

**SOCIAL SECURITY NETS FOR
MARINE FISHERIES**

John Kurien and Antonyto Paul

Working Paper No. 318

October 2001

SOCIAL SECURITY NETS FOR MARINE FISHERIES
The Growth and Changing Composition of Social Security
Programmes in the Fisheries Sector of Kerala State, India

John Kurien
and
Antonyto Paul

Centre for Development Studies
Thiruvananthapuram

October 2001

This Working Paper is drawn from a detailed study (Kurien and Paul, 2000) we undertook for the International Collective in Support of Fishworkers (ICSF). We express our sincere thanks to the ICSF for providing the support to undertake this project.

We are also grateful to Achin Chakraborty of the Centre for Development Studies, Thiruvananthapuram for offering very useful comments on the initial draft and as discussant for the seminar we gave at the Centre.

However, the views expressed in the study and any errors and omissions

ABSTRACT

Social Security is achieved when deprivation or vulnerability is reduced or removed as a result of using social means, thereby, in the process, making lives and livelihoods more secure. However, provision of such social security measures is influenced by various supply and demand factors. This paper attempts to explain the provision of social security in the fisheries sector of Kerala State in south India. It enumerates the salient achievements and the problems faced by the state in providing concrete social security measures for fishworkers. They were a section of Kerala society that was initially left out of the development process. The study also shows how netting them back into the mainstream was not only the result of enlightened state policy, but also, the result of the collective action by the fishworkers themselves. Finally, the paper reflects on what more needs to be done to further improve the standard of living of the fishing communities in Kerala and to streamline the delivery of social security.

JEL Classification : I 38

Key Words : protective social security, promotional social security, public action, fisheries sector, fishing communities, Kerala

INTRODUCTION

Security of life and livelihood are resurfacing today as issues central to the development discourse. The magic formula of “growth-created-welfare-for-all” has proved unworkable in most parts of the developing world. In many developing states, the search for new ways to achieve a decent living for all their citizens is becoming a matter of high priority. One route to achieve this goal has been providing social security coverage for as large a segment of the population as possible. Providing social security is not seen merely as a measure to solve temporary economic insecurity. It also seeks to address the problem of chronic poverty. These measures are envisaged as public provisioning to the vulnerable, thereby empowering them in their private pursuit of a livelihood.

This study focuses on the growth and changing composition of such social security provisions in the fisheries sector of Kerala State in south India. Our attempt is to enumerate the achievements and the problems being confronted by a developing maritime state in taking concrete and definitive measures to ensure that a section of the population, which was initially left out of the development process, is netted back into the mainstream. We attempt to show how this process was not only the result of enlightened state policy, but also, more importantly, the result of the collective action by the fishworkers themselves. The study shows how even with limited means, a developing state can conceive

innovative social security measures to address head-on the issues of poverty and livelihood security. It also highlights how organised and sustained collective action alone will put the pressure on the state to keep its commitments.

The study is divided into this introduction, five core sections, and a conclusion. The first two sections deal with what social security is, why it is needed in general and for the fishing community in particular. The third section is the substantive one that analyses the growth and changing composition of the social security measures. How collective action by the fishing community became a key ingredient in shaping the form of the social security system in Kerala is the subject of the fourth section. The final section spells out what more needs to be done to ensure greater efficiency, coverage and community involvement to achieve better results of social security. The conclusion wraps up the study by highlighting the important issues for consideration that emerge from it.

I

WHAT IS SOCIAL SECURITY? WHY IS IT NEEDED?

Social security is achieved when deprivation or vulnerability is reduced or removed as a result of using social means, thereby making lives and livelihood more secure in this process. These social means are also termed as ‘public action’ and include measures taken at the level of the state, the community or the family. As Dreze and Sen (1991:28) point out, public action refers not only to what is *done for* a family, community or the population as a whole by the state. But it also includes what is *done by* the family or community for itself.

It is important at the very outset to emphasise that achieving social security is not merely an issue of transfer of resources from the coffers

of the state to those who experience various forms of insecurity. At the heart of it, social security is also about the ethical commitment and responsibility for collective caring and sharing – a dimension which tends to disappear as we increasingly lay stress on the albeit important financial, organisational and socio-political aspects of the matter. In the final analysis, a truly socially secure society is not just one in which deprivation and vulnerability cease to exist as a result of properly engineered mechanisms to ensure this. It is one in which, in addition to the former, there also exists a context of geniality linked with a commitment to mutual happiness, trust and love.

Social security measures can take different meanings depending on the context in which they are implemented. In developed countries, economic insecurity is a phenomenon driven by contingent poverty. This is caused by the temporary interruption or loss of earning power as a result of social causes such as unemployment, life-cycle factors like childbearing or old age, and biological causes such as sickness or disability. As a consequence, the social security measures designed, largely by the state, take the form of social insurance schemes, aiming at evening-out the earnings during these periods of income disruption. Moreover, given that in these countries a large proportion of the workforce is involved in regular salaried employment, these schemes can be rather cost-effectively implemented through mechanisms like pay-roll deductions and taxes.

In developing countries, on the other hand, economic insecurity is largely a consequence of massive, widespread and chronic poverty. The vast majority of the working population is self-employed or work in agriculture and related occupations and unorganised work contexts. Relieving poverty in these conditions entail both upgrading the levels of income and reducing the variability in incomes. It is also important to note that the involvement of the state is very low in administering effective

social security programmes that have a wide coverage. This is primarily due to the overall resource constraints, the low level of institutional development for social-security provision and the inadequate demand from the people for such protective measures. In these countries, social security needs to be viewed as “the prevention, by social means, of very low standards of living irrespective of whether, these are the result of chronic deprivation or temporary adversity” (Burgess and Stern, 1991: 45). This is a tall order and undoubtedly only a menu of measures for income support and income maintenance can achieve this.

The urgency to undertake social security measures in developing countries can also be seen as an expression of the failure of the economic development process. One of the fundamental assumptions of the economic development process was that vulnerability and deprivation would be removed as a consequence of general development of the economy. Incomes were supposed to rise; a demographic transition would slow population growth; more of the workforce would move into the organised sector through processes like industrialisation and modernisation. The net result was to be greater security. This has been referred to as the strategy for ‘*growth-mediated security*’ (Dreze and Sen, 1991:22). The non-achievement of these hopes, despite numerous decades of planned economic activity and market functioning, have provided an important motivational element leading to greater awareness among people about their low standards of living and their fundamental rights for social protection. This has led to governments in developing countries considering more direct social means to secure life and livelihood. Dreze and Sen (ibid) have referred to these actions as the strategy for ‘*support-led security*.’

Social security measures are required in themselves because a growth-mediated strategy does not necessarily result in security for all.

Persistent deprivation continues to be experienced world-wide. The existence of high infant mortality rates and low life expectancy rates is a reality in almost all but the highly industrialised countries. The fragile and tenuous nature of the living conditions of over two-thirds of humanity is a cruel fact even today. This results in sudden deprivation for many and fear of succumbing to such a circumstance for the rest. That economic growth, and the maldistributed opulence resulting from this, cannot adequately address these issues has been proved beyond doubt. This is also the experience of even many developed countries. These issues have been dealt with effectively by Dreze and Sen and they conclude that “economic growth alone cannot be relied upon to deal either with the promotion or with the protection of living standards. The strategy of public action for social security has to take adequate note of the problems that limit what aggregate expansion can do in enhancing living conditions.” (Dreze and Sen, 1991:14)

Given the inevitability of social security measures in any type of economy, these measures have been broadly divided into two types by Dreze and Sen, (1993:16): **protective measures and promotional measures**. The former is concerned with the short-run task of preventing a decline in standards of living and the latter with enhancing the long-term general living standard by raising the basic capability of the person or population.

II

SOCIAL SECURITY FOR FISHING COMMUNITIES

In small-scale fishing communities in developing countries, the task of earning a livelihood can be a risky and tenuous business. One’s individual income is usually a share of the earnings of an enterprise. What accrues to a fisherman would depend in large measure on his

contribution to the labour of the specific fishing trip and to his overall share, if at all, in the capital of the enterprise. This, and the fact the harvest from the sea is a fluctuating fortune and the price of first sale is by no means predictable, results in highly fluctuating daily incomes. These can be well below daily subsistence requirements or sometimes yield windfalls that are excessively out of comparison with a reasonable minimum. Despite this, mean incomes can be low and the standard of living can leave much to be desired.

It is reasonable to conjecture that the above objective conditions of earning a livelihood have accounted for the presence of several neighbourhood and community-created income spreading, income transfer, insurance and redistribution mechanisms. These can be counted to form traditional social security measures (Firth, 1966; Platteau and Abraham, 1987; Amarasinghe, 1989; Kurien and Vijayan, 1995). Sometimes these private transfers of income, say when a fisherman with incomes from a bumper catch lends money to a friend, may be the outcome of self-interested individuals or households in a risky environment using current generosity to ensure future reciprocity. Sometimes these transfers are beyond the realm of narrow self-interest, as for example, when fish is distributed to widows and the disabled in the community (Kurien, 2000). More recently, it has been pointed out that certain community resource rejuvenation measures, such as setting up of artificial reefs in coastal waters, also have a conscious element of social security provision. These structures being closer to shore make them easily accessible to the older fishermen and form a “living pension fund.” (Kurien, *ibid*). These examples point to ethically well instituted processes of community reciprocity and caring. It is worth remembering here the argument of Sen (1999:270) that the concept of ‘rational choice’ need not be sheer narrow self-interest, but can include also ‘sympathy’ and ‘commitments’. Inclusion of these need not be a denial of rational will.

The modern fisheries development process led to greater levels of commercialisation of the fish economy. The greatest impulse for this has come from the export orientation given to fish and fishery products. The quantum of fish traded outside the community as a proportion of the harvest rose rapidly. The new money income was important for meeting the new costs associated with the altered technology and other investments needed to match the expanding market opportunities. This contributed to a decline of the levels of caring and sharing which had once characterised the low-level economic equilibrium of these communities. Many of the traditional, community-conceived safety nets have become casualties of this process of commercialisation. In most developing countries, no modern social security measures have taken their place. Consequently, the new context that confronts many fishing communities in developing countries is the juxtaposition of rich fishery resources that contribute huge amounts of foreign exchange to national coffers with poor fishworkers that labour to provide it. This state of affairs point to the need for public action to rectify this situation. Devising the appropriate and cost effective transfer mechanisms for support-led social security to these communities is another issue that merits attention. In some countries it is also important to comprehend both the objective and the subjective factors that lead to the notion of a historical conjuncture to understand the emergence of the demand by the community for new social security measures.

Marine Fisheries and Fishing Communities in the Context of Kerala

To get a proper appreciation of the issues of social security provision in Kerala's marine fishery it would require a brief introduction to the position of fisheries and fishing communities in the context of Kerala's economy and society.

The coastal waters off Kerala's 600-km coastline (10 percent of India's mainland coastline) are the most productive in the country. This high productivity is one of the important factors behind the concentration of marine fishermen in Kerala. Numbering over 170,000 (i.e. the active workers at sea), they form a fifth of the Indian total. The people of Kerala, cutting across religious affiliation, are avid fish eaters. Fish and fisheries therefore have a very significant place in the socio-cultural fabric of life in Kerala.

