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PHF NEWS

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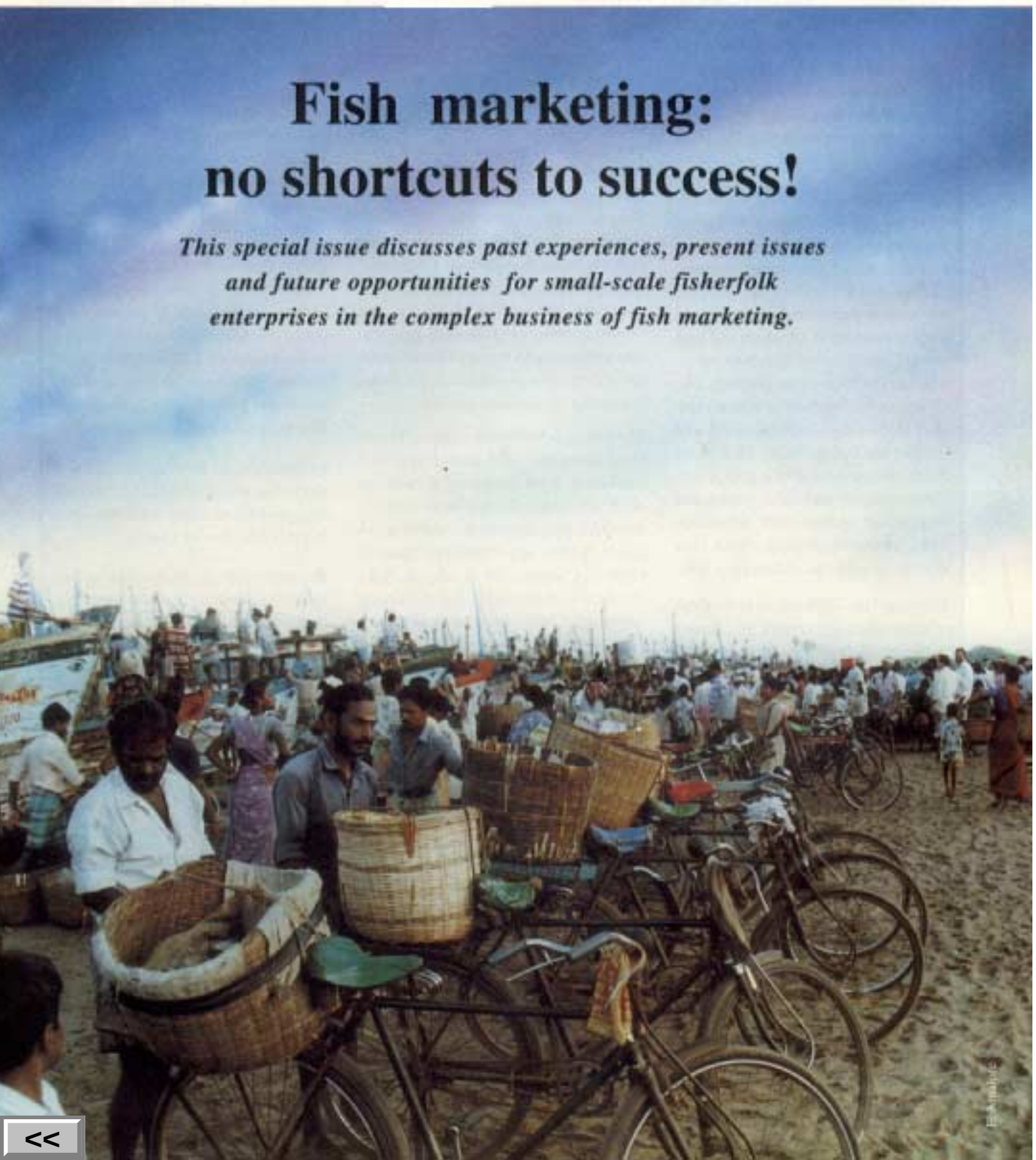
Fish marketing: no shortcuts to success!

This special issue discusses past experiences, present issues and future opportunities for small-scale fisherfolk enterprises in the complex business of fish marketing.



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EDITORIAL

FISH MARKETING

The marine fishery sector in India is very dynamic and complex and is undergoing rapid structural changes. which have affected the marketing of fish and fish products in India. These changes have included an increase in the prices of fish over the past few years, greater availability of ice. and improved transportation links to urban centres.

The fish marketing system in India is directed at developing fisheries production systems and technologies aimed at high-value export markets. The system effectively conveys the power of demand through price signals from consumers to suppliers and vice versa. Each commodity sub-sector — whether for high-value products like shrimp or for lesser-value species like anchovies-has sophisticated and flexible marketing chains. Fish flows in from a large number of supply points. These constitute parts of a complex and fragmented system with numerous links in the marketing chain that manage to keep transaction costs low.

There are large differences in the flow of information and in marketing power at the beach level. Traders are often able to manipulate prices through the interlocking of credit, control over marketing and production inputs, and knowledge of price trends in distant markets. Control over other production inputs such as boats, gear and ice is also used to interlock marketing arrangements.

Recent structural changes in fish marketing have coincided with a reduction in the fishery resource base. This combination has affected the internal marketing of low-value fish and fishery products. As a result of these changes, some fisherfolk groups and NGOs have attempted to market their own fish or produce value-added products and become more active in small-scale marketing development activities.

As the focus of this project is on post-harvest aspects, marketing issues play a very important role. particularly as artisanal communities can add value to catch through improved post-harvest practices. The project has very close links to the Department for International Development's post-harvest research programme. which is presently identifying fish marketing and handling opportunities that benefit traditional fishing communities. This activity seeks to combine market analysis and feasibility studies to identify potential opportunities and some of these issues are addressed in the article on fresh fish marketing by artisanal groups.

Marketing is a full-time commitment. Organizations that undertake fish marketing must have sound business skills: access to information on markets; and marketing systems and structures in place. Local organizations have to critically assess the financial risks involved in undertaking fish marketing ventures. Credit for use as working capital is difficult to obtain. while hanks and other organizations are understandably reluctant to lend capital to small-scale enterprises with no proven track record, particularly as fishing is such an erratic occupation. In view of these problems. the post-harvest fisheries project has always stressed the need for artisanal communities and NGO bodies to set up organizations to manage marketing initiatives.

In this context, the article on emerging fish marketing networks in Andhra Pradesh and Orissa is significant. There is also a short article on a success story in fish marketing — from Manapad, Tamil Nadu

Other articles discuss the plans of SIFFS. the South Indian Federation of Fishermen Societies, to improve fish preservation through ice plants; and the experiences of DFID-PHFP (with marketing anchovies in Kanyakumari) and of an Orissa firm (to tap the North East market for high-quality dried fish)

In fisheries, as in other disciplines marketing is a more complex business than production. There are fewer perils in the water than on land.

But for organizations that take up fish marketing seriously and systematically. the rewards can be handsome.

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News Round-up

Advisory Committee Meeting in New Delhi

The 22nd Meeting of the Advisory Committee of the Bay of Bengal Programme for Fisheries Management was held in New Delhi September 23-24, 1997.

The 28 participants included delegates (from BOBP's member-countries, the FAO, the UK, World Bank) and observers (from Myanmar; the Network of Aquaculture Centres, Asia; SEAFDEC; and the Department of Ocean Development, Government of India).

Mr Bhagat Singh, Additional Secretary in India's Ministry of Agriculture, inaugurated the meeting. Mr K M Chadha, Joint Secretary (Fisheries), addressed the inaugural session. Dr Y S Yadava, Development Commissioner (Fisheries), chaired the technical session.

On behalf of the DFID-PHFP, Project Field Manager Duncan King presented an interim report of the project's activities in 1997, including the findings of the recent Impact Assessment Study.

India drew attention to the lAS finding that while the project's overall impact so far has been small, it has created the conditions for very large impact in future, if lessons learnt at the micro-level can be replicated on a large enough scale in a sustainable manner. Bangladesh and India said there was a need for technical assistance in establishing HACCP (Hazard Analysis and Critical Control Point) and ISO 9000 quality assurance programmes.

The Sri Lankan representative expressed satisfaction with the implementation of the project and said his government looked forward to a continuation of the prt5ject beyond its current phase. The representative of DFID (UK) said the Department was willing to consider future support for the continuation of DFID-PHFP, subject to the expression of interest from the three governments.

Officials Review Project Work in India

The work of the DFID-PHFP and of the BOBP in India was reviewed on August 19, 1997 in Chennai at a meeting of senior fishery officials from the Government of India plus officials from the four east coast states of Tamil Nadu, Andhra Pradesh, Orissa and West Bengal.

Project Field Manager Duncan King outlined the role the post-harvest fishery sector plays in India's economy through food supply, jobs and foreign exchange earnings.

Mr King briefly discussed the project's activities in India. He said that given the complexities of both industrial and small-scale fisheries, post-harvest issues should be addressed jointly by the govermnent, by NGOs and by fisherfolk communities.

The officials present appreciated the presentations and the discussion, and urged that such reviews of the BOBP's and the DFID-PHFP's work in India should be held more frequently.

Cyclone Relief: Fisheries Rehabilitation

A draft action plan for implementing cyclone relief and rehabilitation work in Andhra Pradesh with support from DFID was prepared jointly by Mr Jock Campbell (of the Integrated Marine Management, UK) and the project's Extension and Liaison officer in Andhra Pradesh. A planning workshop was conducted in Hyderabad to discuss the action plan.

Two NGOs from East Godavari district — FIRM and Sravanthi — have been selected for rehabilitation work. They will help identify beneficiaries and manage the revolving fund.

The rehabilitation programme will be implemented by local NGOs. The Department of Fisheries will act as the nodal agency.

Awareness Programme in Post-Harvest Fisheries

The project conducted two workshops in Tamil Nadu for officers from the DOF and related government agencies, plus bank officers. The first was held late May in Nagapattinam, the second in October at Tuticorin. The workshops aimed at raising the officers' awareness on post-harvest issues, and at increasing interaction between the banks and DOF personnel. This interaction, it is hoped, will minimize the need for external support to post- harvest interventions.

Regional Activities: Training

A four-day training programme in street theatre was conducted in July for animators from ROSA, the project's partner NGO based in Nagapattinam, Tamil Nadu. The training programme aimed at enhancing the skills of animators to raise awareness among members of the community.

The animators demonstrated their newly-acquired skills by conducting a street play in a village where the project has had no inputs. The project's Socio-Economic Officer remarked that the animators needed to improve their interaction with the audience, an ability that could be developed through experience.

The same 16 animators took part in September in a four-day training programme in communication skills, held at Porayar near Nagapattinam.

Training exercises in the maintenance of tricycles were conducted in July and August for petty fish traders at Vellakovil village in Qaid-e-Milleth

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district, Tamil Nadu. These traders had been provided with a tricycle under the BPS (British Partnership Scheme).

The Integrated Co-operative Development Programme. Andhra Pradesh, has requested the project's field liaison officer in the state to bring out a paper in Telegu on post-harvest issues in artisanal fisheries. The paper will be distributed to fisherfolk.

INDIA

Fish Drying: The Government of Tamil Nadu has allocated Rs.5 lakhs towards the cost of erecting drying racks at various points along the coast. About 2500 racks are proposed to be set up and handed over to the communities. It is expected that these drying racks will stimulate adoption of the technology all along the coast.

A large number of drying racks put up by processors in Puri, Orissa, were destroyed by a cyclone that crossed the coast in the region. Oriental Dried Fish Traders, a small enterprise with whom the project has links, suffered fairly extensive damage. There is ademand for assistance from the local community.

Use of Ice: Artisanal fisherfolk from all along the coast of Tamil Nadu are

Orissa Extension Officers Visit Andhra Pradesh

Fisheries extension officers from Orissa visited the project office in Kakinada in September to learn about extension methods adopted by the project in the region. They were briefed on project activities in the area, especially those concerning ice boxes and fish smoking, by the Project Officer in Andhra Pradesh, Mr Venkatesh Salagrama. The project's Orissa officer, Mr B Mohapatra, and the Technical Officer based in Chennai, Mr A Natarajan, were also at hand.

The visitors from Orissa met their counterparts from Andhra Pradesh. They discussed implementation of the Marine Fisheries Regulation Act and the Supreme Court ruling on shrimp aquaculture.

Mr Babu Rao of the APFC boatyard, Kakinada, briefed the visitors about the use of FRP in insulated fish containers. He was invited by the Assistant Director of Fisheries, Orissa (Balasore) to visit Puri as consultant and advise local boat builders on incorporating ice boxes into the design of fishing boats.

