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WOMEN AND TECHNOLOGICAL CHANGE-
A CASE STUDY OF THREE FISHING VILLAGES

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Introduction

Kerala has a long coastline of 590 kilometres. In addition, a net work of rivers, lakes and backwaters provide considerable scope for inland fishing. Spread along Kerala's sea-coast are some 250 fishing villages with a population of 800,000. Persons actively engaged in fishing are estimated at 150,000.

The focus of the paper is on the three fishing villages, namely, Sakthikulangara, Neendakara and Puthenthura, located in the Southern part of Kerala. In the first two villages, the fishermen are predominantly Latin Catholic, and in the third villages, they are Hindu by religion. The Hindu fishermen belong to the Araya caste, one of the two major castes to which fishermen in Kerala generally belong. Both the castes rank pretty low in caste heirarchy but are considered above the untouchables. Even Latin Catholics are regarded as inferior to the other Roman Catholics in Kerala who are referred to as Romo-Syrian Christians because they use Syriac as their ritual language.

The above three villages which together formed a compact area around a major sea inlet, generally referred to as Neendakara Inlet, some ten kilometres north of the district town of Quilon were chosen during the early fifties for the location of a Project under the Norwegian Aid Programme to modernise fishing. Though the Project was in operation only for ten years, its technological

impact was quite substantial judging by the extent to which mechanised boats, the use of ice and freezing techniques came into vogue during and after the project. The spread of mechanisation was much faster subsequently once it was fully established that the grounds rich in prawns were within easy reach of mechanised boats and that prawns fetched in high export value. Although the project was originally conceived under the Norwegian Aid Programme was aimed at modernising and developing all aspects of fishing including catching, processing and distribution, primary accent was placed on mechanisation of boats followed by improved technology of conservation and storage. Whatever the reasons, distribution of fish did not receive much attention. The need however to build social infrastructure received quite some recognition not only in the conception but also in the implementation of the project. Due financial provisions were made to establish within the project area adequate health service facilities and to provide the people access to safe drinking water. In fact, access to both health service and safe drinking water was extended to all the population in the project area regardless of whether or not a person was from a fishing household.

More than twenty five years have elapsed since the above modernisation project was taken up and a whole new generation can now be said to have lived through the transition from old to new technology in fishing. During this period, a number of major changes have occurred in the economics of these villages, though not each village has been affected by these changes to the same extent.

Impact of Change

The most noticeable change in the project area is that of the technology of fishing itself. While in 1953 no mechanised boat was operated by the fishermen in these villages now they have over 400 mechanised boats. On the other hand there has been a steep decline in the number of traditional crafts operated by the fishermen of these villages. The spread of mechanisation is however rather unevenly distributed between these villages. The Arayan Hindu village of Puthenthura accounts for only eight out the 400 and odd boats. The rest belong to the Latin Catholic fishermen of Sakthikulangara and Neendakara.

The extent of change over to mechanised fishing is reflected even more forcefully in the statistics of fish catch. The quantum of fish caught in the project area in the early fifties stood around 2,000 tons, all of which was the contribution of traditional crafts. In mid-seventies the annual average landings in the Project Area stood around 29000 tonnes of which as much 97% was accounted for by mechanised boats. An important reason for the catch going up so very phenomenally in the Project Area is of course, that a very large number of mechanised boats from other districts moved into the Project Area during certain months, particularly from June to September, which are considered as the peak fishing season for the prawns. It is estimated that during this season not less than 2000 mechanised boats operate in the area and unload their catch in the jetties that are located in the Neendakara inlet, generally creating great demand for various supporting activities. The catch in this areas during accounted

for between half to three fourths of the total catch of mechanised boats recorded at the various landing centres, totalling 23 in the whole State of Kerala.