It may be of relevance to point out that unlike other traditional occupational sectors in the Kerala economy, the marine fisheries sector was one in which unbridled market forces, modern technology and export orientation were introduced without any opposition by an organised working class. By the yardstick of our present liberalisation policies, a sector with this three-fold orientation should have achieved substantially increased output and productivity leading to higher levels of income and quality of life. The evidence on this account is mixed, to say the least. Fish harvests have fluctuated showing secular trends that first increased (1970-75), then substantially declined (1975-80), increased significantly again (1980-90) but have remained stagnant at that level during the decade of the 1990s. Physical productivity per worker and per unit of capital invested has declined due to the steady increase in the number of workers and the steep increase in the capital invested. This is a phenomenon characteristic of open access resources subject to increased commercialisation. If the state income statistics are any guide, the evidence shows that the fishery sector product per fisherperson (*i.e. total number of persons in the households of the active fishermen of the state*) was always lower than the state domestic product per capita. The gap increased between 1970 and 1985 with the decline in the fish production and then narrowed down between 1985 and 1995, thanks to increased fish prices following rising demand and stagnant output.

More than these differences in the income levels, it is the lower quality of life (on the average) and the higher occupational risk (both to human life and productive assets), which set marine fishing communities apart from the other occupational groupings in Kerala. It is also for this very reason that social security measures attain paramount importance for them. There are four areas in which the fishermen stand at a greater disadvantage compared to other communities in the State that require close attention; (i) Habitat and housing (ii) Sanitation and Health (iii) Literacy and Education (iv) Safety at sea.

i) Habitat and Housing

One of the paramount reasons for the poor quality of life and the sub-standard conditions of habitat of the marine fishing communities in Kerala State is the crowding of the whole community on a narrow strip of land along the length of Kerala's coastline. This is a result of the highly dispersed nature of the fishery resource and the consequent decentralised nature of fishing operations using beach landing crafts. Every fisherman prefers to live on the seafront near the point where he lands his craft and from where he can observe the sea. As a result the population density in marine fishing villages was around 2652 persons per square kilometre. This is in comparison to the state figure of 742 per square kilometre, which is already one of the highest in the country.

In Kerala State, as per the Kerala State Homestead Act, every household is entitled to a piece of homestead plot varying between 2 and 10 cents (one hundred cents = one acre). In spite of this, we have data indicating that in 1979-80 as many as 16 percent of the households in marine fishing villages did not possess even their own homestead plot. A large section of these households built thatched huts on land even beyond the cadastral survey (land beyond the cadastral survey on the seafront is under Central Government jurisdiction and cannot be

assigned for private use). Consequently they are always prone to the perennial risk of their huts being “*eaten by the monsoon sea*”. When households have no land (or title deed to the plot they occupy) and have to erect a shelter on public property, it is but natural that they have to opt for some sort of temporary thatched roof and wall structure. Thatched roofing is very common in Kerala given the numerous coconut palms, but thatched walls characterise the housing of the very poor. In 1980, while just over a quarter of the houses in Kerala were thatched, in fishing villages that proportion was half. In Kerala nearly three-quarter of the houses had brick or stone walls. The proportion in fishing villages was just 16 percent. Compared to the state as a whole, the basic amenities related to housing — such as electric lighting, toilet facilities and access to water were also at far lower standards in the fishing villages. (Kurien, 1995)

ii) Sanitation and Health

One difficulty of providing toilet facilities in coastal villages is that septic tanks do not function effectively because of the high water table in the sandy soil and the risk this entails of leaching of sewage into wells used for drinking water. Consequently, the men use the beach as a toilet at all times. The women use other secluded places only well before dawn. This lack of basic facilities, the use of the beach as a public toilet and the excessive crowding caused by the cluster-settlement pattern, give rise to poor health conditions. Contagious diseases in fishing villages spread very rapidly under these sordid physical conditions. This is at the root of the much-reported poor health conditions in fishing communities. A study of the health status of Kerala State (Panikar and Soman, 1984) highlights that respiratory and skin infection, diarrhoeal disorders and hook worm infestations are much more prevalent in the coastal areas of the state.

iii) Literacy and Education

Literacy and education are the hallmark of Kerala's social advancement. On this count also marine fishing communities lag behind the state as a whole. Taking the working population alone, the literary among fishworkers is 67 percent whereas it is 89 percent for the total working population of Kerala as a whole. The disparity is greater if women workers alone are compared with women fishworkers – 70 percent and 44 percent respectively.

iv) Safety at Sea

It is observed that occupation of marine fishing is subject to relatively higher levels of risks. Many cases of accidents, deaths and loss of property are being reported every year. It may be noted that between 1986 and 1998 the number of deaths of fishermen while fishing for which the Matsyaboard paid compensation was 1096. This means that one fisherman dies at sea in Kerala once in about four days!

In the first three realms there may be variations in the level of attainments of the commodities and the capabilities depending on the geographic region and the religious affiliation of the communities. The fishing communities in the south and north of Kerala (predominantly Christian and Muslim) stand at a disadvantage as compared to the communities in the central region of the state (predominantly Hindu). As regards safety at sea no such differences are perceptible. It would be valid to generalise that those who go fishing at sea are exposed to greater than average risks to their fishing assets and their lives.

The focus of this paper is therefore on the social security programmes in the fisheries sector of Kerala State, India which have been instituted to address the basic social security needs mentioned above. It will provide details of the measures undertaken by the state, the various

organisational arrangements made for the same, as well as the evolving nature of public action by the fishing community that led to both a quantitative and qualitative change in the provision of social security. It illustrates what is possible within the context of developing countries by examining the contours of public action as well as the limits to it.

III

SOCIAL SECURITY IN THE FISHERIES SECTOR OF KERALA: AN ANALYSIS

Our analysis is confined to the social security schemes specific to the fisherfolk. As such, it does not cover the social security schemes available to the Kerala population in general in which the fisherfolk are also beneficiaries. Kerala State, as we know, ranks number one among the Indian states in the provision of social security of which the public distribution, the public health, and public education systems are the most prominent (GOK, 1996; Kannan, 1999). The social security assistance we analyse here pertains to what the fishermen community receive over and above these general schemes. On the basis of data availability our analysis is restricted to the 35 year period from 1964 to 1998. The data was collected mostly from the annual reports of the State Fisheries Department, Kerala State Cooperative Federation for Fisheries Development (Matsyafed), and Fishermen Welfare Fund Board (Matsyaboard).

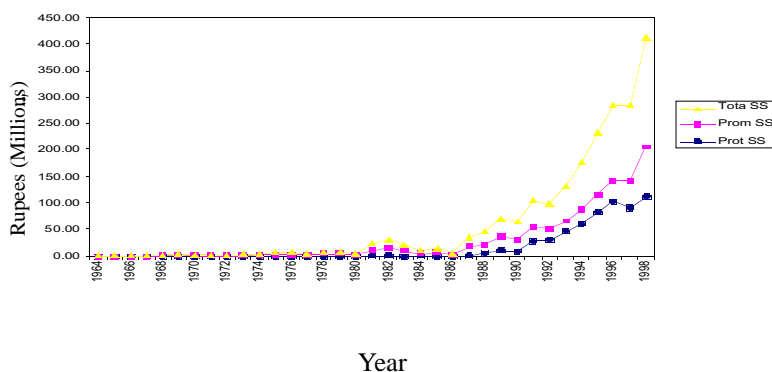
State assistance to the fisheries sector was initially confined to development assistance. This included funds for technological upgradation of harvesting facilities, infrastructural development, and marketing assistance. The development planners conceived the quick transition to mechanised fishing operations as the only alternative for development of a fishery conducted by a traditional community using

artisanal technology. This is amply evident from the fact that the direction of developmental assistance since the initiation of the five-year plans was towards mechanisation. Social security assistance per se was at a low key in the state. The approach of the state was to provide some palliative welfare measures to address the visibly apparent dimensions of the poor quality of life such as poor housing, sanitation, illiteracy and low educational standards.

Initially, the Fisheries Department was the sole agency engaged in the implementation of social security for fishermen. Later, newly created agencies like the Kerala Fishermen's Welfare Corporation, Kerala State Co-operative Federation for Fisheries Development (more commonly known as Matsyafed), and the Kerala Fishermen's Welfare Fund Board (known as Matsyaboard), have also entered the arena for supplementing the social security initiatives. Financing of social security has undergone both widening and deepening. Whereas plan assistance was the only major source of financing in the initial years, the later years have witnessed a flow of more funds from non-plan assistance. Resources from various central government schemes, a variety of financial institutions, as well as the various participants in the fishery have contributed to the funds. Concomitantly, both the protective and promotional social security schemes were on the increase over the years.

A glance at the introduction of various social security measures for fishermen reveals that compared to the first three decades since the formation of Kerala State in 1956, the decade commencing from the mid eighties was the one that witnessed a significant increase in the social security provision (See Figure 1). The year 1986 witnessed the commencement of many new welfare schemes in response to the historic 1984 struggle by the fishworkers (see section IV below). The percentage increase in the volume of social security assistance before and after 1986 was about 1814 points!

Figure 1: Social Security for Fishermen 1964-1998



Taking a cue from this transition point, we divide the data examined for the study broadly into two time periods. **Period One** from 1964 to 1985 and **Period Two** from 1986 to 1998.

PERIOD ONE (1964 – 1985)

Within this first period of 22 years, the year 1981 set a new trend in the quantum as well as in the mode of social security provision. The total volume of social security payments disbursed until 1980 was just Rs 37 million. This made for an annual payment of Rs 2.18 million. These payments were almost exclusively for *promotional measures* relating directly to help improve the quality of life. However, between 1981 and 1985 the annual payment figure rose sharply to Rs10.48 million, an increase of 381 percent. This was accompanied by a notable change in the mode of provision. The latter period was marked by a greater degree of institutionalisation of social security provision. We therefore sub-divide Period One into two sub-periods: (i)The Years of Promotional Social Security Provision (1964 – 1980) and (ii)The Years of Greater Institutionalisation of Social Security (1981 – 1985).

(i) The Years of Promotional Social Security Provision (1964–1980)

As mentioned earlier, these initial years of fisheries development in Kerala were premised on the belief that the modernisation process would automatically raise the levels of living of the fishing communities. There was however recognition of the fact that some “welfare” measures had to be provided to the really poor among them for some time to come. However, social security in general, and protective social security in particular, remained at a low key during this period. Compensation for loss of life of fishermen while fishing was the only significant protective social security during this period. The compensation given, nonetheless, was very meagre. The other minor schemes were compensations for accidents and loss of fishing implements. The very low scale of operation of protective social security is evidenced by the fact that the average annual assistance during this sub-period was only Rs 0.07 million (See Table 1).

Promotional social security received more attention. For example, the housing programme was a priority item. This was followed by educational benefits for formal education of the children of fishermen and professional training of fishermen youth in modern fishing techniques. A nutrition programme being conducted during this period deserves special attention. Despite its small scale of operation, it was an attempt to remedy a basic problem of ill health of mothers and children in the fishing community. The average annual assistance on promotional social security was Rs 2.11 million (see Table 1). The details of the schemes are given in Appendix A

(ii) The Years of Greater Institutionalisation of Social Security (1981–1985)

The primary step to institutionalise social security provisions was the characteristic feature of the post 1980 period. The institutionalisation

Table 1: Social Security Measures for Fisherfolk of Kerala State during 1964-1980

Schemes	Financial Assistance (Rs million)	
	Total	Annual Average
Promotional Measures		
Housing and Rehabilitation	19.92	1.17
Sanitation and Health Benefits	1.86	0.11
Education and Training	14.07	0.83
<i>Total</i>	<i>35.85</i>	<i>2.11</i>
Protective Measures		
Life Insurance	1.1	0.06
Equipment Insurance	0.15	0.01
<i>Total</i>	<i>1.25</i>	<i>0.07</i>
Grand Total	37.1	2.18

Source: Calculated from Annual Reports of the Department of Fisheries (various years)

can be said to be the government's response to the growing restiveness in the fishing community about their experience of increasing poverty and marginalisation. After over two decades of modernised fisheries development, fish production was at its lowest level during 1975-80. This severely hit the income levels of the vast numbers of fishermen who had not "graduated" to fishing on mechanised trawlers. Moreover, it was the increased fishing by trawlers in the coastal waters, which was being blamed for the drop in fish landings. Though there may have been other nature-related factors which form part of the explanation, the role of unrestricted and destructive fishing in contributing to this fall in the

harvest from the sea is undeniable (Kurien, 1992). With the option for stringent action against trawling being ruled out for political reasons, the only expedient response on the part of the government was to distribute more welfare and development assistance. A more institutionalised and targeted approach had to be taken to achieve this. The first development in this line was the starting of the Kerala Fishermen Welfare Corporation (KFWC). As the demand for more and more social security benefits was increasing from the nascent fishermen unions, the government felt that, compared to the government departments, an autonomous corporation constituted specifically for this purpose, could implement the social security schemes in a more timely and effective manner. As a result, from 1980/81 onwards, KFWC emerged as the chief supplier of social security funds. During this sub-period too, promotional social security continued to get the upper hand. Out of Rs 54.27 million spent during this sub-period, Rs 50.20 million was under promotional social security. The agency-wise break-up shows that KFWC disbursed Rs 37.04 million while the Fisheries Department supplied Rs 17.23 million (Table 2).