The possibility of sending crude shark liver oil from Orissa to the extraction plant at Kakinada came up for discussion during the visit. At the moment shark livers are discarded.

Subsequent to the visit to Andhra Pradesh, there has been considerable interest in Orissa about introducing fish smoking in the state. A market for smoked fish products does exist in Orissa, especially among tribals who live in upland areas of the state. The Department of Fisheries, Orissa, has requested two bins for demonstration and training

Another offshot of the trip to Kakinada: FISHFED has proposed that 100-litre ice boxes be used onboard the FRP catamarans that operate in Orissa. A total of 100 such boxes are to be distributed.

Visiting Orissa fisheries extension officers make a field trip to a fishing village (top) and meet project staff in Kakinada (above).

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requesting ice boxes from the project. Santhidan has orders for 36 ice boxes. A total of 22 boxes will be given to catamaran operators, the others to petty fish traders. The project is bringing out a comprehensive leaflet on the types of ice boxes available.

The ice box activity in Andhra Pradesh has taken on a life of its own. The United Fishermen's Association (UFA) have established links with Sintex, manufacturer of ice boxes. They procure boxes on credit, distribute them among fishermen, and pay Sintex in monthly instalments on behalf of the fishermen.

The 250-litre ice boxes placed in Orissa by the project for demonstration have evoked a fairly good response. The boxes are being used onshore for storage of ice and fish by fishermen of a cooperative society on a trial basis. Initial results indicate that the boxes can save up to Rs 10,000 from spoilage during the main fishing season. The society has already started collecting money from its members for a fund to facilitate purchase of the ice boxes.

Social & economic unit:

The unit has completed a study on the use of fish containers by petty fish vendors of Tamil Nadu. Data was obtained through focus group discussions. Preliminary results indicate that most vendors like to buy the containers which are subsidized by the state government, but use them for purposes other than fish marketing.

The Social and Economic Unit has prepared a draft paper on the methodologies used for the project's recent Impact Assessment Study. This paper will be developed further to cover methodologies used by the SEU during the current phase of the project. The unit is also preparing a draft paper on the impact of subsidies on the uptake of technologies.

Linkages with GOs and NGOs

The project has continued its support to three NGO partners during the last quarter. The support takes the form of advice and assistance by staff, and some money for the training of trainers.

A paper has been prepared on the methodologies used for the Post-Harvest Project's recently completed Impact Assessment Study.

The project has completed its first cycle of credit assistance to ROSA. Nagapattinam, Tamil Nadu (NABARD provides refinance) in three villages. The second cycle will result in a 100% increase in the quantum of credit extended to members of credit groups. This could boost the sales of some petty fish traders.

The project has made concerted efforts to develop links with government institutions in Tamil Nadu. As a first step, it suggests that IRDP (Integrated Rural Development Programme) should include supply of ice boxes as one of its activities. The project's technical officer took part in a district-level consultative committee meeting in Nagapattinam (Qaid-e-Milleth district), to improve awareness on the subject among government officials.

Demand for ice boxes of project design is going up in Tamil Nadu, Andhra Pradesh and Orissa.

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Sri Lankan ***co-operatives link up!***
Consumers getfish, young men getjobs as retailers!

RA ***D*** *Ramachandra and Chandra Silva write:*

It has been hailed by everyone as an innovative all-win scheme. On October 3, 1997, the Minister of Fisheries, Mr Mahinda Rajapakse, inaugurated in Kandy a scheme proposed by the Department of Fisheries and DFID-PHFP that taps the potential of co-operatives to help the poor. It links fishermen's co-operatives in fish-producing areas with the multi-purpose co-operatives that operate in the hinterland. The former supplies fresh fish, the latter engages unemployed youth (registered as members of the co-ops) to market them.

Initially (as pilot-scale operation) fishermen's co-operatives in Chilaw and Negombo are providing fish to the multi-purpose co-operatives located in Kandy which is an upland area. Both fishermen and consumers will benefit.

Some of the young men in Kandy who market the fish will get some cash (as working capital loan) to buy fish from the multi-purpose co-ops, plus an insulated fish box developed by DFID-PHFP and manufactured by ONIWI, Colombo. In addition, the multi-purpose co-ops may at a later stage provide loans (investment capital) to the youth to buy bicycles or motor cycles to distribute fish.

This is the first time that such a marketing link-up has been attempted in fisheries. Everyone is enthusiastic about its success. The project and its partners hope to gradually expand this activity to cover other interior areas of the island, depending on the outcome of the pilot stage.

The market link-up is a landmark in the co-operative movement in Sri Lanka, which has come a long way since the birth of the first consumer co-operative society in 1927, and the first fisheries co-operative in 1942. Today Sri Lanka has 700 fisheries co-operatives with over 90,000 members. Their activities cover credit, welfare, subsidies, sale of fishing gear etc. Some of the co-operatives function as fisheries banks.

The marketing link-up of co-operatives has enabled the DFID-PHFP to strengthen its links with the Ministry of Fisheries as well as with the Department of Co-operatives.

BANGL4DESH

Rakhainpara Disaster Rehabilitation

The DFID has sanctioned a sum of Taka 641 000 to the Rakhainpara community for relief and rehabilitation following the cyclone of May 1997. Half of the sum is a grant, the rest is an interest- free loan. Some 100 households are to benefit.

A 9- member committee has been formed to operate the fund. The money will serve as seed capital for a revolving fund.

institutional Support for Set Bagnet Communities : Linkages have been established between the credit groups located in Rakhainpara and the Agrani bank. A total of Tk 300,000 has been provided as loan assistance to the Revolving Loan Fund at Rakhainpara. Loan criteria and modalities for operating the fund are being worked out by the bank and members of the community.

The handloom unit at Rakhainpara has streamlined its procurement activities. A central committee is taking up procurement of yarn and other raw materials. Marketing of the finished product is also to be handled by the same committee.

Community centres are to be set up in the Rehania area of Hatiya. These will use funds generated from within the community. The centres will be used to conduct meetings, training programmes and literacy classes.

SRI LANKA

Meeting with the Minister: Project Field Manager Duncan King recently met the Minister for Fisheries and Aquatic Resources Development, Mr Mahinda Rajapakse, and other senior officials. The Minister appreciated the project's effort. He also proposed that the project extend its work to other areas, organize training and subsidize ice boxes.

Mr Mick Blowfield of NRI, UK, who studied the project's intervention amongst cycle traders, has suggested different options for the project to consider as a part of its exit strategy. One option suggested is getting the Ministry of Fisheries and Aquatic Resources Development to register the Association

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The project has completed a study on the use of fish containers by petty fish vendors of Tamil Nadu. A report will be out soon.

established. The other is undertaking a training programme to build up the management skills of members and enabling them to take over operation of the association. Yet another strategy suggested is that a federation of cycle trader associations in Sri Lanka be formed. At the moment the project and its partner are considering these various options.

Based on the needs of the push cycle traders, a local manufacturer has undertaken to design and fabricate the ice box. These boxes have been tested and found suitable. Thirtyseven such boxes will be given to push cycle traders by the Minister for Fisheries at a special meeting.

NABARD **Officials Visit the Post-Harvest Project**

Four officials of NABARD (National Bank for Agriculture and Rural Development) visited the DFID-PHFP at Chennai on July 3, 1997, to acquaint themselves with the project's work and discuss possible interaction. They were Mr. S. Subramanian, Chief General Manager; Mr. A. Palaniswamy, Deputy General Manager; Mr. Shahji Zachariah, Manager; and Mr. P. Selvaraj, Manager. Mr. I. Rock, Head District Manager of the State Bank of India, Thticorin, accompanied the team.

Mr. Duncan King, Project Manager of the DFID-PHFP, welcomed the visitors and introduced them to the project's objectives and approach and its activities at various locations.

Mr. Subramanian was glad to know that the project, like NABARD, focused on poverty alleviation. He suggested co-operation between banks, the project and the Department of Fisheries in promoting post-harvest technologies for poor fisherfolk communities.

Mr. George Mathew, project economist, said that the project had helped introduce ice boxes in Manapad, a very active fishing village. Following a needs assessment exercise conducted by the project, the Fisheries College and the Research Institute, based in Tuticorin, designed an ice box to suit the needs of fishermen. It was field-tested in Manapad. The fisherfolk community's response to the ice box was overwhelming. The Department of Fisheries and the Tamil Nadu Apex Fisheries Co-operative Federation (TAFCOFED) had come forward to distribute 175 ice boxes to the community.

A video film "Good fish, good price" – which showed the use of ice and ice boxes, rack-dried anchovies and the fish containers – was screened. Mr. A. Natarajan, the project's Technical Officer, introduced the film.

The NABARD officials were unanimous that fisherwomen, particularly those who belonged to self-help groups, had proved more credit-worthy than fishermen. Mr. Rock of the SBI said that 16 self-help women's groups were being supported by SB! in Punnakayal village of Tuticorin. He asked the project to consider releasing a few ice boxes for demonstration to members of these groups.

NABARD and DFID agreed to involve each other in their respective extension programmes wherever appropriate.

Visiting officers of NABARD and the State Bank of India listen to a presentation by Project Field Manager Duncan King in Chennai.

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FIRST-PERSON REPORT

Training fisherfolk NGOs in street theatre: Report of an exercise at Santhidan

By B.Gomathi

Street theatre is a powerful form of self-expression in rural communities.It is staged in the open. The actors and actresses are drawn from the community. The audience therefore identifies fully with the play.

No wonder street theatre has an impact that print and even audio-visual media cannot match. Development organizations with a story to tell, a message to impart or a technology to transfer, avidly eye the potential of Street theater.

Can skills in street theater be taught? Would some knowledge of the theory of drama help produce a better street play? Would such theory be easily absorbed? The answer to all these questions is a resounding yes!

The best way to make Street theater an integral communication tool among a community of fisherfolk is to train some leaders or animators from this community, says the DFID-PHFP's Training Officer C. Mohana. They in turn will pass on the skills to the community. (See box)

I was privileged to witness a comprehensive four-day training programme in street theater recently (23-26 September, 1997). It was a fine learning experience, which I would like to share with readers.

The programme was held in Nagercoil for five community organizers and 14 animators – all women, all trainers – from Santhidan, the project's partner NGO. The project made some funds available for the programme and the services of a resource person.

The main resource person at the Nagercoil session was Mr P J Britto, Director of the Indian Institute of Social Development, Thanjavur, who has conducted over 1,000 training programmes, many of them on street theater. Training in street theater is a participatory exercise, with everyone learning by doing. said Mr Britto. "It is not a one-shot exercise. The group that's trained has to keep learning, hone its skills, absorb new lessons".

The team of 19 – Tamilarasi, Shoba, Lisa, Ajula, Cleetus, Vijaya Rani, Vimala, Jennila, Mini, Pushpaleela, Merin Viji, Mrs Jerrin, Mrs Albin Mary, Mrs Christy, Mrs Panimary. Mrs Gaberialal, Mrs Bemadheeth, Mrs Mary, Mrs Ephrem – ranged in age from 22 to 38. Five of them were graduates.

During the first three days, the training programme was held at RCC Ashram, a religious training centre in Pamban Vila, some 10-12 km from Nagercoil. The centre has conference and training facilities plus facilities for accommodation and food. On the evening of the third day, the participants were to put up a performance at Nadu Muttam village, 20 km from Nagercoil. On the fourth day, the training venue would move to the Santhidan headquarters at Nagercoil (Pamban Vila had been booked by some other organization on that day.)

Mr Britto's first task was to know and assess the group he was to train. He asked participants to come forward and sing a song – it could be devotional, film-related, folk, jazz, anything. The group were then asked to form pairs and perform instant role plays – enacting husband and wife, father and son, doctor and patient, mother-in-law and daughter-in-law etc.

At the Nagercoil training programme on street theatre, games, songs and dances enabled participants to open out and express themselves.

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The women trainees demonstrate teamwork, vital for street theatre. They join hands to hoist one of their colleagues high above the head.

The songs and the role plays gave Mr Britto a pretty good idea of the group. Mr Britto then asked the participants what they wanted to learn from the 4-day training exercise. Responses varied. One group said "We want to prepare a simple street play that people can follow easily?' Some others said: "We want to learn to use street plays to bring out village problems." Some others expressed interest in mastering street theater techniques.

