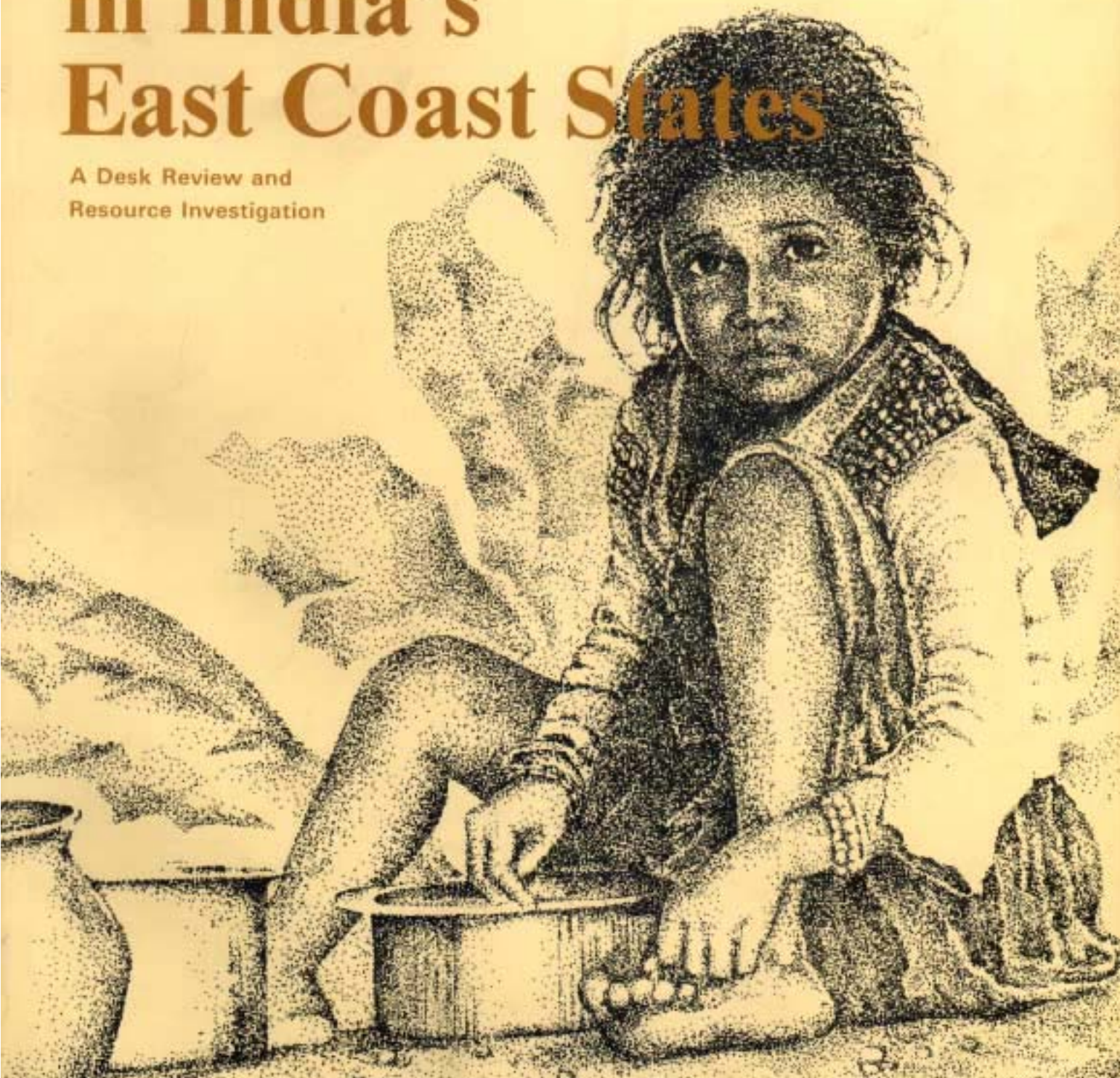


Food and Nutrition Status of Small-Scale Fisherfolk in India's East Coast States

A Desk Review and
Resource Investigation



**FOOD AND NUTRITION STATUS OF SMALL-SCALE
FISHERFOLK IN INDIA'S EAST COAST STATES**

A Desk Review and Resource Investigation

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This paper is an outcome of a desk review and resource investigation on the nutrition status of fisher-folk in India's east coast states. It was conducted over a three-month period from February 1985. It documents data from existing surveys and studies, and describes nutrition programmes and institutions in these states.

The desk review was sponsored by the Norway-funded project "Nutrition and fisher-folk in the Bay of Bengal region" (GCP/INT/417/NOR), which is being executed in cooperation with the small-scale fisheries project of the Bay of Bengal Programme.

The nutrition project is in pursuance of the resolution adopted by the 1994 World Fisheries Conference, Rome, to "promote the role of fisheries in alleviating malnutrition". The project attempts to improve the nutritional status of fisherfolk of the region and thereby play a part in improving their living conditions. The desk review/resource investigation described in this paper is a preparatory activity of the project. It may also help serve as a source of information to planners, researchers and officials concerned with nutrition activities, particularly for fisher-folk.

As a follow-up to the desk review/resource investigation, nutrition surveys of fisherfolk have been conducted in Orissa, Andhra Pradesh and Tamil Nadu. Reports of pilot surveys in two fishing villages of each state are under preparation. A workshop to focus attention on the nutrition problems of fisherfolk and to identify specific activities was held in March 1996.

The small-scale fisheries project of the Bay of Bengal Programme began in 1979 and covers five countries bordering the Bay of Bengal – Bangladesh, India, Malaysia, Sri Lanka and Thailand. Funded by SIDA (Swedish International Development Authority) and executed by the FAO (Food and Agriculture Organization of the United Nations), the project seeks to develop, demonstrate and promote appropriate technologies and methodologies to improve the conditions of small-scale fisherfolk in member countries.

This paper is an information document and has not been officially cleared by the Government concerned or by the FAO.

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1 INTRODUCTION

Since 1983, FAO's Fishery Industry Division and Food Policy and Nutrition Division have been supporting activities that integrate fish, fisheries and nutrition. Consequently the World Fisheries Conference, 1984, adopted a special action programme, "Promotion of the role of fisheries in alleviating undernutrition." Two approaches were identified to translate the programme into action :

1. Considering the *direct* nutrition effects of fish as food, or the consumption value of fish. This can be achieved by better exploitation of fish resources; by increasing the availability of fish to low-income groups; by better marketing and distribution; by linking national nutrition policy with the national fisheries policy.
2. Considering the *indirect nutrition* effects of fisheries as income or the *commodity value* of fish. Focus here is on evolving measures to see that fishermen are assured of nutritious food through better employment and income; more food purchasing power: better food consumption and living conditions.

The second approach concerns mainly the small-scale fisheries sector. FAO felt the need to identify ways by which regional small-scale fishery projects could consider nutrition aspects. To ensure this, FAO, Rome carried out a desk review of existing regional projects in January 1984.¹ The Bay of Bengal Programme (BOBP) was selected for preliminary investigations because it aims at methodologies to improve the living conditions of fisherfolk, of which health and nutrition form an integral part, and because it has the expertise to identify and deal with socio-economic problems.

An international nutrition consultant studied ongoing BOBP activities in November 1984. This resulted in a project proposal, "Nutrition and fisherfolk in the Bay of Bengal Region",² to be funded by NORAD and carried out by BOBP. The project aims at developing operational methods and approaches to solve the nutrition problems of fisherfolk.