Out of the seven schemes of KFWC, five were promotional in nature (see Appendix B). The housing scheme continued to be the prominent one. On the educational front the role of KFWC was to provide scholarships to the selected students from the fishing community. The most important programme in the field of education was, however, the educational scholarship scheme, introduced by the Fisheries Department. As per this scheme, all the children of registered fishermen could avail during their period of education, a lumpsum grant, stipend, and pocket money at par with what was being provided to Scheduled Caste/Scheduled Tribe (SC/ST) students.

Table 2: Social Security Measures for the Fisherfolk of Kerala State during 1981-1985

Schemes	Financial Assistance (Rs million)			
	Fisheries Dept.	KFWC	Total	Annual Average
Promotional Measures				
Housing and Rehabilitation	0.00	30.40	30.40	6.08
Sanitation and Health Benefits	1.00	1.90	2.90	0.58
Education and Training	16.23	0.29	16.52	3.30
Marketing Assistance	0.00	0.38	0.38	0.08
Total	17.23	32.97	50.20	10.04
Protective Measures				
Life Insurance	0.00	2.90	2.90	0.58
Equipment Insurance	0.00	1.17	1.17	0.23
Total	0.00	4.07	4.07	0.81
Grand Total	17.23	37.04	54.27	10.85

Sources: Calculated from Annual Reports of the Department of Fisheries (various years); Report of KFWC, 1984

PERIOD TWO (1986 - 1998)

Quantum jumps in the number of social security schemes and in the volume of social security assistance and a greater emphasis on the provision of *protective social security measures* which hitherto remained at a low ebb were the hallmarks of this period¹. Two new agencies came up on the supply – side :

1 As we discuss in section IV below, the emphasis on protective social security is understandable as a short run strategy of the state government to satisfy the traditional fishermen who were agitating against the drastic decline in their standard of living as a result of the fall in the fish catch both in absolute terms and in relation to their counterparts in the mechanised sector.

- 1) Kerala State Co-operative Federation for Fisheries Development (commonly known as **Matsyafed**)
- 2) Kerala Fishermen Welfare Fund Board (known as **Matsyaboard**)

Matsyafed was formed by amalgamating three corporations, namely, KFWC, Kerala Fisheries Corporation, and Kerala Inland Fisheries Development Corporation. Though the precise mandate of Matsyafed was to provide developmental assistance, namely, technological and financial assistance in upgrading traditional fishing crafts, it has also come up with certain social security measures. Matsyaboard, on the other hand, was instituted specifically for providing social security for the fishers under the Fishermen Welfare Fund Act, 1985

Social Security Provided By Matsyafed

Between 1986 and 1998 Matsyafed had initiated 10 social security schemes (see Appendix C). The coverage included housing, sanitation, alternative employment, education, training and accident insurance. It is noteworthy that schemes, which specifically target women in the sector, were included among these measures. A social security expenditure of about Rs 75 million was undertaken through Matsyafed during this period (see Tables 3 and 5).

Social Security Schemes By Matsyaboard

Since its installation in 1986, under the legal provisions of the Fishermen Welfare Fund Act, 1985, Matsyaboard was mandated as the nodal agency for implementing welfare measures for fishermen. The coverage of Matsyaboard has been wide. Every fishermen registered under the Welfare Fund Act becomes a member and is entitled to all the benefits from Matsyaboard. A 'fisherman' is defined as any person engaged mainly in fishing operations for his livelihood. As on 31

Table 3 : Social Security Measures Provided by Matsyafed during 1986 - 1998

Schemes	Comme- ncement	Benefi- ciaries till 1997/98	Total Disbur- sal (Rs mill)	Percapita Benefit (Rs)
Promotional Measures				
1) Housing Scheme	1985/86	14588	27.80	1906
2) Rehabilitation Housing Scheme	1985/86	867	35.00	40369
3) Sanitation and Health Benefits	1991/92	5190	4.64	886
4) Women Fish Vendors Bus Service	1985/86	450	1.36	3022
5) Community Peeling Centres	1985/86	NA	2.09	NA
6) Women Vendors Subsidy Scheme	1993/94	1253	0.21	169
7) Alternative Employment Training for Youth	1995/96	16	NA	NA
8) Cash Award for Best Students	1996/97	NA	NA	NA
<i>Total</i>			<i>71.10</i>	
Protective Measures				
1) Personal Accident Insurance	1995/96	37	3.70	100,000
2) Chairman Relief Fund	1997/98	NA	0.40	NA
<i>Total</i>			<i>4.10</i>	
Grand Total			75.20	

Source : Matsyafed, Annual Reports (various years)

Note : NA = Not available

December 1994, there were 172,000 members registered with Matsyaboard.

The corpus of the funds of Matsyaboard is created through contributions from several parties. Basically, it is conceived as a sort of tripartite corpus in which the government, fishworkers, and those who own fishing implements, fish merchants and fish exporters (in lieu of employers) are the contributors (details about their contributions are given in Appendix D).

Matsyaboard has introduced many welfare schemes over these years. It is important to note that unlike Matsyafed, most of the social security schemes implemented by Matsyaboard are *protective* ones. Of the 16 schemes, twelve are protective measures (see Table 4; details of the schemes given in Appendix E).

This policy shift must be seen in consonance with the increased pressure from fishermen, who were agitating for, among other things, immediate redressal of the increasing risk and negative externalities of trawling on their livelihoods. For instance, risks like destruction of crafts and gears through collision with night trawling boats were very common during this period. Many cases of accidents and loss of life were also reported. It may be noted that since the commencement of this scheme in 1986, compensation was paid for 1096 deaths until 1998. This means that one fisherman dies at sea in Kerala once in about four days! No other occupation in Kerala is so risky.

The various schemes of the Matsyaboard practically cover most of the social security benefits prescribed by the ILO Convention 102².

2 According to this convention social security is addressed to provide protective measures in case of nine specific contingencies such as: 1) medical care and benefits 2) sickness 3) unemployment 4) old age 5) employment injury 6) large family 7) maternity 8) invalidity and 9) widowhood.

Table 4: Social Security Measures Provided by Matsyaboard

Schemes	Year of Starting	Beneficiaries till 1998	Total Disbursal (Rs. Millions)	Per capita benefit (Rs.)
Promotional Measures				
1) Cash Award for Best Students	1990/91	65	0.08	1262
2) Scholarship for Best Students	1990/91	2811	1.39	493
3) Family Planning Scheme	1990/91	2791	1.39	498
4) Sanitation Scheme	1996/97	1753	2.18	1244
<i>Total</i>		<i>5.04</i>		
Protective Measures				
1. a) Death Insurance	1986/87	1096	24.42	22,281
1. b) Disability Insurance	1986/87	106	1.17	11,038
2) Non-Accident Death Compensation	1986/87	455	6.78	14,901
3) Financial Assistance for Daughters' Wedding	1986/87	7559	7.51	994
4) Financial Assistance for Funeral Expenses of Dependents	1986/87	5678	1.66	292
5) Old Age Pension	1987/88		226.86	
6) Financial Assistance for Temporary Disability	1987/88	7946	2.88	7362
7) Financial Assistance to Dependant on his death	1990/91	1609	2.90	1802
8) Financial Assistance for Fatal Diseases	1990/91	319	1.92	6019
9) Chairman's (Miscellaneous) Relief Fund	1990/91	310	0.25	806
10) Financial Assistance for Eye Ailments	1995/96	NA	0.43	NA
11) Special Assistance for Matsyaboard	1987/88	301	1.99	6611
12) Maternity Assistance	1996/97	25	0.01	520
<i>Total</i>			<i>278.78</i>	
Grand Total			283.82	

NA = not available

Source : Matsyaboard Data

The old age pension is the most popular of the schemes of the Matsyaboard having the largest number of beneficiaries. Fishermen of the age group of 60 and above can avail of pension under this scheme on certain conditions. The number of pensioners in 1998 reached 27,000. It is quite commendable that the schemes of the Matsyaboard cover the various phases of fishermen's life. Their births, marriages and funerals are financially assisted. Treatment for different types of morbidity – from eye ailment and snakebite to diseases like cancer, brain tumour, heart surgery, and even for mental illness is given assistance. Thanks to the implementation of various social security schemes by the Matsyaboard the amount spent for social security has registered a considerable increase. Until 1998 the Matsyaboard alone spent Rs 283.82 million (see Table 4 & 5).

Social Security Schemes by the Fisheries Department

Though most of the social security schemes were implemented by Matsyaboard and by Matsyafed during this period, a few schemes were still operated by the Department of Fisheries. These include saving cum relief scheme, scheme for housing, electrification of homes, and schemes to provide sanitation, dispensaries, fisheries schools, training centres, and educational grants (for details see Appendix F).

Of these, the saving cum relief scheme is the only *protective* social security scheme. The rest are *promotional* ones. The saving cum relief scheme is a sort of contributory unemployment benefit scheme and the only one of its kind. It provides fishermen with a financial assistance during the lean months of fishing. In terms of the volume of assistance this is the largest of the Departmental social security schemes. During the period 1992 - 1998, about Rs 300 million was disbursed under this scheme. The housing scheme of the Department has become more attractive since it is a full grant-in-aid scheme. Related to housing are the two new schemes of house electrification and sanitation. The

Table 5: Social Security Assistance during Period Two (1986-1998); Rs Millions

Schemes	Fish.Dept.	Matsyafed	Matsya board	Total	Annual Average
Promotional Measures					
Education benefits	265.63	0.00	1.47	267.10	20.55
Sanitation and Health benefits	19.96	4.64	3.57	28.17	2.17
Housing and Rehabilitation	70.80	62.80	0.00	133.60	10.28
Employment benefits	0.00	3.66	0.00	3.66	0.28
Total	356.39	71.10	5.04	432.53	33.27
Protective Measures					
Insurance benefits	0.00	3.70	25.59	29.29	2.25
Accident benefits	0.00	0.40	3.13	3.53	0.27
Death benefits	0.00	0.00	11.34	11.34	0.87
Marriage benefits	0.00	0.00	7.51	7.51	0.58
Old age pension	0.00	0.00	226.86	226.86	17.45
Sickness benefits	0.00	0.00	4.34	4.34	0.33
Maternity benefits	0.00	0.00	0.01	0.01	0.00
Unemployment benefits	299.96	0.00	0.00	299.96	23.07
Total	299.96	4.1	278.78	582.84	44.83
Grand Total	656.35	75.2	283.82	1015.37	78.11

Department spent Rs 656.35 million under the social security schemes during the Period Two (see Table 5).

Increasing Magnitudes and Changing Composition of Social Security

As we analyse the development of the social security schemes, the most striking feature we observe is the significant increase in the volume of assistance in the Period Two compared to Period One. **Table 6** below gives the break-up of the social security assistance for the two periods.

