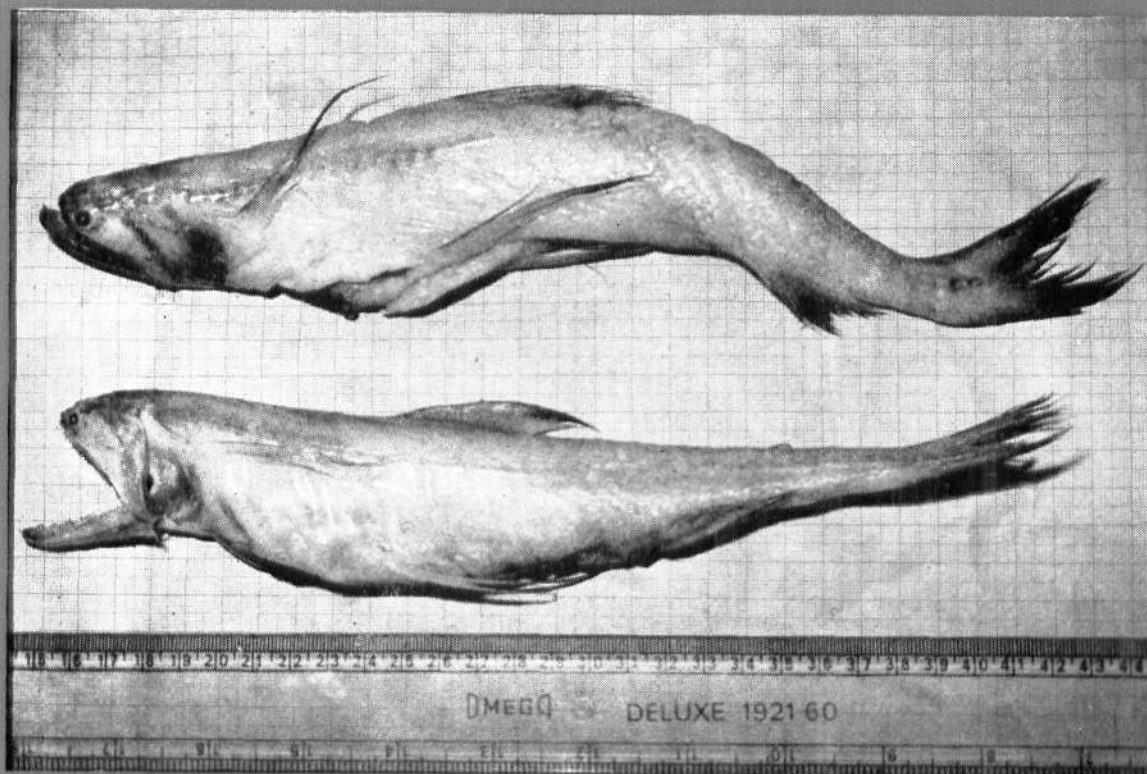




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PSYCHO-SOCIAL ASPECTS OF FISHERMEN WITH RESPECT TO MOTORIZATION

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In India the motorization of country crafts has, to a certain extent, helped the fishermen to increase their fish catch as a result of the increased mobility and the access to the fishing grounds. It has been reported that in Kanyakumari, due to motorization the employment opportunity had doubled as more number of fishermen were required to go in the craft. An increase by six times in the gross returns of fishermen after motorization has also been reported. Though the economic benefits of this innovation was quite perceivable its popularization has not been quite even. For example in Kerala, while fishermen of Alleppey and Quilon adopted motorization prior to 1980, the fishermen of Kannamali and Saudi areas in Cochin took up the same during 1981-'83. The innovation caught up in Vypeenkara during 1984-'85 only. The number of motorized units in Vypeenkara during 1982 was only one or two and in 1985 it was about 115. Though the causative factor for adoption of this innovation is primarily better returns in economic terms, its continuance and sustenance as well as adoption of more improved fishing methods will, to a great extent, depend on the impact of this innovation on the social well-being of the fishermen. This report examines the efficiency of the technology based on the perception of fishermen of their present and future status in relation to their living conditions prior to motorization. The study was conducted in Vypeenkara during August-October, 1985.