As preparation for this project, a desk review and resource investigation were suggested to compile available information on the nutritional status of small-scale fisherfolk of the Bay of Bengal region. BOBP operates in Bangladesh, India, Malaysia, Sri Lanka and Thailand; but as a first step, the review confined itself to the east coast states of India. The review covers the following aspects :

- Documentation of data on nutritional status of fisherfolk along the east coast
- Review of ongoing nutrition/health programmes and their possible extension to marine fisherfolk.
- Identification of national expertise in food and nutrition planning, research and training.

The report is presented in five chapters along these lines. Abbreviations used in the report are listed in Appendix 1.

All documents cited in the text and listed at the end of the report are available in the BOBP library.

2 NUTRITIONAL STATUS OF FISHERFOLK

Very little information is available on the health and nutrition status of small-scale fisherfolk of India's east coast. A few micro-level studies and baseline surveys in Tamil Nadu, Andhra Pradesh and West Bengal give a basic idea. There have been some occasional socio-economic studies of fisherfolk. These cover health and nutrition aspects to a limited extent.

This chapter presents data from specific nutrition/health studies and general socio-economic surveys in each state.

Institutions like the National Institute of Nutrition (NIN), Hyderabad; the College of Home Science of the Andhra Pradesh Agricultural University, Hyderabad; and the Sri Avinashilingam Home Science College for Women, Coimbatore have undertaken community nutrition surveys. But fishing communities as a special group have not been studied. Attention has been focussed on urban slum dwellers, tribals, farm and factory workers and dairy farmers.

The National Nutrition Monitoring Bureau (NNMB) of the Indian Council of Medical Research (ICMR) at NIN, and the National Sample Survey (NSS), conduct annual surveys. However, the data presented district-wise do not help identify or interpret the nutritional status of fisherfolk as a single group.

The Government of India's Integrated Child Development Services (ICDS) programme collects data to determine the nutritional status of children under five years of age and maintains weight charts. But the data are not published and are available only at the ICDS project centres.

2.1 Andhra Pradesh

A comparative study³ (1984) of the nutritional status of fisher-folk from Jalaripet area and farm labourers from Simhachalam block (both in Vishakhapatnam district) showed that child mortality and gastro-intestinal infections were higher among fisherfolk. However, the reverse was the case with nutritional deficiencies and skin disorders. More children of the agricultural community were anaemic and deficient in Vitamin A and Vitamin B.

A socio-economic survey (1978) done in seven fishing villages from five coastal districts of the state presents data on food expenditure. It accounts for 58% to 83% of the total income, of which 5 to 23% is spent on fish.

Another survey⁵ (1979) of 22 fishing villages in the Konaseema area of East Godavari district briefly discusses the food expenditure pattern : 51.43% of the income is spent on food and liquor, of which 11.6% is on fish.

Though no specific figures are given on the nutrient intake, the following general statement gives an idea :

“Seen from the standpoint of calorific value of food, the dietary habits of fishermen’s families seem to be far from satisfactory. As a result most of the villagers, especially children, suffered from a very high degree of vitamin deficiency and malnutrition, which resulted in their being susceptible to serious illness”.

This view is confirmed by two BOBP reports – a study done in Bandaravanipeta⁶ (1979); and the General Description of Marine Small-Scale Fisheries in Andhra Pradesh⁷ (1983).

2.2 Orissa

No specific study seems to have been undertaken on the nutritional status of Orissa fisher-folk. However, a socio-economic survey⁸ (1981) in Choumukh area, Balasore district, gives information on mortality and morbidity rates among Orissa fisherfolk.

The general mortality rate during the last five years was 42 per thousand for the fishing community and 26 per thousand for the non-fishing community. Mortality for children below five was higher for boys than for girls. Cholera and anaemia were two of the main causes of death among children aged 0-10.

The survey provides comparative data for disease patterns among fishing and non-fishing communities.

2.3 Tamil Nadu

A nutrition survey⁹ (1983) conducted for BOBP in Nochikuppam and Ayodyakuppam marine fishing hamlets in Madras city indicated that of 482 children under five years of age, 55% were malnourished mildly or moderately and 3% severely (Gomez weight/age classification).

Xerosis (Vitamin A deficiency) and angular stomatitis (Vitamin B deficiency) were the major diseases prevalent. Malaria, measles, respiratory infection and diarrhoea were the diseases common among children.

The families' dietary patterns showed quantitative and qualitative variations over the year, depending on the fishing seasons. 75% of the families spent Rs. 10 to Rs. 20 a day on food; while the daily income ranged from Rs. 10 to Rs. 30. Fish was the animal protein consumed almost every day by most families. Milk, meat and fruit were eaten rarely.

Another survey was undertaken for BOBP in coastal villages of Kanyakumari and Tirunelveli districts¹⁰ (1984) to identify the main illnesses and nutritional deficiency diseases prevalent among fisherfolk. The survey report presents information on feeding and weaning practices and on health and nutrition problems among people in villages surveyed. A considerable number of women and children suffered from partial blindness because of Vitamin A deficiency. 70% of the children suffered from 1st and 2nd grade malnutrition (Gomez classification).

The most common diseases among children were respiratory infection, whooping cough and worms. Poverty and irregular income, inadequate medical facilities, lack of knowledge and under-utilization of the facilities available were mainly responsible for these diseases.

The Central Nutrition Bureau, Tamil Nadu, conducted a short nutrition and diet survey¹¹ (1983) in two marine fishing villages near Madras. The survey gives anthropometric data concerning pre-school children and pregnant and lactating mothers, nutritional deficiencies noticed among them, and their nutrient intake.

A socio-economic study¹² (1982) by BOBP in three fishing villages in Chingleput district reports that nearly 66% of the families go without any meal on some days – the major reason being low or no catch. As for food consumption, vegetables, meat and milk are consumed occasionally, fish at least half the year.

Another BOBP study¹³ (1985) in the same village identifies the status of women in the family and society as one of the major reasons for their poor health and nutrition. According to this study, fish in many families is served mainly to the men; there may be little or nothing left for the women.

2.4 West Bengal

A community survey I4 (1985) conducted in Basanti, a marine village, indicates that 44% of the children below five years of age are mildly malnourished, 26% moderately malnourished and 5% severely malnourished (Gomez classification).

The BOBP paper “General Description of Marine Small-Scale Fisheries of West Bengal”¹⁵ (1977) discusses the socio-economic condition of the fisherfolk, including income and expenditure data. It shows that 82% of the income is spent on food. No further details are available.

3 EXISTING NUTRITION PROGRAMMES

(Appendix 3 lists the programmes summarized here).

Three government programmes – “Integrated Child Development Services” (ICDS); “Noon meal or school meal programme”; and “Programme for the prevention of Vitamin A and iron deficiency” – are implemented in all states, but the scope of coverage varies, as does its intensity. International agencies like UNICEF, WFP and CARE take part in these programmes in varying degrees.

In addition, international aid agencies sponsor some government programmes as short-term experimental ventures. The Tamil Nadu Integrated Nutrition Programme (TINP) sponsored by the World Bank is one such.

A third category includes programmes run by voluntary agencies. These are funded either by government or by foreign religious/social development organizations. The Balwadi/Creche Nutrition Programme supported by the Ministry of Social Welfare and implemented through four national level voluntary agencies is an example of the former type of programme. The Targeted Maternal and Child Health Education Project (TMCH) of the Catholic Relief Services in various states is an example of the latter. The components of all these programmes vary from mere supplementary feeding to a whole range of services covering health, nutrition care and social development. For example, ICDS covers supplementary feeding, nutrition education, preventive and curative health care such as immunization and medical referral services; and non-formal pre-school education for children aged 3 to 6 years. Details of all these programmes are found in the tables.

