern of craft among fisherfolk
12. Gears owned by fisherfolk
13. Sharing pattern of gears among fisherfolk
14. Electronic equipment, life saving equipment and training acquired (No. of families)
15. Additional information
16. Infrastructure - housing and education (In the villages)
17. Infrastructure/facilities (In the villages)
18. Infrastructure-fishery related (In the villages)
TABLE 1. STATE PROFILE

| State/U.T. | Coastal <br> Length $(\mathbf{k m})$ | No. of <br> landing <br> centres | No. of <br> fishing <br> villages | No. of <br> fishermen <br> families | Fisherfolk <br> population |
| :--- | :---: | :---: | :---: | :---: | :---: |
| West Bengal | 158 | 44 | 346 | 53,816 | 269,565 |
| Orissa | 480 | 57 | 641 | 86,352 | 450,391 |
| Andhra Pradesh | 974 | 314 | 498 | 129,246 | 509,991 |
| Tamilnadu | 1,076 | 352 | 581 | 192,152 | 790,408 |
| Pondicherry | - | 26 | 28 | 11,541 | 43,028 |
| Kerala | 590 | 178 | 222 | 120,486 | 602,234 |
| Karnataka | 300 | 88 | 156 | 30,176 | 170,914 |
| Goa | 104 | 34 | 39 | 1,963 | 10,668 |
| Maharashtra | 720 | 152 | 406 | 65,313 | 319,397 |
| Gujarat | 1,600 | 723 | 263 | 59,889 | 323,215 |
| Daman \& Diu | - | $\mathbf{7}$ | 22 | 5,278 | 29,305 |
| TOTAL | $\mathbf{6 , 0 0 2}$ | $\mathbf{1 , 3 7 5}$ | $\mathbf{3 , 2 0 2}$ | $\mathbf{7 5 6 , 2 1 2}$ | $\mathbf{3 , 5 1 9 , 1 1 6}$ |

TABLE 2. POPULATION STRUCTURE

| STATE/U.T. | Villages | Families | Male |  |  | Female |  |  | Total | Family size |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Adult | Children | Total | Adult | Children | Total |  |  |
| West Bengal | 346 | 53,816 | 86,532 | 55,490 | 142,022 | 76,945 | 50,598 | 127,543 | 269,565 | 5.01 |
| Orissa | 641 | 86,352 | 142,318 | 93,292 | 235,610 | 128,632 | 86,149 | 214,781 | 450,391 | 5.22 |
| Andhra Pradesh | 498 | 129,246 | 152,096 | 107,822 | 259,918 | 151,184 | 98,889 | 250,073 | 509,991 | 3.95 |
| Tamilnadu | 581 | 192,152 | 275,556 | 130,234 | 405,790 | 262,847 | 121,771 | 384,618 | 790,408 | 4.11 |
| Pondicherry | 28 | 11,541 | 14,697 | 7,036 | 21,733 | 14,738 | 6,557 | 21,295 | 43,028 | 3.73 |
| Kerala | 222 | 120,486 | 213,773 | 90,535 | 304,308 | 213,319 | 84,607 | 297,926 | 602,234 | 5.00 |
| Karnataka | 156 | 30,176 | 61,969 | 24,857 | 86,826 | 61,332 | 22,756 | 84,088 | 170,914 | 5.66 |
| Goa | 39 | 1,963 | 4,036 | 1,480 | 5,516 | 3,778 | 1,374 | 5,152 | 10,668 | 5.43 |
| Maharashtra | 406 | 65,313 | 111,665 | 51,698 | 163,363 | 109,331 | 46,703 | 156,034 | 319,397 | 4.89 |
| Gujarat | 263 | 59,889 | 97,907 | 68,907 | 166,814 | 92,958 | 63,443 | 156,401 | 323,215 | 5.40 |
| Daman \& Diu | 22 | 5,278 | 8,952 | 5,953 | 14,905 | 8,860 | 5,540 | 14,400 | 29,305 | 5.55 |
| TOTAL | 3,202 | 756,212 | 1,169,501 | 637,304 | 1,806,805 | 1,123,924 | 588,387 | 1,712,311 | 3,519,116 | 4.65 |

TABLE 3. EDUCATIONAL STATUS

| STATE/U.T. | Primary | Secondary | Above <br> Secondary | Not <br> educated | Total |
| :--- | ---: | ---: | ---: | ---: | ---: |
| West Bengal | 83,301 | 33,734 | 6,018 | 146,512 | 269,565 |
| Orissa | 142,005 | 56,879 | 16,783 | 234,724 | 450,391 |
| Andhra Pradesh | 111,403 | 45,827 | 8,384 | 344,377 | 509,991 |
| Tamilnadu | 260,088 | 206,257 | 61,229 | 262,834 | 790,408 |
| Pondicherry | 12,763 | 10,904 | 3,518 | 15,843 | 43,028 |
| Kerala | 171,470 | 218,704 | 48,493 | 163,567 | 602,234 |
| Karnataka | 52,572 | 49,606 | 17,346 | 51,390 | 170,914 |
| Goa | 1,691 | 4,581 | 1,102 | 3,294 | 10,668 |
| Maharashtra | 94,303 | 97,446 | 22,368 | 105,280 | 319,397 |
| Gujarat | 70,658 | 52,088 | 9,560 | 190,909 | $\mathbf{3 2 3 , 2 1 5}$ |
| Daman \& Diu | 7,760 | 7,273 | 2,045 | 12,227 | 29,305 |
| TOTAL | $\mathbf{1 , 0 0 8 , 0 1 4}$ | $\mathbf{7 8 3 , 2 9 9}$ | $\mathbf{1 9 6 , 8 4 6}$ | $\mathbf{1 , 5 3 0 , 9 5 7}$ | $\mathbf{3 , 5 1 9 , 1 1 6}$ |