Pre-occupation with Prawns

In the early fifties major varieties of fish caught in the Project Area were sardines, butter fish and mackerel. On the introduction of mechanised boats, fishermen in the area started fishing for sharks and seer fish which lay in waters beyond the reach of the traditional craft. During the latter part of the sixties, however, the composition of the catch switched considerably in favour of prawns. Today fishing for prawns altogether dominates the whole scene in the Project Area.

It would not be an exaggeration to say that fishing in the Project Area has now come to stand for fishing to prawns. No doubt, some quantity of prawns was caught in this region even prior to the introduction of mechanised fishing but this was collected mainly in the backwaters and paddy fields by traditional canoes and it comprised a very small proportion of the total catch. A small quantity of backwater shrimps was exported in the form of pulp and dried fish, to countries like Burma and Sri Lanka. It was sometime during the early sixties that extensive grounds were discovered some 10 to 15 kilometres off the Nendakara coast for catching prawn. This coincided with the opening up of the markets abroad, first in the U.S.A. and later on in Japan and Western Europe. Prawn fishing is mostly carried out in mechanised boats of upto 14 metre length, operating two to four sea trawls at depths of upto 40 metres.

Seasonality of Operations

In theory, the trawling operations can be carried out almost throughout the year. But a characteristic feature noticed in the Project Area is that trawling and related activities are concentrated in a short period of three months during the South West Monsoons between June and September every year. Thus, mechanisation cannot be said to have reduced the seasonality of fishing. In fact, seasonality has become even more pronounced than before.

Growth of freezing activity

Virtually no use of ice was in vogue for the conservation of fish in the early fifties and before in Kerala. The use of ice for preserving fish became widely acceptable only in recent years, after the establishment of the Project ice factory and freezing plant. Now even traditional fishermen and fisherwomen have started using ice for preserving fish. Among the vast consuming public of Kerala also the prejudice that the use of ice spoils the freshness and taste of fish is wearing out fast.

There is no doubt that as far as the area around Neendakara inlet is concerned, fishing has undergone a major transformation, in regard to the technology of fishing, fish preservation and the composition of catch. Prawns now comprise a major part of the area's fish catch and are almost entirely exported in processed form. As a result downstream linkages have been generated in the form of prawn processing, refrigeration and transportation that were unknown to the area before.

It is in the light of the above changes that we shall discuss the changes that have occurred in the lives of women from the fishing households from the three villages in the Project Area.

What are our questions?

Though women as such did not figure explicitly in the design of the modernisation project, it could nevertheless be argued that they would automatically stand to gain from the improvements expected in the income levels of their fishermen. One could even go further and say that women were to gain directly from the social infrastructure that the Project had explicitly provided for. The fact still remains that the Project was designed on the assumption that fisherwomen had little if any direct active role to play in whatever was sought to be achieved by way of improvement in production and income through technological changes in fishing and related activities. This, as we shall note, is an assumption that has actually proved to be highly arguable because even though women from fishing households were never directly engaged in what may very narrowly be defined as fishing. They did participate in a number of related activities, not all of which got necessarily paid for, which supported the households income earning capacity.

The principal question we wish therefore to raise is,

(1) How have the women from fishing households been affected by development spurred on by the modernisation project? More specifically, what we ask is whether the quantum and type of work participation by these women have undergone any major change. Since, as we shall note, change has actually occurred, it will be appropriate to ask if as a result there has been a perceptible change in not only women's roles and status in general but also in their attitudes. We attempt to concretise our answer to the last question with reference to the women's role and attitudes in deciding on the

size of family, and the stage at which to undertake family planning. Of course, all along we have borne in mind the fact that the response of the Araya fishermen to the modernisation project was rather poor compared to that of Catholic fishermen.