It should be possible to extend to fishing communities all such programmes except those meant for special groups such as tribals. Fisheries departments or fishing communities should contact the agency responsible for executing a particular programme with a proposal.

Government departments and international agencies contacted during the course of the present desk review seem to be keen on considering fishing communities as a target group for nutritional activities.

4 PRESENT NUTRITION INFRASTRUCTURE

(Appendices 4a and 4b contain lists of relevant institutions)

National expertise in nutrition policy planning, research and training is found in Ministries and government departments, research institutes, colleges, universities and non-government agencies.

Government departments, both state and central, decide, plan and execute policies and programmes in nutrition (and related areas such as hygiene, public health, women and children). Institutions of national standing, university and college departments conduct research and provide training in these areas. There are also non-government voluntary agencies with their own expertise in research, training, programme planning and implementation.

Then there are international agencies such as UNICEF, WFP and CARE which assist national agencies and work in close collaboration with them.

All such agencies are listed and described wherever possible in Appendix 4a. (Individual experts are not listed here but a list is available with BORP). As there are many voluntary agencies, only the major ones are included in this indicative list. Entries marked with asterisks are institutes whose paediatricians are consultants to the ICDS programmes in the respective states. The social welfare department of each state has a complete list of these consultants. They conduct occasional surveys or studies on the nutritional status of children in their respective project areas.

Training and training aids

Most of the research institutions discussed above and listed (see Appendix 4b) provide training mainly at a higher level. For instance, NIN offers training for physicians, teachers of nutrition and nutrition administrators. The home science colleges provide courses at under-graduate and post-graduate levels. However, the Avinasilingam College, Coimbatore, and the Home Science College, Hyderabad, do provide short-term training for middle level nutrition workers. NIPCCD conducts training for district-level ICDS functionaries from all over India.

ICDS, being the major nationwide programme on nutrition and health care, with a geographical coverage that expands every year, has a large number of health/nutrition workers in different levels – i.e., Anganwadi workers (village level), supervisors and project officers (block/district levels). The supervisors and anganwadi workers are trained by government run or government recognized institutions. NIPCCD has a list of all these institutes. Besides ICDS, functionaries for other programmes are also trained by those mentioned above and a few others. Only selected institutions are listed in Appendix 4b. Three directories that describe voluntary agencies in India¹⁶, Orissa¹⁷ and Tamil Nadu¹⁸ are useful sources of information.

As part of their training activities, the institutes listed above produce a number of training aids and impart to their trainees skills in developing training aids. All of them, NIPCCD, in particular, have expertise in designing and developing training aids.

Most of these aids are normally posters, flip charts, flash cards, pamphlets and the like. CARE, Madras has prepared a number of films in Tamil on health and nutrition, some of which are being translated into Oriya and Telugu.

It should be mentioned here that the nonformal education curriculum package prepared by BOBP for the Tamil Nadu fisherfolk (adult education) and Orissa fisherfolk (primary education) are the only NFAE material available for fisherfolk as a special group. The material covers health and nutrition aspects to some degree.

The material for Orissa fisherfolk covers six subjects i.e., family and community life; health, nutrition and personal hygiene; environment and technology; history; geography and civics. The Tamil Nadu adult education curriculum package contains an animators' guide, a literacy primer and workbook, a numeracy primer and an animators' edition of the numeracy primer, the trainers' manual and supplementary readers. All these components cover health and nutrition aspects.

5 CONCLUSIONS

The desk review indicates that very little information is available on nutrition among small-scale fisherfolk. It figures as secondary data in socio-economic studies or is hidden in unpublished data. Not much research has been carried out on nutrition among small-scale fisherfolk as compared to that on other disadvantaged communities. The studies show that most of these groups live in conditions of want that impede their physical and mental development. Children under five years of age, and women, especially pregnant and lactating mothers, are the most subject to risk.

Realizing all this, the Central and State Governments have introduced special programmes to improve health and nutrition. Their main emphasis is on food supplements. Interestingly enough, fish is

not a part of the supplement distributed in any of these programmes. Perhaps its cost is prohibitive. Fishing communities are not being considered at present for any special intervention as are tribal groups or urban slum dwellers.

The resource investigation reveals that there is no dearth of expertise in research and training or in designing action programmes. Implementation and monitoring are the problem areas. This might be due to organizational constraints and ambitious targeting.

Fish is easily available to fisher-folk and therefore it is expected that their nutritional status would be better than that of other low income groups. Though fish is a good source of protein and micro nutrients, only cereals can meet their energy (calorie) needs. In order to buy cereals and other daily needs fishermen have to sell their catch. Fishing being a seasonal occupation with highly fluctuating incomes, fisherfolk sometimes have little money even to meet their normal food requirement. So, to what extent does the commodity value of fish affect consumption? How does the traditional food distribution pattern at home influence the consumption of different family members? Such questions need to be clarified.

In collaboration with the concerned governments, BOBP could take steps to fill the information gap and stimulate action.

Appendix 1

LIST OF ABBREVIATIONS

AIIMS	-All India Institute of Medical Sciences
AIIPHH	-All India Institute of Public Health Et Hygiene
BRAC	--Bangladesh Rural Advancement Committee
CARE	-Cooperative for American Relief Everywhere
CINI	--Child in Need Institute
CMNNMP	-Chief Minister's Nutritious Noon Meal Programme
CRS	-Catholic Relief Service
CSM	-Corn Soya Milk
DANIDA	-Danish International Development Agency
GOI	-Government of India
ICDS	-Integrated Child Development Services
ICMR	---Indian Council of Medical Research
MCH	-Maternal and Child Health
NIN	-National Institute of Nutrition
NIPCCD	-National Institute of Public Cooperation & Child Development
NNMB	-National Nutrition Monitoring Bureau
NSS	-National Sample Survey
RUHSA	-Rural Unit for Health & Social Affairs
SNP	-Supplementary Nutrition Programme
TINP	-Tamil Nadu Integrated Nutrition Programme
TMCHE	-Targeted Maternal & Child Health Education Project
UNICEF	-United Nations Children's Fund
VHAI	-Voluntary Health Association of India
WFP	-World Food Programme

Appendix 2a

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Appendix 3

NUTRITION PROGRAMMES IN EAST COAST STATES OF INDIA

Name	Description	Implementing & collaborating agencies	Funding authority or agency	Target group & area covered'	Food supplement ⁶
3.1 Andhra Pradesh					
1 Integrated Child Development Services (ICDS)	A package of the following services : Supplementary nutrition programme (SNP), Nutrition and health education, Non-formal pre-school education. Immunization, Health check.	Directorate of Women & Child Welfare	-- Govt. of Andhra Pradesh – Govt. of India – UNICEF	Number of beneficiaries : 3,30,000 children and mothers. Children aged 0-6 & pregnant and lactating women. Non-formal pre-school education for children aged 3 to 6. Nutrition & health education for all women aged 15 to 45. Area covered – selected blocks in all the eight coastal districts.	Milk, pre-processed or semi-processed food, or food prepared on the spot from locally available foodstuffs. Served depending on age & degree of malnourishment for 300 days in a year. 200 calories + 10 grams protein for children below 1. 300 calories + 15 grams protein for children between 1 and 5. 500 calories + 25 grams protein for pregnant & lactating women.
2 Mid-day Meal Programme ²	Lunch for school children.	Directorate of Education.	– Andhra Pradesh Government – CARE	Number of beneficiaries : 3.6 million children. Primary school children (in classes 1-5) belonging to scheduled castes, scheduled tribes and backward communities, and of parents with annual income less than Rs. 3,000. Area covered : 7950 schools all over the state	Cooked products made of 100 grams of rice or 80 grams of bulghar wheat + 5 grams soya bean salad oil served on all school working days i.e. 220 days every year.