Out of about 115 motorized country crafts, the owners/shareholders of 50 units were subjected to the study. Data were collected using an interview schedule involving projective and non projective techniques. Information on personal variables, impact of motorization and the living standards and projection for future, aspirations and facility satisfaction as assessed qualitatively by fishermen themselves were collected.

Age and education of the respondents

The respondents were in the age range of 18-58. About 35% was in the age group of 18-30, 37% in the age group of 31-45 and 28% in the age group of 46-58. The educational status of the respondents was between II-IX standard. Twenty per cent of the respondents had educational status between I & IV

standard. The age-wise and education-wise distribution of respondents is given in Table 1.

Table 1. Age and education of the respondents

Age (years)	Education (figures indicate % respondents)			
	Below primary	Primary	Primary-secondary	Secondary
18-30	—	5.8	21.5	7.8
31-45	—	7.8	27.4	1.9
46-50	5.0	5.4	1.9	1.9
> 50	1.9	9.8	1.9	—
Total	6.9	28.8	52.7	11.6

Family structure

Eighty per cent of the respondents was having nuclear families and the rest had one or more numbers living with them, the average family size being 6.5.

Table 2. Details of crafts & gears used by the motorized units

Type	Crafts (% respondents)	Type	Gear (% respondents)
Small	—	Drift gillnet	29.4
Medium	50.9	Boat seine (combination)	31.4
Big	49.1	Hooks & line	19.6
		Boat seine,	19.6
		Drift gillnet & Hooks & line	
		Drift gillnet & Boat seine	—

Occupation

Ninety per cent of the respondents was engaged in traditional fishing before taking up motorized fishing and 10% had occupations not related to fisheries.

Details of crafts and gears owned

The details of crafts and gears belonging to the motorized units are given in Table 2. Among motorised units percentage of the canoes crewed by 16 and 5 was about 50% each.

Source of inspiration for motorization

Eighty per cent of the respondents indicated their source of inspiration for taking up motorization as the demonstration effect of fishermen of Kannamali, Saudi and Alleppey. Fifteen per cent indicated that availability of credit under IRDP was the factor which prompted them to go in for motorization and the rest of them have followed their fellow fishermen in the adoption of the innovations.

Source of finance

About 59% of the respondents had availed individual loan facilities available for purchase of country crafts under IRDP and pooled them together to purchase the motorized units. About 12% had availed credit scheme by Latin Catholic Church and 29% had made use of their own resources. The time lag between their desire to have motorized units and actual possession ranged between 4 months to 4 years. Regarding the difficulties encountered in realizing the goal, loss of fishing days and travelling and miscellaneous expenditure were indicated as most important (Table 3).

Table 3. Source of credit, time taken and difficulties in realising the goal (in %)

Source of credit	Respon- dents (%)	Time taken (years)	Respon- dents (%)	Difficul- ties encountered (Multi-responses)	Respon- dents (%)
IRDP	58.8	About 1	25.0	Loss of fishing days	74.5
Latin Catholic Church	11.8	2-3	70.8	Extra expenditure including travel	50.0
Own resources	29.4	3-4	4.2	—	—

Impact of motorization as perceived by the respondents

All respondents in this study agreed that there was some increase in their income as the result of motorization. The number of fishing days have gone down as Sundays had become compulsory holidays. Ninety per cent had already registered definite increase in the quantity of fish caught. No change was seen in the role of women in the post harvest operations or their income. Eighty per cent of the respondents reported improvement in their food consumption and 70% said that the clothing had improved. No change was immediately perceivable in education and housing, but many of them hoped that there would be improvement in these aspects in the next five years. The saving habit of 8% of the respondents already indicated improvement. Seven items pertaining to socio-economic conditions were presented to the respondents on a five point scale and the mean score obtained indicated improvement in the overall socio-economic conditions. The details are presented in Table 4.