"Let's form committees," said Mr Britto. "There's a lot to be done, and the responsibilities have to be shared." Four committees of two members each were set up for report-writing (detailed proceedings of each day). There was a 4-member committee for "maintenance" (to ensure that the training venue remained clean and orderly), a 1-member committee for time-keeping, a 1-member committee for medical help (fortunately this committee remained inactive), a 7-member committee to compile a book out of the entire exercise, a 3-member "field committee" to liaise with Nadu Muttam, where the team was scheduled to present a couple of street plays. There was also a central coordinator for the whole exercise.

The participants learnt and discussed theory (theoretical inputs took up about six hours a day), took part in games and exercises, and wrote role plays and stones, some of which would be selected for the actual performance. Group members learnt to use musical instruments – such as the *dholak* and the *kanjeera* – in which all of them were interested. They began work early every morning and were on their toes till late in the evening.

Theoretical inputs

Mr Britto's theoretical inputs were fairly rigorous. He told his trainees about the nine elements of street theater – space, body, script, sound, rhythm, time, audience, mind and imagination, team and teamwork. He dealt with each of these elements in detail. He conducted exercises and games to enable the team to understand these elements better.

What were the games the participants played? An example of a game to induce confidence and trust among the participants: Every participant was asked to fall without inhibition in front of a fellow-participant. "Just fall. Don't worry about injuring yourself. Your partner will hold you before you hit the ground," Mr Britto admonished. If a participant was jittery, Mr Britto said:

The project's work with street plays

When did DFID-PHFP begin to sponsor training in Street plays? It began in April *1995,* in response to a request form ROSA, the project's partner NGO based in Nagapattinam, Tamil Nadu. The training was provided through the State Resource Centre for Non-formal and Adult Education (SRC), based in Chennai.

Mr. J Lucas, the founder of Santhidan, then requested SRC to provide similar training for its animators. DFID-PHFP agreed to support the training. A week's training was provided for 29 Santhidan animators in December 1995. The trainer was Mr Kumara Guru, a therukoothu expert.

In September 1996, Mr David Gore-Booth, the British High Commissioner, visited Santhidan. A street play was presented on the use of drying racks.

What the Santhidan resource team mainly lacked, apart from experience, was training in script-writing for street plays. The recent training programme held in Nagercoil addressed this need.

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"Don'tjust bend. Fall properly." Till she fell properly, the participant had to repeat the exercise. There were no mishaps, the partner always held the "falling" participant.

Another game was a potato dance. Aim: to display and develop body coordination, Participants danced in pairs, their arms round each other, a potato between their foreheads. The potato wasn't supposed to fall. It was good fun – though the dancers were panting at the end of the dance!

In another game (to demonstrate group effort or team work), six women had to lift up one of their colleagues by stages – the final stage being above the head. The burlier participants posed problems, but the task was accomplished.

In another teamwork exercise, four or five pairs of women stood in a row with clasped hands. Another participant had to take a leap and fall on the clasped hands. There were a couple of falls, but the exercise was repeated till it was done right.

Efforts at story-writing, song-writing and playing musical instruments posed a different kind of challenge. "I'll start writing stories regularly from now on," gushed one participant after discovering how well her story had turned out.

By the end of the second day, the busy participants had written up five plays in the rough. Two plays were selected for the next day's performance, one on alcoholism, another on ice and ice boxes – a social theme, a technology theme.

The play on alcoholism highlights the plight of a typical fisher family. The man is addicted to the bottle, the woman is distraught and ill-tempered, there's neither food nor money in the house, the child has to leave school because fees are unpaid and books are not• bought.

The 150-strong audience got totally involved with the play. The woman sitting next to me got terribly angry with the main character, the alcoholic. "Flog him", she yelled out to the suffering "wife", forgetting that her "husband" was actually a woman animator from the community.

An on-the-spot evaluation (through interviews) of the alcoholism play confirmed its impact. "I felt I was peeping into something going on next door," said one member of the audience. The play on ice boxes aroused interest in the technology. People wanted to know how much the ice boxes cost, where they would be available.

The girls were tired and excited after the performance, but a lot of work remained to be done. The "book committee" worked during the rest of the evening to compile the learning materials from the entire training programme – the plays, the scripts, the songs, the games, the exercises – into a resource book. It was in fact a complete record. It was virtually written overnight! It also had some some sketches done by a couple of participants.

The girls dedicated the book to the late J Lucas, founder of Santhidan, who had guided and inspired them. (See PHF News, July 1997, for an obituary on Lucas.)

Santhidan now has a 19-member resource team fairly well-trained in street theatre. All of them remember Pamban Vila with affection. The team looks forward to putting its training to good use, helping organize effective street plays at Santhidan.

Following the training on street theatre, Santhidan's animators put up two Streetplays scripted by themselves at a village in Nagercoil before a rapt audience of about 150.

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Workshop on Post-Harvest Technologies in Tuticorin

A workshop on post-harvest fisheries technologies held in Tuticorin on October 10, 1997 brought together 110 participants from a variety of development agencies. Participants represented the Department of Fisheries, the District Rural Development Agency, NABARD, eight commercial banks and two NGOs (Santhidan and TMSS), Some 30 community representatives from fisheries co-operative societies were present. So was a clutch of newspaper and television reporters.

The District Collector, Mr C Muthukumaraswamy, inaugurated the workshop and delivered the presidential address. DFID Project Field Manager Duncan King delivered the keynote address. There were special speeches by Mr I Rock of the State Bank of India and Mr P Selvaraj, manager of NABARD.

The inaugural session was followed by a technical session. An exhibition on post-harvest fisheries presented on the occasion featured a display of ice boxes, rack-dried fishes and fish pickles by Santhidan, the Nagercoil NGO. Intech Enterprises, a private firm, displayed an FRP ice box.

District Collector Muthukumaraswarny emphasized the need for sound low-cost post-harvest technologies in fisheries, since fish was a perishable commodity and crude handling methods caused a lot of waste. In his keynote address, Mr King said the main focus of post-harvest fisheries in India so far had been on distribution and marketing systems. Very little attention had been paid to handling and processing. This trend had changed in recent years on account of an expanding quality-conscious export market, but the switch applied only to a small percentage of total production. He called for a higher focus on management of existing fish resources by reducing waste, adding value, and improving the efficiency of handling, processing and marketing of fish.

Mr King said that small-scale fisherfolk communities faced several problems in handling, distributing and marketing fish, because of lack of a suitable infrastructure. A large percentage of the catch was processed by traditional methods such as salting, drying and smoking. icing was the best way to preserve fish. Ice boxes — portable, easy to handle, and desgined to meet the regours of a marine environment and of fishing craft — were the most practical solution.

Mr King briefly described the work of the DFID-PHFP in promoting the use of ice and ice boxes along artisanal marine fisherfolk on the east coast.

At the workshop's technical session, Mr A Natarajan of DFID-PHFP explained low-cost PHT such as ice boxes and drying racks, and showed a video film. Users of these technologies from Santhidan were interviewed. Mr. Prakasam (Tamil Nadu Apex Fisheries Co-operative Federation) and Dr Rex Raj. Assistant Project Officer, Animal Husbandry, also spoke. At the discussion that followed, some suggestions emerged:

- DFID should conduct such workshops at the village level, and promote post-harvest technologies in co-operation with DRDA. Ice box manufacturers should open outlets in selected villages.
- Details about ice boxes and fish-drying racks should be sent to the Lead District Manager of the State Bank of India, Tuticorin, for use in his district plan.
- A self-help group from Punnakayal requested fish marketing assistance and training in fish pickle making.

Earlier, Mr C Raveendran, Joint Director of Fisheries, welcomed participants.

District Collector CMuthukumaraswamy inaugurated the Tuticorin workshop on post-harvest technologies (left). It featured a display of ice boxes, rack-dried fishes and fish pickles by Santhidan (below), the Nagercoil - based NGO.

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Fresh Fish Marketing by Artisanal Groups In India

by Ann **Gordon**

A long-time observer of the post-harvest fisheries scene in India discusses some of the issues fishermen's groups must tackle if they are to successfully market their own catch.

The marketing of India's marine fish has changed dramatically over the last 10-20 years. Lucrative export opportunities for shrimp, fresh or frozen table fish and even some dried species led to a rapid expansion in the size of the harvest fleet and in processing facilities. India's growing cities were also a source of strong demand for table fish. Improvements in road, rail and telecommunications and the availability of ice facilitated the rapid development of both export and domestic markets.

Increased commercialisation and pressure on the resource base has resulted in greater emphasis on higher - value fresh fish marketing than on the traditional processed products which fishing communities were obliged to produce when marketing opportunities were fewer. The investment in fishing fleet and the increased number of buyers (particularly for export products) has led to a greater concentration of landings at large centres in some areas, and the decline of many smaller centres. Fish processing and the local fresh fish trade have suffered, being made to compete with the higher prices offered by big merchants supplying export markets and distant cities.

Fishermen often feel themselves to be exploited. Some of them are locked into price and sales agreements with merchants who have advanced them credit. Or their fishing village may be served by only one merchant (because of the remoteness of the village, small qatch size, or because the merchant has restricted the activities of other merchants).

Although there has been considerable success in increasing fishing incomes derived from export varieties (particularly shrimp and cuttle fish), this appears to be a special case. For such products, information on prices and standards is transparent, accessible and understood and there is, in addition, considerable competition amongst merchants to obtain supply for the under-utilized processing plants. Moreover, the high value of such produce justifies expenditure on the use of ice, which by reducing perishability also reduces pressure to sell to the first buyer. As a consequence, well-organised and motivated fishermen groups in southern India have been very successful in obtaining a higher export price for their membership.

This contrasts sharply with fresh fish destined for domestic markets. For the fishermen, although the unit value is less, the volume of catch and aggregate income derived from these fish is much more significant. Yet fishermen frequently feel that they receive unfair prices for their catch — particularly when there are few buyers, or when there are glut landings. Catches of course vary seasonally, but even within seasons, catch sizes and content may vary significantly from one day to the next, without warning.

Some fishermen groups have reacted to this by attempting to market their own fish. Yet, few such initiatives have been successful. This underscores the risky nature of the fresh fish trade and the tendency to underestimate the costs involved in managing that risk,

Women fish vendors often face pmblems in acquiring fish, getting supplies of ice or transport to fish markets.

including flexible access to transport, ice and working capital. The discussion below explores some of the issues fishermen groups must confront if they are to successfully market their own catch.

The capital requirements of the fresh fish trade can be considerable. Working capital is needed to buy fish and ice, meet vehicle running costs and bear trading losses. If a truck is rented, it represents a further drain on resources: but a purchased truck requires access to loan finance and necessitates a steady cash flow to meet the repayment schedule. Yet an effective marketing initiative by fishermen will oblige local merchants to pay higher prices at the landings, thus reducing trading profits and the potential to generate revenues to cover inevitable periods of loss.

Fishing communities often have very limited infrastructure. The problems posed by poor roads and remoteness, absent or intermittent telephone links, and shortages in ice supply should not be under estimated. Market conditions change rapidly, and up - to - date information is the key to profitable marketing of a highly perishable

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product. Telephone links, flexible but reliable access to affordable ice, and the possibility of supplying different markets are all important.

Fishermen groups may find it difficult initially to break into the wholesale trade — and any problems arising as they learn their trade may undermine their credibility with wholesale merchants. Access to information and mutually beneficial trading relationships will depend, in part at least, on the ability to supply a product of reliable quality (and quantity — where prior arrangements have been made by phone).

Fish marketing also calls for considerable management skills and the ability to make management decisions based on business principles. This is really the key since there will be pressure from group members to pay fishermen the highest possible price, or even a fixed minimum price, which will result in trading losses or difficulties in covering subsequent losses from accrued surpluses. During periods o' low trading activity it may make financial sense to rent out a truck (purchased for fish trade) to other people or activities — but this may also meet withresistance from the group, feeling that this is contrary to their purpose.

Transparent accounting and auditing will also be important in assuring group members that resources are properly managed. Credible management will also assist in bank negotiations.

Finally, and perhaps most important of all, the need for strength of purpose and cohesion within the groups cannot be over-emphasised. Divisions and rivalries within groups often emerge - sometimes over the issues highlighted and differences of view on appropriate marketing strategies. For most groups the management of a fish marketing enterprise represents a greater challenge to their unity than any activities undertaken before. Experience shows that it is certainly not the route to easy profits others imagined it to be.