In order to answer the above questions, we have relied on quantitative information available from various surveys conducted over the past twenty five years. This also includes the information collected by the State Government in 1978 in a census of fishing households and supplied to us on request. In addition, we ourselves collected information in the course of construction of geneological histories of the selected households taken up for in depth case studies.*

III

Women in Traditional Fishing Households

Traditionally, fishing in Kerala State, as in the rest of India, has been considered low income, low skilled and low-status occupation. Traditional fishing crafts are manually operated. The larger the craft the greater is the number of men needed to operate it. Probably the larger craft ventured further out into the sea than the smaller craft. Though the daring fishermen did venture into the high seas even on their catamarans, the smallest craft made by joining together with coir ropes a few logs of wood, in actuality most fishing was confined close to the sea coast in mid-water layers of the sea. This limited the range of species the traditional craft could fish for. Also fishermen experienced several months of virtual inactivity when the sea was rough for long stretches as was the case during the monsoon season. In Kerala, the monsoon season lasts for as long as four to six

months in a year. Moreover, since the use of ice for preservation was virtually unknown until recently, given the tropical weather, prices fluctuated violently, inversely with the quantum of the catch. Given the marketing system, dominated by the middlemen the fishermen were the most vulnerable link in the chain. Traditionally therefore, fishing meant nothing more than hand to mouth existence.

In this situation, what was the role of women in fishing households? Traditionally, women in these households stayed at home, looked after the children and attended primarily to domestic chores which were entirely a female responsibility. But women from the poorer fishing households, particularly such households where men had largely to work on other people's craft did take also to work that would supplement, however marginally, the household's income.

The major income earning activity for such women was head load fish vending. They would carry on their heads fish in baskets over distances of 10 to 15 kms. and sell it from door to door. Several women from fishing households engaged themselves in defibring of coconut husks and manual rope making. Many also did fish drying and net making. Some were involved in shell collecting. To engage in most of these activities, they did not have to go outside the house. They would combine them with pure domestic work and at the same time either generate a little additional income for the household or support the principal income earning activity of the household, namely fishing which was an exclusive male preoccupation.

Thus the work options traditionally open to women from fishing households were mostly in jobs such as head load fishing vending, fish drying, shell collection and coir defibring. Since most of these activities were rather arduous and brought in very meagre returns to engage in any of these carried loss of status even among fishermen so that often those who were compelled by their circumstances to undertake these activities would not admit it publicly. The earlier censuses and surveys did not therefore capture fully this dimension of women's work participation though we know from our in depth case studies that many women from fishing households were involved in some income generating work besides rearing and nurturing the family.

According to a 1953 survey of the fishing households of our three villages, the proportion of self-earning women was uniformly low though there were differences between villages in regard to the principal activity in which these self earning women engaged. It can be seen from Table I that in Sakthikulangara, the larger of the two Latin Catholic villages, and in Puthenthura, the Araya village, coir making was the most common occupation for self-earning women; in Neendakara, the smaller of the Latin Catholic villages, fish vending was the most common activity of such women. Interestingly, while coir making is the type of activity which could easily be combined with housework, for fish vending women would have to stay away from home for quite a few hours. It was observed also that though the work participation by women was extremely low in all the three villages, while the majority of self-earning women in the two Latin Catholic villages were married,

Table I: Work Participation by Fisherwomen from Three Villages, 1953.

Type of Activity	Villages		
	Sekthikulangara	Noendakara	Punthenthura
Fish trade	1	16	4
Coir Making	29	3	17
Other trade	-	5	..
Teachers	1	2	-
Workers	31	26	21
Non-workers	956	312	622
Total Population of women	987	338	643

Note: Though the indications are that the term "self-earning persons" had been defined to include self-earning dependents, it would still appear that involvement in "second occupations of a more occasional nature" did not get adequately recorded. The following statement is of significance in this context: "Secondary occupations of a more occasional nature are of some importance. In periods with great demand for coir products, specially if fishing at the same time is poor, home production of coir will be increased. Under the present marketing difficulties for coir products this trade is at a low ebb. Some persons periodically also add to their incomes by collecting sea-shells which are sold for manufacture of lime."