TABLE 4. ACTIVE FISHERMEN
\(\left.\begin{array}{lcccc}\hline STATE/U.T. \& Full time \& Part time \& Occasional \& Total <br>
\hline West Bengal \& 50,924 \& 15,630 \& 4,196 \& 70,750 <br>

population\end{array}\right]\)| 269,565 |
| :--- |
| Orissa |

TABLE 5. OCCUPATIONAL PROFILE

| STATE/U.T. | Active fishermen | No. of fisherfolk involved in fishing allied activities |  |  |  |  |  |  | Other than fishing | Total occupied | Total fisherfolk population |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Marketing of fish | Making/ Repairing Net | Curing/ Processing | Peeling | Labourer | Others | Total |  |  |  |
| West Bengal | 70,750 | 5,237 | 15,326 | 4,705 | 478 | 26,151 | 5,844 | 57,741 | 1,968 | 130,459 | 269,565 |
| Orissa | 121,282 | 31,691 | 40,252 | 27,849 | 3,167 | 37,781 | 11,794 | 152,534 | 15,359 | 289,175 | 450,391 |
| Andhra Pradesh | 138,614 | 34,337 | 23,926 | 28,319 | 2,996 | 55,372 | 7,942 | 152,892 | 8,727 | 300,233 | 509,991 |
| Tamilnadu | 206,908 | 36,126 | 19,051 | 6,250 | 2,107 | 25,657 | 15,318 | 104,509 | 12,817 | 324,234 | 790,408 |
| Pondicherry | 10,341 | 6,393 | 630 | 364 | 5 | 714 | 1,989 | 10,095 | 1,697 | 22,133 | 43,028 |
| Kerala | 140,222 | 17,976 | 9,560 | 3,881 | 8,057 | 17,242 | 14,358 | 71,074 | 13,310 | 224,606 | 602,234 |
| Karnataka | 37,632 | 14,327 | 7,876 | 3,342 | 581 | 14,043 | 5,530 | 45,699 | 7,500 | 90,831 | 170,914 |
| Goa | 2,515 | 1,688 | 479 | 0 | 0 | 515 | 700 | 3,382 | 502 | 6,399 | 10,668 |
| Maharashtra | 72,074 | 43,822 | 9,086 | 9,209 | 1,439 | 11,565 | 6,659 | 81,780 | 10,725 | 164,579 | 319,397 |
| Gujarat | 83,322 | 14,885 | 13,452 | 3,212 | 4,310 | 31,366 | 7,857 | 75,082 | 10,390 | 168,794 | 323,215 |
| Daman \& Diu | 5,868 | 880 | 80 | 11 | 3 | 256 | 373 | 1,603 | 78 | 7,549 | 29,305 |
| TOTAL | 889,528 | 207,362 | 139,718 | 87,142 | 23,143 | 220,662 | 78,364 | 756,391 | 83,073 | 1,728,992 | 3,519,116 |

TABLE 6. GENDER-WISE FISHING ALLIED ACTIVITES

| STATEJ.T. | Male |  |  |  |  |  |  | Female |  |  |  |  |  |  | Total | Total fisherfolk population |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Marketing of fish | Making/ Repairing Net | Curing/ Processing | Peeling | Labourer | Others | Total | Marketing of fish | Making/ Repairing Net | Curing/ Processing | Peeling | Labourer | Others | Total |  |  |
| West Bengal | 4,492 | 7,711 | 1,936 | 250 | 22,872 | 2,965 | 40,226 | 745 | 7,615 | 2,769 | 228 | 3,779 | 2,879 | 17,515 | 57,741 | 269,565 |
| Orissa | 21,753 | 33,734 | 11,402 | 1,606 | 28,007 | 5,681 | 102,183 | 9,938 | 6,518 | 16,447 | 1,561 | 9,774 | 6,113 | 50,351 | 152,534 | 450,391 |
| Andhra Pradesh | 7,177 | 22,995 | 3,795 | 417 | 23,903 | 3,690 | 61,977 | 27,160 | 931 | 24,524 | 2,579 | 31,469 | 4,252 | 90,915 | 152,892 | 509,991 |
| Taminadu | 5,107 | 16,775 | 760 | 680 | 22,627 | 9,328 | 55,277 | 31,019 | 2,776 | 5,490 | 1,427 | 3,030 | 5,990 | 49,232 | 104,509 | 790,408 |
| Pondicherry | 261 | 610 | 14 | 2 | 646 | 1,235 | 2,768 | 6,132 | 20 | 350 | 3 | 68 | 754 | 7,327 | 10,095 | 43,028 |
| Kerala | 4,964 | 5,500 | 590 | 416 | 15,705 | 8,447 | 35,622 | 13,012 | 4,060 | 3,291 | 7,641 | 1,537 | 5,911 | 35,452 | 71,074 | 602,234 |
| Karnataka | 1,927 | 7,690 | 221 | 161 | 7,757 | 2,527 | 20,283 | 12,400 | 186 | 3,121 | 420 | 6,886 | 3,003 | 25,416 | 45,699 | 170,914 |
| Goa | 219 | 475 | 0 | 0 | 501 | 686 | 1,881 | 1,469 | 4 | 0 | 0 | 14 | 14 | 1,501 | 3,382 | 10,668 |
| Maharashtra | 4,534 | 7,618 | 625 | 186 | 8,075 | 4,465 | 25,503 | 39,288 | 1,468 | 8,584 | 1,253 | 3,490 | 2,194 | 56,277 | 81,780 | 319,397 |
| Gujarat | 4,219 | 8,532 | 1,861 | 1,533 | 23,304 | 5,430 | 44,879 | 10,666 | 4,920 | 1,351 | 2,777 | 8,062 | 2,427 | 30,203 | 75,082 | 323,215 |
| Daman \& Diu | 17 | 21 | 7 | 0 | 34 | 250 | 329 | 863 | 59 | 4 | 3 | 222 | 123 | 1,274 | 1,003 | 29,305 |
| TOTAL | 54,670 | 111,661 | 21,211 | 5,251 | 153,431 | 44,704 | 390,928 | 152,692 | 28,057 | 65,931 | 17,892 | 67,231 | 33,660 | 365,463 | 756,391 | 3,519,116 |

TABLE 7. RELIGION AND COMMUNITY (No. of Families)

| STATE/U.T. | Religion |  |  |  |  | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | \(\left.\begin{array}{c}Community <br>

SC/ST\end{array}\right]\)
TABLE 8. MEMBERSHIP IN CO-OPERATIVES

| STATE/U.T. | Members in |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Fisheries <br> co-operatives | Other <br> co-operatives | Total | Total <br> fisherfolk <br> population |
| West Bengal | 4,281 | 1,092 | 5,373 | 269,565 |
| Orissa | 18,977 | 18,951 | 37,928 | 450,391 |
| Andhra Pradesh | 46,238 | 53,136 | 99,374 | 509,991 |
| Tamilnadu | 243,282 | 80,488 | 323,770 | 790,408 |
| Pondicherry | 21,493 | 5,582 | 27,075 | 43,028 |
| Kerala | 119,406 | 61,479 | 180,885 | 602,234 |
| Karnataka | 18,018 | 6,103 | 24,121 | 170,914 |
| Goa | 355 | 14 | 369 | 10,668 |
| Maharashtra | 38,221 | 7,169 | 45,390 | 319,397 |
| Gujarat | 4,218 | 336 | 4,554 | 323,215 |
| Daman \& Diu | 214 | 3 | 217 | 29,305 |
| TOTAL | $\mathbf{5 1 4 , 7 0 3}$ | $\mathbf{2 3 4 , 3 5 3}$ | $\mathbf{7 4 9 , 0 5 6}$ | $\mathbf{3 , 5 1 9 , 1 1 6}$ |