These observations are based in part on research undertaken by the Natural Resources Institute (UK) in collaboration with a number of Indian organisations including SIFFS (South Indian Fedration of Fishermen Societies), CIFT (Central Institute of Fishing Technology). CMS (Catalyst Management Services) and the DFiD-PHFP. The research is funded by DFID and focuses on opportunities for traditional fishing communities to generate additional income from fish marketing and processing activities.

A number of separate case studies were considered covering dried fish marketing in India's north eastern states; access to ice by local fish traders in Kerala and successful experiences in fresh fish marketing. The results point up the dynamic nature of India's domestic fish markets and the risks faced by artisanal groups venturing into marketing activities. The need for strong experienced groups is emphasised, and the importance of activities which create pressure for merchants to pay fisherfolk higher prices — as distinct from actual fish marketing by the communities themselves. Thus, in fish marketing, the threat of intervention through, for instance, occasional truck rental when beach prices are very low, may be more effective than the purchase of a truck which leaves a group potentially exposed if loan repayments connot be met. Similarly, access to ice obviates the need to sell to the first buyer. The identification of such leverage points is the key to improving the bargaining position and hence the incomes of fisherfolk.

Note: The author is an Economist wit/i the UK's Natural Resource Institute (NRI). She has worked with a number of organizations in India over the past 10 years on fish marketing issues.

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Fish Marketing Networks in Andhra Pradesh and Orissa : A Discussion

No fish marketing venture on India's east coast can sustain itself entirely on its own. It needs links with producer-trader groups at other locations, so that demand at big markets is met, stocks don 'tpile up unsold, and both fish flow and cash flow remain healthy. Following an awareness meeting conducted by the DFID-PHFP in Hyderabad in August 1996, a number of fisheries agencies in Andhra Pradesh and Orissa have established links with each other This network will get stronger and bigger with a second awareness programme planned for December 1997. Venkatesh Salagrama discusses the why and how of the network

Is it as noisy as a fish market? Does it stink like a fish market? Is someone haggling like in a fish market? An alien, on encountering metaphors like these, may assume that a fish market is a synonym for hell.

To say that the traditional production, processing and marketing systems leave a lot to be desired is, well, saying the obvious. Then why discuss it again? The problem is that the intricacies and complexities in the activity turn the obvious into Mark Twain's definition of a classic: "A book that everyone likes to have read, but no one bothers to actually read". For all the debate about the need for something, anything, to be done, very little has been attempted, let alone done.

Not without reason. Consider the fate of any venture which proposes to start production and marketing of value added fish products', whether for philanthropic or commercial reasons. It may have considered in depth everything which requires to be considered before taking up an enterprise. And yet, there is not one value-added fish marketing enterprise on the east coast of India — under a government/quasi-government set-up, or in the private sector — which can really be called a 'success'.

When this is compared against the fact of thousands of small and illiterate fish producers and traders continuing for generations to be involved in the trade, it is justifiable to conclude that it is not only a complex and uncharted territory as far as the 'experts' are concerned, but one which probably requires an unconventional approach.

Most traditional fish markets depend on high volumes and small profit margins. Improved products are based on low volumes and high margins.

When observed closely, the following factors emerge from the traditional operations:

- That the entire marketing process for marine fish is an individualistic activity with different forces, each trying to vie for individual benefit.
- That the markets are to a large extent unorganised because the trade itself requires a lot of flexibility unlike in other sectors. As a trader once remarked, "This is a business which can be a highly profitable venture and a highly losing proposition at the same time."
- That it is a 'large volume-small margins' market. The improved products, which are of the 'small volume-large margins' category, cannot supplant the traditional products at least in the short and medium term, because of many reasons, some of which are discussed in this article.
- That an informal network of linkages does exist among large-scale traders.

Value-added fish products denote, for the purposes of this article, products that can be made using basic facilities available in the artisanal sector, and include such products as improved-quality dried and smoked fish, wafers and other mince-based products, and pickles etc. This does not include capital-intensive, "hi-tech", export-oriented industrial products.

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It spreads across the whole of India and sometimes extends overseas as well. This is the lifeline for the survival of all large-scale operations.

That storage at any point in the marketing chain is limited to the least possible period, never exceeding a month at most.

These practices follow from an understanding of certain ground realities:

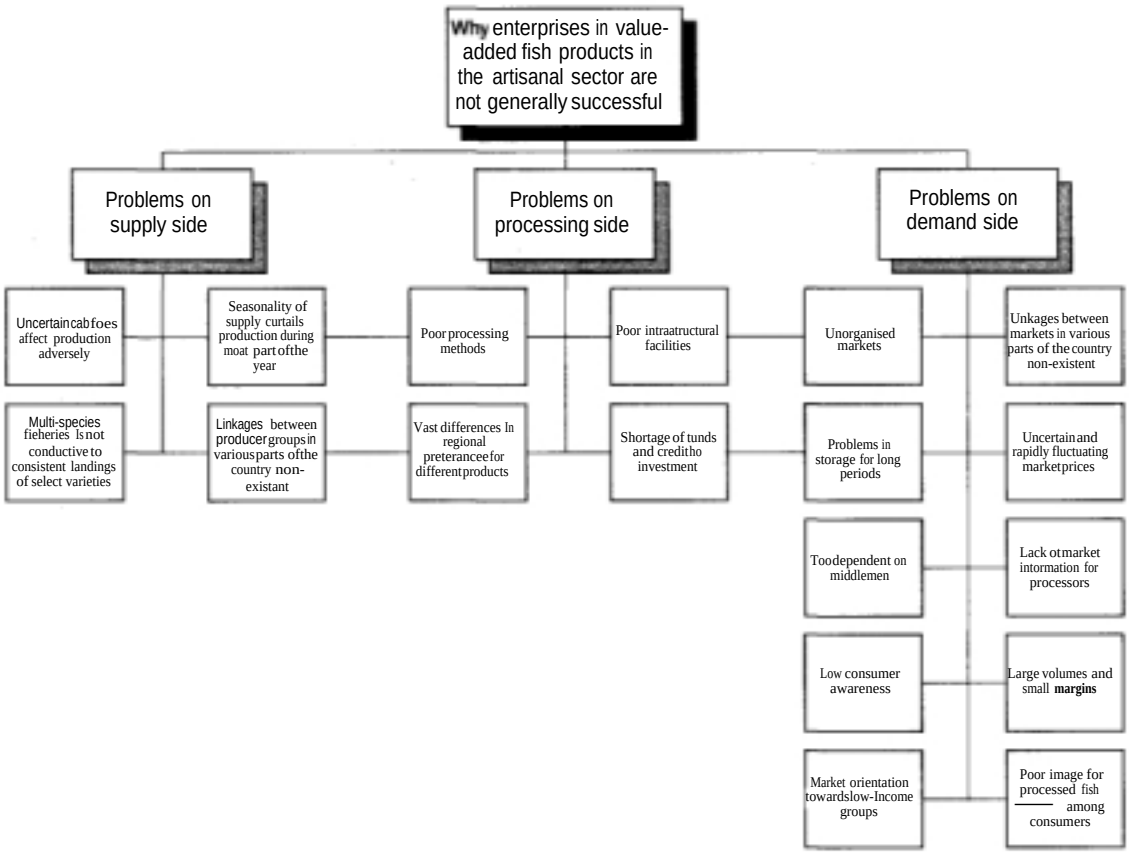
- The multi-species artisanal fishery of the east coast of India is not really a big welcome sign for anybody to enter into marketing. Imagine investing in a factory which is forced to make motor-cars, children's toys or feature films – the product varying with the availability of raw material from time to time. Worse, in the fisheries sector, the option of continuing to make something, anything, is quite often not there.
- A marketing enterprise in the artisanal sector, however big, will remain ultimately a small-scale enterprise. Traditional processors and traders have perfected mechanisms that may not get the best prices in the market, but involve the least risk. Any new enterprise will consequently have to be least capital-intensive, otherwise the activity becomes very unviable.
- The infrastructural facilities for assuring maintenance of quality from the production to consumption phases are either absent or inadequate.
- No venture, howeverbig (particularly if big), located at any one point on the east coast of India, can hope to develop and sustain a marketing enterprise dealing with fish and fish products entirely on its own.

The current situation is not really conducive for streamlining the marketing systems into more organised structures. Consequently, market prices for processed fish are highly elastic, making most ventures highly susceptible to failure. Quality is not looked upon as an important criterion for processed fish, because the processed fish are not generally regarded as a commodity to which value can be added. Poor quality makes the producers vulnerable to any number of outside forces. Being the way they are, fish markets do not get adequate attention from the concerned authorities (Whoever heard of fish markets being closed down for being insanitary? One might as well seal off the seas for being saline), nor does the fraternity of fish processors and traders demand regulatory and improving measures. Add one more point, processed fish are not a very valued food item on many menus in the area, and you have the classic vicious circle scenario. Some of these problems are summarised in Table 1.

Why is the market so vulnerable?

As mentioned, an important thing about the marketing of value-added fish products by any enterprise based on the east coast of India is that sustaining

TABLE 1: PROBLEMS IN PRODUCTION AND MARKETING OF VALUE-ADDED PRODUCTS.



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supply is as much a problem as generating demand. Often, as the experiences of several Brave Hearts show, the collapse of an enterprise was due more to lack of consistent supplies than due to public apathy to the products.

Take, for instance, the case of Enterprise X. A community-based production and marketing venture. Enterprise X introduced high-quality dried fish into the market. During the first year, the enterprise could break even, and great hopes were placed on it for the second year. There were many enquiries from traders in various parts of the state for the products.

Enterprise X installed additional processing, packing and storage facilities to handle the products. The only problem was that the fish were nowhere to be seen. It was blamed on a number of factors, but the result was the same. When the fish did appear, three months late, it was monsoon time and no drying was possible. The next year. there were no enquiries, no traders and no hopes either. Most of the products went to the good old traditional markets, fetching about half their potential value.

Another story: anchovies, like any other fish, are a seasonal variety, landing in good quantities for 3-4 months in a year. But market demand is not seasonal. When anchovies landed in a particular year, the Enterprise X people purchased them in tonnes, ensured that the moisture content was brought down as much as possible, packed them in suitable bags, and stored them in godowns for using as stock during the lean period. For three months (until the onset of monsoons), the fish remained in good condition, then discoloration started appearing on the bodies. Moisture kept seeping in, in spite of the best efforts. Redrying meant loss of weight and loss of considerable quantity of fish due to breakages etc. Beetles seemed to be omnipresent and omnipotent, necessitating extraordinary vigilance. Finally the stock had to be sold in the local market, at a price slightly higher than the 'regular' product, which meant that on the whole Enterprise X lost heavily.

Marketing linkages

Looking at the issues raised so far (Table 1), it becomes clear that by developing market linkages between various producer groups, most of the constraints to production and marketing

High fish catches, low prices (below and right, top). Low catch, high demand (right, below). A network of products and distributors will tackle both problems and lead to assured incomes.

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Ashok Krishnaswamy

can be safely overcome. Such linkages help in:

a) ensuring sustained supply of particular varieties to the markets from various parts of the country;

b) rapid turnovers, reducing storage periods, thereby cutting down costs and wastage;

c) providing a chance for processors/ traders/consumers to be more selective about the varieties of fish;

d) reducing capital costs (i.e., costs of installing processing units etc.) and retaining the activities in the small-scale sector;

e) providing opportunities for small producer groups to launch a concerted promotion campaign for value-added products;

f) developing quality standards for fishery products, which not only helps produce uniform products across the region, but also in motivating consumers to take the product more enthusiastically.

Imagine Enterprise X, which is in Andhra Pradesh, developing linkages with producer/trader groups in, say, Orissa and Tamil Nadu. What could it look forward to under this arrangement?

Fortunately, on the east coast of India, fishing seasons in various parts of the coast seem to complement one another. The peak fishing season for a species like anchovy could be the first and second quarter of the year in Andhra Pradesh, the third and fourth quarters in Orissa, and the first and fourth quarters in Tamil Nadu.

When glut landings of anchovy occur in Andhra Pradesh, Enterprise X sells its excess product to their partner agency in Tamil Nadu, which has developed good markets for anchovies, but had no catches during that part of the year. Similarly, when anchovies stop landing in Andhra Pradesh, Enterprise X purchases — 'borrows' — from its partner in Orissa, who has good quantities of anchovies landing, but is not in a position to sell the entire product. The result: consistent availability of anchovies in the markets. When varieties which do not have a market in Andhra Pradesh, but are

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relished elsewhere, are captured, Enterprise X purchases them, and sends the products to the partner groups after processing. Also, the cost of production comes down during glut landings, keeping investments low and incomes high.