Source: P. Bog, A Statistical Survey of Economic Conditions in the Project Area. The Norwegian Foundation for Assistance to Underdeveloped Countries, Oslo, 1954.

most of the self earning women in the Araya village of Puthenthura were widows. It was noted also that the few unmarried self-earning women found in these three villages were all daughters of single female family supporters.

Let us compare the picture in 1953 with the picture in 1978 of work participation of women from the fishing households in our three villages. It can be seen from Table II that if one takes

account of home based income earning activities of women, work participation is significantly higher in the Araya village than in the

Table II: Work Participation by Fisherwomen from three villages, 1978.

Type of Activity	Sakthikulangara	Neendakara	Puthenthura
I. Homebased work	1.1	2.6	31.1
i) Net making	0.5	1.1	30.2
ii) Coir Rope making	0.3	-	0.9
iii) Prawn peeling at home	0.3	1.5	-
II. Work outside Home	11.9	14.4	12.9
i) Fish vending	2.2	1.3	0.3
ii) Prawn business	5.6	6.1	0.4
iii) Peeling for wages	3.4	3.9	10.6
iv) Regular employment	-	0.9	-
v) Other activities	0.5	2.2	1.6
Workers	13	17	44
Non Workers	87	83	56
Total	100	100	100
Actual Population of Women in Fishing Households.	1541	1266	1165

Note: Work activities have been grouped into two categories of
 1) Home based work, and 2) work outside home on the basis of a judgement about the activities which do not require women to stay away from home and those which do.

two Latin Catholic villages. Thus while in terms of population latin Catholic fisherwomen in the Project area outnumber Araya fisherwomen in the ratio of 5:2 the tables are turned when it comes to working fisherwomen. There are five working Araya fisherwomen to every four such latin Catholic fisherwomen.

But it has to be noted that the difference between the two religious groups is accounted for almost entirely by Araya women's participation in net making on a wide scale. In 1953 net making was not even mentioned as one of the activities in which women from either of the two religious groups participated, though it would appear from the case histories of women from both the religious groups that there was practically no fishing household where women did not know and actually perform the job of net making, at least for the limited purpose of repairing whatever nets their own households owned and used for fishing. The major difference however between net making recorded in 1978 and that women engaged in 1953 is that in recent years net making is not in the nature primarily of repair work. Nor do women engaged in it now for the purpose primarily of providing the household itself with fishing nets.

Now fisherwomen are supplied with nylon twine. They make the netting at home which is collected at regular intervals and paid for at fixed rates. The income a fisherwoman thus makes from net making is quite small (hardly half of what a women working for wage as prawn peeler makes daily). Still it makes a distinct addition to the household monetary income. What is more, net making is an activity with little seasonality, whereas work activity more directly related to fishing in the area is very highly seasonal. The three monsoon months of June to August account for over half of the yearly catch in the area. As experience over the past twenty years or so has demonstrated seasonality is greater for mechanised fishing than traditional fishing. Still it is the women from the Araya fishing households, whose menfolk have more or less stuck to traditional fishing, that have taken to net making and not women from Latin Catholic households. It

ought also to be added that even though traditional fishermen have also started using nylon fishing nets, most of the demand for these nets still comes from mechanised fishing. So household net making which the Araya fisherwomen are now engaged in on a wide scale is based on the demand for its product arising principally from the mechanised sector.

What is happening to fisherwomen's other traditional occupations that we spoke of like head load fish vending, coir rope making and shell collection? In our three villages defibring of husks and coir rope making seems to have come down to a very negligible proportion. So also is the case with shell collection. As for head load fishing vending, it is still being done by a few of the older women. Strangely enough all these women are from the poor Catholic fishing households which have for some reason or the other been left behind in the race towards mechanisation of fishing. In the Araya Hindu village also, traditional occupations other than net making have altogether disappeared. Even the net making they do is not for the household. Even at the present low rates of payment, net making is more remunerative today than it was in the past.