CO

3 Health-based nutrition programme	Provision of basic drugs through primary health centres to prevent blindness (from Vitamin A deficiency) and to prevent anaemia (from iron and folic acid deficiency).	Department of Public Health & Family Services.	Andhra Pradesh government & UNICEF (UNICEF withdrew in 1985)	Children and pregnant mothers. Area covered : All of Andhra Pradesh.	Vitamin A and folic acid + iron tablets are distributed.
4 Nutrition programmes in urban slums	Supplementary feeding	Municipal Administration Department		Children and mothers prone to nutritive disorders. Area covered : Only urban slums	
5 Nutrition programme for Tribal Communities	Supplementary feeding	Tribal Welfare Department		Area covered : Tribal villages	

” 3.2 Orissa

6 ICDS	A package of the following services : Supplementary Nutrition Programme (SNP) nutrition and health education, non-formal pre-school education, Immunization, health check.	Community Development & Rural Re-construction Department.	<ul style="list-style-type: none"> - Orissa government - CARE - WFP and UNICEF 	<p>Number of beneficiaries : 10,47,000</p> <p>Children aged 0-6 & pregnant and lactating women. Non-formal pre-school education for children aged 3 to 6. Nutrition & health education for all women aged 15 to 45. Area covered : 44 blocks of which 4 are coastal blocks.</p>	<p>Milk, pre-processed or semi-processed food, or food prepared on the spot from locally available foodstuffs served depending on age & degree of malnourishment for 306 days in a year.</p> <p>200 calories + 10 grams protein for children below 1.</p> <p>300 calories + 15 grams protein for children between 1 and 5.</p> <p>500 calories + 25 grams protein for pregnant and lactating women.</p>
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Appendix 3 (Contd.)

Name	Description	Implementing & collaborating agencies	Funding authority or agency	Target group & area covered'	Food supplement ⁶
7 Special Nutrition Programme (SNP)	Food assistance	Community Development & Rural Re-construction Department	<ul style="list-style-type: none"> - Orissa government - CARE - WFP and UNICEF 	Number of beneficiaries : 3,69,000 Children and mothers prone to nutritional disorders. Area covered – all blocks not covered by ICDS (270 blocks).	Cooked food with 80 gms of cereal and 8 gms of salad oil served for 264, 270, 300 days per year by CARE, WFP and the state government respectively.
8 Mid-day Meal (School Lunch) Programme	Food assistance	Community Development & Rural Re-construction Department.	<ul style="list-style-type: none"> - Orissa government - CARE - WFP and UNICEF 	No. of beneficiaries : 7,37,000 School children of 6-11 years are covered Area covered – selected blocks in all the four coastal districts.	80 grams of cereal with 5 grams of salad oil served for 180 days per year.
3.3 Tamil Nadu					
9 ICDS	A package of the following services : Supplementary Nutrition Programme (SNP) nutrition and health education, non formal pre-school education, immunization, health check.	Directorate of Social Welfare	<ul style="list-style-type: none"> - Tamil Nadu government - CARE - UNICEF 	No. of beneficiaries : 24,00,000 approx. Target group : Children aged 0-5 & pregnant and lactating women. Non-formal pre-school education for children aged 3 to 6. Nutrition & health education for all women aged 15 to 45. Area covered – total 39 projects. No marine village covered yet.	Children aged 2 + to 4+ are given rice cooked with dhal, oil & vegetables. Kids below two are given CSM. Pregnant and lactating women are given bulghar wheat and salad oil.

10	Chief Minister's Nutritious Noon Meal Programme (CMNNMP)	Lunch served to pre-schoolers and children in schools up to class 10.	Department of Education & Directorate of Social Welfare.	- Tamil Nadu government - CARE	No. of beneficiaries : Approx. 55,00,000 Children aged 2 + to 15 Area covered – all over Tamil Nadu.	Rice cooked with dhal, oil and vegetables is served on all school working days.
11	Danida ³ Health Care Project – Tamil Nadu	Comprehensive nutrition, health and family welfare programme with the following components : Establishment of health sub-centres; Construction & renovation of health infrastructure; Water supply Et sanitation training; Nutrition; Innovative/alternative health delivery schemes; Community welfare fund, information, education and communication.	DANIDA project office, Directorates of Medical Services, Social Welfare and Rural Development.	88.3% Danish contribution; rest Government of India.	No. of beneficiaries : Mothers – 13,000 Children – 12,600 Nutrition component covers pregnant & lactating mothers and children aged 6-24 months	Supplement (80 grams) containing ragi, groundnut and jaggery.
12	Tamil Nadu Integrated Nutrition Project ⁴ (TINP)	Integrated health and nutrition development with emphasis on communication viz. Nutrition surveillance and supplements - Interventions for nutrition-related health problems such as deworming, oral rehydration.	TINP project office, Directorates of Social Welfare and Public Health.	Tamil Nadu government World Bank	No. of beneficiaries : 1,30,000 children, 24,000 mothers. Malnourished children of 6-36 months and pregnant and lactating mothers. Area covered : Six districts Madurai, Ramnad, Pudukottai, Tirunelveli, North Arcot, Chingleput.	Supplement containing par-boiled rice, ragi, Bengal gram (each 15%) + groundnut flour, sesame, groundnut, jaggery (each 10%). 40 grams of this supplement per day for children under 2 years of age, 80 grams per day for children above 2, and for pregnant and lactating mothers. Those severely malnourished get

Appendix 3 (C0ntd.)

Name	Description	Implementing & collaborating agencies	Funding authority or agency	Target group & area covered ¹	Food supplement ⁶
	<p>Vitamin A, iron and folic acid supplements</p> <p>Improvement of home child care and feeding practices through education.</p>				<p>rations appropriate to age twice daily.</p>
<p>3.4 West Bengal</p> <p>13 ICDS</p>	<p>A package of the following services : Supplementary Nutrition Programme (SNP), nutrition and health education, non-formal pre-school education, immunization, health check.</p>	<p>Additional Director of Social Welfare (ICDS), Dept. of Social Welfare.</p>	<p>– West Bengal government – CARE – WFP - UNICEF</p>	<p>No. of beneficiaries : approx. 3,30,000 children and 58,060 mothers. Children aged 0-6 & pregnant and lactating women. Non-formal pre-school education for children aged 3 to 6. Nutrition & health education for all women aged 15 to 45. Area covered -- 80 blocks of which 14 are in two coastal districts.</p>	<p>Milk, pre-processed or semi-processed food, or food prepared on the spot from locally available foodstuffs and served depending on age & degree of malnourishment for 300 days in a year. 200 calories + 10 gms protein for children below 1. 300 calories + 15 gms protein for children between 1 and 5. 500 calories + 25 gms protein for pregnant & lactating women.</p>
<p>14 SNP</p>	<p>Distribution of bread through voluntary agencies.</p>	<p>Directorate of Social Welfare.</p>	<p>– West Bengal government</p>	<p>Distribution of bread alone. Area covered : Calcutta slums.</p>	

15 Mid-day Meal Programme	Lunch for school children.	Office of the Deputy Director, Primary Education (Relief & Welfare).	- West Bengal government		
16 Targeted Maternal & Child Health Education Programme ⁵	Package of services similar to ICDS with the following components : non-formal nutrition education, immunization, health check-ups, deworming, supplementary nutrition.	Catholic Relief Services, through their 24 dioceses all over the state.	US Catholic Conference	Pregnant and lactating mothers and preschool children (second and third degree malnourished children, 36-60 months old).	Distribution of bulghar wheat, CSM and soya oil to the target group.
17 Balwadi/Creche Nutrition Programme	Education facilities and nutrition supplements to pre-schoolers in rural areas.	Central Social Welfare Board, Indian Council of Child Welfare, Bharatiya Adimjati Sevak Sangh (Tribal Service Society), Harijan Sevak Sangh (Untouchables' Service Society).	Ministry of Social Welfare, Government of India. Yearly grant of upto Rs. 7000 per creche for teacher's salary, school equipment & food supplement.	Children of 2+ to 6 years. Area covered - all the four east coast states.	