TABLE 9. FISHING CRAFTS - COASTAL STATES AND UNION TERRITORIES

| STATE/UT | Trawlers | Purse- <br> seiners | Gillnetters | Dolnetters | Liners | Others | Total <br> Mechanized | Motorised | Non- <br> motorized | Total |
| :--- | ---: | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| West Bengal | 610 | 0 | 4,355 | 1,692 | 66 | 106 | 6,829 | 1,776 | 10,041 | 18,646 |
| Orissa | 1,340 | 22 | 1,760 | 254 | 28 | 173 | 3,577 | 4,719 | 15,444 | 23,740 |
| Andhra Pradesh | 1,802 | 0 | 424 | 0 | 20 | 295 | 2,541 | 14,112 | 24,386 | 41,039 |
| Tamilnadu | 5,300 | 46 | 655 | 11 | 781 | 918 | 7,711 | 22,478 | 24,231 | 54,420 |
| Pondicherry | 326 | 0 | 177 | 0 | 0 | 124 | 627 | 2,306 | 1,524 | 4,457 |
| Kerala | 3,982 | 54 | 428 | 0 | 10 | 1,030 | 5,504 | 14,151 | 9,522 | 29,177 |
| Karnataka | 2,515 | 505 | 1,254 | 0 | 28 | 71 | 4,373 | 3,705 | 7,577 | 15,655 |
| Goa | 830 | 196 | 47 | 0 | 0 | 14 | 1,087 | 932 | 532 | 2,551 |
| Maharashtra | 4,219 | 156 | 2,550 | 4,409 | 253 | 1,466 | 13,053 | 3,382 | 7,073 | 23,508 |
| Gujarat | 8,002 | 0 | 2,363 | 2,425 | 4 | 253 | 13,047 | 7,376 | 3,729 | 24,152 |
| Daman\&Diu | 315 | 4 | 170 | 71 | 0 | 2 | 562 | 654 | 211 | $\mathbf{1 , 4 2 7}$ |
| Total | $\mathbf{2 9 , 2 4 1}$ | $\mathbf{9 8 3}$ | $\mathbf{1 4 , 1 8 3}$ | $\mathbf{8 , 8 6 2}$ | $\mathbf{1 , 1 9 0}$ | $\mathbf{4 , 4 5 2}$ | $\mathbf{5 8 , 9 1 1}$ | $\mathbf{7 5 , 5 9 1}$ | $\mathbf{1 0 4 , 2 7 0}$ | $\mathbf{2 3 8 , 7 7 2}$ |

TABLE 10. CRAFTS OWNED BY FISHERFOLK

| Craft State | West Bengal | Orissa | Andhra <br> Pradesh | Tamilnadu | Pondicherry | Kerala | Karnataka | Goa | Maharashtra | Gujarat | Daman \&Diu | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MECHANIZED |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Trawler(<30') | 33 | 152 | 16 | 294 | 14 | 273 | 229 | 96 | 320 | 272 | 0 | 1,699 |
| Trawler(30'-35') | 61 | 112 | 218 | 1,019 | 68 | 314 | 526 | 65 | 227 | 346 | 3 | 2,959 |
| Trawler(36'-40') | 231 | 70 | 29 | 1,114 | 182 | 177 | 101 | 24 | 574 | 1,061 | 41 | 3,604 |
| Trawler(>40') | 236 | 135 | 96 | 847 | 30 | 125 | 162 | 66 | 1,405 | 2,621 | 201 | 5,924 |
| TRAWLERS | 561 | 469 | 359 | 3,274 | 294 | 889 | 1,018 | 251 | 2,526 | 4,300 | 245 | 14,186 |
| 2 Purse Seiners (<40') | 0 | 6 | 0 | 30 | 0 | 0 | 63 | 3 | 5 | 10 | 4 | 121 |
| Purse Seiners ( $>40{ }^{\prime}$ ) | 12 | 12 | 0 | 6 | 0 | 4 | 190 | 81 | 69 | 0 | 0 | 374 |
| PURSE SEINERS | 12 | 18 | 0 | 36 | 0 | 4 | 253 | 84 | 74 | 10 | 4 | 495 |
| 3 Gill Netter ( $<30^{\prime}$ ) | 1,393 | 984 | 77 | 249 | 61 | 77 | 479 | 47 | 1,449 | 1,099 | 21 | 5,936 |
| Gill Netter(>30') | 3,016 | 512 | 57 | 171 | 7 | 19 | 154 | 0 | 715 | 492 | 149 | 5,292 |
| GILL NETTERS | 4,409 | 1,496 | 134 | 420 | 68 | 96 | 633 | 47 | 2,164 | 1,591 | 170 | 11,228 |
| 4 Dol Netter (<30') | 964 | 170 | 0 | 2 | 0 | 0 | 1 | 0 | 2,946 | 933 | 40 | 5,056 |
| Dol Netter ( $>30^{\prime}$ ) | 164 | 74 | 0 | 5 | 0 | 0 | 0 | 0 | 1,052 | 580 | 31 | 1,906 |
| DOL NETTERS | 1,128 | 244 | 0 | 7 | 0 | 0 | 1 | 0 | 3,998 | 1,513 | 71 | 6,962 |
| 5 Ring Seiners ( $<40^{\prime}$ ) | 0 | 12 | 0 | 34 | 0 | 61 | 5 | 7 | 6 | 5 | 0 | 130 |
| Ring Seiners ( $>40^{\prime}$ ) | 5 | 0 | 0 | 18 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 112 |
| RING SIENERS | 5 | 12 | 0 | 52 | 0 | 150 | 5 | 7 | 6 | 5 | 0 | 242 |
| 6 Liners( $<30$ ') | 28 | 12 | 11 | 267 | 0 | 6 | 4 | 0 | 8 | 0 | 0 | 336 |
| Liners(>30') | 9 | 2 | 2 | 460 | 0 | 2 | 23 | 0 | 0 | 0 | 0 | 498 |
| LINERS | 37 | 14 | 13 | 727 | 0 | 8 | 27 | 0 | 8 | 0 | 0 | 834 |
| 7 Carriers to Purseseiners (<30') | 23 | 109 | 0 | 9 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 157 |
| Carriers to Purseseiners (>30') | 0 | 0 | 0 | 22 | 0 | 3 | 23 | 0 | 6 | 0 | 0 | 54 |
| PURSE SEINER CARRIERS | 23 | 109 | 0 | 31 | 0 | 11 | 31 | 0 | 6 | 0 | 0 | 211 |
| 8 Carriers to Ring seiners (<30') | 10 | 26 | 0 | 0 | 6 | 145 | 1 | 0 | 0 | 1 | 1 | 190 |
| Carriers to Ring seiners (>30') | 5 | 0 | 0 | 0 | 0 | 57 | 2 | 0 | 0 | 0 | 0 | 64 |
| RING SEINER CARRIERS | 15 | 26 | 0 | 0 | 6 | 202 | 3 | 0 | 0 | 1 | 1 | 254 |
| 9 Others | 52 | 38 | 20 | 813 | 86 | 14 | 36 | 0 | 108 | 227 | 0 | 1,394 |
| TOTAL MECHANIZED BOATS | 6,242 | 2,426 | 526 | 5,360 | 454 | 1,374 | 2,007 | 389 | 8,890 | 7,647 | 491 | 35,806 |