As regards women's participation in work outside home, the overall inter-village, inter-religious differences, as can be seen from Table II, cannot be considered large. But there is a major difference with regard to the type of activity women most commonly engaged in between the two religious groups. While in Latin Catholic villages, the most common activity women engage in is prawn business, which covers buying, processing and/or selling of prawns, in the Araya village women work mostly for wages as prawn peelers. The former operate independently as self-employed individuals whereas

the latter work as employees for men and women engaged in prawn processing. This difference is qualitatively very important.

Prawn processing involves peeling and deveining. It is undertaken in the various peeling sheds that have sprung up in the Project Area, especially in the two Latin Catholic villages. They belong to individuals or business firms engaged in prawn export. A few of the women from Latin Catholic villages engaged in prawn business also own and run small peeling sheds. The workers in all peeling sheds are almost entirely women a good proportion of whom are Araya fisherwomen from Puthonthura. They get paid according to the number of basins of unprocessed prawns they peel in a day. On an average a woman peeling for wages makes less than 10 rupees a day during the working season. Compared to the prevailing current daily wages of Rs.15/- for women construction workers in the neighbourhood, the earnings of a prawn peeler are definitely low. Also, peeling of prawns is a highly seasonal activity in that it is confined to three months in a year. Moreover, working conditions are quite hard. Often these women are required to work right through the night on days of bumper catch during the peak season. This is something that they do not like to do even though they get paid at a higher rate.

Of the women engaged in prawn business there are some who combine buying and selling with processing; there are others who only do prawn processing. These women are small entrepreneurs. To buy prawns, they have to go to the boat jetty when the catch is unloaded by the trawlers. They have to participate in auctions. The catch is landed in basket, and auctioned in lots. One has to

make a clever guess of the quality and quantity of prawns that will be possible to recover from a particular lot. On that depends the profits that one can make on resale after sorting. Thus one takes considerable risk in bidding for a lot. But as one gains in experience, the element of error becomes smaller. However, to be successful in auction you have not only to make the right bid but also be assertive enough to enforce your bid. Here women are at a disadvantage because they have to operate in an activity dominated by men. In fact, women generally participate in auctions of smaller lots in which men are less interested. Even there, it is difficult for women not familiar to the men on the jetty to participate, effectively in auctions. Since the men on the jetty be they boat owners, deck hands, auction agents, peeling shed owners or prawn or fish merchants are almost all from either Sakthikulangara or Neendakara, it is relatively less difficult for women from these two villages to gain entry and acceptance in prawn business. No Araya woman from Puthenthura has so far ventured into the prawn business. Once one settles into the business, the returns can be quite good. There are women, a few only no doubt, who having prospered have helped their families achieve quite a high level of living over these past twenty years or so.

It was noted above that in the early fifties the few recorded self-earning women in the Araya village were widows. This is no longer the case. Those who are widowed or separated constitute less than 10 per cent of the fisherwomen of Puthenthura who are now engaged in income generating activity. Nor is it any longer valid that the working unmarried women come almost entirely from female-headed households, be they Hindu or Latin Catholic households.

However, from the Latin Catholic villages, the number of unmarried working fisherwomen is rather small. It is almost a tenth of those in the Araya village or Puthenthura.

Thus the view that a fisherwomen who offers her services in the labour market has to be either a widow or nearly destitute is no longer valid. As has been noted above, the situation has changed most dramatically in the Araya village but even in the two Latin Catholic villages work participation by fisherwomen is no longer something that only the very poor and helpless are forced into. In fact, the major type of activity women from the fishing households of Catholic villages are increasingly taking to is prawn business. To enter prawn business, these women have to have a certain financial backing. They came from households who have already made good. What seems to be happening is that after these women have had the desired number of children and of the right mix and age, they enter prawn business by joining one of their relatives already engaged in, and well versed in, the buying, processing and selling of prawns. For women of Latin Catholic villages entry into work in this manner seems now to be becoming the most common. On the other hand, this is not an avenue open to Hindu fishermen. They take to peeling of prawns for wages and from a much younger age.