1 Names of the coastal villages covered can be obtained only at the block level. An incomplete list of blocks covered for some of the programmes is at BOBP.

2 Suspended indefinitely since mid 1985.

3 Because of budget restrictions the nutrition component was implemented only in one pilot block for each target district from September 1982 to June 1984 (18 months). Only the education/communication aspect has been retained and supplementary feeding has been suspended from the second phase which commenced in June 1985.

4 World Bank to withdraw after mid-1986 and TINP to be taken over by the state and incorporated into the ICDS programme.

5 CRS has similar programmes in other states also.

6 The ingredients include only food items of plant origin.

Appendix 4a

LIST OF AGENCIES CONCERNED WITH NUTRITION

4.1 Government agencies

4.1.1 Central Government

1. Central Technical Committee for Social Components of ICDS, 236, Gulmohar Enclave, New Delhi 110 049. Contact Person : Chairman
2. Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, Nirman Bhavan, New Delhi. Contact Persons : Advisor (Nutrition); Deputy Commissioner (MCH).
3. Ministry of Social Welfare, Government of India, Shastri Bhavan, New Delhi 110 001. Contact Persons : Joint Secretary; Consultant (ICDS).
4. Social Welfare and Nutrition Unit, Planning Commission, Government of India, Yojana Bhavan, New Delhi. Contact Person : Joint Advisor.
5. Ministry of Rural Development, Government of India, Krishi Bhavan, New Delhi. Contact Person : Director (Women Programme); Director (Social Education).

4.1.2 State Governments

Andhra Pradesh

6. Department of Education, Government of Andhra Pradesh, Secretariat, Hyderabad.
7. Department of Public Health and Family Services, Government of Andhra Pradesh, Secretariat, Hyderabad.
8. Women and Child Welfare Department, Government of Andhra Pradesh, 10-3-281, Humayun Nagar, Hyderabad 500 028. Contact Persons : Director; Training Coordinator.

Orissa

9. Community Development and Rural Development Department, Orissa Secretariat, Bhubaneswar 751001. Contact Persons : Director (Social Welfare); Deputy Director (ICDS).
10. Health Services Department, Heads of Department Building, Bhubaneswar 751 001. Contact Persons : Director; Deputy Director (Nut).

Tamil Nadu

11. Directorate of Health and Preventive Medicine, Department of Medical Services & Family Welfare, 258/261 Anna Road, Madras 600 006. Contact Person : Director.

The prime government agency for health services in the state, is also responsible for health education and training of government recruits in Tamil Nadu. The Central Nutrition Bureau of the Directorate is in charge of this in-service training in health and nutrition. The unit coordinates with the regional unit of the National Nutrition Monitoring Bureau (NNMB), located in Madras, as the government counterpart. This Directorate also holds responsibility for the health aspects of the TINP (Tamil Nadu Integrated Nutrition Programme) and the DANIDA Health Care Project.

12. Director of School Education and SCERT, College Road, Madras 600 006. Contact Person : Director.

This Directorate is the implementing agency for the Chief Minister's Nutritious Noon Meal Programme (CMNNMP) at the primary and secondary school level. Two assistant directors are in charge.

13. Directors of Social Welfare, 485, Anna Salai, Nandanam, Madras 600 035. Contact Person : Director.

The Directorate is in charge of implementing supplementary nutrition components of health and nutrition programmes in the state, besides administering welfare programmes for the women, children and the handicapped. There are separate units dealing with nutrition programmes Deputy Director (Tamil Nadu Integrated Nutrition Programme – TINP); Deputy Director (Noon Meal Programme – pre-primary level only).

West Bengal

14. Deputy Director (Primary Education – Relief & Welfare), 84, Sarat Bose Road, Calcutta. Contact Person : Officer-in-charge.
15. Directorate of Health Services, Government of West Bengal, Calcutta. Contact Persons : Joint Director (Public Health & Communicable Diseases); Asst. Director (Health Services & Nutrition).
16. Social Welfare Department, Government of West Bengal, 45, Ganesh Chandra Avenue, (State Transport Building), Calcutta 700 013. Contact Person : Director.
Juvenile Court Building (Near Seth Bhavan), Salt Lake, Calcutta 700 064. Contact Person : Addl. Director (ICDS).

4.2 **Research Institutions**

1. All-India Institute of Medical Sciences (AIIMS), Department of Gastroenterology & Human Nutrition, Ansari Nagar, New Delhi. Contact Persons : Prof. & Head, Dept. of Gastroenterology; Prof. & Head, Dept. of Paediatrics.
2. All-India Institute of Public Health and Hygiene (AIIPHH), Chittaranjan Avenue, Calcutta. Contact Persons : Prof. Et Head, Dept. of Biochem & Nutrition; Asst. Prof. (ICDS Consultant).
- 3.” Andhra Medical College, Department of Paediatrics, Andhra University, Waltair. Contact Persons: Prof. & Head, Dept. of Paediatrics; Prof. & Head, Dept. of Social & Preventive Medicine.
4. College of Home Science, A.P. Agricultural University, Khairatabad, Hyderabad 500 004. Contact Persons : Dean; Prof. & Head, Dept. of Food & Nutrition.
Besides teaching and laboratory research in nutrition, this department undertakes nutrition assessment surveys in the community. But the target groups are normally urban slum dwellers, industrial workers and farm labourers.
- 5.” Institute of Child Health, Department of Paediatrics, Government Women & Children Hospital, Pantheon Road, Egmore, Madras 600 028.
6. M.S. University of Baroda, Dept. of Food Et Nutrition, Baroda, Gujarat. Contact Person : Prof. & Head.
7. National Institute of Nutrition (NIN), P.O. Jamai Osmania, Hyderabad 500 007. Contact Persons : Director; Deputy Director – Field Studies; Chief, Statistics.
Devoted to research, training, monitoring and consultancy in nutrition and related problems in India. An organ of the Indian Council of Medical Research (ICMR), its aims are to
 - identify dietary and nutrition problems
 - evolve suitable methods for prevention and control of nutrition problem
 - conduct operational research for planning and implementing national nutrition programmes
 - continuously monitor diet and nutrition in India
 - provide training and orientation on nutrition to polic/-makers and to teachers in medical and agricultural institutions
 - disseminate nutrition knowledge
 - advise government and other agencies on nutrition problems.The institute maintains a nutrition museum. As part of its extension activity, it publishes leaflets, booklets, games and a popular journal on nutrition.
8. National Institute of Public Cooperation and Child Development (NIPCCD), 5, Siri Institutional Area, Hauz Khas, New Delhi 110 016. Contact Person : Director.
The institute functions under the Ministry of Social Welfare. It fulfills research and training needs in social welfare, for the Central Government as well as State Governments. Its aim is to conduct research and evaluation studies; organize training courses, seminars and workshops; provide consultancy and documentation services in social and child development. This institute carries out research in training technology – i.e. training

methods and aids. Various types of aids – charts, posters, folders, glove puppets, finger puppets, lolly puppets, string puppets, flannel graph, maxi flans, flexi flans and toys for cognitive development have been prepared. Recently, 20 slide sets on health, pre-social education, nutrition, ICDS, child care and psycho-social development were prepared. These are being used in training activities and there is a proposal to distribute them to government-recognised grassroots-level training centres. Besides, manuals and guides have been prepared for trainers and workers at various levels.