As all partner agencies would have discussed the quality parameters of the product beforehand, Enterprise X does not worry about the quality or unevenness of processing any more. It does not need to store its product for more than three months, thus bringing down losses in storage. It does not need to spend large amounts for raising its production capacity through installation of more machinery etc. The groups plan to sell the packaged product under ajoint brand name, which means that all products, irrespective of their origin, get to be sold as one brand, giving it abroad-reaching identity. Promotion costs for the products are shared by all agencies jointly, who can also lobby with concerned government agencies for better facilities.

But howdoes this differfrom the existing market linkages?

The networking system suggested above is different from traditional linkages in that it is an organised system. The traditional system, by virtue of its being unorganised, leaves scope for middlemen making hefty profits, and also does not follow any fixed pattern. Consequently, it is very fragile. It is at best a temporary business arrangement and does not have an identity of its own, like in the case of, say, the milk, poultry or egg production and marketing associations. Also, the traditional system operates within the existing constraints of poor quality and uncertain supply-and-demand situations, whereas the objective of the networking as envisaged is to overcome the uncertainties as much as possible.

What has been done so far?

It has to be agreed in the beginning that networking is not as simple as it looks on paper. When networking relates to marketing, and the agencies involved come from different backgrounds, extreme care has to be taken to ensure that the objectives of the network reflect the needs of all individual members. More importantthan having enthusiasm

TABLE 2: MARKETING LINKAGES FOR VALUE ADDED-PRODUCTS IN AP & ORISSA

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to join the network, *the* member groups should he in a position to handle management of the enterprises and marketing activities competently. It is also possible that most member—groups. particularly community-based organisations (CBOs) would require training on various issues. To handle such issues, suitable mechanisms have to he identified at the beginning itself,

Following an awareness programme conducted by the DFID Post-Harvest Fisheries Project (See box below') **in** August 1996. a series of linkages got established between various agencies in Andhra Pradesh and Orissa. A striking feature of the relationships was the fact that a sort of barter system was beginning to develop (which required that a producer he a trader as well, and vice versa). Another feature has been the growth of healthy competition among the members themselves to try and reach as many people as possible. (For an overview of the linkages which got established between various producer groups. see Table 2.) It is in this context that the importance of quality as a means of enhancing marketability was identified and discussed. Just when the linkages were beginning to consolidate. a major cyclone struck Andhra Pradesh in November 1996. which put paid to all production and marketing activities for nearly six months. The groups are trying to re-establish contacts with one another. It is precisely this kind of vulnerability which is sought to be addressed by the network, and the impact of the cyclone could in the end have been positive, after all.

However, all producer groups have realized the importance of a network and are busily discussing the institutional arrangements for developing and sustaining such a network. The second awareness programme planned to be conducted in December 1997 is expected to bring together the various agencies, which could then decide the future course of action.

DEVELOPMENT OF A MARKET NETWORK ON THE EAST COAST OF INDIA

In August 1996, the DFID Post-Harvest Fisheries Project conducted an awareness programme on fish and fishery products at Hyderabad. The awareness programme targeted the general public who were unaware for the most part of products made using fish. The programme brought together 12 producer groups, which, besides displaying their products, also got together to discuss problems and prospects in production and marketing of value-added products. They identified three major problems areas, which would have to be resolved before any progress can be made:

- lack of awareness on the part of the consumers: the inability of small producer groups to undertake market promotion at any appreciable level;
- the inability of any one agency in one area to be able to create and sustain market demand once **it** is generated because of fluctuation of catches; and,
- lack of awareness of quality control criteria, and laxity in observing them if known.

The awareness programme was successful in achieving both its objectives—i.e., identifying market potential for value-added products in urban centres, and providing coherence and shape to efforts being made by various agencies individually in this sector.

Over the next few months, with the coordination of the DFID Post-Harvest Fisheries Project, these agencies—there were NGOs, quasi-government bodies, co-op societies, fisherfolk youth groups and private entrepreneurs—started marketing activities, albeit in a tentative, hesitant way, establishing linkages among themselves, supplying and procuring from each other, and keeping up the debate as to the appropriate course of action. In the meantime, eight more agencies joined the group, producing and marketing value-added products, with various levels of expertise, investment and reach.

Finally, it has been agreed that the agencies should form a consortium, which will be registered as a marketing body. This allows the members to.

- set and agree to quality control parameters for different products being made by all agencies, to ensure quality and consistency;
- interact with one another, sourcing products, generally supplementing each other in times of need, at the same time retaining freedom to engage in trading on their own, depending on the availability of products and demand; and.
- take up promotion of fish and fishery products jointly, preferably with the assistance of the government, for a concerted action plan to acquire a profile for them in the markets, under a common brand name.

It's early days yet. But discussions are under way to decide the form and content of the consortium, logistics of operation, sources of funding for the consortium itself to make it a self-sustaining unit, and the quality-control parameters for various products. About 20 products have been identified for production by these groups. It is planned to narrow the list to the more widely produced varieties initially, and based on the experience, to include other items also.

The products include improved-quality dried, salted, salt-dried and smnokedfish and shrimp, dry shrimppulp, pickles in oil and vinegw fish wafers,fish crackers, fastfood items like fish cutlets etc. It is intended to conduct a second awareness programme in Hyderabad, to consolidate the gains made with the first programme, in terms of understanding the sustainability of consumer demands, etc., besides providing a platform to decide the final form of the consortium. This programme is scheduled to be conducted in December 1997, and nearly 20 agencies may take part in the programme.

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Lessons learnt: Marketing of rack-dried anchovies in Kanyakumari

by George Mathew

Failures are often more instructive than successes. The project's economist describes how the DFID-PHFP set out in 1992 to market rack-dried anchovies in Kanyakumari . The project's planning, problem-shooting and precautionary foresight were just right. But the anchovy fishery collapsed in 1994. Landings plunged and never recovered. One positive outcome : some individual fishermen have taken up rack-drying of anchovies.

The saga of market intervention of the PHFP started sometime in mid-1992 when the project decided to undertake a commercial operation for marketing rack-dried anchovies on a pilot scale. The Kanyakumari District Fishermen's Sangams Federation (KDFSF) was the project's partner in this endeavour.

The project sought to promote the use of drying racks through KDFSF as a possible solution to the physical and value losses sustained by Kanyakumari district fishermen through sand-drying of anchovies. The project appointed a marketing adviser based in Kanyakumari. He had four field assistants responsible for procuring rack-dried anchovies. Each of them coordinated with a group of fishermen-suppliers. An officer based at the project headquarters in Chennai coordinated with the marketing adviser in Kanyakumari as also with KDFSF.

One of the hurdles faced was finding a market for the superior quality product. Market studies done in the metropolitan markets of Chennai and Hyderabad had shown that a market existed there for such a product. Surveys done by the project in Sri Lanka also indicated a fairly large market for the product if it was produced in sufficient quantities.

With such an apparently large market for rack-dried anchovies, the project began a programme of encouraging fishermen from three villages (Kovalam, Kheel Manakudy and Pallarn), to undertake rack drying of anchovies during the 1993 season. As an incentive,

the project fixed the price of rack-dried product "participatively" with the fishermen at Rs 22 per kilogram. This was about 10 times the price paid during the anchovy season of 1992 for the sand-dried product. The high prices were justified on the ground that the effort that went into producing the product was high. However, this procurement price was to prove problematic as the season progressed.

The 1993 season began as usual in Kanyakumari in the second week of July. As always the landings in the initial stages were low. The price paid for sand-dried anchovies was between Rs 7 and Rs 9 per kg depending on the quality of the product. Procurement was low and many of the fishermen who had promised to put up drying racks had not installed their racks. Even those who had their racks up continued to put their anchovies on the beach.

The situation changed in September when heavy landings began. The price of the sand-dried product fell by 50 per cent to Rs 3.50 to Rs *4.50* per kg. Suddenly procurement picked up with fishermen producing vast quantities of dried product. By the end of September, procurement had crossed 5 tons and was rising. At this point the activity ran into a cash crunch. What the project had envisaged was that the product would be sold and the cash realised would be used to fund further procurement. However, with the glut landing the markets became rather dull, most traders who procured the product suddenly cut back on procurement and began demanding a reduction in price from 30 Rs/kg to 25 Rs/kg.

At this price the project would be unable to meet its overhead costs exclusive of salaries. Suddenly there was a large stock on hand (nearly 14 tonnes) with no market for the product.

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The problem was further compounded with KDFSF undergoing a cash crisis, consequent to cost over- run in the construction of its office building. Fishermen in their desperation insisted that KDFSF procure the stock even if it could not make payments immediately. The fishermen looked upon the KDFSF as a bank, with the rack-dried product acting as savings. In order to keep up its promise to fishermen, the project continued to procure stock.

A further problem arose when the anchovies which were stored carefully in hessian sacks, indicating who had supplied what (so that every supplier could be held accountable for his product) got emptied out. The products of different suppliers got mixed up. Further, the product was heaped up on the floor making it susceptible to blow fly infestation. Result: the product suddenly lost its premium. The emphasis now shifted to disposing of the stock as quickly as possible to prevent losses.

To add to the problems faced, there was a personnel problem too. The project's marketing adviser decided to quit at this crucial juncture. This meant that the new marketing adviser had to get to grips with the situation almost immediately. It was decided that the project would introduce a professional manager to take charge of the activity in Kanyakumari. It was expected that he would establish systems of administration, form market linkages and keep the project informed of progress. The immediate problem was disposing of the stock of anchovies.

A concerted effort was made by the manager in charge of the project to dispose of the stock. The sale price was reduced to 28 Rs/kg, leaving a margin of about 3 Rs/kg. The arrivals of dried anchovies into the market had tapered off by then. The entire stock was disposed of by the end of February 1994; the entire investment made by the project and the KDFSF was recovered.

The experiences gained, it was expected, would enable the project to fine-tune its strategy for the 1994 season. It was decided that the procurement prices would float with the market. The procurement of stock would then depend on the absorptive capacity of the market. The systems were streamlined with changes being made to the inventory control system.

WIth all systems in place, all that was needed was a record landing of anchovies. What actually happened was that the fishery collapsed. Landings fell to new lows, and never recovered. Experts have yet to figure out why or how the collapse occurred.

The project tried to diversify the project range to cover a wider range of species. But this proved difficult because of the very nature of the market. The project withdrew from the scene, with everyone concerned losing interest.

While the project failed in its effort to market the anchovy product on its own and replace the middleman, it did create a small niche market for the product. During the last three years, private traders – some of whom obtained supplies from the project – have entered into contracts directly with the fishermen who supplied the project. These traders procure small quantities of the dried product for sale in the Kerala market.

Consequently, two years after the project wound up the anchovy-drying activity, anchovies continue to be dried on racks in Kanyakumari.

Commercial rack-drying of anchovies in Kanyakumari (below), failed because of the collapse of the anchovy fishery.

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When distant pastures are not always greener: an Orissa firm's experience in marketing dried fish

An Orissa dryfishfirm learns — the hard way — that it is essential to cater to local markets before dealing with distant markets that seem lucrative but are loaded with risks. V Salagrama tells the story.

Oriental Dry Fish Industries (ODFI) is a partnership firm established in January 1996, with three partners: two were former fisheries officers and the third partner ran a business in fisheries requisites.

The impetus for the firm came from Department of Fisheries officers in the area, who, supported by the DFID Post-Harvest Fisheries Project, were promoting improved fish processing practices like fish-drying racks among the fisherfolk. Improved dry fish products were fetching better prices in the markets, as was apparent from the proliferation of drying racks installed by individual processors on their own, and as a low-investment business opportunity, this seemed quite encouraging.

Prior to starting the enterprise, the partners undertook painstaking ground work, conducting market surveys and meeting traders in many areas, including Andhra Pradesh, interior parts of Orissa itself and North-Eastern India. Obtaining favourable feedback from traders for the trial product, they started a unit in Paradeep, a major fishing port in Orissa. The choice of Paradeep is ideal, because

- the varieties that ODFI chose to prepare dry fish from were abundantly available in trawl-landings in the area for most part of the year, and were cheaper than elsewhere;
- processors inthe village were willing to come and work in the ODFI unit, and also showed interest to sell their products through ODFI, which meant that the investment on ihfrastructure need not be as high as was required;
- transportation facilities were good, and traders most often came to the village to lift the product; and,
- the partners of ODFI had a very good rapport with local fisheries officers and the fishing community.