In the light of the above, it is reasonably safe to say that a major change has come about in the work involvement of fisherwomen of both the religious groups in consequence of the spread of mechanised fishing in as we have noted, significant both qualitatively as well as quantitatively.

Nevertheless, there are important differences between the two

religious groups, particularly in the type of fisherwomen's work involvement. The Catholic women are doing far better in that they have taken largely to such work as is both better paying and independent. On the other hand, Araya fisherwomen have taken largely to work as wage earners. As should however have been obvious from the above, The success of the latter to the independent, better paying work taken up by Catholic fisherwomen was virtually unavoidable for reasons which derive, partly at least, from the fact that while Catholic fisherwomen accepted mechanised fishing, Araya fishermen almost rejected it. In fact it is remarkable that though their men folk rejected mechanised fishing, Araya fisherwomen did not desist from taking to whatever new work opportunities were generated for them by mechanised fishing in the Project/Area.

IV. Women and Demographic Change

As has been noted above, although the focus of the modernisation project covering our three villages was on fishing, the social infrastructure component of the Project placed considerable emphasis on the establishment of modern health facilities in the area. The Project design provided for a curative-cum-preventive health services programme explicitly covering maternity and child care. Thus in regard to their own and their children's health women in the Project Area can be said to have been exposed directly, and much more forcefully than so far, to a technology of which they could not be said to be altogether unaware, but which was not so easily accessible to them.

Another important aspect to be borne in mind in our context is the marked exposure of the people in general, including women, to some education for quite some years in the State of Kerala.

Although the project for the modernisation of fishing did not have any educational component, the emphasis in recent years in the State Government's policy to expand educational facilities among backward groups and communities could not have left our three villages untouched. Indeed, going by the marked spread of literacy (defined as the basic ability to read and write) among the women of the fishing households of our villages the access of educational facilities must have improved considerably over the past 20 to 25 years. Between 1959 and 1978 literacy (defined as the proportion of literates to total population) among the fishermen of the villages taken together improved from 5% to 71%.

It is in this background that we shall take a look at a few interesting demographic changes that have taken place in the Project Area over the past 25 years or so.

Improvement in Sex Ratio

For the country as a whole, sex ration has been consistently unfavourable to women from census period to census period. In the State of Kerala however though the ratio has been favourable to women for the population as a whole, this has not been the case for fishing households. In the Project Area also, sex ratio was found to be rather low when the project started, but it improved over the past 25 years. From Table III it can be seen that between 1953 and 1978 there has been a distinct improvement in the ratio of females to males among the fisherfolk of all the three villages. Though the ratio has not yet reached the state level, it definitely is better than the all-India ratio. Sex ratio, it is widely accepted, tells us a great deal about the prevailing status of women particularly their health status. Substantial improvements over time in sex

Table III: Sex Ratio in Project Villages, 1953, 1963 and 1978.

Village	Year	1953	1963	1978
Sakthikulangara		872	868	961
Neendakara		892	900	938
Puthenthura		858		
Kerala State		1028	1022	1034
India		946	951	935

Sources:

Col.1: P. Bog, A Statistical Survey of Economic Conditions in the Project Area, the Norwegian Indian Project in Travancore-Cochin, The Norwegian Foundation of Assistance to Underdeveloped Countries, Oslo, 1954.

Col.2: Thankappan, T.R. and Menon, M. Devidas, "A Report on the Assessment of the Impact of the Indo-Norwegian Project on the Socio-Economic Conditions of the Fishermen of the Indo-Norwegian Project Area" (1963).

Col.3: Socio-Economic Census for Fishermen in Kerala State, Department of Fisheries, Ports and Social Welfare, 1978. (Figures obtained on special request).

ratio among groups can be taken as a clear sign that women in these groups have improved their health status and thereby their general chance of physical survival.