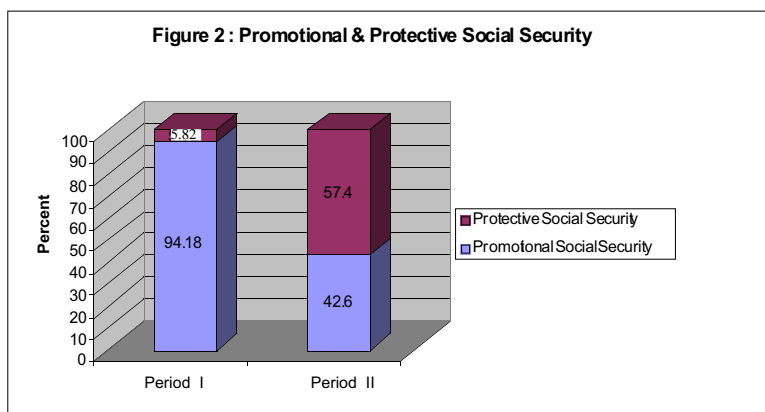
Table 6: Social Security for Period One and Period Two (Rs Millions)

Periods	Promotional Social Security		Protective Social Security		Total Social Security	
	Total	Annual Average	Total	Annual Average	Total	Annual Average
Period One (1964 -85)	86.05	3.91	5.32	0.24	91.37	4.15
Period Two (1986- 98)	432.53	33.27	582.84	44.83	1015.37	78.11
Percentage Increase	403	751	10856	19328	1011	1782

The increase in the total volume of social security and the broadening of protective social security during Period Two are quite significant. During Period One *protective social security* was restricted to occupational hazard related insurance, and death/accident benefits whereas in Period Two schemes for sickness benefit, marriage benefit, maternity benefit, unemployment benefit and so on were added. The savings cum relief scheme and the old age pension scheme deserve special

mention because they were the two schemes that account for the largest share of protective social security assistance during Period Two. In Period One, *protective social security* was just Rs 5.32 million with an annual average of Rs 0.24 million. The corresponding figures for Period Two were Rs 582.84 million and Rs 44.83 million respectively. That is, an increase of 10856 percent points in total protective social security and 19328 percent points in the annual average! *Promotional social security* has also registered an increase between the two periods. It rose from Rs 86.05 million in Period One to Rs 432.53 million in Period Two — an increase of 403 percent. The average annual promotional social security rose by 751 percent from Rs 3.91 million to Rs 33.27 million. Thanks to the contribution of both protective and promotional social security, the total social security assistance increased from Rs 91.37 million to Rs 1015.37 million and the annual social security from Rs 4.15 million to Rs 78.11 million between the Periods One and Two.

The changing pattern of protective and promotional social security across the two periods is clear in the **Figure 2**.



percent. On the other hand, in Period Two the protective social security share increased nearly ten times to 57 percent. The share of promotional social security, correspondingly, declined from 94 to 43 percent.

Relative Magnitudes of Social Security

With regard to certain relative magnitudes of social security, such as, Percapita social security, ratios of social security to Fisheries Sector Product (FSP), and to Budgetary expenditure, the achievements in the Period Two are quite commendable. Table 7 is self explanatory.

Table 7 : Relative Magnitudes of Social Security

Relative Magnitudes	Period One	Period Two	Percentage Change
Percapita Social Security (Nominal)	Rs 593	Rs 5174	773
Percapita Social Security (Real)*	Rs 322	Rs 1206	275
Social Security/FSP (Annual Average)	0.68%	1.71%	151
Social Security/Budgetary Expenditure (Annual Average)	0.05%	0.17%	237

* = deflated by cost of living index with base 1970 = 100

Comparison with Other Sectors

To understand the relative performance of social security initiatives in the fisheries sector with respect to other unorganised labour sections, we have made a comparison of the Fishermen Welfare Fund Board with those of headload workers and of coir workers (see Tables 8 and 9).

Table 8: Welfare Board Social Security Benefits for Fishermen and Headload Workers

Characteristics	Fishermen	Headload Workers
Year of Starting	1986	1984
Coverage (as on 31-12-94)	172,000 (90%)	16,387 (9%)
Number of Schemes	15	12
Annual Social Security (4 year average -1988-1991)	Rs 13.97 million	Rs 9.23 million
Annual Percapita Social Security (1988-1991)	Rs 81	Rs 563

Sources: Unpublished data from Matsyaboard and Welfare Board for Headload Workers

Table 9: Welfare Board Social Security Benefits for Fishermen and Coir Workers

Characteristics	Fishermen	Coir Workers
Year of Starting	1986	1988
Coverage (as on 31-12-94)	172,000 (90%)	140,000(33%)
Number of Schemes	15	9
Annual Social Security (3 year average-1997-1999)	Rs 42.63 million	Rs 40.94
Annual Percapita Social Security (1997-1999)	Rs 247.85	Rs 292.43

Sources: Unpublished data from Matsyaboard and Welfare Board for Coir Workers

From the above Tables 8 and 9 it is clear that regarding coverage and number of schemes the Kerala State Fishermen Welfare Board is far ahead. Access to the Headload Workers Welfare Fund Board is given only to those who have membership cards from the affiliated unions whereas all genuine fishermen are given free entry in the Fishermen

Welfare Fund Board. However, with regard to the key indicator of per capita social security it lags behind other Welfare Boards. What this implies is that along with increase in the coverage of membership, commensurate increase in the financial assistance has not taken place. Also there were failures in timely disbursal of the funds.

A Few Limitations

A few limitations in the performance of social security undertakings may also be pointed out.

i) Need for Balanced Growth and Co-ordination

It is true that **Table 7** affirms the significant increase in social security and its relative magnitudes during Period Two. However, the ideal of *balanced growth* of protective and promotional social security (Guhan, 1993; Dreze and Sen, 1991) calls for further action especially in the promotional front because the need for increased promotional social security continues to be very much a felt need in the fishery sector. For instance, increasing fishing pressure due to overcapacity exists in the fishery and alternative employment opportunities are practically absent in the fishing villages. Therefore, more and more employment programmes and job training programmes are essential. Health and sanitation of the fisherfolk in the State is still in a deplorable condition (Charles, 1997; Pushpangadan and Murugan, 1999). Unless a concerted effort is undertaken the health profile of fishing community would further deteriorate.

Lack of co-ordination between the agencies that provide social security is another issue of concern. For instance, take the housing scheme. While the Fisheries Department runs a scheme in which the whole amount of assistance (Rs 35,000) is given as a grant, the 1985/86 scheme of the Matsyafed was on a loan cum grant basis in which the

grant amount was a mere Rs 1900. Naturally, takers were low for the latter. Better co-ordination of these various agencies can avoid duplication of the programmes and make the implementation more effective.

ii) Lack of Timely Implementation

Effectiveness of social security systems needs to be judged not by the mere number of schemes but rather by their actual and timely implementation. There is ground for serious concern in this regard. Lack of adequate funds has crippled the functioning of many of the schemes. The best example is the old age pension scheme of the Matsyaboard. It is no exaggeration to state that there has not been a single year since the commencement of this scheme that has not witnessed the agitation by fishermen demanding payment of *arrears* of the pension. In fact, old age pension distribution has become a distribution of pension arrears. The duration of arrears has ranged from a few months to as much as two years. In March 1999, the pension arrears reached the order of Rs 38 million. Another example of disbursement delay pertains to the scheme meant to provide a lumpsum grant at the beginning of the academic year to help children to acquire clothes, books and other necessary facilities to be able to attend school and college. When such payments are delayed the end result is that the purpose for which the grant was meant is not met and the arrears received are used for satisfying other needs. Sometimes, the delayed disbursement is due to the negligence and casual attitude of the authorities of the educational institutions. Finally, it is the beneficiaries who suffer.

iii) Inefficient Fund Mobilisation

The core of the matter seems to be the shortage of funds which, in turn, emanates from the lackadaisical attitude of the government in mobilising the contributions due from the stakeholders. A clear example

would be the contribution of exporters to the welfare fund. Though their share is 1 % of the sales turn over, seldom do they contribute. Whenever revenue recovery actions are initiated they employ the strategy of declaring an export strike which makes the government stop short of drastic action. During the 10 year period between 1986/87 and 1997/98, their arrears are about 10 times their actual payments (Rs 214.03 million against a payment of Rs 21 million). The contribution of the fishermen was higher than that of the exporters (see Table 10).

Table 10: Contributions to the Welfare Fund until 1997/98

Parties	Amount (Rs million)
Government	262.00
Fishermen	54.80
Exporters	21.00
Other Merchants	3.72
Owners of Traditional Crafts	5.65
Mechanised Boat Owners	12.75
Owners of Fishing Gears	1.72
Prawn Farm Owners	1.14
Fines	4.95

Source : Unpublished data from Matsyaboard

Another matter that deserves special attention in resolving the fund shortage is the very large administrative expenditure incurred by the Matsyaboard. In 1998/99 the total social security assistance disbursed by the Matsyaboard for the fishermen was about Rs 45 million. The administrative expenditure for that year - primarily by the salary for the staff (159 persons) and the contingency expenses related to their work - was around Rs 15 million. Or, one-third the assistance is rendered – a ratio far above any normal standard.

From this brief analysis of the development of social security in the fisheries sector we shall now turn to another interesting question regarding its causality.

IV

SOCIAL SECURITY PROVISIONS AND PUBLIC ACTION FROM BELOW

We have observed a substantial quantitative and qualitative change in the nature of state-led public action for provisioning of social security. It is therefore relevant to reflect upon the processes that brought about this change. Was it a result of enlightened state action from above? Or was it due to the pressure of demands from below? We shall see how both these factors contributed. It was an outcome of the state's response contingent on the collective action by the fisherfolk.

Collective action by fishermen for social security started only after the growth of labour unions among fishworkers. Compared to other sections of the labouring poor in Kerala like agricultural labourers, toddy tappers, and coir and cashew workers, unionisation of fishworkers had a late start. There were some isolated attempts by radical political parties in different parts of the Kerala coast to form trade unions of fishermen even in the early 1950s. These seem to have met with limited success partly because they did not focus specifically on the problems pertaining to the fisheries sector which were indeed different from those faced by land-based workers. In 1970 a noteworthy achievement was the formation of the Catholic Fishermen Union (CFU) at Alappuzha. (Jose et al, 1988). It was CFU that pioneered the fishermen agitations to press for social security in the wake of burgeoning negative externalities on the traditional fishery created by unregulated mechanised trawler operations. A charter of demands was submitted by CFU to the district collector of Alappuzha in 1972. It included a few modest demands such as: provision of free

food rations during the lean fishing season, resumption and increase of the grant for re-thatching of huts; enhancement of the funds for the housing scheme so as to provide houses for all fishermen within 5 years; provision of benefits to the fishing community commensurate with those given to other poor communities; generation of alternate employment opportunities for fishermen in coastal industries, and collection of base-line data by conducting a socio-economic survey of fishermen. Sustained pressure on the authorities for five years yielded results. In the end, the district collector of Alappuzha signed an agreement with representatives of CFU concerning certain welfare grants including the conducting of an socio-economic survey of the fishermen. Notwithstanding these initial achievements, one major limitation of the fishermen struggle during these early years was that they were narrowly focussed in terms of issues, space and participants. They lacked a broader vision of the needs and demands of fishermen and the fishery of Kerala as a whole. A partial solution to this problem was the formation of the Latin Catholic Fishermen Federation (LCFF) in 1977. Though the communal character of the union still remained, it provided a larger forum for fishermen to raise their demands. The LCFF submitted a twenty-two-point charter of demands to the Chief Minister of Kerala. Most of the demands were for social security. Along with these demands for social security it also contained a few demands for institutional reforms like introduction of a fisheries bill to protect the interests of traditional fishermen, restriction of mechanised boats beyond 5 km off the coast, and prohibition of destructive fishing practices and pollution of coastal waters.