The unit was installed on the beach in an area measuring *0.5* acres, where provisions for fresh water, salting, cleaning and processing including drying racks, were made. A storage shed was constructed using locally available materials, which, at the same time, could store products for long periods. A hut was constructed for housing supervisors and watch-and-ward staff.

Based on the information gathered during market surveys, three varieties — ribbonfish, anchovies and croakers — were purchased at the Paradeep fishing harbour, and processed hygienically into high-quality products. Quality was the most important issue at the yard, and the staffwere trained to maintain the highest standards of quality. The quality of the product was apparent from the fact that it fetched nearly double the price of traditionally processed fish.

In the first year, the enterprise made a moderate profit, selling its product to traders from Calcutta. This had a positive impact on the local community as well, who started installing drying racks in large numbers. The problem they faced was with regard to controlling insect infestation, and they approached research institutes like the CIFT. While good anti-infectants are available in the market, conventional wisdom suggested that the product be disposed of at the earliest, before problems such as insect infestation arose.

During the lean season, the partners of ODFI undertook visits to markets in Andhra Pradesh in the south and in the North-East. While some of their product was sold in packs through an apex fishermen cooperative body in Andhra Pradesh, the returns were not as profitable as when they were sold in the North-East. The market price in the North-East was more than 3 times the price elsewhere, and the ODFI took their produce in the second year to a market in Jagi Road in Assam for sale. That was to prove rather costly, because the high prices being offered in Assam were offset by a number of factors. They included:

- high transportation costs
- uncertainties in transporting to the distant markets through hilly terrain
- delays, sometimes exceeding six months, in payment for the product by the local traders, and
- prevailing instability and tensions in the area, because of terrorism, which reduced the scope for selling the product immediately.

This experience made ODFI search for other markets that might provide lesser margins but were more stable. They also started concentrating on local markets, which again may not be as lucrative as the North-East markets, but are more reliable and less expensive to cater to.

Assessment **of the activity**

The fact of the three partners having prior experience in the fisheries sector is in itself an important indicator of the fact that a basic and clear understanding of the sector is necessary for anyone venturing into marketing here. This helps in identifying the most ideal location for the venture, and obtaining support from the local communities.

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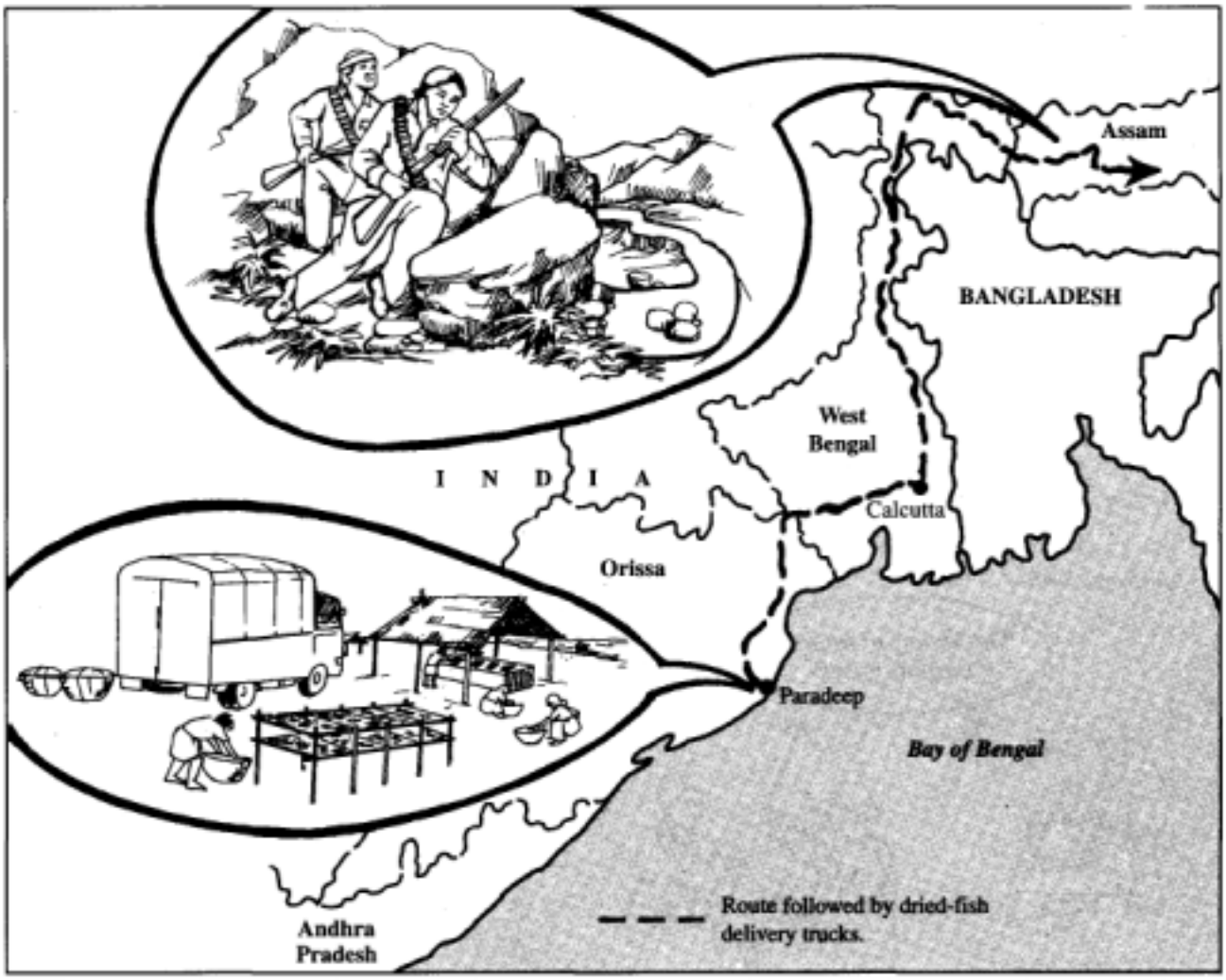

Artist Jairaj interprets the experience of the Orissa firm which sought to market high-quality dried fish in the North-East.

Also, considering the vagaries of the sector, a prior knowledge offers scope to diversify into other products, when fishing is low or targeted varieties are not available.

While the improved process does yield a better product, the ODFI experience clearly shows that there is a lot to learn from the traditional processing and marketing practices. The traditional practices developed as a result of centuries of experience of the fisherfolk, and are, by that fact alone, more practical than the improved processes.

Keeping the investment costs as low as possible, and maintaining most of the processing staff on daily-wage basis, the ODFI ensured that overheads do not mount during the lean periods.

Realising the need to explore new markets for improved products (because they cost more, they may not be welcomed in the existing markets), the ODFI started with market surveys, so that they could not only ascertain the demand position, but also identify areas from where raw material could be sourced when needed.

Concentrating on three varieties alone in the initial stages makes it possible to pay full attention to them, rather than get entangled in complex production and marketing arrangements.

While the North-East experience is rather bitter, it is however a good lesson, which would definitely come handy in future.

Lessons learnt

For a small entrepreneur like ODFI, if quality products do not even pay investment costs, it is necessary to be able to cut the production costs to a level where they can at least recover investment. This may mean compromising on certain issues, but in the initial stages, particularly when catering to a local, predominantly traditional market, this may become necessary.

It is essential to start dealing with local markets before going to the more lucrative but risk-prone distant markets.

The fact of local processors starting to use drying racks on their own, based on the experience of the ODFI, indicates that if the financial viability of a technique is properly established, the targeted beneficiaries do not need to wait for assistance from any quarter. It also establishes that for any technology to take root in the community, it is always a case of 'seeing is believing'.

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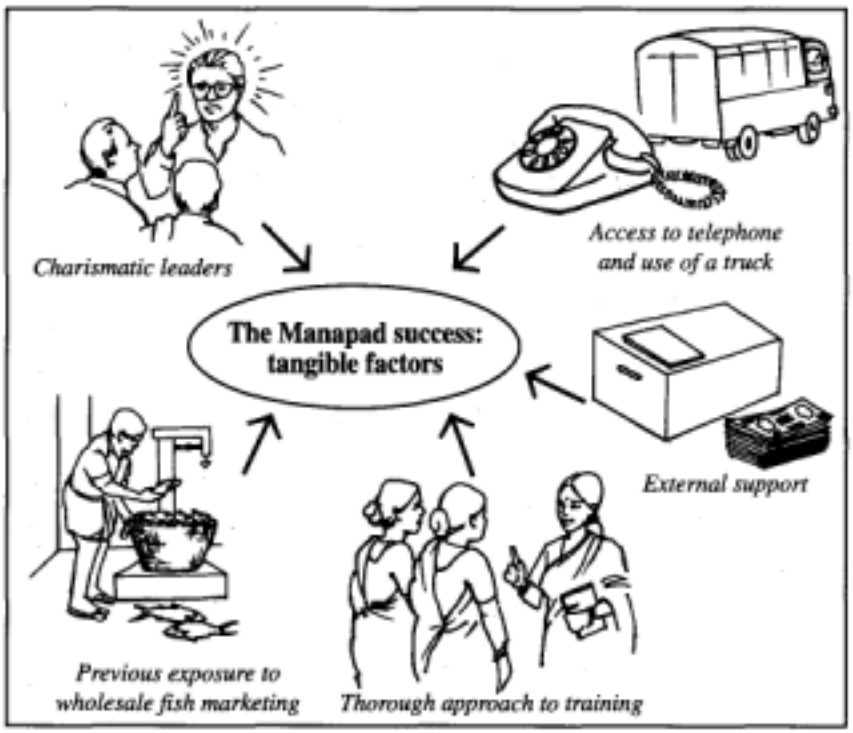
A success story in fish marketing: Manapad, Tamil Nadu

This article is based on a case-study presented by Ms Ann Gordon of the NRI at a workshop in Chennai held in March 1997. To research the case-study, she, spent a week at Manapad in November 1996, observing fish marketing operations, and inteviewing sangam members and Others.



Successful examples of fresh fish marketing by small-scale enterprises and NGOs are rare. One of these rare successes is the 'sangams' (fish co-operative societies) of Manapad, just south of Tuticorin in Tamil Nadu, which have effectively marketed fresh fish in Tamil Nadu and Kerala.

Manapad has some 14 sangams with about 600 fishermen-members. They were formed in 1992, with *50* members. The initial impetus to establish sangams in Manapad sprang partly from the efforts of a charismatic and respected priest, director of the Diocesan Social Service Society. The sangams' objectives were threefold:

(a) to increase fish prices paid to fishermen;

(b) to break the cycle of indebtedness amongst fishermen; and

(c) establish a savings mechanism.

The sangams' initial venture into marketing concerned prawns for the export market. All that they did was make telephone calls to potential buyers to get quotes. This stimulated competition and resulted in better prices for the catch. Two years later, the sangams intervened whenever very good catches were landed, by ordering ice and renting a truck to take the fish to wholesale markets in Kerala and Tamil Nadu. Fishermen's names, along with varieties and quantities, would be logged. After the fish had been sold, revenues would be distributed to fishermen in the right proportion after deduction of marketing costs.

After one year, the sangams took out a loan to buy a new truck.

Both tangible and intangible factors are behind the success of the Manapad sangams.

Tangible factors: strong charismatic leaders; a thorough approach to training; previous exposure to wholesale fish markets (one of the members of the Manapad sangams had earlier worked for a rival merchant; he knew the traders in the wholesale markets); access to telephone communication; outside support – initially from the Diocesan Social Service Society, later from SIFFS (South Indian Federation of Fishermen's Societies), which loaned two large ice boxes.

Intangible factors include the active participation of members in the sangams; the trust that exists among them and the spirit of unity; the degree of organization and management among the sangams; the business acumen they have exhibited, which is rare among such organizations.

The Manapad experience holds some lessons for other organisations interested in fish marketing.

(a) strength of purpose and cohesion within the group, including strong leadership;

(b) sound business management - to protect the groups' income, and ensure that groups' investments give an adequate return;

(c) thorough training activities – covering management, accounting and administrative issues, as well as general awareness raising;

(d) learning the marketing process before large investments have been made (in Manapad they rented trucks initially);

(e) when a large investment is made, planning the commencement of loan repayments to coincide with the season when their income is likely to be greatest;

(f) being able to benefit from the experience of a member who had already been involved in fish marketing;

(g) access to telephone communications; and

(h) contact with other organisations working with fishing communities which enabled access to ice boxes and other relevant information.