Frequency of Pregnancies

Frequency of child bearing (particularly with unqualified medical help) and hazard to life can be said to be directly related. One very important factor that should have contributed to the improvement in sex ratio in our three villages is the distinct reduction over the past 25 years in the frequency of child bearing.

The extent of improvement in this regard in the Project Area can be seen from Table IV giving the average number of pregnancies by age group of married women with children at two points in time, first in 1957 when a health survey was conducted under the auspices of the project health authorities and second in 1978 when information was collected by the author for her own in-depth study. The table

Table IV: Average Number of Pregnancies by Age group by Age Groups of Married Women with Children in the Project Area, 1957 and 1958.

Age Group	Average No. of Pregnancies per women		Percentage Reduction in No. of Pregnancies between 1957 and 1978
	1957	1978	
below 20	1.5	6.7	53
20 - 30	3.9	2.3	40
30 - 40	7.1	3.7	48
40 - 50	11.6	5.7	51

Figures for 1957 are taken from the report of the Health Survey from the Project Area for 1957 by Iais Earstad and Gerd Saetre (Report No.5 of the Indo-Norwegian Project in Kerala, Norwegian Foundation for Assistance to Underdeveloped Countries, Oslo, 1960).

Figures for 1978 were collected as part of a Survey conducted for a I.L.O. study in the tree villages.

shows quite clearly that the number of pregnancies per women by the time they reached menopause was rather large in 1957. However, by 1978 the position had changed markedly in that for all age groups the number of pregnancies had declined by between 40 and 53 percent.

When we disaggregate our 1978 data at the village level (comparable information is not available village wise for 1957), it would appear that while the number of pregnancies per married

woman has come down for both the Latin Catholic and Araya Hindu villages, it is in the latter village that not only was the decline seems to have been greater but also earlier.

Table V gives pregnancies occurring to married women of selected age groups separately for each of the three project villages.

Table V: Average Number of Pregnancies for Married Women in three Fishing Villages

Age category of Married Women	Predominantly latin Catholic		Predominantly Hindu Araya
	Sakthikulangara	Neendakara	Puthenthura
1. To married women of all ages	4.74	3.86	3.70
2. To married women upto age 60	4.19	3.69	2.28
3. To married women of upto age 40	2.95	2.60	2.07
4. Number of couples for whom information was collected in each village	262	256	251

Source: Survey conducted for the ILO study by the author in 1978.

It can be seen that the average number of pregnancies occurring to married women regardless of age is relatively lower for the Hindu Araya village. But it can also be noted that both for women upto age 60 and for women upto age 40 the average number of pregnancies is lower for the Araya village. This shows that in the Araya village of Puthenthura, the rate of decline was already quite steep in the generation before that of the married women who are currently 40 years of age. On the other hand, in the Latin Catholic villages of Sakthikulangara and Neendakara, it is the present generation which

is experiencing a steep decline in the number of pregnancies. However at the same time, it is clear that the number of pregnancies per married woman has been on the decline for all the three villages.

For the Latin Catholic villages, evidence of the declining number of births is available also from the church records. The two village churches maintain registers to record baptisms, burials and marriages in their respective jurisdiction. Access to these registers was of immense help in gaining insight into the demographic changes in the fishing households of the two villages.

It can be seen from Table VI, that not only were the birth rates in both the villages quite high during the five year period,

Table VI: Birth Rates in Sakthikulangara and Neendakara

Period	Number of births for every 1000 population	
	Sakthikulangara	Neendakara
1951 - 54	46.5	55.0
1955 - 59	45.4	48.1
1960 - 64	39.0	51.7
1965 - 69	42.6	46.2
1970 - 74	40.7	49.8
1975 - 79	31.2	36.1

Source: Information was collected from the registers maintained in St. Sebastian Church, Neendakara and St. Britto's Church, Sakthikulangara.