Collective action by fishermen that cut across barriers of caste, creed, and political affiliations was made possible only with the starting of the Kerala Swathanthra Malsya Thozhilali Federation (KSMTF) in 1980. That year KSMTF presented a 38-point charter of demands to the Chief Minister. It contained many novel demands that included both

social security and resource conservation measures. Along with the earlier demands, new demands like registering of all genuine fishermen, providing pensions, arranging for provident funds, and providing medical insurance for fishermen were added. Also, for conservation, the charter demanded prohibition of purse seining, and restriction of mechanised fishing beyond 20 km off the coast. The KSMTF was joined in its efforts by the traditional community organisation of the Hindu fishermen called Dheevera Sabha.

The year 1984 witnessed the most militant agitation of fish workers in Kerala. The agitation included rallies, demonstrations, picketing, and hunger strikes at all coastal districts of the state. Among the demands the one most stressed was the ban on trawling during the monsoon season. Social security demands were an important second. On 18 June 1984 fishermen conducted the 'long march' to the government secretariat. Though the government remained stubborn, the press and the intelligentsia across the state and nation lauded the struggle and its dual concern for a sustainable fishery and a secure fishing community. This combination of demands for social security, developmental assistance, and conservation gave the fishermen's struggle of Kerala under the KSMTF the unique identity of a *socio-ecological movement of the working class*. In 1985 the agitation was revived. The 1985 struggle was further strengthened by the joint struggle with other trade unions across the political spectrum. One of the major joint struggles undertaken in 1985 pertained to the issue of the provision of old age pensions. Even though the government did not approve the demand for a trawl ban during the monsoon, most of the social security demands were virtually approved to placate the agitating fishermen.

This was the most important factor behind the spurt in social security during Period Two of our analysis.

Two important achievements on the social security front, as the aftermath of the 1984 agitation, were the introduction of an educational benefit scheme (lumpsum grant) for students from fishing communities and the old age pension for fishworkers. The educational benefit scheme has a special significance. Till 1984 it was a benefit restricted to students of certain backward castes like SC/ST and later to the Dheevera caste. But, with this new scheme a *caste benefit* was transformed into a *class benefit*. The pension scheme of the Matsyaboard was the response to one of the chief demands raised by the KSMTF, and also by other political party trade unions and the Dheevera Sabha. Organisational innovations also took place in the provision of social security. Matsyafed was established in 1985 to strengthen developmental assistance to the traditional sector and the Matsyaboard was started in 1986 to co-ordinate and intensify welfare assistance for fishermen. Formation of both these bodies was an outcome of the post 1984 agitation settlement.

V

SOCIAL SECURITY: WHAT MORE NEEDS TO BE DONE?

At the very outset we had stated that when deprivation or vulnerability is reduced or removed as a result of social means social security is achieved. This can be measured by examining the standard of living and the quality of life of the concerned population.

Despite the significant changes that have taken place in the last two decades in improving the standard of life of the fishing communities in Kerala, they still remain, by and large, at the bottom of the socio-economic ladder in Kerala. They have a lot of catching up to do. Though no authoritative census data is available on these issues, the evidence from rapid surveys continues to reaffirm this fact (GOK, 1997).

Strengthening of Promotional Measures

The above situation highlights the need for continued strengthening of promotional measures of social security. The realms of nutrition, health and sanitation, employment training, empowerment of women and education warrant much closer and continued attention in this regard. In particular, more targeted nutritional schemes catering to the needs of young mothers and pre-school children combined with preventive health care and sanitation merit more imaginative schemes and funding to back it.

On the employment front the long – run strategy should be to take people out of the activity of fishing by enhancing educational attainments. Initially, however, more employment in fishery-related or coastal-area related fields can be fostered. As a first step, more skill oriented training for the under/unemployed youth in a wide variety of subjects will add to the pool of human resources. These include training in outboard engine repair; masonry and carpentry ; ferro-cement pre-fabricated construction; GPS resource mapping and coastal zone physical and social survey skills; sea safety and navigation ; basic mother and child health awareness and sanitation; coastal zone tourism; credit, accountancy and local organisation management; basic computer training; to name a few.

Far greater focussed attention is warranted in the empowerment of women in fishing communities. This can be achieved by a combination of functional awareness and education linked to alternative employment generation. The potential of the educated young unmarried girls in fishing villages should be utilised to tackle the issue of village health and sanitation and children's pre-school orientation. They can also provide learning support to school going children.

On the formal education front there is a need to start more residential fisheries technical schools which start from the primary level

of schooling. A target of one school for every maritime district should be achieved.

Enhance Financial Resources, Credible Information, and Local Organisational Support

The feasibility of all the above suggestions rests entirely on the pillars of financial resource mobilisation, credible information, and local organisational support.

Financial resource mobilisation will require the application of greater political will to make the seafood exporters pay their arrears to the Welfare Fund. Achieving this will give a major boost to the corpus and in turn to the possibility of undertaking more promotional social security measures of the types mentioned above. Although attempts to abstain from paying their contribution might seem rational from the part of exporters, a closer look into the future prospects of exports would prove otherwise. If the WTO Seattle conference is any indicator, labour standards will become an important determinant in export trade. If so, such institutional arrangements by the state can also be a major step in avoiding the application of the “social clause” barriers to seafood exports. In a context where the quality standard norms are jeopardizing their international competitiveness, this should be a major incentive for exporters to collaborate.

Financial resources available for social security will increase with every reduction in the administrative costs of the Matsyaboard. While it may be unthinkable in the Kerala context to downsize a statutorily constituted Board, it should be possible to reorganise the present personnel in a manner, which will make their work more meaningful, and management oriented. Such reorganisation itself will contribute to better and more effective targeting of the social security schemes. The obvious advantages from computerisation and e-governance possibilities

that are open to such statutory bodies dealing with large numbers of beneficiaries should be made effective use of in streamlining the administration of the Matsyaboard.

Credible information is an important input for present and future social security provision. The quality of data and information available regarding persons eligible to get social security benefits is very poor. Despite the statutory requirement for annual re-registration, the procedures followed to achieve this are fraught with administrative lapse, and political interference. There is need to conduct a family census of eligible claimants in order to prepare demographic, educational, and occupational profiles of present claimants and their dependents. The issue of electronically identifiable identity cards is one easy and desirable measure to consider.

Local organisational support is indispensable for the effective identification of social security needs and proper targeting of benefits to the right persons. The new concept of the Matsya Bhavans which are located in the coastal areas and under the jurisdiction of the coastal panchayats/municipalities is a step in the right direction. However, the Matsya Bhavans should not be seen as the lowest tier in the chain of financial command of the Matsyaboard. These Matsya Bhavans must become the crucial link between the governance structure of the state and the local-level samithis from the fishing communities in the panchayat. In this context, the implementation of the recommendations of the Task Force on Livelihood Secure Fishing Communities of the Kerala State Planning Board(GOK, 1997) attains significance. The Task Force suggested that five samithis be created from among the fishing communities in each coastal panchayat which can provide the Matsya Bhavans with “roots” in the community. Only such measures will give people an active role in decision-making in the planning and

implementation of fishery schemes, including importantly social security programmes. Four of the suggested samithis have a direct bearing on social security. They are samithis for: (1) Sea-safety (2) Housing, water, sanitation and public health (3) Education and alternative employment and (4) Women's employment.

Retaining the Heart of the Matter

Fishing communities in Kerala are known to have several traditional and long standing community arrangements for social security and risk insurance. These were largely in place at a time where no formal social security arrangements were available. Their hallmark was that they provided an institutionalised caring arrangement, which was personal and timely and based on the principle of reciprocity and mutual trust. The greater commercialisation of fishing and the availability of state support for social security have reduced the relevance of some of these community arrangements. One important measure in the pursuit of revamping and enhancing the formal social security measures in the fisheries sector will be to undertake a study of the past and present community initiated social security and insurance arrangements. This is important to assess the distinctive features which made these arrangements meaningful and central to the heart of the community. It might well be that some of these arrangements are relevant, cost-effective and more appropriate even in today's context. Should this be the case, they should be re-examined and revitalised. The need of the hour is for formal social security enhancement that supplements, rather than duplicates or replaces, these community-care arrangements. Developing micro-credit programmes in the fishery villages can be a major community initiative to supplement the formal schemes.

CONCLUSION

Achieving the desirable levels of social security for everyone in a society is indeed a daunting and challenging task. However, attaining this objective is tantamount to fostering genuine economic development and the substantive freedom associated with it (Sen, 1999). In the developing country context, and more specifically in the context of specific sectors like the small-scale fishery, a 'growth-mediated' approach to social security is unattainable. Consequently a 'support-led' strategy for social security provisioning, with a tripartite approach to resource mobilisation form the only economically viable and socially feasible option.

The arrangements for social security in Kerala's fishery sector deserve praise. The numbers of schemes in place touch the lives of fishworkers and their families from birth to death and match the requirements of the ILO. However, this cannot be taken to be merely an achievement of the State. It is also a tribute to the effectiveness of the collective action by the fishermen that 'pushed' the State to enhance the resource flows for social security and initiate and strengthen the organisational apparatus for its delivery.

The challenge before both the state and the community in the new millennium will be faced on three fronts: (1) enhancing the flow of funds for social security (2) generating credible data and information (3) evolving new promotional and protective measures by pushing for a more democratic and decentralised delivery mechanism. The first will call for far more political will. It can only be ensured by sustained pressure from below on the one hand and risk pooling mechanisms by the community to complement public support on the other. The second calls for greater initiative and commitment by government functionaries complimented with the use of the latest information technology. The third calls for more imaginative and dedicated leadership at the level of the state and the community.

Appendix – A

Social Security Schemes of the Department of Fisheries

PERIOD ONE

Promotional Measures

1 *Housing Scheme:*

Under this scheme, construction of new houses and housing colonies were taken up for fishermen, especially for those who lost houses in natural calamities. Promotional social security of *housing* was changed into *housing and rehabilitation* because harbour development for mechanised boats had been on the increase and with this the need for rehabilitation of evicted fishermen became an imperative.

2 *Sanitation and Health:*

This scheme aimed at providing amenities like wells, latrines, approach roads etc in the fishing villages. Medical dispensaries were started in 1973/74 in selected fishing villages to provide free medical care to fisherfolk.

3 *Applied Nutrition Programme:*

In 1966/67 an Applied Nutrition Programme (ANP) was introduced. It was a programme for improving the nutritional status of mothers and children by providing fish powder. For the operationalisation of the programme a few mechanised boats were supplied to certain fishermen co-operatives in selected areas. Out of the fish catch, 10 percent was earmarked for the program so as to give 3-ounce fish powder per child and 5 ounce per mother.

4 *Education and Training:*

a) Scholarships

Selected fishermen students from very poor families were given scholarships to pursue post-matriculate studies under this scheme.

b) Fisheries Schools

Originally, fisheries schools were those primary schools and high schools initiated by the Fisheries Department in the fishing villages. During 1965/66 the fishery schools were transferred from the Fishery Department to the Education Department to facilitate the former to start *Fisheries Technical Schools*. In 1968 three such technical schools were opened. They are to provide fishermen children a public school - type education with a fisheries bias and also training in seamanship, navigation, net-making etc. Education is given from eighth standard to the tenth with free boarding and lodging.

c) Training Centres for fishermen

A few training centres were opened to provide training for fishermen youth in the operation of modern methods of mechanised fishing.