Ms Gordon urges other groups considering fish marketing activities to carefully consider their own circumstances. Can they match the performance of the Manapad sangams?

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Marketing of handloom products made by Rakháin women, Cox's Bazar

by **Shamima Nasreen Mili**

They had weaving skills. They received additional skill training. They learnt marketing procedures and set up a marketing group. Result: they have doubled their incomes.

The Rakhain women of Cox's Bazar, Bangladesh, who happen to be of Burmese descent and belong to the fisherfolk community, are skilled weavers. Weaving is an old Rakhain tradition. They worked on their looms and wove fabrics whenever contractors provided them with yarn and gave them firm orders. They were usually paid Tk. 15-20 per yard of cloth and Tk. 15 per piece of bag. They could earn Tk. 20-25 in a day. Additionally some of them used to bring yarn from Cox's Bazar for making bags and sell them in the Burmese market nearby at a marginal profit.

The project identified weaving as a vocation with potential for the Rakhain women, as an alternative income option. A pilot venture was started with the help of UBINIG, which has considerable expertise in handloom production. It started with only 14 members. Membership expanded gradually to 24. Hence a separate operational group of 24 members was formed.

On the basis of identified need, the weavers were given training on several operations — the dyeing of yarn. design of fabrics, costing, and modified handloom operation. As part of the training programme. they visited weavers' villages in Tangail. where Bengali weavers use Chittaranjan looms, slightly different from the traditional Rakhain looms. There they learned the use of maku, a small part of modified handloom, which makes the weaving operation easier and quicker.

On return from the training, they shared experiences with other community members, introduced *maku* and modified some parts of their looms.

The training enabled group members to produce more of high quality fabrics in the stipulated time. The product is now being marketed in Dhaka. with UBINIG providing support to buy yarn, dye it. and market the product. The women understood the whole operation by practising it regularly. Their awareness and consciousness about production and marketing channels has gone up considerably. After sonic initial hesitation, the group is now trying to discover new marketing outlets, gradually taking over the production process from UBINIG.

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Growing in confidence, the Rakhain women are learning to maintain production records and acquaint themselves withmarketing procedures so that they can run their activities by themselves without any external support.

Women plan visits to Dhaka to promote products

The group nominated a 4-member conmiittee (two women, two men). They are responsible for buying yarn, marketing the products and keeping contact with market outlets on behalf of the group.

UBINIG in collaboration with the project is now preparing a promotional brochure for the handloom products of Rakhain women. It will introduce the products to various market outlets. The women are planning to visit five big outlets in Dhaka City with brochures and sample products. They will be able to obtain regular orders if the market promotion goes off well.

Rakhain women want to put their improved weaving skills to productive use. Skill training has encouraged many more Rakhain women to join the group. Outsiders too are keen to take up weaving. It's wonderful to see how a slight change in looms and the introduction of market outlets has helped transform traditional Rakhain society. Rakhain women plan to take up weaving seriously as a profession, because it has helped them double their incomes.

Lessons learned

- A slight modification can make a product more profitable
- Exposure trips can strengthen knowledge and raise the confidence level of a rural community more effectively than discussion and explanation can.
- Income-generating options can be effective if market channels and outlets are identified.
- Proper training on costing and accounting are essential to sustain and expand production.
- The weavers are all female—some male support is neccessary.
- Technical skills can be absorbed quickly but acquiring commercial acumen could be a slow process.

Guidelines on marketing: New project publication

The Post-Harvest Project has published a document (Information Bulletin 9) that seeks to help developmentorganizationsandNGOs that plan an entry into marketing. (It is titled "'General guidelines for development organizations planning to enter marketing ventures".)

The document lists eight stages that an NGO or enterprise must follow to market a product: The stages are in sequence: What product to market? pre-feasibi lity; detailed market research; technical and economic appraisals; organizational issues; social and environmental issues; legal and statutory issues.

The document mainly addresses NGOs working with fishing communities in peninsular India, particularly the east coast. But it would be found useful and relevant for almost any marketing venture by an NGO.

The paper was prepared by Catalyst Management Services (CMS), on behalf of the project. It is addressed at lay people. The language has been kept non-technical to the extent possible.

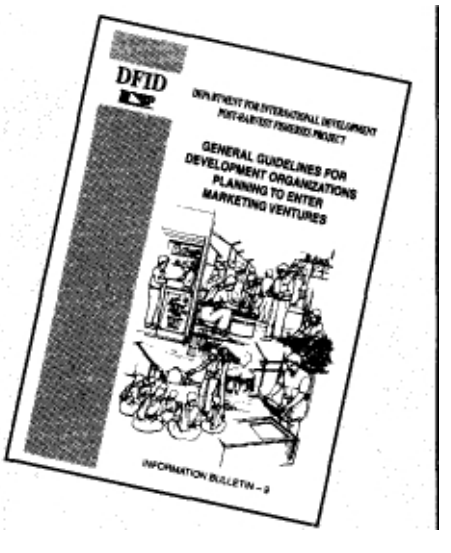
CMS notes that no NGO can handle all the issues raised in the document entirely by itself. But this document hopes to alert NGOs to these issues — so that they know the questions they MUST ask before proceeding further with their marketing venture. They may then seek external help to handle the issues and questions.

How did this publication come to be written? NGOs contacted by the project said that specific areas where they needed advice were:

- A systematic approach tostarting a commercial venture
- Obtaining market information intelligence
- Evaluating consumer perceptions and taste
- Product development
- Building a marketing organization: structure and strategy
- Costing and pricing
- Legal and statutory requirements concerning mar eting
- Quality control.

The project then initiated work on preparing a document of guidelines that would address these and other issues.

The document contains as annexures an indicative list of useful government publications; a sample questionnaire for a feasibility study; types of probability and non-probability samples; a format for product costing: a format for calculation of break-even volume; a format for cash flow projections ;a for a profit & loss account; and a format for a balance sheet.



The project requests feedback on the utility of the document, so that it can be improved and made more useful.

Chokka Mahalaxmi

The two pmfiles beloit' give an idea of the workstyle and lifestyle of women fish traders. They also highlight the advantages of an ice box over the conventional fish basket used by the traders.

Chokka Mahalaxmi, *45,* is an active trader and processor of fish and dry fish. She lives on the beach near Chandrabhaga, Pun district.

Mahalaxmi has a large family. She looks after her husband and three sons (all of whom are fishermen), two daughters and a two-year-old grand-daughter. The kid belongs to the elder daughter, who stays with Mahalaxmi as her husband is away in Andhra Pradesh.

Mahalaxnii has become a processor and trader to supplement the family income.

A DFID-PHFP team recently conducted a study on the use of ice by petty fish traders at Chandrabhaga. The team followed Mahalaxmi around, from 25 September to 3 October, as part of the study. During the period, Mahalaxmi bought 13-20 kg of fresh fish at a price of 150 to 300.Rs/kg.

Mahalaxmi carries Rs 500 with her every day to the landing site. It's a tortuous route to the fish market. Mahalaxmi takes the fish basket on headload from Nolia Street to Chandrabhaga square. half a km away, on foot. The next step is public transport (autorickshaw, cycle rickshaw or bus) to the Konark market, a little more than 3 km away. She stays at the market for seven to 10 hours — all days of the week except Friday.

She buys fish worth up to Rs 3000 or Rs 4000 from fishermen at beach auctions. She takes the fish on credit and pays for it gradually after selling the fish. Unlike some others, she has no trade tie-up with any fishing craft owner.

Mahalaxmi uses an average of 10 to 12 kg of ice per day, which costs Re.! or Rs.1.50 per kg.She buys ice from the government or private ice factory.

Fish landing at Chandrabhaga goes on from 1 p.m. till 6 p.m. Mahalaxmi starts buying fish as soon as the boats start landing. Prawns and pomfrets are sent immediately to the local trader's godown. Other varieties are sold on the shore to local cycle traders. She takes unsold fish t0 the Konarak market the next morning, preserving it overnight in ice in a basket. Sometimes she resorts to distress sale, as the condition of the fish has deteriorated for want of ice. On an average, the fish remains in the basket for 12 to 13 hours.

During the study period, Mahalaxmi's net earning per day was Rs.50. After deducting the costs of fish transportation (Rs 10), fish packing (Rs 2) and some refreshments (Rs 5). she made a profit of Rs 30 to Rs 100 per day, depending on the quantity of fish she bought.

Talking about consumer preferences for fish, Mahalaxmi says that the average consumer likes seerfish, pomfret, hilsa ilisha, silver belly, croaker, anchovy and horse mackerel. These are the profitable varieties. The good fishing season is from September to February.

A local NGO based at Konarak, Coastal People's Development Action, assists the fishing community at Chandrabhaga. CPDA runs a non-formal school. It also has an active self-help women's group, and carries out savings and credit activities. (The local Canara Bank assists such group activities.) A missionary group runs a regular school that provides mid-day meals. It also operates a health care centre for the community.

Chavvakula Jagannathamma

Chavvakula Jagannathamma, 32. is a petty fish trader and dry fish processor like Mahalaxmi, from Konark in Pun district. During the study period (25 September-3 October), she was provided with a 50-litre ice box by the **DFID-PHFP.**

The project carried out a comparative study on the advantages of the ice box vis-a-vis the conventional fish basket, by recording differences in sale of fish, earnings and profits etc, for both Mahalaxmi and Jagannathamma. Most factors concerning seasonality, species **of fish bought and sold, time of landing,** were similar for the two petty fish traders.

The family circumstances of the two traders, including ownership of fishing assets and household assets, were also similar. Both traders took to petty fish trading to boost family income,

During the period of the study, Jagannathamma bought fish weighing between 15 and 25 kg costing only Rs *175* to Rs 375. But during the peak season, she even bought fish worth Rs 4000 to Rs 5000 on credit. The amount of ice used on average was 8 to 10kg/day. During the study period, she made a net profit of 80 Rs/day.

Jagannathamma says that on account of her using the ice box, she needed to buy less ice and thereby saved money. She could also sell the fish over a longer period. Consumers preferred her fish to Mahalaxmi's, because they were more fresh.Shewasabletobargainforhigher prices because of the better quality ensured by the ice box. She could eliminate the agony of a distress sale.

By using the ice box, Jagannathamma on an average earned Rs 30 more per than Mahalaxmi did.

After learning about the profit potential of the ice box, Mahalaxmi showed strong interest in acquiring one. She also mobilized five other petty fish traders and started saving regularly, so that she could buy an ice box. They opened a joint savings account with the local Canara Bank, and managed to save Rs.3400 in a short time.

These efforts of a single group of petty fish traders can be replicated in all marine fishing villages of Orissa. All that's needed is a liaising agent.

— **BINOD MAHAPATRO**

Fish Losses During Monsoons

How serious are fish losses during monsoons in the small-scale processing sector in India? Better understanding of this question will help policy-makers and planners to make better-informed decisions about action to reduce fish losses,

Four studies have been conducted in Kerala, Kanyakumari (Tamil Nadu), Andhra Pradesh and Orissa to generate a quantitative and qualitative assessment of wet season fish losses in small-scale coastal fisheries. The studies were conducted by the College ot Fisheries, Mangalore, in collaboration with NRI (Natural Resources Institute) and the DFID Post-Harvest Fisheries Research Programme. A field research team of the college led by Prof Mohan Joseph, was in charge of the studies.

For each study, the research team collected technical and socio-economic data on monsoon losses at selected sites. During the field work the team linked with NGOs and research organisations and adopted an informal participatory approach to the work, involving fisherfolk as much as possible in the data-gathering exercise.

The team found that in many coastal areas, fishing activities were either suspended or reduced, because of government restrictions or because of rough sea conditions. Often, fishing and processing activities come to a halt, especially during the early part of the monsoon when the rain is intense. As weather conditions improve, however, small-scale fishermen become more active,

Studiestoassessfishlossesduringthe wetseason have been conducted in four south Indian states. A detailed report will be discussed at a workshop in January 1998.