Table 4. Socio-economic changes after motorization as perceived by respondents

Parameters administered (Multi-responses)	Respon- dents (%)	Mean score (maximum score = 5)
Increase in mobility	100	4.53
Increase in catch	100	4.64
Improvement in food	80	4.82
Improvement in clothing	70*	3.22
Improvement in housing	43*	3.87
Improvement in education of children	96*	3.90
Improvement in savings	8	2.55
		pooled 3.93

* Hope to improve soon.

Facility satisfaction

Six aspects of facilities related to the operation and maintenance of motorized units and disposal of catch namely landing facilities, market, availability of inputs like kerosene, petrol and engine oil, facilities for storing and repair of engine and finance were presented to the respondents on a five-point scale. The scores are presented in Table 5. The mean facility satisfaction score was 2.2 which was below satisfactory. It was reported that the 600 litres of kerosene available to them through government outlets for a period of one month

was sufficient only for 20 days and the rest of the quantity had to be bought from the open market at prices prevailing at that time. Regarding marketing of the catch the time of landing was reported to determine the trade. If agents could get sufficient quantity of fish from Cochin Fisheries Harbour, the price of fish landed at Vypeen was reported to go down. The landing facilities at Vypeen was felt to be unsatisfactory. The facilities for storing the engines were also not satisfactory. For repairing engines no facility was available in the Island and the fishermen had to go out of the Island even for every small repair, paying exorbitant charges for private conveyance.

Table 5. Facility satisfaction mean score

Facilities considered	Mean score (maximum score = 5)
Landing facility	2
Marketing	3
Inputs for operating the engine	2
Storage facility for engine	2
Repair	1
Finance	2
	pooled 2.20

Aspirations

Aspiration was measured for education and occupation for children, food, clothing, housing and ownership of fishing implements and the rank order is presented in Table 6. Eighty two per cent considered better living in terms of food, shelter and clothing as most important while 63% considered ownership of fishing implements and more number of crafts and gears and 63% better education for their children.

Table 6. Aspirations and ratings for self

Aspirations	Rank order (%) (multiresponse)	Rating for time dimensions	Self mean rating
Better living in terms of food, shelter & clothing	82	Past	1.0980 ^a (0.3003)
Education for children	63	Present	2.8627 ^b (0.6331)
Possession of implements	63	Future	6.2941 ^c (0.9848)

Note: Means with different superscripts differ significantly among themselves at 1% level of significance.

Rating for self and village

A ten point ladder scale (0-10) indicating progress in life was administered to the respondents. Their assessment of general conditions and extent of progress as subjectively perceived for self for three time dimensions namely past, present and future at the interval of five years was rated. The mean rating is given in Table 6. The rating for past, present and future aspirations showed significant difference which indicated that the change brought about by motorization was significant. As regards rating for village, an open question was put asking whether the respondent thought that motorization had brought about any improvement in the life of the villagers or whether they perceived any change in future. Seventy per cent felt that the villagers can progress if they go in for motorization at large as some progress has been indicated in the first year of motorization.

Conclusion

During 1982-'83, though fishermen of Vypeen Island were aware of motorization the factor which hindered the adoption was lack of financial resources. Though schemes were available under IRDP for motorization of fishing crafts the initial investment of Rs. 9,000/- was beyond the reach of small fishermen. As they realised the benefits of motorization from the successful experience of the fishermen elsewhere they had availed the credit available under different agencies for purchase of motorised units. They felt that the motorization has already proved its worth and if it continues to accrue more benefits they may switch over to mechanised fishing by raising pooled capital. When they were asked to react to the banning of mechanised fishing like trawling and purse-seining the general feeling was that mechanization was not totally harmful to them. This was mainly due to the increased mobility of motorized units and the resultant increase in catch.

From the above findings it may be concluded that motorization can be instrumental in bringing about significant changes in the living conditions of fishermen and their outlook and inculcating the spirit of unity and co-operation among them. The fishermen in general felt that their status has improved as a result of motorization and were more optimistic about their future. It is hoped that proper motivation and facilities with adequate supporting services will lead to quicker adoption of better fishing methods.