Appendix – B

Social Security Schemes of the Kerala Fishermen Welfare Corporation

PERIOD ONE

Promotional Measures

1 Housing and Rehabilitation Scheme:

a) The objective of the scheme was to provide planned habitats to the traditional fishermen of the state in a phased manner. The target group was fishermen who owned at least one cent of land. The first phase of construction of 10,000 houses started in 1979; the second phase for another 10,000 in 1981. The estimated expenditure per house was Rs 4,000 of which Rs 2,000 was given as grant and the other Rs 2,000 as loan. Between 1979/80 and 1982/83 KFWC gave subsidies for construction of 14,248 houses.

b) In order to rehabilitate the 2000 families to be evicted from the proposed Vizhinjam Harbour the state government had entrusted KFWC to construct houses at estimated cost of Rs 11,500 per house. The achievement during 1981/82 and 1982/83 was completion of 165 houses.

2 Educational Scholarships:

The objective of this scheme was to provide scholarships to students from fishing communities to pursue post-matriculate studies. The Department of Fisheries originally implemented this scheme and in 1980/81 it was handed over to KFWC. The rate of scholarship, which was existing, and the revised were as follows:

Course of Study	Rate prevailed till 29-11-1982 (Rs)	Revised rate as on 29-11-1982 (Rs)
PDC	250	500
Degree Courses	400	500
TTC	400	400
B.Ed	500	600
Diploma	400	500
PG Courses	500	750
MBBS	500	1000
Engineering	500	1000
Law	500	1000
B.Sc Agriculture	500	1000
B.V.Sc & B.F.Sc.	400	1000

3 *Marketing Assistance:*

a) Working Capital Subsidy

Objective of this scheme, started in 1980/81, was to give working capital for marketing and purchase of cycles / three wheelers etc. for marketing of fish. The target group was women fish vendors, hawkers, and cycle-load traders.

b) Women Vendors' Bus Service

In 1980/81 KFWC started to operate special bus services to transport women fish vendors with their fish baskets to the market places. Only a nominal charge is levied from the passengers every month. Year-wise average number of beneficiaries in 1980/81, 1981/82, and 1982/83 were 240, 222 and 222 respectively.

Protective Measures

1 *Equipment Insurance:*

Under this scheme, relief was provided to fishermen in the case of loss or damage of fishing crafts or/and houses. Relief given was at the following rates:

For destruction of house	-upto Rs 100/-
For loss of canoe	-upto Rs 500/-
For loss of catamaram	-upto Rs 300/-

2 *Life Insurance:*

An insurance scheme was started for fishermen on 1-7-1980 to give financial assistance to the bereaved family on the death of a fisherman due to accidents while fishing or immediately after fishing and to victims of permanent or temporary incapacitation caused in fishing. The rate of assistance was as given below.

For permanent loss of both eyes or both limbs or one eye and one limb	- upto Rs. 10,000
For permanent loss of one eye or one limb	- upto Rs. 5,000
For permanent disability making fishing impossible	- upto Rs. 5,000
For temporary disability	- upto Rs. 200

Appendix – C

Social Security Schemes of the Kerala State Cooperative Federation for Fisheries Development (Matsyafed)

PERIOD TWO

Promotional Measures

1 Housing and Rehabilitation:

a) Subsidised Housing Scheme

This was a continuation of the KFWC scheme. In this scheme the cost estimate per house was Rs 8,000/- of which Rs 4,000 was loan from the Housing Development Bank (HUDCO); Rs 2,000, subsidy from the state government; and the balance Rs 2,000, the beneficiary's contribution. Along with completing the first and second phases of the program, initiated by KFWC, Matsyafed started to implement two more phases – (third phase) in 1986/87 and the (fourth phase) in 1994/95. In each phase, the target was construction of 10,000 houses each. The cost estimate was raised from Rs 8,000 to Rs 15,000 in the fourth phase, christened as “Rajiv One Million Housing Scheme”. However, the share of government subsidy has come down from Rs 2,000 to Rs 1,500. HUDCO loan was raised to Rs 12,500 and the beneficiary's contribution was fixed as Rs 1,000. Because of the fall in subsidy and the starting of a more attractive housing scheme by the Fisheries Department, the Matsyafed housing scheme had no many takers since 1996/97. Between 1985/86 and 1997/98 the number of completed houses under this scheme reached 14,588.

b) Rehabilitation Housing Scheme

Since 1985/86 Matsyafed has taken up the housing scheme for the fishermen households evicted for Vizhinjam harbour project. The target is 1051 houses of which 867 houses were completed by 1997/98.

2 Sanitation and Health:

This was a HUDCO aided scheme for giving financial assistance to construct latrines for fishermen households. The target was 5,500 latrines.

Estimated expenditure per latrine was Rs 2,500 of which HUDCO loan was Rs 1,200; government subsidy, Rs 750 and the rest was beneficiary's contribution. Under this scheme, 4495 latrines were constructed directly by Matsyafed and an additional 1695 were constructed indirectly through NGOs and local government bodies.

3 Women Vendors' Bus Service:

Matsyafed further developed this scheme which was started by KFWC in 1980/81 in Trivandrum into other districts like Alleppey, Kollam and Ernakulam. By 1995/96 buses were running along nine routes and about 450 women availed of the service. Only a nominal charge is collected from the passengers. Matsyafed bears the rest of the expenditure.

4 Community Peeling Centres:

Matsyafed has carried over this programme from KFWC. The advantage of this scheme was that it helped many fishing women to earn a livelihood by working in a hygienic environment. In 1985 Matsyafed started two peeling centres, one each, at Neendakara and Sakthikulangara.

5 Women Vendors' Subsidy Scheme:

Matsyafed started this scheme in 1993/94 of giving a financial assistance of Rs 250/- to women fish vendors for purchasing vessels for carrying fish. In 1993/94 and 1994/95 the number of beneficiaries were 200 and 1053 respectively.

6 Education and Training:

a) Training Programme for Fishermen Youth

As part of empowering fishermen youth for alternative employment, 18 youth were given a four-month training in OBM service and repair. Employment opportunities were also given to them by starting OBM service centres. In 1995/96 six youth were given such training; also, 5 youth were sponsored for CIFNET marine vessel engine driver's course. Another five were sponsored for the course in 1996/97.

b) Cash Award for Students

From 1996/97 onwards fishermen students who score highest marks in secondary school leaving certificate (SSLC) examination at district level were given cash awards by Matsyafed.

Protective Measures

1 Life Insurance:

It was started in 1995 in collaboration with the National Insurance Company. This is to assist fishermen in cases of death or permanent disability due to accident. Insurance amount is Rs 0.1million for death and Rs 0.05 million for disability. The annual premium to be paid by fisherman is Rs 50/-. Membership in the scheme that was initially a mere 19,628 rose to 1,70,000 by 1997/98. In 1995/96 four death cases and one disability case were given the insurance amount and in 1997/98 thirty-two deaths were paid insurance.

2 Matsyafed Chairman Relief Fund:

This scheme was started in 1997/98, with a specific motive of providing emergency help to fishermen who happen to be victims of natural catastrophes. This assistance is given at the discretion of the Chairman of Matsyafed.

Appendix – D

Kerala Fishermen's Welfare Fund

The Rate of Contribution by the Different Stakeholders in the Sector

- a) State government: provides per year Rs 30 million for the pension scheme and Rs 1.7 million towards insurance premium.
- b) Fishermen: to remit Rs 30 per year (later revised to Rs 50)
- c) Dealers: to remit 1 % of the sales turn over
- d) Exporters: to remit 1 % of the sales turn over. Prawn/fish farmers: to remit 2 % of the sales turn over
- e) Boat owners :
 - < 15 GRT: Rs 100 per month for 9 months
 - 15-25 GRT: Rs 200 per month for 9 months
 - 25-35 GRT: Rs 400 per month for 9 months
 - > 35 GRT: Rs 1000 per month for 9 months
- f) Catamaran owners:
 - Non-motorised: Re 1/- per month for 9 months
 - Motorised: Rs 2/- per month for 9 months
- g) Other craft owners :
 - < 9mts, non-motorised: Rs 3/- per month for 9 months
 - < 9mts, motorised: Rs 5/- per month for 9 months
 - > 9mts, non-motorised: Rs 5/- per month for 9 months
 - > 9mts, motorised: Rs 7/- per month for 9 months
- h) Chinese and stake net owners: Re 1/- per month for 9 months.

Appendix – E

Social Security Schemes of the Kerala Fishermen Welfare Fund Board (Matsyaboard)

PERIOD TWO

Promotional Measures

1 Education and Training:

As an incentive for students of fishermen community to excel in studies, the Matsyaboard has instituted cash awards and scholarships. Accordingly, those who get the highest and the second highest marks for the secondary school leaving certificate (SSLC) examination from the three geographical regions (south, north, and central) of Kerala are presented with cash award of Rs 2000/- and Rs 1000/- respectively. These were raised to Rs 3000/- and Rs 2000/- respectively since 1994. In addition, an award of Rs 1000/- each is given to those who secure highest marks in each revenue districts. A scholarship programme was started in 1994. As per this scheme, fishermen children who stand first and second in the SSLC are provided scholarships of Rs 100 per month for two years to pursue higher studies.

2 Family Planning Scheme:

This is a scheme that gives financial assistance for the post operational care to the fishermen or their wives who undergo sterilisation operation. The assistance given was Rs 250/- and the amount was raised to Rs 500/- from 1994.

3 Basic Sanitation Scheme:

As part of improving the health and sanitation of fishermen households, the Matsyaboard started giving financial assistance of Rs 2,500/- for construction of latrines. Beneficiaries should be registered fishermen who own a house and the land around. During 1996/97 nine hundred latrines were constructed in the state and 720 were to be completed by 1997/98.

Protective Measures

1 Group Insurance Scheme:

There was a scheme originally run by the Fisheries Department for providing to fishermen financial assistance at death or disability due to accident. However, it was in 1986 that the Matsyaboard brought this scheme under a group insurance scheme. The scheme covers all fishermen of the age group of 15 to 70, registered under the Kerala Fishermen Welfare Act, 1985. The central and state governments in a fifty-fifty ratio finance this scheme. Compensation (in Rupees) given under this scheme was enhanced four times as seen below.

Case \ Revision date	10-9-1986	10-9-1990	10-9-1992	10-9-1996
Death	15,000	21,000	25,000	50,000
Found missing	15,000	21,000	25,000	50,000
Permanent or total disablement	15,000	21,000	25,000	50,000
Temporary or partial disablement	7,5-00	10,500	12,500	25,000

2 Compensation for Death of Fisherman (during or immediately after fishing, not due to accident):

This scheme gives financial assistance of Rs 15,000 to dependants of fishermen who happen to die during fishing or immediately after fishing due to some causes other than accident. Thus, it covers the cases of death, which are not covered under the group insurance scheme. Beneficiaries of this scheme can be any registered fishermen.

3 Financial Assistance for Marriage of Fishermen's Daughters:

Poor fishermen who struggle to meet the expenses related to the marriage of daughters are assisted by this project. It started as a loan cum grant scheme in which Rs 1200 was given as loan and Rs 200 as grant. Later, in 1995, it was made a full grant scheme of providing Rs 1,500 per marriage.

4 Financial Assistance at Death of Dependants of Fishermen:

Under this scheme a fisherman is entitled to get a financial assistance of Rs 250/- (revised as Rs 300/- in 1991) to meet the expenses related to the death of his dependants such as father, mother, wife, minor sons or unmarried daughters.

5 Old Age Pension:

This is one of the most popular schemes of the Matsyaboard and the one that accounts for the largest financial outlay. Under this scheme, a fisherman who has completed 60 years can apply for old age monthly pension under the following conditions:

- He had undertaken fishing activity for livelihood for a period not less than 10 years prior to the date of application.
- He lived in a fishing village in Kerala at least for a year.
- His personal annual income does not exceed Rs 1500

The pension amount was originally Rs 75/-. It has undergone subsequent revisions to Rs 85/- in 1992 and to Rs 100/- in 1997.