TABLE 11. SHARING PATTERN OF CRAFTS AMONG FISHERFOLK

| Craft / State | West Bengal | Orissa | Andhra Pradesh | Tamilnadu | Pondicherry | Kerala | Karnataka | Goa | Maharashtra | Gujarat | Daman \&Diu | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mechanised |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Trawler (<30') |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 217 | 79 | 13 | 4 | 0 | 55 | 13 | 0 | 1 | 1 | 0 | 383 |
| 25-50\% | 22 | 51 | 1 | 32 | 0 | 87 | 33 | 0 | 2 | 1 | 0 | 229 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 239 | 130 | 14 | 36 | 0 | 142 | 46 | 0 | 3 | 2 | 0 | 612 |
| Trawler (30'-35') |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 11 | 204 | 65 | 41 | 4 | 81 | 15 | 0 | 0 | 7 | 0 | 428 |
| 25-50\% | 9 | 40 | 31 | 198 | 4 | 94 | 41 | 0 | 6 | 4 | 0 | 427 |
| 50-75\% | 0 | 1 | 4 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 9 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 |
| Total | 20 | 245 | 100 | 241 | 8 | 177 | 57 | 0 | 7 | 11 | 0 | 866 |
| Trawler ( $36{ }^{\prime}-40^{\prime}$ ) |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 2 | 185 | 0 | 52 | 31 | 28 | 41 | 0 | 4 | 32 | 0 | 375 |
| 25-50\% | 17 | 12 | 5 | 68 | 11 | 70 | 13 | 0 | 10 | 11 | 0 | 217 |
| 50-75\% | 2 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 21 | 197 | 5 | 121 | 42 | 102 | 54 | 0 | 14 | 43 | 0 | 599 |
| Trawler (>40') |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 1 | 145 | 0 | 104 | 19 | 86 | 87 | 0 | 107 | 86 | 0 | 635 |
| 25-50\% | 7 | 11 | 0 | 174 | 3 | 61 | 19 | 0 | 30 | 52 | 0 | 357 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 37 | 0 | 0 | 38 |
| Total | 8 | 156 | 0 | 278 | 22 | 148 | 106 | 0 | 184 | 138 | 0 | 1,040 |
| Total trawlers | 288 | 728 | 119 | 676 | 72 | 569 | 263 | 0 | 208 | 194 | 0 | 3,117 |
| 2. Purse Seiners (<40') 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 8 | 0 | 14 | 0 | 2 | 50 | 0 | 0 | 0 | 0 | 74 |
| 25-50\% | 0 | 0 | 0 | 5 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 20 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 8 | 0 | 19 | 0 | 2 | 65 | 0 | 0 | 0 | 0 | 94 |
| Purse Seiners ( $>40$ ') |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 0 | 0 | 0 | 0 | 330 | 141 | 0 | 7 | 0 | 0 | 478 |
| 25-50\% | 0 | 8 | 0 | 0 | 0 | 5 | 87 | 8 | 0 | 0 | 0 | 108 |

TABLE 11．Contd．

| $\underset{\substack{1 \\ \mathbf{1} \\ \hline}}{ }$ | -o ôe | $\underset{\sim}{\text { Nen }}$ |  | జ్N |  | $\text { 악 } 0<0$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0000 | 00000 | 000000 | 00000 | 000000 | 00000 |
|  | 0000 | $\stackrel{\sim}{\sim}$ | $\bullet \times \sim \sim$ | மN～○8 | ツ | 00000 |
|  | OONN | $\cdots \infty$ | ¢ | $\underset{\sim}{\sim} \widetilde{N}^{\sim} \sim-\infty$ | $\text { 运 } \mathrm{O}^{\infty}$ | 00000 |
| 进 | $\bigcirc \bigcirc 0 \infty$ | 00000 | 000000 | 00000 | 000000 | 00000 |
|  | $\text { -○ } \underset{\sim}{\sim} \underset{\sim}{\circ}$ | ¢ |  | 00000 | 000000 | 00000 |
|  | -ం心్ల్ల్ల్ల | $0 \times 00$ N | 咸－OON | 00000 | 000000 | $\stackrel{N}{\sim} \odot \circ \bigcirc \underset{\sim}{\sim}$ |
|  | 0000 | $\sim 100 \sim$ | $00000 \sim \sim$ | 00000 | $0-00-$ | 00000 |
|  | 000\％ | 승으읃 | $\sim \sim \circ \circ \underset{\sim}{\sim}$ | －roon | $\stackrel{\text { மナー○の「 }}{\text { ¢ }}$ | N NO○ |
|  | 0000 | $\stackrel{\infty}{\sim}$ | 으 م | 00000 | 000000 | 1000010 |
|  | 0000 |  |  | 융ㅇㅇㅇ | ホ | 00000 |
|  | 0000 | Nooof |  | $\infty \bigcirc \bigcirc \bigcirc$ | の $\infty \bigcirc \bigcirc \bigcirc \sim_{\sim}^{\sim}$ | 00000 |
|  <br> Tiver $\frac{\pi}{0}$ |  |  |  |  |  |  |

TABLE 11. Contd.

