

**FOOD SECURITY IN A  
REGIONAL PERSPECTIVE**  
A view from 'Food Deficit' Kerala

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## ABSTRACT

The paper examines the question of food security viz-a-viz food availability and self sufficiency in production. Given the cropping pattern in Kerala it is unrealistic to expect food self-sufficiency. However, through a pro-poor public policy regime, Kerala has been able to enhance food security considerably. This situation is currently being challenged as a result of a shift in policy of the Central Government with regard to the Public Distribution System in the country. This could lead Kerala to accelerating its fiscal crisis should it decide to continue with the current system of food security.

**JEL Classification:** I131; I138; Q18

**Key Words:** Food Security, Kerala State, Public Distribution System, poverty, public policy

## **Introduction**

The recent shift in policy in the allocation and pricing of food grains, announced by the Central Government through its budget proposals for 2000-01, constitutes a major departure with regard to food security policy in the country. On the one hand, it has sought to restrict the coverage of the subsidised Public Distribution System to what it considers to be the poor. On the other, it has unilaterally increased the price of the foodgrains and other essential commodities to both the poor and the non-poor. One of the hard-hit states of this policy shift is the food grain deficit state of Kerala. In the process, its Public Distribution System, assiduously built up over a long period of time and hailed as a model one, is now facing survival problems. What should have been a model for other states in the matter of food security, given the acute inequalities in accessing food in this country, is now left to fight for its very survival. This paper is an attempt to assess the state-assisted food security system in Kerala to show that it has contributed to improving a wide-range of human development indicators that are closely related to access to food and the alleviation of poverty. At a time when the food security system in Kerala is poised for a quantitative as well as qualitative improvement, the changes in national policy that are patently anti-poor has dealt it a devastating blow.

## **Food Production and Availability**

As in the case of several developmental indicators in India, the state of Kerala presents itself as an interesting case in the matter of food security also. While Kerala finds itself at a lower level in terms of the average intake of food among various states in India, it is in the forefront in such food security indicators as the incidence of under nutrition, poverty, infant mortality and life expectancy. The problem of 'availability' may have compelled Kerala, in a manner of speaking, to concentrate on the distribution of food. But an important aspect of availability is the question of internal production of food. What is Kerala's record in this aspect? Kerala is known as a 'food deficit' state in India because of the wide gap in the consumption and production of foodgrains especially rice which is the staple diet of the population. However, if food is viewed from a broader angle in terms of a food basket consisting of a number of items of daily consumption, a different picture emerges. Of the 15 items for which actual consumption data were calculated, it is found that Kerala produces more than its requirement for two-thirds i.e. 10 items. Table 1 gives the details.

The food consumption data shown in Table 1 was calculated on the basis of household consumption in selected localities in both urban and rural Kerala in 1990-91. The pooled results of these were found to correspond to the consumer expenditure data as per the 45th round of the NSS<sup>1</sup>.

However there are important questions here on the particular items in which Kerala experiences a deficit. This is especially striking for foodgrains, mainly rice. The production of other items, except vegetables, are limited by agro-climatic conditions. The deficit in foodgrain production assumes a greater importance than any other food because cereals (including substitutes) account for more than half of the intake

**Table 1: Major Food Items in Kerala: Requirement and Production (000'tonnes)**

Item	Consumption (gm) @	1991		1992	
		Requirement	Production	Requirement	Production
Rice	2249	3403	1087	3637	953
Other Cereals	228	345	4	369	6
Pulses	108	163	16	175	15
Tapioca	245	371	3803	396	2602
Vegetables	499	755	#143	807	#154
Milk	521	788	1690	843	2246
Sugar	192	291	0	311	0
Tea	20	30	61	32	65
Coffee	8	12	21	13	22
Gur	19	29	52	31	51
Fish	308	466	607	498	851
Meat	60	91	117	97	138
Cooking Oil	59	89	**	95	**
Eggs (Million)	*0.56	847	1550	905	1991
Coconut (Million)	*0.93	1407	4232	1504	5906

# Vegetable, Pine Apple, Sweet Potato, Papaya and drum stick.

@ Quantity consumed per person per week.

\* Egg and Coconut in Numbers.

\*\* Data not available. It can be safely assumed that the production of coconut oil is more than the requirement because coconut production exceeds the consumption by a factor of 3 to 4 as revealed by the last row.