6 Financial Assistance for Temporary Disability of Fisherman due to Accident:

If a fisherman cannot go for fishing at least for a period of seven days on account of some temporary disability due to accident, he can avail of the benefit of this scheme. The assistance per this scheme is as follows: Rs 100/- for the first seven days and Rs 15/- per day for the following days within a ceiling of total assistance at Rs 300/- (which is raised to Rs 500/- w e f 1-1-1991).

7 Financial Assistance to the Dependants at Death of Fishermen:

If the dependants of a deceased fisherman are not entitled to benefits of group insurance or any other benefits of the Matsyaboard to meet the funeral expenses, they can get assistance under this scheme. The amount given was originally Rs 250/-. Later it was raised to Rs 500/- in 1991 and to Rs 1000/- in

1994. In 1996 the scheme was thoroughly revised and thereafter, the dependants could avail Rs 5,000/- at the death of an active fisherman below 60 years, whatever be the cause of death.

8 *Financial Assistance for Fatal Diseases:*

This scheme intends to help fishermen within the age group of 23-60 and whose family income per year is below Rs 15,000/- to meet medical expenses in treatment of certain fatal diseases. The diseases covered under the scheme and the respective assistance are as follows:

Diseases	Financial Assistance (Rs)	
	As in 1991	As in 1996
Heart surgery	25,000	40,000
Kidney transplant	25,000	40,000
Brain tumour	25,000	40,000
Cancer	25,000	40,000*
Paralysis	12,000	12,000
Mental disease	5,000*	5,000*
Severe elephantiasis	pension of Rs. 100/-pm	pension of Rs.100/- pm

* = In case the disease is not cured, one can claim a monthly pension of Rs 100/

9 *Matsyaboard Chairman Relief Fund:*

It is a scheme envisaged to assist fishermen in contingencies. This scheme entitles the Matsyaboard to take up immediate relief measures in unexpected natural calamities. As per this scheme the following emergency assistance can be claimed:

- Cases of getting wounded in accidents while fishing: (range of assistance: Rs 100 - 500)
- At the death of fisherman and the family having no means of livelihood: (Rs 250 - 1000)

- Cases of getting wounded in rescue operation: (Rs 100 - 300)
- Fishermen households loosing house and belongings in flood or fire: (Rs 500 - 2500)
- Though not house, belongings getting lost in fire or flood: (Rs 300-1500)
- Cases of snake bite, burns etc.: (Rs 200 - 500)
- Cases of fishermen being found missing while fishing: (Rs 1000 - 2000)

10 Eye Ailments Scheme (Nethrajiyothi):

This scheme, as the name, 'Nethrajiyothi' indicates, is one to give light to the blind. It envisages organising medical camps in coastal villages for detecting and treating eye-ailments. Fishermen who suffer from diseases like cataract are given treatment, spectacles etc.

11 Special Assistance by Matsyaboard:

Under the provisions of this scheme the Matsyaboard can render financial assistance in certain occasions as special cases. Such occasions may arise when an applicant has not met all the legal requirements for an assistance but at the same time the Matsyaboard is convinced of his/her case being genuine.

12 Maternity Assistance:

It was only in 1996/97 this scheme was started. This scheme provides maternity assistance of Rs 500/- to fisher women and to fishermen's wives for the first two childbirths.

Appendix – F

Social Security Schemes by the Department of Fisheries

PERIOD TWO

Promotional Measures

1 *Savings cum Relief Scheme:*

This is one of the most popular schemes of the Department. The Central and State governments assist this scheme on a fifty-fifty basis. The objective of this scheme is to give financial assistance to all registered fishermen of the age group of 18 - 60 during the four lean season months of March to June. It can, therefore, be called an unemployment benefit scheme. Financing of the scheme is as follows: Each fisherman has to remit Rs 45/- each during the eight months of fishing. To this total contribution of Rs 360/- the Centre and State governments contribute Rs 360/- each and the grand total of Rs 1080/- is distributed to each fisherman in four monthly instalments of Rs 270/- each during the lean season.

2 *Housing Scheme:*

Two housing schemes continue to be operated under the Department. The first one is a fully Central Government sponsored scheme within the Tenth Finance Commission's *Problem Grant*. Under problem grant the state government is provided with Rs 700 million for undertaking housing, drinking water projects, and fisheries roads during 1996-2000. Of this, Rs 500 million is earmarked for housing; Rs 70 million for drinking water; and 130 million for road development. The other scheme is 60 percent centrally sponsored and the rest 40 percent state sponsored. A major attraction of the Department housing scheme is that it is a full grant scheme of Rs 35,000/- per house.

3 *Coastal Electrification (Theerajyothi):*

Under this scheme an aid of Rs 1000/- each is given to selected fishermen households towards electrifying their houses.

4 Sanitation Scheme:

Through this scheme the Department provides financial assistance of Rs 2,500/- each to selected fishermen households to construct latrines.

5 Safe Drinking Water Scheme:

The Department has started drinking water schemes in 70 selected villages.

References

- Ahmad, E. et al (eds) (1991) *Social Security in Developing Countries*, Clarendon Press, Oxford
- Amarasinghe, O. (1989) Technical Change, Transformation of Risks and Patronage Relations in a Fishing Community of South Sri Lanka, *Development and Change* 87/3, Hague
- Burgess, RSL and Stern, N. (1991) Social Security in Developing Countries: What, Why, Who and How? in E. Ahmad et al (ed) (1991) *Social Security in Developing Countries*, Clarendon Press, Oxford
- Charles, L. (1997) Health Status and Health Care System Among the Fisherfolk - A Micro Level Analysis, M Phil Dissertation (unpublished), Centre for Development Studies, Thiruvananthapuram
- Dreze, J. and Sen, A. (1991) Public Action for Social Security: Foundation and Strategy, in E. Ahmad et al (ed) (1991) *Social Security in Developing Countries*, Clarendon Press, Oxford
- Dreze, J. and Sen A. (1993) *Hunger and Public Action*, Oxford University Press, New Delhi
- Firth, R. (1966) *Malay Fishermen: Their Peasant Economy*, Routledge & Kegan Paul, London
- Ghai, D. (1997) Social Development and Public Policy: Some Lessons from Successful Experiences, DP 89, UNRISD, Geneva
- Government of Kerala (GOK) (1975) *Economic Review*, State Planning Board, Thiruvananthapuram
- Government of Kerala (GOK) (1981) *Economic Review*, State Planning Board, Thiruvananthapuram
- Government of Kerala (GOK) (1986) *Economic Review*, State Planning Board, Thiruvananthapuram

- Government of Kerala (GOK) (1992) *Kerala Fisheries - An Overview*, The Department of Fisheries, Thiruvananthapuram
- Government of Kerala (GOK) (1996) *Social Security Initiatives in Kerala - Report of the Expert Committee*, State Planning Board, Thiruvananthapuram
- Government of Kerala (GOK) (1997) *Report of the Taskforce on Livelihood Secure Fishing Community*, Planning Board, Thiruvananthapuram
- Government of Kerala (1963/64 – 1997/98) *Administrative Reports*, Fisheries Department, Thiruvananthapuram
- Government of India (1983) *Measures for the Marine Fishermen in India*, Ministry of Agriculture, Department of Agriculture and Co-operation, New Delhi
- Guhan, S. (1993) Social Security for the Poor in the Unorganised Sector: A Feasible Blueprint for India, in K.S. Parikh and R. Sudhakaran (eds.) *Human Development and Structural Adjustment*, Macmillan, Madras
- Jose, K. et al (1988) *Oru Samarakatha*, (Malayalam), KSMTF, Thiruvananthapuram
- Kannan, K.P. (1998) “State and Union Intervention in Rural Labour: A Study of Kerala” in Radhakrishna, R. and Sharma, A.N. (eds.) 1998 *Empowering Rural Labour in India: Markets, State and Mobilisation*, Institute of Human Development, New Delhi
- Kannan, K.P. (1999) Poverty Alleviation as Advancing Basic Human Capabilities: Kerala’s Achievements Compared, CDS Working Paper 294, Thiruvananthapuram
- Kannan, K.P. and T.T.Sreekumar (1998) Rural Labour Movements and Organisation in India: A Case Study of Fish Workers Struggle in Kerala, *Labour and Development*, 3(1&2), pp 24-63, Noida

- Kurien, J. (1985) Technical Assistance Projects and Socio-Economic Change - Norwegian Intervention in Kerala Fisheries Development, *Economic and Political Weekly*, 20(25&26), pp A70- A88, Bombay
- Kurien, J. (1992) Ruining the Commons and Responses of the Commoners: Coastal Overfishing and Fishworkers' Actions in Kerala State, India in Ghai,D and Vivivan JM (eds) *Grassroots Environmental Action: People's Participation in Sustainable Development*, Routledge, London
- Kurien, J. (1995) The Kerala Model: It's Central Tendency and the Outlier, *Social Scientist* 23/1-3, New Delhi
- Kurien, J. (2000) Factoring Social and Cultural Dimensions into Food and Livelihood security Issues of Marine Fisheries: A Case Study of Kerala State, India, Working Paper 299 Centre for Development Studies. Thiruvananthapuram
- Kurien, J. and Achari, TRT (1988), Fisheries Development Policies and the Fishermen's Struggle in Kerala, *Social Action*, 38, Jan-Mar, pp 15-36, New Delhi
- Kurien J. and Paul A. (2000) Nets for Social Safety, ICSF, Chennai
- Kurien, J. and .Vijayan, A.J. (1995), Income Spreading Mechanisms in a Common Property Resource: Karanila System in Kerala's Fishery, *Economic and Political Weekly*, Vol XXX No 28, Bombay
- OECD (1997) *Social Implications of Responsible Fisheries: Potential, Social and Employment Implications of Moving Towards Responsible Fisheries - An Analysis of Alternative Measures*, Directorate for Food, Agriculture, and Fisheries, Fisheries Committee, Paris
- Panicker, PGK and Soman, CR (1984) *Health Status of Kerala: Paradox of Economic Backwardness and Health Development*, Centre for Development Studies Publications, Thiruvananthapuram

- Platteau, JP and Abraham, A (1987) An Inquiry into Quasi-Credit Contracts: The Role of Reciprocal Credit and Interlinked Deals in Small-Scale Fishing Communities, *Journal of Development Studies*, 23/4
- Pushpangadan, K. and G. Murugan (1999) Gender Bias in a Marginalised Community; A Study of Fisherfolk in Coastal Kerala (mimeo) Centre for Development Studies, Trivandrum
- Radhakrishna, R and Sharma, A.N. (eds) (1998) *Empowering Rural Labour in India: Markets, State and Mobilisation*, Institute of Human Development, New Delhi
- Sen, A.(1999) *Development as Freedom*, Alfred A. Knopf, New York
- Thomas, J (1989) Socio-Economic Factors Influencing Educational Standards in a Marginalised Community: A Case Study on the Marine Fisherfolk of Kerala, M.Phil Thesis (unpublished), Centre for Development Studies, Thiruvananthapuram
- UNDP (1991) *Human Development Report 1991*, Oxford University Press, New York

CENTRE FOR DEVELOPMENT STUDIES
LIST OF WORKING PAPERS

(From 1991 onwards)