| Craft StateWes |  | Orissa | Andhra Pradesh | Tamilnadu | Pondicherry | Kerala | Karna taka | Goa | Maharashtra | Gujarat | Daman \&Diu | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ring Seiners (>40') |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 0 | 9 | 27 | 2 | 1,784 | 3 | 0 | 0 | 0 | 0 | 1,825 |
| 25-50\% | 0 | 0 | 0 | 55 | 1 | 29 | 0 | 0 | 0 | 0 | 0 | 85 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 9 | 82 | 3 | 1,816 | 3 | 0 | 0 | 0 | 0 | 1,913 |
| Total Ringseiners | 0 | 0 | 14 | 107 | 3 | 2,244 | 3 | 0 | 0 | 0 | 0 | 2,371 |
| 6. Liners(<30') |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 7 |
| 25-50\% | 0 | 2 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 2 | 0 | 33 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 37 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 2 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 25-50\% | 0 | 0 | 0 | 319 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 323 |
| 50-75\% | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 345 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 351 |
| Total Liners | 3 | 2 | 0 | 378 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 388 |
| 7. Carriers to Purseseiner(<30') 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 18 | 0 | 17 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 42 |
| 25-50\% | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 11 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 18 | 0 | 17 | 0 | 8 | 10 | 0 | 0 | 0 | 0 | 53 |
| Carriers to Purseseiner(>30') 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 0 | 0 | 7 | 0 | 388 | 28 | 0 | 0 | 0 | 0 | 423 |
| 25-50\% | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 12 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 7 | 0 | 388 | 40 | 0 | 0 | 0 | 0 | 435 |
| Total Purseseiner carriers | 0 | 18 | 0 | 24 | 0 | 396 | 50 | 0 | 0 | 0 | 0 | 488 |
| 8. Carriers to Ringseiner(<30') 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 0 | 0 | 0 | 6 | 1,363 | 1 | 0 | 0 | 0 | 0 | 1,370 |
| 25-50\% | 0 | 3 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 65 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 3 | 0 | 0 | 6 | 1,425 | 1 | 0 | 0 | 0 | 0 | 1,435 |

TABLE 11．Contd．

|  |  |  |  | $\frac{\infty}{7} 0.0-\frac{0}{i n}$ |  | $\prod_{n}^{\infty} \prod^{\infty} \text { N }$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 000000 | 00000 | 00000 | 00000 | 00000 | 00000 |
|  | 000000 | rooor |  | $\sim 60000$ | 00000 | －Noom |
|  | 000000 | Oroor |  | にNOO～ | 00000 | ONOON |
| $\begin{aligned} & \text { 厄O } \\ & \hline \mathbf{O} \end{aligned}$ | 000000 | 00000 | $\bigcirc \infty \bigcirc \bigcirc \infty$ | 00000 | 00000 | OLONN |
|  | ハ○○○円 | NN○○ | 整N~ | サナ | －－00～ | N |
|  | $\stackrel{\infty}{6} 8 \times \sim \stackrel{0}{\text { ¢ }}$ | ¢000 |  |  | $\sim \infty 00$ 응 | Nör |
|  | N～OOナO | $\underline{¢}$ | న్సె లంo న్న్ | 00000 | －000응 | いサ○○の |
|  | 000000 | NㅡNOO |  |  | No 움 | $\underset{m}{\text { অ Mo○ }}$ |
|  | 0000000 | の000の | $\underset{\sim}{\circ} \underset{\sim}{\forall} \forall \circ \underset{\sim}{N}$ | 00000 |  | Nペ の～～～ |
|  | 00000 m | 응o下 | $\frac{\underset{N}{\mathrm{~N}}}{\mathrm{~N}} \underset{\sim}{\mathbb{N}}$ | চ ¢oo | が্যー○オ | No욷 은 |
| －$\overline{0}$ | 000000 | $ল \forall 00-$ | ষ্户 | 00000 | 00000 | パ®○○ |
| 30 |  |  |  |  |  |  |
|  |  <br> $\stackrel{8}{0}$ |  |  |  | ¢ |  |

TABLE 11. Contd.

|  | West Bengal | Orissa | Andhra Pradesh | Tamilnadu | Pondicherry | Kerala | Karnataka | Goa | Maharashtra | Gujarat | Daman \&Diu | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Ring Seiner |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 5 | 1 | 5 | 12 | 1,892 | 2,498 | 0 | 0 | 0 | 0 | 4,413 |
| 25-50\% | 0 | 1 | 0 | 1 | 0 | 255 | 1,629 | 0 | 0 | 0 | 0 | 1,886 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 17 | 246 | 0 | 0 | 0 | 0 | 263 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 0 | 0 | 0 | 0 | 14 |
| Total | 0 | 6 | 1 | 6 | 12 | 2,174 | 4,377 | 0 | 0 | 0 | 0 | 6,576 |
| 5. Fibre Glass |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 41 | 865 | 2,146 | 10,507 | 645 | 987 | 70 | 0 | 13 | 62 | 0 | 15,336 |
| 25-50\% | 6 | 509 | 1,937 | 7,459 | 645 | 315 | 86 | 0 | 28 | 17 | 1 | 11,003 |
| 50-75\% | 0 | 2 | 24 | 132 | 22 | 2 | 31 | 0 | 0 | 0 | 0 | 213 |
| >75\% | 0 | 0 | 4 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Total | 47 | 1,376 | 4,111 | 18,110 | 1,313 | 1,304 | 187 | 0 | 41 | 79 | 1 | 26,569 |
| 6. Ferro Cement 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 0 | 11 | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 17 |
| 25-50\% | 0 | 0 | 43 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 52 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 54 | 1 | 0 | 11 | 0 | 0 | 1 | 2 | 0 | 69 |
| 7. Others |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 0 | 7 | 1 | 0 | 330 | 2,625 | 0 | 0 | 0 | 0 | 2,963 |
| 25-50\% | 0 | 0 | 10 | 81 | 0 | 94 | 1,055 | 0 | 5 | 0 | 0 | 1,245 |
| 50-75\% | 0 | 0 | 0 | 1 | 0 | 9 | 130 | 0 | 0 | 0 | 0 | 140 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 17 | 83 | 0 | 433 | 3,810 | 0 | 5 | 0 | 0 | 4,348 |
| Total Motorised |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 106 | 1,107 | 3,240 | 11,185 | 663 | 4,406 | 5,225 | 0 | 19 | 67 | 0 | 26,018 |
| 25-50\% | 32 | 802 | 5,059 | 9,196 | 658 | 1,018 | 2,786 | 5 | 47 | 75 | 1 | 19,679 |
| 50-75\% | 0 | 3 | 62 | 134 | 22 | 33 | 407 | 0 | 0 | 0 | 0 | 661 |
| >75\% | 0 | 0 | 6 | 12 | 1 | 12 | 4 | 2 | 0 | 0 | 0 | 37 |
| Total | 138 | 1,912 | 8,367 | 20,527 | 1,344 | 5,469 | 8,422 | 7 | 66 | 142 | 1 | 46,395 |
| Non-Motorised |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Dugout |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 8 | 141 | 0 | 0 | 0 | 20 | 14 | 0 | 16 | 0 | 1 | 200 |
| 25-50\% | 0 | 358 | 6 | 117 | 0 | 65 | 72 | 0 | 8 | 8 | 0 | 634 |
| 50-75\% | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 8 | 502 | 6 | 117 | 0 | 85 | 86 | 0 | 24 | 8 | 1 | 837 |