Source: Government of Kerala (1999:25)

of calories (64 percent for rural and 57 percent urban) and around half of the intake of proteins (52 and 48 for rural and urban areas respectively) in Kerala (ORF 1999:51-52). Hence the foodgrain deficit is almost tantamount to food deficit in Kerala.

This state of affairs is reflected in the position of Kerala compared to the country as a whole in respect of the availability and actual average consumption of food. In the country as a whole the area under foodgrains has declined marginally (around two percent) during the nineties but the output increased by around 15 percent. At the beginning of the nineties, when the process of economic reform was started, foodgrain production stood at 176 million tonnes and increased to 203 million tonnes in 1998-99. Kerala experienced a different trend: area under foodgrains declined by 37 percent and the output by 33 percent. Per capita monthly cereal consumption in rural India declined from 15.35 kg in 1971-72 to 13.50 kg in 1991-92. This decline was spread over in most states but in Kerala it increased from 7.99 kg to 10.0 kg (ORF 1999:45-46). The average is however still below the national average. Substitution of coarse grains with fine grains along with a diversification in food consumption is presumed to be the reason for this decline. The increase in Kerala could be the result of an increased availability of rice through the PDS; however, this calls for a detailed investigation.

Although Kerala is one of the five states with the least incidence of poverty (as per the 45th round of NSS 1993-94 figures), the problem of hunger seems to persist. The share of households having two square meals a day was the lowest in Kerala among the 17 states both in 1983 and 1993. The figures for urban Kerala were 86.05 and 92.5 percent whereas for the country as a whole they were 93.25 and 97.7 percent respectively. For rural Kerala the rank is fifth lowest in 1993 with 91.2 percent but higher than West Bengal (81.4), Orissa (83.5), Assam (90.4)



and Bihar (91.0). To this we should also note the relatively low level of calorie intake in Kerala at 1965 kcalories as against 2400 in India for 1993-94. Kerala's position is the third lowest after Tamil Nadu (1884) and Maharashtra (1939). However NNMB data for 1988-90 show that the energy intake in Kerala was 2140 kcalories, also higher than Tamil Nadu (1871) and Maharashtra (2221). It is quite possible that the diversified nature of food availability in Kerala (such as coconut, tapioca, banana, etc) as well as the habit of eating out (also in rural areas) may account for the disparity in figures for Kerala.

All these point to a picture wherein Kerala's position with regard to the availability of food is below the national average leading to the characterisation of the state as a 'food deficit' one. The extent of this deficit has increased over time in Kerala increasing its vulnerability to food security in the event of a shortage or crisis at the national level. In other words, Kerala is perhaps the most vulnerable to any short-term or long-term foodgrain deficit at the national level. This is borne out by the experience of Kerala since its formation in 1956 to the mid-seventies when the country experienced shortfalls in foodgrain production and consequent introduction of restrictions on the movement of foodgrains. The 'food problem' then assumed a critical place in the politics of the state as well as its relations with the central government.

What is the extent of the foodgrain deficit in Kerala? As Table 2 shows Kerala's deficit in rice was 50 to 55 percent from the early fifties to the mid-seventies. Since then the deficit has increased steadily and now stands at more than 75 percent of its requirement. From the national view, Kerala accounted only 1.3 percent of the production in India till the mid-seventies; this has now come down to 0.5 percent. Till the mid-seventies Kerala accounted for only 4 percent of India's population which has declined to 3.3 percent by the end of the century. Given the

**Table 2: Requirement and Availability of Rice (Lakh tonnes)**

Year	Population	Requirement	Own Production		External Supply		Deficit % (5 as % of 3)
	(Lakhs)		Total	Available	PDS	Private	
1	2	3	4	5	6	7	8
1951	135.49	14.22	7.12	6.41	.	7.81	55
1961	169.04	19.77	10.68	9.61	.	10.16	51
1971	213.47	24.96	120.98	11.68	7.37	5.91	53
1981	254.54	29.77	12.72	11.45	10.63	7.69	61
1991	290.99	34.03	10.87	9.78	17.50	6.75	71
1996	311.01	36.37	9.53	8.58	13.50	14.29	76

Note: Ten percent of the production of rice is treated as seed requirement to arrive at Availability.