In Kerala most of the fish processors, who are women, found it hard to compete for the limited supply of fish. which was usually sold for consumption fresh. Many of these women therefore do not process fish during the monsoon, preferring to wait for the by-catch from trawlers at other times of the year. The team noted that though losses do occur during the monsoon season, mainly at processing yards, the generally high demand for fresh fish and the relatively good infrastructure of Kerala ensure that losses are minimal,

in Tamil Nadu, where there are no government restrictions on fishing, losses were found to occur at all stages of distribution, except the fishing stage. Physical losses alone were estimated at one site to be over Rs.6 million per annum. Losses were also noted in Andhra Pradesh, especially during attempts to sun-dry some of the smaller varieties of fish caught by shore seines. In Orissa, processing activity becomes difficult and is reduced, but losses do occur when rain leads to the spoilage of semi-processed fish.

According to Prof Joseph, "In general terms, the nsrng demand and pnces, coupled with reduced or stagnant catch levels, mean that fishermen now tend to take more care of their catches.

Lossesatthefishingstagearegenerally lowerthantheywereafewyearsago". He added that "'during the monsoon the smaller-scale processors tend to hnd **it** difficult to compete for fish with the larger-scale processors and traders'. Furthermore, small-scale operators will sometimes avoid buying small pelagic species during the monsoon since there is more risk involved in processing these. Instead these species are bought by the larger-scale processors who can more easily absorb any losses if they occur.

A detailed report of the four studies is currently being prepared and will be discussed at a workshop in January.

—ANSEN **WARD**

The proposed SIFFS ice plants: how they will help fisherfolk

by Satish **Babu**

The South Indian Federation of Fishermen Societies plans to set up a network of ice plants at selected locations in South India. The idea is to make ice available at reasonable prices to fishers and fish vendors, and help fisherfolk communities gain better control over fish marketing operations. The Chief Executive of SIFFS discusses a study in this connection supported by DFID and NRI.

The importance of preservation

Fish is one commodity that is preferred in the fresh form over any of its processed forms. Given the perishable nature of fresh fish, traditional fishworker communities depended on salting and drying for preserving fish when it could not be sold fresh. Considering the price differential between fresh and salted/dried forms, such processing was done only as a last resort for most species. Exceptions, however, existed in the form of fish that had demand in the salted or dried form such as shark meat (wetsalted), anchovies (dried) or ribbon fish (dry salted).

For most species, fishermen as well as fish vendors have been long looking for mechanisms that would prolong the life of fish in its fresh state. Given the high temperature and humidity in the coastal regions in India, shelf life for most species is restricted to a few hours. This short shelf life forces fishermen to off-load their catch as early as possible, since holding the fish would lead to lesser prices. This was true even in cases where the fishermen felt that the price offered by the merchant was too low. In short, the absence of preservation mechanisms had its direct and negative impact on fisher communities.

Preservation mechanisms are also important for fish marketing systems, whether the actors are small women vendors carrying fish on their heads, or large merchants who deploy long-distance transport infrastnicture. Preserving fish allows marketing systems to cover larger geographical areas and improve availability of fish.

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Finally, preservation helps the consumer to obtain good fish, even in areas that are far from the coastline. This is true of both domestically consumed species as well as export species.

Fish **marketing**

The lower southern coast of India is a highly productive fisheries zone. This zone supports a set of dynamic fishing communities that are involved in the production and marketing of fish. The fishermen of these regions are highly skilled in their fishing techniques, and use a wide variety of craft and gear for fishing in these surf-ridden waters.

Fish is widely consumed by the populations of the region and by all sections of society. The region had been well-known for its exports of dry fish to Sri Lanka hundreds of years ago. Fresh fish marketing, however, was limited in scope on account of the relative isolation of fishing villages. It was only in the last two decades that fresh fish started getting marketed over long distances. Such marketing was taken up by traders in the region to cater to the demand of fresh fish in urban centres such as Madras and Madurai as well as regions like Kerala, which offered high prices for fresh fish. Thus, high-valued table fish such as pomfrets and seertish which would fetch a high price in Madras were transported to Madras, while fish such as tuna and mackerel would be shipped off to the Kerala markets.

Basic to this long-distance marketing of fish were two factors: the availability of a good road network and the availability of ice. Till a couple of decades ago, the road network within the coastal region was not very good, and daily transportation was difficult. As soon as the roads developed, it became feasible to transport fish, provided it could be held in good condition. It was at this time that ice plants began to come up in the region.

Ice plants

Ice plants have been put up by government agencies as well as private entrepreneurs in the last two decades. However, the supply of ice is still effatic and far below peak requirements. A number of factors contribute to this situation.

*Ice plants began **to come up** in **coastal** regions **of south India** when **the road** network improved. But the supply of ice is erratic.*

a. *Scale requirements:* In order to be economical, an ice plant needs to be big enough. Most ice plants are normally in the 5-15 tonnes per day range. The larger the plant, the cheaper it is produce a tonne of ice. However, this also means that only the largest fishing villages (or groups of villages) will have access to ice plants. The small and isolated villages generally have poor access to ice.

b. *Seasonality and price fluctuations:* The demand for ice closely follows the supply levels of fish, and therefore is highly seasonal. In some centres, ice plants remain completely closed for about three months every year. The level of fluctuations brings in additional "flexibilities" in pricing of ice. During the peak season, the price of ice soars, as ice plant owners need to make good their losses during the lean season.

c. *Distribution network and access to ice:* Not all have equal access to ice, even in a village that has a relatively better supply of ice. Ice is distributed by a chain of intermediaries, as the ice plant owner seldom takes up retailing of ice. Ice traders enter into a contract with the plant owner, whereby they are assured of ice round the year at mutually agreed prices. These traders have 1-2 outlets in every village where they unload their supplies each day. The retailer is often a woman, who sells by the block, or more commonly, per kilo of ice. In the latter case, the ice block is broken up and sold, which leads to higher wastage due to melting.

Larger traders, who consume large quantities of ice, get preference over smaller vendors for ice supply. In times when the demand outstrips the supply, it is invariably the small vendors – often women—who don't have access to ice, except at extremely high prices. This gives the larger trader a substantial edge over the smaller vendors, and increases his control over the price fixation process. This situation adversely affects both the fish producer and the small vendor.

d. *Quality of ice:* Ice is a commodity for which quality is often not considered as a significant factor. However, quality does impact the effectiveness of the ice to preserve fish. In this case, quality has more to do with physical attributes of the ice than its chemical or bacteriological aspects.

A common complaint regarding ice is that ice plant owners tend to sell blocks that are not completely frozen. Such blocks have only the outside frozen, and hollow space inside (the water in this space leaks out through cracks in the ice). This problem is more acute in the peak season, especially so in areas prone to power problems or power cuts (as in Kerala).

Block ice which is broken by pounding with a pestle often has sharp edges. In the absence of proper insulated storage, the ice blocks start melting, especially

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during the summer, resulting in wastage of ice and therefore higher prices.

Many parts of the coastal areas experience a scarcity of drinking water. Ice plants in such locations often have to bring in water from other places. The quality of the water in these cases is often very poor. Use of ice made from water of dubious quality has its implications in the quality of fish, especially in the case of export species.

The SIFFS intervention in preservation

SIFFS, as a member-based organization handling economic activities, considers fish marketing central to any economic intervention in fisheries. The SIFFS societies consider fish worker control of the first point of sale as mandatory and control over forward linkages as desirable. The control of first point of sale by producers themselves, helps in realizing the highest prices for the produce.

The price of fish depends on several factors, the dominant being supply and demand. One of the factors that modulates demand is the availability of a long-distance transportation and preservation infrastructure. For this reason, SIFFS considers ice to be a strategic tool in the hands of fishermen organizations that would enable them gain greater control over the marketing process.

SIFFS commissioned a study early this year to work out a set of strategies for its programme in improving preservation systems. This study was supported by DFID/NRI and carried out by a consultancy group. Much of what is discussed below has been a result of this study.

The SIFFS intervention in preservation has the following broad objectives:

a. Improvements in availability of ice for fish preservation, for both large villages and smaller centres using appropriate ice production technologies

b. Providing better access to ice for smaller vendors so that their livelihoods are more secure.

c. Providing auxiliary storage technologies (on-board ice boxes, on-shore ice boxes and permanent ice boxes) to store ice/or iced fish.

d. Through the above measures, empowering fish worker communities to gain better control over the marketing process.

Network of ice plants

In order to operationalize these objectives, several components are necessary. These include:

a. *ice manufacturing technologies:*

SIFFS intends to establish a network of ice plants in selected locations to improve the availability of ice at reasonable prices to fishers and vendors. At present, five ice plants of 15-20 tonnes capacity are planned in the region from Thiruchendur to Calicut. The first of these plants is presently under construction at Enayamputhen-thurai in Kanyakumari district, and is expected to be commissioned by Dec 1997.

The five plants in the network will use the commonly-available block ice technology (ammonia or freon). However, for relatively isolated fishing villages with low or moderate demand for ice, SIFFS is trying out alternative technologies such as tube ice, flake ice, and portable/mobile ice plants for isolated areas. SIFFS plans to put up one pilot using one of these technologies.

b. *ice distribution infrastructure*

In order to ensure better distribution of ice with lesser losses, SIFFS is planning an ice distribution system that consists

Kanyakumari lies in a highly productive fisheries zone that supports dynamic and knowledgeablefishing coinmunities.

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of a central ice plant, permanent ice boxes (PIBs), on-shore ice boxes, and on-board ice boxes.

Each ice plant targets an area of the coast, and is preferably located in the region. Each village in the target region will have either a PIB or several on-shore ice boxes. PIBs have been made in capacities ranging from 1000 kg to 3500 kg, while on-shore ice boxes have capacities in the range 300-600 kg. PIBs are normally attached to the village fish marketing society (since these require built-up space). For smaller villages, one or more on-shore ice boxes could be used.

SIFFS also promotes the use of on-board ice boxes which are taken to sea by the fishermen for preservation of the just-landed catches. Ice boxes ranging from 20 to 600 litre capacity are used for this purpose.

Fish holds are insulated storage areas built into the hull of a boat in the case of gillnet/longline boats that are about 28' and above, and use inboard diesel engines. In this case, an ice box is not preferred since it takes up space on the deck and also because it is exposed to the sun, leading to higher thermal loads. Fish holds are ideal in this case, since they use space that is normally unused. Fish holds have provision to stock ice and iced fish, and help the boats to extend their voyage times from 2 days to as long as 2 weeks.

c. Ice retailing systems

The retailing system for ice envisaged by SIFFS is to be managed by village level women's organizations in consultation with the fish marketing society. The women's organization employs one woman in each village who will retail ice at prices decided by SIFFS for the entire region. The availability of PIBs or on-shore ice boxes will allow these retailers to buffer demand-supply fluctuations to some extent. This system is expected to improve women's access to ice.

d. *Ice distribution strategy*

In order to hedge between demand and supply, an ice distribution strategy has been proposed by the study. Under this

system, ice is distributed only to SIFFS members, and the ice plant distributes 80% of its daily production to the target villages, and holds back 20% till noon. By noon, the fish arrivals in each of the villages would be known. and the balance amount left at the plant level is distributed to the village with the largest fish landings.

e. Other areas

Other long-standing demands from the fishermen include extensions to this basic system of post-harvest preservation, such as cold storages and freezing plants. Cold storages help in times when prices crash (either from bulk landings or from manipulations by large merchants), since these enable fishermen to hold on their produce rather than sell it out of compulsion. SIFFS has plans to put up a cold storage on a pilot basis.

Freezing plants, the other long-standing demand from SIFFS members, are based on the fact that a substantial proportion of the annual income of fishermen in the region comes from export species such as shrimp, cuttlefish, squid and lobster. Any marketing intervention that helps improve the price of these species—even marginally—has a substantial impact on the annual earnings of fish producers. Traditionally, marketing of export species has harboured several kinds of malpractices, and the intervention made by SIFFS societies hitherto has been limited to supplying freezing companies. Because of this, despite the substantial capital and personnel requirements, freezing plants still remain high on the fishermen's agenda. SIFFS hopes to address this issue within the next 3-4 years.

Getting the highest revenue from fish

In conclusion

The capture fisheries sector has been caught up in a vicious circle because of the scarcity of fish. It leads to increased competition, which in turn forces fishermen to adopt new and more efficient technologies that contribute to further destruction of the fish stocks. In order to break out of this destructive loop, one way would be to adopt measures to realize the highest revenue from whatever fish is landed.

Preservation technologies and measures address this problem. The application of ice for on-board, on-shore and marketing uses, would enable producer communities to realize better revenues for their produce on the one hand, and would provide better quality of fish to the consumer community. For a fish worker organization like SIFFS, its own preservation facilities also increase producer control over marketing, which is a highly desirable strategic objective.

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