TABLE 11．Contd．

| $\stackrel{1}{\sqrt{2}}$ |  |  |  |  | No |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 00000 | 00000 | 00000 | 000 | N |
| $\begin{aligned} & \frac{\pi}{v} \\ & \stackrel{\rightharpoonup}{3} \\ & \stackrel{3}{3} \end{aligned}$ | 00 | 00 | 00 | $\wedge$－ 0 O | N్ల్ల No |
|  | Oroor | ＋ | 知 90000 |  | 筑 |
| \％ | 00000 | N＝00 | 00000 | $\hat{N}=00 \mathrm{~N}$ | 청 $\bigcirc$ |
|  | 00000 | NNのON | $\underline{\sim}-00 \mathrm{~N}$ | へ⿵冂⿰入入 |  |
|  | ＋$¢ \sim \sim \sim$ | ¢ ¢ ¢～ | ッ800F |  |  |
|  | －过 000 只 | －Noom | 00000 | $\sim \bigcirc$ |  |
|  |  |  | $\mp \stackrel{\infty}{0} 00$ 品 |  |  |
|  |  |  |  |  |  |
|  | $\stackrel{\sim}{\sim} \stackrel{\circ}{\circ}+\circ \stackrel{\circ}{\square}$ |  | N |  | $\underset{\sim}{\hat{e}} \underset{\sim}{\text { op }}$ |
|  | 00000 |  | 은 $00 \%$ | 웅 0 ¢ 000 |  |
|  |  |  |  |  |  |

TABLE 12. GEARS OWNED BY FISHERFOLK

| Name of Gear | West <br> Bengal | Orissa | Andhra <br> Pradesh | Tamil- <br> nadu | Pondi- <br> cherry | Kerala | Karna- <br> taka | Goa | Mahar- <br> ashtra | Gujarat | Daman <br> \&Diu | TOTAL |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Trawl net | 1,228 | 1,387 | 2,229 | 17,011 | 1,598 | 2,900 | 5,127 | 1,338 | 8,550 | 25,984 | 1,836 | 69,188 |
| Purse seine | 19 | 1,166 | 0 | 79 | 0 | 43 | 515 | 283 | 174 | 9 | 0 | 2,288 |
| Boat seine | 49 | 1,716 | 4,557 | 2,872 | 1 | 1,772 | 21 | 5 | 964 | 259 | 0 | 12,216 |
| Fixed bag net | 46,528 | 19,303 | 16,787 | 1,357 | 14 | 709 | 1,790 | 0 | 21,482 | 34,059 | 230 | 142,259 |
| Drift net | 1,164 | 5,433 | 4,013 | 36,705 | 1,376 | 6,575 | 6,482 | 144 | 12,588 | 823 | 0 | 75,303 |
| Gill net (Large) | 67,119 | 162,999 | 237,876 | 334,389 | 1,402 | 23,162 | 13,822 | 9,756 | 112,617 | 207,327 | 21,060 | $1,191,529$ |
| Gill net (Medium) | 181,783 | 152,726 | 259,090 | 503,186 | 15,148 | 96,759 | 72,682 | 9,352 | 90,098 | 154,040 | 26,215 | $1,561,079$ |
| Gill net (Small) | 78,867 | 167,861 | 215,396 | 573,400 | 15,781 | 82,495 | 49,565 | 7,240 | 74,435 | 111,067 | 6,211 | $1,382,318$ |
| Total Gillnet pieces | 327,769 | 483,586 | 712,362 | $\mathbf{1 , 4 1 0 , 9 7 5}$ | 32,331 | 202,416 | 136,069 | 26,348 | 277,150 | 472,434 | 53,486 | $4,134,926$ |
| Hooks and lines | 2,896 | 18,864 | 48,317 | 140,069 | 918 | 9,943 | 13,887 | 0 | 8,365 | 3,844 | 4 | 247,107 |
| Long lines | 80 | 7,189 | 14,673 | 12,079 | 16 | 2,856 | 2,917 | 0 | 192 | 806 | 0 | 40,808 |
| Troll lines | 0 | 375 | 1 | 80,287 | 419 | 8,186 | 73 | 0 | 4 | 0 | 0 | 89,345 |
| Ring seine | 0 | 4,295 | 61 | 235 | 6 | 828 | 360 | 277 | 0 | 2 | 0 | 6,064 |
| Shore seines | 69 | 12,690 | 5,099 | 5,690 | 19 | 3,302 | 869 | 204 | 4,423 | 14,209 | 47 | 46,621 |
| Scoop net | 0 | 5,357 | 1,315 | 7,823 | 30 | 1,231 | 2,167 | 128 | 1,988 | 42 | 0 | 20,081 |
| Traps | 37 | 6,131 | 552 | 2,057 | 0 | 42 | 433 | 0 | 5,564 | 2 | 0 | 14,818 |
| Others | 62 | 8,830 | 9,259 | 25,702 | 371 | 1,880 | 4,049 | 609 | 27,073 | 66,188 | 717 | 144,740 |


| TABLE 13. SHARING PATTERN OF GEARS AMONG FISHERFOLK (No. of families having shares in fishing gears) |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | West Bengal | Orissa | Andhra Pradesh | Tamilnadu | Pondicherry | Kerala | Karnataka | Goa | Maharashtra | Gujarat | Daman \&Diu | TOTAL |
| Trawl net |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 244 | 16 | 77 | 141 | 14 | 342 | 190 | 0 | 82 | 99 | 2 | 1,207 |
| 25-50\% | 50 | 22 | 46 | 216 | 9 | 299 | 84 | 0 | 29 | 24 | 0 | 779 |
| 50-75\% | 0 | 0 | 4 | 3 | 0 | 1 | 36 | 0 | 0 | 2 | 0 | 46 |
| >75\% | 1 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 14 |
| Total | 295 | 38 | 127 | 364 | 23 | 642 | 311 | 0 | 111 | 133 | 2 | 2,046 |
| Purse seine |  |  |  | 0 |  |  |  |  |  |  |  |  |
| <25\% | 0 | 40 | 0 | 977 | 10 | 62 | 162 | 1 | 55 | 0 | 0 | 1,307 |
| 25-50\% | 0 | 4 | 0 | 87 | 0 | 16 | 100 | 0 | 0 | 0 | 0 | 207 |
| 50-75\% | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 7 |
| >75\% | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 44 | 0 | 1,066 | 10 | 79 | 267 | 1 | 55 | 0 | 0 | 1,522 |
| Boat seine |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 41 | 239 | 1,056 | 723 | 32 | 1,489 | 0 | 0 | 5 | 0 | 0 | 3,585 |
| 25-50\% | 1 | 230 | 1,085 | 159 | 0 | 105 | 0 | 0 | 10 | 0 | 0 | 1,590 |
| 50-75\% | 0 | 1 | 14 | 1 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 20 |
| >75\% | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | 42 | 471 | 2,157 | 883 | 32 | 1,597 | 0 | 0 | 16 | 0 | 0 | 5,198 |
| Fixed bag net |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 692 | 1,377 | 824 | 2,745 | 650 | 62 | 46 | 0 | 456 | 28 | 0 | 6,880 |
| 25-50\% | 57 | 1,079 | 149 | 175 | 11 | 17 | 0 | 0 | 48 | 55 | 0 | 1,591 |
| 50-75\% | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 109 |
| >75\% | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 |
| Total | 749 | 2,566 | 975 | 2,921 | 661 | 79 | 46 | 0 | 506 | 83 | 0 | 8,586 |