- MRIDUL EAPEN** Hantex: An Economic Appraisal.
September, 1991, W.P.242
- SUNIL MANI** Government Intervention in Commercial Crop Development:
A Case of Flue Cured Virginia Tobacco.
November, 1991, W.P.243
- K. PUSHANGADAN** Wage Determination in a Casual Labour Market: The
Case Study of Paddy Field Labour in Kerala.
January, 1992, W.P.244
- K.N. NAIR & S.P. PADHI** Dynamics of Land Distribution: An Alternative
Approach and Analysis with Reference to Kerala.
January, 1992, W.P.245
- THOMAS ISAAC** Estimates of External Trade Flows of Kerala - 1975-76 and
1980-81.
March, 1992, W.P.246
- THOMAS ISAAC, RAM MANOHAR REDDY, NATA DUVVURRY** Re-
gional Terms of Trade for the State of Kerala.
March, 1992, W.P.247
- P. MOHANAN PILLAI** Constraints on the Diffusion of Innovations in Kerala:
A Case Study of Smokeless Chulas.
March, 1992, W.P.248
- R. ANANDRAJ** Cyclicity in Industrial Growth in India: An Exploratory
Analysis.
April, 1992, W.P.249
- T.M. THOMAS ISAAC, RAM MANOHAR REDDY, NATA DUVVURY**
Balance of Trade, Remittance and Net Capital Flows: An Analysis of
Economic Development in Kerala since independence.
October, 1992, W.P.250
- M. KABIR, T.N. KRISHNAN** Social Intermediation and Health Transition:
Lessons from Kerala,
October, 1992, W.P.251

- SUNIL MANI, P. NANDAKUMAR** Aggregate Net Financial Flows to India: The Relative Importance of Private Loan vis-a-vis Foreign Direct Investments.
August, 1993, W.P.252
- PULAPRE BALAKRISHNAN** Rationale and the Result of the Current Stabilisation Programme.
November, 1993, W.P.253
- K.K. SUBRAHMANIAN, P. MOHANAN PILLAI** Modern Small Industry in Kerala: A Review of Structural Change and Growth Performance.
January, 1994, W.P.254
- DILIP M.MENON** Becoming Hindu and Muslim : Identity and Conflict in Malabar 1900-1936.
January, 1994, W.P.255
- D. NARAYANA** Government Intervention in Commodity Trade: An Analysis of the Coffee Trade in India.
January, 1994, W.P.256
- K.J. JOSEPH, P. NANDAKUMAR** On the Determinants of Current Account Deficits: A Comparative Analysis of India, China and South Korea.
January, 1994, W.P.257
- K.K. SUBRAHMANIAN, K.J. JOSEPH** Foreign Control and Export Intensity of Firms in Indian Industry.
February, 1994, W.P.258
- PULAPRE BALAKRISHNAN, K. PUSHANGADAN** Total Factor Productivity Growth in Indian Manufacturing - A Fresh Look.
April 1994, W.P.259
- D. NARAYANA, K.N. NAIR** Role of the Leading Input in Shaping Institutions: Tendency in the Context of Irrigation Uncertainty.
May, 1994, W.P.260
- G. MURUGAN, K. PUSHANGADAN** Pricing of Drinking Water: An Application of Coase Two-part Tariff.
December, 1994 W.P.261
- MOHANAN PILLAI** On the Mexican Crisis.
December, 1995, W.P.262
- SUNIL MANI** Financing Domestic Technology Development through the Venture Capital Route.
December, 1995, W.P.263

- T.T. SREEKUMAR** Peasants and Formal Credit in Thiruvithamcore: The State Institutions and Social Structure 1914-1940.
December, 1995 W.P.264
- AMITABH** Estimation of the Affordability of Land for Housing Purposes in Lucknow City, Uttar Pradesh (India): 1970-1990.
March, 1996. W.P.265
- K. PUSHPANGADAN, G. MURUGAN, K. NAVANEETHAM** Travel Time, User Rate & Cost of Supply: Drinking Water in Kerala, India:
June 1996. W.P.266
- K.J. JOSEPH** Structural Adjustment in India: A Survey of Recent Studies & Issues for Further Research,
June 1996 W.P.267
- D. NARAYANA** Asian Fertility Transition: Is Gender Equity in Formal Occupations an Explanatory Factor?
October, 1996 W.P.268
- D. NARAYANA, SAIKAT SINHAROY** Import and Domestic Production of Capital Goods from Substitution to Complementarity,
October 1996. W.P.269

NEW SERIES

- W.P. 270** **ACHIN CHAKRABORTY** *On the Possibility of a Weighting System for Functionings* December 1996
- W.P. 271** **SRIJIT MISHRA** *Production and Grain Drain in two inland Regions of Orissa* December 1996
- W.P. 272** **SUNIL MANI** *Divestment and Public Sector Enterprise Reforms, Indian Experience Since 1991* February 1997
- W.P. 273** **ROBERT E. EVENSON, K.J. JOSEPH** *Foreign Technology Licensing in Indian Industry : An econometric analysis of the choice of partners, terms of contract and the effect on licensees' performance* March 1997
- W.P. 274** **K. PUSHPANGADAN, G. MURUGAN** *User Financing & Collective action: Relevance sustainable Rural water supply in India.* March 1997.
- W.P. 275** **G. OMKARNATH** *Capabilities and the process of Development* March 1997
- W. P. 276** **V. SANTHAKUMAR** *Institutional Lock-in in Natural Resource Management: The Case of Water Resources in Kerala,* April 1997.

- W. P. 277 PRADEEP KUMAR PANDA** *Living Arrangements of the Elderly in Rural Orissa*, May 1997.
- W. P. 278 PRADEEP KUMAR PANDA** *The Effects of Safe Drinking Water and Sanitation on Diarrhoeal Diseases Among Children in Rural Orissa*, May 1997.
- W.P. 279 U.S. MISRA, MALA RAMANATHAN, S. IRUDAYA RAJAN** *Induced Abortion Potential Among Indian Women*, August 1997.
- W.P. 280 PRADEEP KUMAR PANDA** *Female Headship, Poverty and Child Welfare : A Study of Rural Orissa, India*, August 1997.
- W.P. 281 SUNIL MANI** *Government Intervention in Industrial R & D, Some Lessons from the International Experience for India*, August 1997.
- W.P. 282 S. IRUDAYA RAJAN, K. C. ZACHARIAH** *Long Term Implications of Low Fertility in Kerala*, October 1997.
- W.P. 283 INDRANI CHAKRABORTY** *Living Standard and Economic Growth: A fresh Look at the Relationship Through the Non- Parametric Approach*, October 1997.
- W.P. 284 K. P. KANNAN** *Political Economy of Labour and Development in Kerala*, January 1998.
- W.P. 285 V. SANTHAKUMAR** *Inefficiency and Institutional Issues in the Provision of Merit Goods*, February 1998.
- W.P. 286 ACHIN CHAKRABORTY** *The Irrelevance of Methodology and the Art of the Possible : Reading Sen and Hirschman*, February 1998.
- W.P. 287 K. PUSHANGADAN, G. MURUGAN** *Pricing with Changing Welfare Criterion: An Application of Ramsey- Wilson Model to Urban Water Supply*, March 1998.
- W.P. 288 S. SUDHA, S. IRUDAYA RAJAN** *Intensifying Masculinity of Sex Ratios in India : New Evidence 1981-1991*, May 1998.
- W.P. 289 JOHN KURIEN** *Small Scale Fisheries in the Context of Globalisation*, October 1998.
- W.P. 290 CHRISTOPHE Z. GUILMOTO, S. IRUDAYA RAJAN** *Regional Heterogeneity and Fertility Behaviour in India*, November 1998.
- W.P. 291 P. K. MICHAEL THARAKAN** *Coffee, Tea or Pepper? Factors Affecting Choice of Crops by Agro-Entrepreneurs in Nineteenth Century South-West India*, November 1998
- W.P. 292 PRADEEP KUMAR PANDA** *Poverty and young Women's Employment: Linkages in Kerala*, February, 1999.
- W.P. 293 MRIDUL EAPEN** *Economic Diversification In Kerala : A Spatial Analysis*, April, 1999.

- W.P. 294** **K. P. KANNAN** *Poverty Alleviation as Advancing Basic Human Capabilities: Kerala's Achievements Compared*, May, 1999.
- W.P. 295** **N. SHANTA AND J. DENNIS RAJA KUMAR** *Corporate Statistics: The Missing Numbers*, May, 1999.
- W.P. 296** **P.K. MICHAEL THARAKAN AND K. NAVANEETHAM** *Population Projection and Policy Implications for Education: A Discussion with Reference to Kerala*, July, 1999.
- W.P. 297** **K.C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN** *Impact of Migration on Kerala's Economy and Society*, July, 1999.
- W.P. 298** **D. NARAYANA, K. K. HARI KURUP**, *Decentralisation of the Health Care Sector in Kerala : Some Issues*, January, 2000.
- W.P. 299** **JOHN KURIEN** *Factoring Social and Cultural Dimensions into Food and Livelihood Security Issues of Marine Fisheries; A Case Study of Kerala State, India*, February, 2000.
- W.P. 300** **D. NARAYANA** *Banking Sector Reforms and the Emerging Inequalities in Commercial Credit Deployment in India*, March, 2000.
- W.P. 301** **P. L. BEENA** *An Analysis of Mergers in the Private Corporate Sector in India*, March, 2000.
- W.P. 302** **K. PUSHPANGADAN, G. MURUGAN**, *Gender Bias in a Marginalised Community: A Study of Fisherfolk in Coastal Kerala*, May 2000.
- W.P. 303** **K. C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN**, *Socio-Economic and Demographic Consequences of Migration in Kerala*, May 2000.
- W.P. 304** **K. P. KANNAN**, *Food Security in a Regional Perspective; A View from 'Food Deficit' Kerala*, July 2000.
- W.P. 305** **K. N. HARILAL, K.J. JOSEPH**, *Stagnation and Revival of Kerala Economy: An Open Economy Perspective*, August 2000.
- W.P. 306** **S. IRUDAYA RAJAN**, *Home Away From Home: A Survey of Oldage Homes and inmates in Kerala*, August 2000.
- W.P. 307** **K. NAVANEETHAM, A. DHARMALINGAM**, *Utilization of Maternal Health Care Services in South India*, October 2000.
- W.P. 308** **K. P. KANNAN, N . VIJAYAMOHANAN PILLAI**, *Plight of the Power Sector in India : SEBs and their Saga of Inefficiency* November 2000.
- W.P. 309** **V. SANTHAKUMAR AND ACHIN CHAKRABORTY**, *Environmental Valuation and its Implications on the Costs and Benefits of a Hydroelectric Project in Kerala, India*, November 2000.

- W.P. 310** **K. K. SUBRAHMANIAN. E. ABDULAZEEZ**, *Industrial Growth In Kerala: Trends And Explanations* November 2000
- W.P. 311** **INDRANI CHAKRABORTY** *Economic Reforms, Capital Inflows and Macro Economic Impact in India*, January 2001
- W.P. 312** **N. VIJAYAMOHANAN PILLAI** *Electricity Demand Analysis and Forecasting –The Tradition is Questioned*, February 2001
- W.P. 313** **VEERAMANI. C** *India's Intra-Industry Trade Under Economic Liberalization: Trends and Country Specific Factors*, March 2001
- W.P. 314** **U.S.MISHRA AND MALA RAMANATHAN** *Delivery Complications and Determinants of Caesarean Section Rates in India - An Analysis of National Family Health Surveys, 1992-93*, March 2001.
- W.P. 315** **ACHIN CHAKRABORTY** *The Concept and Measurement of Group Inequality*, May 2001.
- W.P. 316** **K. P. KANNAN AND N. VIJAYAMOHANAN PILLAI** *The Political Economy of Public Utilities: A Study of the Indian Power Sector*; June 2001.
- W.P. 317** **K. J. JOSEPH AND K. N. HARILAL** *India's IT Export Boom: Challenges Ahead*. July 2001.

This work is licensed under a
Creative Commons
Attribution – NonCommercial - NoDerivs 3.0 Licence.

To view a copy of the licence please see:
<http://creativecommons.org/licenses/by-nc-nd/3.0/>