9. National Nutrition Monitoring Bureau (NNMB), NIN, Jsmal Osmania P.O., Hyderabad 500 007. Contact Persons : Deputy Director (Field Surveys) at NIN; Officer-in-charge in Tamil Nadu, Orissa and Andhra Pradesh.

Established by the Indian Council of Medical Research (ICMR) and under the administrative control of the National Institute of Nutrition (NIN), the Bureau's major objectives are to – continuously collect information on the dietary and nutritional status of a representative segment of the population in 10 states including all the four east coast states – evaluate ongoing nutrition programmes in different regions in India.

NNMB has 10 field units in the states carrying out nutrition assessments. Each unit has a medical officer, a nutritionist and four field assistants supervised by their respective state nutrition officers.

10. Nutrition Foundation of India, B 37 Gulmohar Road, New Delhi. Contact Person : Director. It is an autonomous research organization.

- 11." Rajaji Hospital, Dept. of Paediatrics, Madurai.

12. Sri Avinasilingam Home Science College for Women, Coimbatore 641 043. Contact Person : Director

The institute has expertise in general nutrition research, nutrition education, community nutrition and child nutrition. It offers 18 under-graduate and 10 post-graduate courses including M.Phil and Ph.D in some of the areas. It specialises in nutrition, undertakes field/community and lab research in nutrition as part of student research and sponsored research at the request of national and international institutions. The institute also undertakes training programmes for the development staff of the central and state governments on subjects relating to women and children.

Besides nutrition, other areas of concern for training and research are environmental sanitation, child care, family planning, adult education and rural development. The college is also bringing out the *Journal of nutrition and dietetics*.

- 13." Stanley Medical College, Department of Paediatrics, Madras 600 013. Contact Person : Prof. & Head.

14. Viharilal College of Home and Social Sciences, Judges Court Road, Alipore, Calcutta.

4.3. International Agencies

1. CARE INDIA, B-28 Greater Kailash I, New Delhi 110 048. Contact Persons : Director; Programme Officer

Cooperative for American Relief Everywhere (CARE) is an international voluntary agency that assists development work. It participates in government-sponsored nutrition programmes in various states, mainly through food assistance. It is also engaged in health and nutrition education and communication. The Tamil Nadu unit of CARE has prepared over 20 documentaries on health and nutrition which are very popular. Some of these are being translated into Telugu and Oriya. Addresses of CARE units in the east coast states are given below :

2. CARE – Andhra Pradesh, 6-3-569/2 Rockdale Compound, P.O. Box 37, Somajiguda, Hyderabad 500 482. Contact Person : Administrator.
3. CARE – Orissa, 372 Shahid Nagar, Bhubaneswar 751 007. Contact Person : Administrator
4. CARE – Tamil Nadu, DPI Campus, College Road, Madras 600 006. Contact Person : Administrator.

5. CARE – West Bengal, 7/2 Short Street, Calcutta 700 017. Contact Person : Administrator.
6. UNICEF, 73, Lodi Estate, New Delhi. Contact Person : Programme Officer, (Nutrition Section), Project Officer (ICDS)
UNICEF takes part in social development projects of the central and state governments in India. It extends assistance to area development programmes, integrated child development services, development of women and children in rural areas (DWCRA), IRDP etc. UNICEF's input is primarily towards non-recurring expenditure for projects. This includes technical expertise, equipment, transport, educational material, cash assistance for training, strengthening of technical and managerial capacity of educational institutions and government departments, support to monitoring and evaluation, cash support to research and innovative pilot activities, and communication support.
7. UNICEF, East India, 26 Lee Road, Calcutta 700 020. Contact Persons : Zone Office Representative: Nutrition Officer.
8. UNICEF, South East India, 16 Uma Nagar, Begumpet, Hyderabad 500 016. Contact Persons : Zone Office Representative; Asst. Programme Officer (AP); Programme Officer (Orissa).
9. UNICEF, South India, 20, Chittaranjan Road, Nandanam, Madras 600 035. Contact Persons : Zone Office Representative; Programme Officer.
10. World Food Programme (WFP), 53 Jor Bagh, New Delhi 110 003.
The World Food Programme provides food assistance under government activities relating to food-for-work and nutrition supplements. Orissa and West Bengal are the only east coast states that receive food aid under the ICDS and upgraded SNP.

Appendix 4b

LIST OF AGENCIES CONCERNED WITH GRASSROOT-LEVEL TRAINING AND PREPARATION OF TRAINING AIDS

1. Central Health Education Bureau, Directorate General of Health Services, Kotla Road, Temple Lane, New Delhi.
2. Child in Need Institute (CINI), Village Daulatpur, P.O. Amgachi, Via Joka, 24 Parganas, West Bengal.
3. Deenabandu Rural Life Centre, Shanti Nilayam, R.K. Pet, Chingleput District 631 303, Tamil Nadu.
4. Family and Child Welfare Training Centre, Sri Niketan, Calcutta, West Bengal.
5. Gandhigram Institute of Rural Health & Family Welfare Trust, 26 Chinnalapatti, Gandhigram, Madurai, Tamil Nadu.
6. Indian Council for Child Welfare, 4 Deen Dayal Upadaya Marg, New Delhi 110 002.
7. Indian Institute of Social Welfare and Business Management, College Square West, Calcutta 700 073, West Bengal.
8. Institute of Home Economics, South Extension Part I, New Delhi
9. Jayaprakash Institute of Social Change, AE 19 Salt Lake City, Calcutta 700 064, West Bengal.
10. State Institute of Rural Development, Unit 8, Bhubaneswar, Orissa.
11. Rural Unit for Health & Social Affairs (RUHSA), Christian Medical College & Hospital, Vellore 632 004.

In addition to these institutes, that have expertise in preparing training aids on nutrition for their own purpose, there are a few other organizations that prepare such aids on a commercial basis. These are :

1. Chitrabani, 76, Rafi Ahmed Kidwai Road, Calcutta, West Bengal.
2. Bengal Social Service League, I/6 Raja Direndra Street, Calcutta 700 009, West Bengal.
3. West Bengal Voluntary Health Association, 8 Rawden Street, Calcutta, West Bengal.

4. Bangladesh Rural Advancement Committee (BRAC), 66 Mohakhali C.A. Dhaka 2, Bangladesh.
Training aids prepared by BRAC, Bangladesh are used by organizations in West Bengal since the language is the same.
5. Voluntary Health Association of India (VHAI), C 14 Commercial Centre, Safdarjung Development Area, New Delhi 110 016.
6. INHAP Programme, Vikram Sarabai Community Service Centre, Navarangapura, Ahmedabad 380 009, Gujarat.
7. Group Media Communications, St. Xavier's Technical Institute, Mahim, Bombay 400 016, Maharashtra.
8. Audiovisual Unit, Christian Medical College, Ida Scudder Road, P. B. No. 3, Vellore 632 004. Tamil Nadu.

Product catalogues of some of these organizations and a few sample aids are available with BOBP.