TABLE 13. Contd.

| Gear / State | West Bengal | Orissa | Andhra Pradesh | Tamilnadu | Pondicherry | Kerala | Karnataka | Goa | Maharashtra | Gujarat | Daman \&Diu | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Drift net |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 105 | 627 | 1,190 | 1,642 | 161 | 248 | 129 | 13 | 36 | 0 | 0 | 4,151 |
| 25-50\% | 1 | 205 | 789 | 624 | 175 | 274 | 78 | 0 | 36 | 1 | 0 | 2,183 |
| 50-75\% | 0 | 100 | 10 | 149 | 4 | 0 | 20 | 0 | 1 | 0 | 0 | 284 |
| > $75 \%$ | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 16 |
| Total | 106 | 932 | 1,989 | 2,424 | 340 | 522 | 227 | 13 | 80 | 1 | 0 | 6,634 |
| Troll lines |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 3 | 0 | 321 | 3 | 19 | 0 | 0 | 0 | 0 | 0 | 346 |
| 25-50\% | 0 | 2 | 0 | 893 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 908 |
| 50-75\% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| > $75 \%$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 5 | 0 | 1,214 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 1,254 |
| Ring seine |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 0 | 403 | 110 | 86 | 123 | 2,349 | 1,753 | 0 | 0 | 0 | 0 | 4,824 |
| 25-50\% | 0 | 168 | 43 | 17 | 5 | 152 | 1,088 | 0 | 0 | 0 | 0 | 1,473 |
| 50-75\% | 0 | 7 | 0 | 0 | 0 | 8 | 155 | 0 | 0 | 0 | 0 | 170 |
| >75\% | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Total | 0 | 582 | 153 | 103 | 128 | 2,509 | 2,996 | 0 | 0 | 0 | 0 | 6,471 |
| Shore seines |  |  |  |  |  |  |  |  |  |  |  |  |
| <25\% | 344 | 1,614 | 14,287 | 357 | 14 | 97 | 343 | 64 | 1,070 | 26 | 0 | 18,216 |
| 25-50\% | 20 | 618 | 759 | 241 | 15 | 114 | 72 | 2 | 153 | 3 | 0 | 1,997 |
| 50-75\% | 5 | 49 | 557 | 1 | 0 | 1 | 0 | 0 | 27 | 0 | 0 | 640 |
| >75\% | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| Total | 369 | 2,281 | 15,628 | 599 | 29 | 212 | 415 | 66 | 1,250 | 29 | 0 | 20,878 |

## Marine Fisheries Census 2005

TABLE 13. Contd.


| TABLE 14. Electronic equipment, life saving equipment and training |  |  |  |
| :--- | :---: | :---: | :---: |
|  | acquired (No. of families) |  |  |
|  | Electronic gadgets | Life saving equipment | Training acquired |
| STATE/U.T. | 998 | 686 | 12 |
| West Bengal | 5,077 | 5,932 | 230 |
| Orissa | 2,541 | 46 | 39 |
| Andhra Pradesh | 4,157 | 2,101 | 158 |
| Tamilnadu | 356 | 1 | 9 |
| Pondicherry | 4,224 | 1,039 | 645 |
| Kerala | 1,025 | 126 | 8 |
| Karnataka | 181 | 43 | 0 |
| Goa | 9,720 | 3,637 | 269 |
| Maharashtra | 4,546 | 105 | 423 |
| Gujarat | 78 | $\mathbf{1 4 , 6 2 0}$ | 2 |
| Daman \& Diu | $\mathbf{2 4 , 9 0 3}$ |  | $\mathbf{1 , 7 9 5}$ |
| TOTAL |  |  |  |

TABLE 15. ADDITIONAL INFORMATION

| State/U.T. | Total Families | No. of families |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Involved in fishing |  |  | Not going for fishing |  | Only women involved in fishing allied activites |
|  |  | No craft | No gear | Neither | Having craft | Having gear |  |
| West Bengal | 53,816 | 37,546 | 27,110 | 26,217 | 812 | 1,078 | 171 |
| Orissa | 86,352 | 56,297 | 27,432 | 25,977 | 565 | 2,050 | 1,272 |
| Andhra Pradesh | 129,246 | 75,245 | 61,227 | 58,415 | 1,816 | 3,086 | 6,337 |
| Tamilnadu | 192,152 | 109,085 | 94,566 | 88,979 | 2,138 | 2,548 | 8,681 |
| Pondicherry | 11,541 | 5,061 | 4,974 | 4,782 | 254 | 271 | 1,750 |
| Kerala | 120,486 | 82,772 | 82,554 | 79,438 | 1,094 | 1,327 | 6,991 |
| Karnataka | 30,176 | 15,526 | 13,454 | 12,864 | 748 | 1,064 | 1,691 |
| Goa | 1,963 | 628 | 490 | 418 | 32 | 43 | 51 |
| Maharashtra | 65,313 | 37,483 | 26,580 | 25,647 | 1,080 | 2,612 | 6,517 |
| Gujarat | 59,889 | 42,950 | 26,973 | 26,470 | 815 | 1,221 | 1,194 |
| Daman \& Diu | 5,278 | 4,083 | 4,004 | 3,914 | 35 | 35 | 457 |
| TOTAL | 756,212 | 466,676 | 369,364 | 353,121 | 9,389 | 15,335 | 35,112 |