1955-59, but also these rates came down drastically in both the villages only very recently. This is particularly true of Neendakara. Of course, it is relevant to bear in mind in this context that Neendakara is also the village which had the maximum of immigration during the past twenty years or so. As a result it could be that

households not exposed as much to the local influences as the local permanent households are much more heavily represented in the figures for Neendakara than in the case of Sekthikulangara.

It is quite remarkable that inspite of the known position of the Catholic Church towards family planning in general and sterilization in particular, the women from the Latin Catholic village do not anylonger lag behind the women from the Araya village in regard to the acceptance of sterilisation.

Acceptance of Family Planning

To complement the information with respect to the number of pregnancies occurring to a married woman, it was possible to gather information with respect to the acceptance of female sterilisation which, to all intents and purposes, is the only family planning device so far in use in these three villages. The information

given in Table VII with respect to the acceptance of female sterilisation by married women still in the reproductive group and those who have crossed the threshold recently. From the table VI we can

Table VII: Acceptance of Sterilisation in Three Fishing Villages, 1978.

	Predominantly Latin Catholic		Predominantly Araya
	Sakthikulan-gara	Neenda kara	Puthenthura
1. Total number of married women aged 40 or below in the sample	130	177	141
2. Total number of sterilised married women aged 40 or below in the sample	76 (58.5)	89 (50.3)	75 (53.2)
3. Total number of married aged 50 or below in the sample	161	209	181
4. Total number of married women aged 50 or below accepting in the sample	(53.4%)	(45.9%)	(50.3%)

Source: Information collected by the author for the I.L.O. study.

see that the level of acceptance is higher among women of the younger age group, in all the three villages.

Concluding observations

Women from the fishing households in all the three villages have clearly made great strides on both economic as well as demographic fronts, though women from Latin Catholic villages have been rather selective in the choice of work opportunities. Of course, they had the immense advantage of easy access to independent, better paying activities, whereas these were virtually closed to Araya fisherwomen. Relatively low paid work opportunities have gone virtually abegging in the Latin Catholic villages. Take net making for instance. The entire net making activity in the Project Area is geared to meeting the requirements of the mechanised sector of fishing which Latin Catholics dominate.

Not one of the women from Latin Catholic fishing households seems to be engaged in net making. The whole industry is altogether left to the Arayas of Puthenthura. While few fisherwomen from our Latin Catholic villages have taken to prawn peeling for wages, for the Araya fisherwomen this has become their major mainstay.

Will the Araya fisherwomen have taken to net making and peeling of prawns for wages on the scale they are currently engaged in, if their menfolk had taken to mechanised fishing on the scale of the Latin Catholic fishermen of the neighbouring villages? However, hypothetical, the question is worthwhile raising. True that Araya fisherwomen possibly in their search for work opportunities had limited choice and therefore accepted relatively low paid work to supplement their household incomes. But there also remained several households in the Latin Catholic Villages who did not, or could not, switch over to mechanised boats. Why is it that women from such Latin Catholic households not take up net making or go out to peel prawns for wages? A small number of women from these households did go for prawn peeling but most have stayed at home doing nothing except domestic chores. Here, perhaps the newly evolving social norms may have played a role. Working as independent prawn merchants is considered respectable whereas net making and prawn peeling for wages are not.

It is significant that while in taking to work opportunities fisherwomen from the two religious groups have responded somewhat differently, in their acceptance of improved health services, they have been remarkable close to each other. This is particularly noteworthy because the Latin Catholics have to contend with the opposition of their Church whereas Arayas had no such institu-

tional barriers to fight against in this regard.

One thing is for sure therefore. With petroleum prices going up, mechanised fishing may become less and less profitable and therefore less attractive. Depletion may take place of shrimp grounds around the Project Area. Big multinational business houses may move in and throw out the relatively small, independent entrepreneurs who have come up from among the fishermen and fisherwomen, of our villages. Net making may move the factories since the State Government is, somewhat thoughtlessly, encouraging their establishment. But the gains that the fisherwomen have made in terms of their health status principally through their fertility control would not easily be lost.