Appendix 5a

HEALTH AND NUTRITION SURVEYS AND SOCIO-ECONOMIC SURVEYS IN MARINE VILLAGES

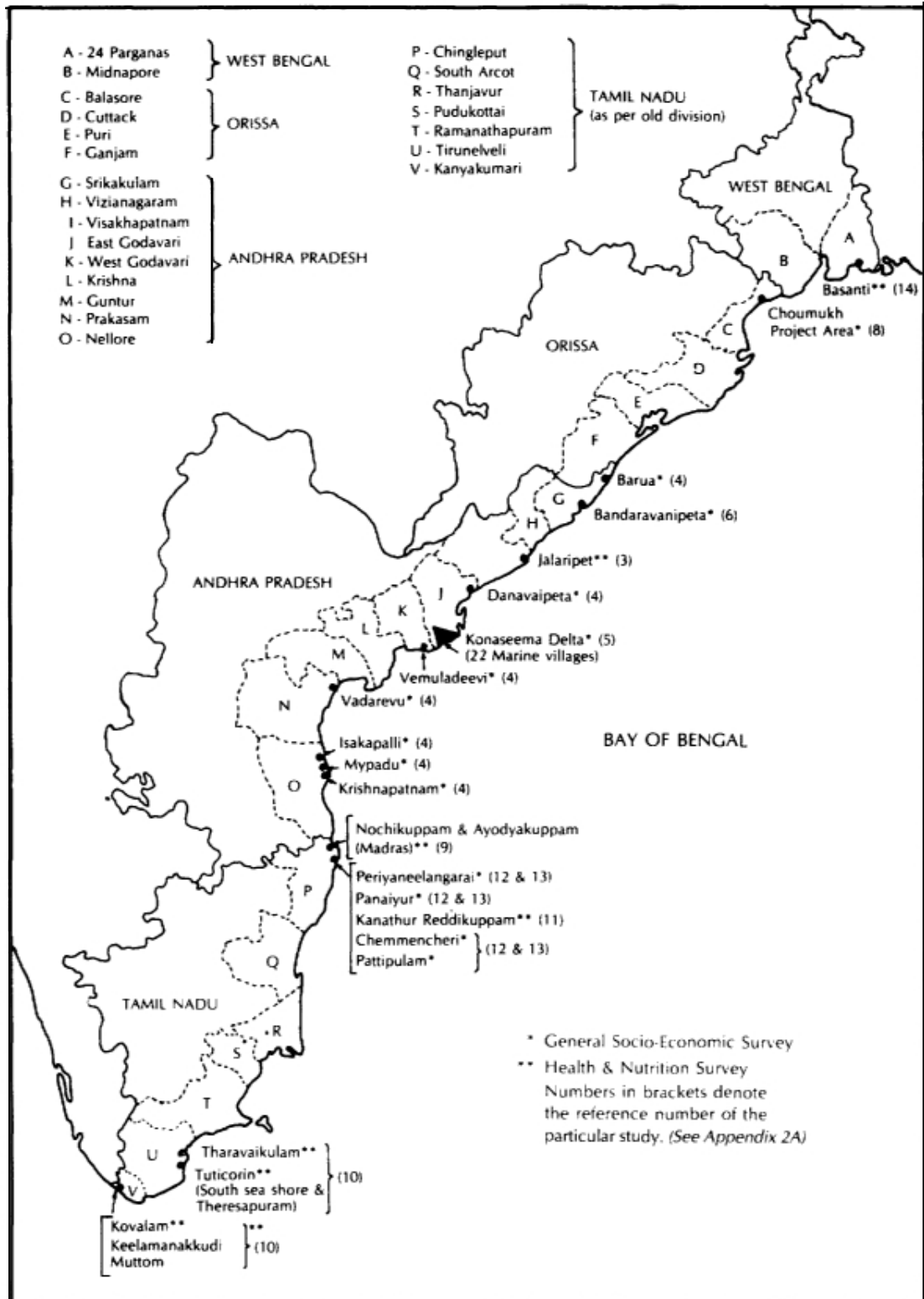
This table lists east coast marine villages where either general socio-economic surveys or surveys on health and nutrition have been conducted by various agencies in the past. A map of these villages is found in Appendix 5b.

District	Administrative Block/Taluk	villages
Tamil Nadu		
Kanyakumari	Agatheswaram	Muttom, Kovalam, Keelamanakkudi
Thirunelveli	Kovilpatti Srivaikuntam	Tharavaikulam, South Sea Shore area & Theresapuram in Tuticorin
Chingleput	Saidapet	Perianeelankarai, Panaiyur, Chemmencheri, Pattipulam, Tiruchinankuppam
Madras	Madras city	Nochikuppam and Ayodhyakuppam
Andhra Pradesh		
Nellore	Nellore Kovur	Krishnapatnam & Mypadu Isakapalli
Prakasam	Chirala	Vadarevu
West Godavari	Narasapur	Vemuladeevi
East Godavari	Tuni Konaseema delta Amalapuram	Danavaipeta Volalarevu, Rameswaram, Vasalatippa, S. Yenam, Samanthakurru N. Kothapalli, Balusuttippa, Byravapalam, Gatchakayalapora, Kothapalam, Chirayanam, Mulletimoga,
	- Mummidivaram P. Gannavaram Razole	Neelarevu, Pandi, Pallem, Pora Goganamatham, Kavaraka Anturvedipallipalem, Gondi, Kesanapalli
Srikakulam	Sompeta	Barua, Bandaravanipeta
Vizag	Lawson's Bay	Jalaripet

District	Administrative Block/Taluk	Villages
Orissa		
Balasore	Baliapal (Choumukh project area)	Choumukh, Dagara, Tahalia - 2, Badatalpada, Paljamkunda, Kathasgada, Jugudiha, Madhupura, Panchrukhi, Kalroi, Bishnupur, Nayabali
West Bengal		
24 Parganas		Basanti

Appendix 5b

HEALTH/NUTRITION SURVEYS AND SOCIO-ECONOMIC SURVEYS IN MARINE VILLAGES



Publications of the Bay of Bengal Programme (BOBP)

The BOBP brings out six types of publications :

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

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

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

Miscellaneous Papers (BOBP/MIS/) concern work not originated by BOBP staff or consultants – but which is relevant to the Programme's objectives.

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

Newsletters (*Bay of Bengal News*), issued quarterly, contain illustrated articles and features in non-technical style on BOBP work and related subjects.

A list of publications follows.

Reports (BOBP/REP/.)