TABLE 16. Infrastructure - Housing and Education (In the villages)

| State | No. of villages | No.of Families | Housing (Fishermen only) |  |  | Education |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Kutcha houses (\%) | Pucca houses (\%) | Total Houses | Primary | Secondary | College | Technical Institutes |
| West Bengal | 346 | 53,816 | 90.68 | 9.32 | 45,750 | 557 | 58 | 3 | 2 |
| Orissa | 641 | 86,352 | 73.11 | 26.89 | 84,384 | 636 | 234 | 22 | 6 |
| Andhra Pradesh | 498 | 129,246 | 46.73 | 53.27 | 112,521 | 516 | 97 | 5 | 7 |
| Tamilnadu | 581 | 192,152 | 31.47 | 68.53 | 168,378 | 483 | 170 | 17 | 21 |
| Pondichery | 28 | 11,541 | 29.31 | 70.69 | 10,021 | 38 | 13 | 3 | 2 |
| Kerala | 222 | 120,486 | 24.63 | 75.37 | 119,868 | 458 | 202 | 37 | 54 |
| Karnataka | 156 | 30,176 | 14.84 | 85.16 | 18,661 | 808 | 202 | 56 | 25 |
| Goa | 39 | 1,963 | 28.43 | 71.57 | 1,779 | 146 | 87 | 20 | 12 |
| Maharashtra | 406 | 65,313 | 7.75 | 92.25 | 61,847 | 654 | 187 | 39 | 47 |
| Gujarat | 263 | 59,889 | 17.20 | 82.80 | 41,981 | 736 | 230 | 52 | 41 |
| Daman \& Diu | 22 | 5,278 | 0.28 | 99.72 | 5,257 | 34 | 14 | 1 | 3 |
| Grand Total | 3,202 | 756,212 | 37.89 | 62.11 | 670,447 | 5,066 | 1,494 | 255 | 220 |

TABLE 17. Infrastructure/Facilities (In the villages)

| State | Total <br> villages | Villages <br> Electrified | Villages <br> connected <br> by road | Villages <br> having bus <br> stop/stand | Hospitals | Banks | Co-Op- <br> Societies | Community <br> centers | Local <br> festivals | Cinema <br> Theatres |
| :--- | ---: | ---: | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| West Bengal | 346 | 160 | 99 | 69 | 24 | 24 | 46 | 8 | 670 | 3 |
| Orissa | 641 | 459 | 453 | 65 | 54 | 43 | 170 | 233 | 1,793 | 3 |
| Andhra Pradesh | 498 | 459 | 430 | 300 | 43 | 22 | 2,378 | 175 | 1,877 | 11 |
| Tamil Nadu | 581 | 564 | 538 | 411 | 186 | 93 | 967 | 234 | 933 | 56 |
| Pondichery | 28 | 28 | 28 | 15 | 9 | 11 | 35 | 11 | 43 | 2 |
| Kerala | 222 | 222 | 219 | 203 | 357 | 306 | 381 | 137 | 458 | 83 |
| Karnataka | 156 | 156 | 153 | 134 | 304 | 284 | 199 | 152 | 1,588 | 28 |
| Goa | 39 | 30 | 30 | 29 | 123 | 52 | 23 | 57 | 163 | 7 |
| Maharashtra | 406 | 375 | 333 | 294 | 455 | 217 | 366 | 465 | 2,049 | 26 |
| Gujarat | 263 | 244 | 241 | 218 | 486 | 269 | 200 | 291 | 2,495 | 42 |
| Daman \& Diu | 22 | 22 | 22 | 20 | 26 | 15 | 16 | 22 | 105 | 2 |
| Total | $\mathbf{3 , 2 0 2}$ | $\mathbf{2 , 7 1 9}$ | $\mathbf{2 , 5 4 6}$ | $\mathbf{1 , 7 5 8}$ | $\mathbf{2 , 0 6 7}$ | $\mathbf{1 , 3 3 6}$ | $\mathbf{4 , 7 8 1}$ | $\mathbf{1 , 7 8 5}$ | $\mathbf{1 2 , 1 7 4}$ | $\mathbf{2 6 3}$ |

\[

\]

_।

_।

## List of figures

1. Landing centres \& marine fishing villages
2. Marine fisherfolk households and population
3. Average family size
4. Educational status of fisherfolk
5. Occupation status of fisherfolk in India
6. Active fishermen in India
7. No. Of members involved in actual fishing
8. Distribution of fishing allied activities in India
9. State-wise distribution of allied activities

9(1)a. Marketing of fish - total population
9(1)b. Marketing of fish - male
9(1)c. Marketing of fish - female
9(2)a. Making/repairing nets - total
9(2)b. Making/repairing nets - male
9(2)c. Making/repairing nets - female
9(3)a. Curing/processing - total
9(3)b. Curing/processing - male
9(3)c. Curing/processing - female
9(4)a. Peeling - total
9(4)b. Peeling - male
9(4)c. Peeling - female
9(5)a. Labourers - total
9(5)b. Labourers - male
9(5)c. Labourers - female
10. Distribution of families in different religions
11. SC/ST households
12. Total craft in the fishery
13. Total trawlers in the maritime states
14. Total purseseiners in the maritime states
15. Total gillnetters in the maritime states
16. Total dolnetters in the maritime states
17. Total liners in the maritime states
18. Total mechanized boats in the maritime states
19. Total motorized boats in the maritime states
20. Total non-motorized boats in the maritime states
21. Craft owned by fisherfolk
22. Mechanized boats owned by fisherfolk
23. Trawlers owned by fisherfolk
24. Purseseiners owned by fisherfolk
25. Gillnetters owned by fisherfolk
26. Dolnetters owned by fisherfolk
27. Motorized boats owned by fisherfolk
28. Motorized fibre glass boats owned by fisherfolk
29. Motorized ringseiners owned by fisherfolk
30. Motorized plank built boats owned by fisherfolk
31. Non-motorized boats owned by fisherfolk
32. Gears owned by fisherfolk in different states (excluding gillnets and hooks \& line)
33. Seine nets owned by fisherfolk
34. Trawlnets owned by fisherfolk
35. Bagnets owned by fisherfolk
36. Driftnets owned by fisherfolk
37. Gillnet pieces owned by fisherfolk
38. Hooks \& lines owned by fisherfolk
39. Communication and life saving equipment and training undergone (No. of families)

Fig. 2. Marine Fisherfolk households and population



Fig 5. Occupation Status of fisherfolk in India



Fig. 8. Distribution of fishing allied activities in India

Fig. 9. State-wise distribution of allied activities

Fig. 9(1)c. MARKETING OF FISH - FEMALE



Fig. 9(3)a. CURING/PROCESSING - TOTAL

Fig. 9(4)a. PEELING - TOTAL
(




Fig. 11. SC/ST Households









Fig.21. Crafts owned by fisherfolk














Fig.35. Bagnets owned by fisherfolk




Fig.39. Communication \& Life saving equipment and


## Census Scenes