1. Report of the First Meeting of the Advisory Committee. Colombo, Sri Lanka, 28-29 October 1976. (Published as Appendix 1 of IOFC/DEV/78/44.1, FAO, Rome, 1978).
2. Report of the Second Meeting of the Advisory Committee. Madras, India. 29-30 June 1977. (Published as Appendix 2 of IOFC/DEV/78/44.1, FAO, Rome, 1978).
3. Report of the Third Meeting of the Advisory Committee. Chittagong, Bangladesh, 1-10 November 1978. Colombo, Sri Lanka, 1978. (Reissued Madras, India, September 1980)
4. Role of Women in Small-Scale Fisheries of the Bay of Bengal. Madras, India, October 1980.
5. Report of the Workshop on Social Feasibility in Small-Scale Fisheries Development. Madras, India, 3-8 September 1979. Madras, India, April 1986.
6. Report of the Workshop on Extension Service Requirements in Small-Scale Fisheries. Colombo, Sri Lanka, 8-12 October 1979. Madras, India, June 1980.
7. Report of the Fourth Meeting of the Advisory Committee. Phuket, Thailand, 27-30 November 1979. Madras, India, February 1980.
8. Pre-Feasibility Study of a Floating Fish Receiving and Distribution Unit for Dubla Char, Bangladesh. G. Eddie M. T. Nathan. Madras, India, April 1986.
9. Report of the Training Course for Fish Marketing Personnel of Tamil Nadu. Madras, India, 3-14 December 1979. Madras, India, September 1986.
- 10.1 Report of the Consultation on Stock Assessment for Small-Scale Fisheries in the Bay of Bengal. Chittagong, Bangladesh, 16-21 June 1986. Volume 1 : Proceedings. Madras, India, September 1980.
- 10.2 Report of the Consultation of Stock Assessment for Small-Scale Fisheries in the Bay of Bengal. Chittagong, Bangladesh, 16-21 June 1980. Volume 2 : Papers. Madras, India, October 1980.
11. Report of the Fifth Meeting of the Advisory Committee. Penang, Malaysia, 4-7 November 1980. Madras, India, January 1981.
12. Report of the Training Course for Fish Marketing Personnel of Andhra Pradesh. Hyderabad, India, 11-26 November 1980. Madras, India, September 1981.
13. Report of the Sixth Meeting of the Advisory Committee. Colombo, Sri Lanka, 1-5 December 1981. Madras, India, February 1982.
- i4. Report of the First Phase of the "Aquaculture Demonstration for Small-Scale Fisheries Development Project" in Phang Nga Province, Thailand. Madras, India, March 1982.
15. Report of the Consultation-cum-Workshop on Development of Activities for Improvement of Coastal Fishing Families. Dacca, Bangladesh, October 27 November 6, 1981. Madras, India, May 1982.
16. Report of the Seventh Meeting of the Advisory Committee. New Delhi, India, January 17-21, 1983. Madras, India, March 1983.
17. Report of Investigations to Improve the Kattumaram of India's East Coast. Madras, India, July 1984.
18. Motorization of Country Craft, Bangladesh. Madras, India, July 1984.
19. Report of the Eighth Meeting of the Advisory Committee. Dhaka, Bangladesh, January 16-19, 1984. Madras, India, May 1984.
20. Coastal Aquaculture Project for Shrimp and Finfish in Ban Merbok, Kedah, Malaysia. Madras, India, December 1984.
21. Income-Earning Activities for Women from Fishing Communities in Sri Lanka. Edeltraud Drewes. Madras, India, September 1985.
22. Report of the Ninth Meeting of the Advisory Committee. Bangkok, Thailand, February 25-26, 1985. Madras, India, May 1985
23. Summary Report of BOBP Fishing Trials and Demersal Resource Studies in Sri Lanka. Madras, India, March 1986.

Working Papers (BOBPIWIPI)

1. *Investment Reduction and Increase in Service Life of Kattumaram Logs.*
R. Balan. Madras, India, February 1980.
2. *Inventory of Kattumarams and their Fishing Gear in Andhra Pradesh and Tamil Nadu.*
T.R. Menon. Madras, India. October 1980.
3. *improvement of Large-Mesh Driftnets for Small-Scale Fisheries in Sri Lanka.*
G. Pajot. Madras, India. June 1980.
4. *Inboard Motorisation of Small G.R.P Boats in Sri Lanka.* Madras, India, September 1980.
5. *Improvement of Large-Mesh Driftnets for Small-Scale Fisheries in Bangladesh.*
G. Pajot. Madras, India, September 1980.
6. *Fishing Trials with Bottom-Set Longlines in Sri Lanka.*
G. Pajot, K.T. Weerasooriya. Madras, India, September 1980.
7. *Technical Trials of Beachcraft Prototypes in India.*
O. Gulbrandsen, G.P. Gowing, Fi. Ravikumar. Madras, India, October 1980.
8. *Current Knowledge of Fisheries Resources in the Shelf Area of the Bay of Bengal.*
B.T. Antony Raja. Madras, India, September 1980
9. *Boatbuilding Materials for Small-Scale Fisheries in India.* Madras, India, October 1980.
10. *Fishing Trials with High-Opening Bottom Trawls in Tamil Nadu, India.*
G. Pajot, John Crockett. Madras, India, October 1980.
11. *The Possibilities for Technical Cooperation between Developing Countries (TCDC) in Fisheries.*
E.H. Nichols. Madras, India, August 1981.
12. *Trials in Bangladesh of Large-Mesh Driftnets of Light Construction.*
G. Pajot, T.K. Das. Madras, India, October 1981.
13. *Trials of Two-Boat Bottom Trawling in Bangladesh.*
G. Pajot, J. Crockett. Madras, India, October 1981.
14. *Three Fishing Villages in Tamil Nadu.* Edeltraud Drewes. Madras, India, February 1982.
15. *Pilot Survey of Driftnet Fisheries in Bangladesh.* M. Bergstrom. Madras, India, May 1982.
16. *Further Trials with Bottom Longlines in Sri Lanka.* Madras, India, July 1982.
17. *Exploration of the Possibilities of Coastal Aquaculture Development in Andhra Pradesh.* Soleh Samsi, Sihar Siregar and Martono of the Directorate General of Fisheries, Jakarta, Indonesia. Madras, India. August 1982.
18. *Review of Brackishwater Aquaculture Development in Tamil Nadu.* Kasemsant Chalayondeja and Anant Saraya of the Department of Fisheries, Thailand. Madras, India, September 1982.
19. *Coastal Village Development in Four Fishing Communities of Adirampattinam, Tamil Nadu, India.* F.W. Blase. Madras, India, December 1982.
20. *Further Trials of Mechanized Trawling for Food Fish in Tamil Nadu*
G. Pajot. J. Crockett, S. Pandurangan. P.V. Ramamoorthy. Madras, India, December 1982.
21. *improved Deck Machinery and Layout for Small Coastal Trawlers*
G. Pajot, J. Crockett, S. Pandurangan and P.V. Ramamoorthy. Madras, India, June 1983.
22. *The Impact of Management Training on the Performance of Marketing Officers in State Fisheries Corporations.*
U. Tietze. Madras, India, June 1983.
23. *Review of Experiences with and Present Knowledge about Fish Aggregating Devices.*
M. Bergstrom. Madras, India, November 1983.
24. *Traditional Marine Fishing Craft and Gear of Orissa.* P. Mohapatra. Madras, India. April 1986.
25. *Fishing Craft Development in Kerala : Evaluation Report.* O. Gulbrandsen. Madras, India, June 1984.
26. *Commercial Evaluation of IND-13 Beachcraft at Uppada, India.* R. Ravikumar. Madras, India. June 1984.
27. *Reducing Fuel Costs of Fishing Boats in Sri Lanka. (In preparation).*
28. *Fishing Trials with Small-Mesh Driftnets in Bangladesh.*
G. Pajot and T.K. Das. Madras, India, March 1984.
29. *Artisanal Marine Fisheries of Orissa : a Techno-Demographic Study.*
M.H. Kalavathy and U. Tietze. Madras, India, December 1984.
30. *Mackerels in the Malacca Straits.* Colombo, Sri Lanka, February 1985.
31. *Tuna Fishery in the EEZs of India, Maldives and Sri Lanka.* Colombo, Sri Lanka, February 1985.
32. *Pen Culture of Shrimp in the Backwaters of Killai, Tamil Nadu : A Study of Techno-economic and Social Feasibility.*
Rathindra Nath Roy, Madras, India, January 1985.
33. *Factors that Influence the Role and Status of Fisherwomen Karuna Anbarasan.*
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34. *Pilot Survey of Set Bagnet Fisheries of Bangladesh.* Abul Kashem. Madras, India, August 1985.

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