Source: Government of Kerala (1999:26).

continuing trend in the decline of the area under rice, and the continuing increase in the requirement as a result of population increase, although at a slower rate, the deficit is likely to go up to 80-85 percent of the requirement within the next few years. Latest figures (for 1998-99) show that the rice production in the state has declined to 7.3 lakh tonnes i.e. only around 20 percent of the requirement. *In sum, Kerala has ceased to be a foodgrain producing state of any significance.*

It is not the main theme of this paper to go into the causes of such a rapid decline in foodgrain production in Kerala. The nature and extent of the decline has been studied by several scholars (e.g. George and Mukherjee 1986; Kannan and Pushpangadan 1988 and 1990). The political economy of the decline in rice cultivation is closely related to the larger political economy of development in Kerala (Kannan 1999a)

in which farmers have opted for shifting land out of rice into more remunerative and less labour-absorbing cash crops such as coconut, rubber, banana and others. On the one hand farmers face a high cost regime in cultivation mainly due to high wages (the prices of other inputs being comparable to other states) without a corresponding increase in labour productivity. Since prices are not determined by the Kerala market, farmers do not enjoy any significant price advantage as well. This has resulted in a change in the cropping pattern in Kerala dominated by cash crops, both food and non-food ones. In fact the area under rice which was 30 percent of the Gross Cropped Area in the sixties has declined to around 15 percent in the nineties (see Table 3).

An important question before Kerala is whether it can hope to reduce its gap between food grains production and consumption. An Expert Committee (Govt of Kerala 1999) which examined this issue recently, arrived at the following conclusion:

“Food self-sufficiency for Kerala, in the sense of the state’s ability to produce all the food items to meet its requirements, is not an economically feasible one. This is especially true for its requirement of rice. Therefore the policy of the state should be redefined in terms of *achieving food security rather than food self-sufficiency* (emphasis in original).

“Food security on the other hand refers to the ability of a society to ensure access to food to its population through a variety of means that include both enhancing production and its equitable and fair distribution. The Public Distribution System in Kerala is part of such a food security system. The aim of the government should be to reduce the vulnerability of the state in food security arising

out of external shocks such as a decline in the national-level production and movement restrictions. The government should try to reduce the gap between internal production and the requirements of its population. The Committee recommends that the aim should be to *reduce this gap to 50 per cent from the current level of more than 75 per cent within a period of ten years*. Population projections for Kerala suggest that its total population in the year 2010 will be around 360 lakhs. Thus the total requirement of rice would be around 42 lakh tonnes per annum, estimated at an average daily requirement of 320 gms per person per day as evidenced by some recent consumption pattern studies. This means that the objective should be to increase the production of rice from the current level of 9 [1998 figures] lakh tonnes to 21 lakh tonnes by 2010.

“The broad strategy to achieve this objective should be to increase (i) the total productivity, and (ii) the cropping intensity on paddy lands. Productivity per hectare of land should be increased from the present state average of 2000 to 3500 kg rice. Cropping intensity, defined as the ratio of gross cropped area to net area, should be increased from the current level of 1.5 to 2.0. If a net area of 3.00 lakh hectares (which is less than the original wetland area of 5.74 lakh hectares as per the Basic Tax Register and 3.33 lakh ha utilised for paddy cultivation during 1992-93) can be retained for rice cultivation with a cropping intensity of 2.0, it will have the potential for a gross cropped area of 6 lakh hectares. With a yield rate of around 3500 kg of rice (5250 kg of paddy) per hectare, this will ensure a total

production of 21 lakh tonnes of rice, i.e. *50 per cent of the projected requirement in 2010* (emphasis in original). This warrants a compound annual rate of growth (CARG) of a little more than 7 per cent in rice production in the state, which is achievable provided all the actors involved, the government, the farmers, the farm workers and the scientists, commit themselves to the proposed total package.” (P.114-15)

**Table 3: Percentage Share of Area under Major Crops in Kerala**

Crop	Ternnum Ending		
	1965-66	1985-86	1995-96
Rice	32.1(1)	25.5(1)	16.4(2)
Coconut	22.5(2)	24.7(2)	30.3(1)
Tapioca	8.6(3)	7.8(4)	4.1(5)
Rubber	5.9(4)	10.8(3)	14.5(3)
Pepper	4.0(5)	4.0(6)	6.1(4)
Cashew	3.4(6)	5.0(5)	3.6(6)
Arecanut	2.4(7)	2.1(8)	23.(8)
Banana	1.8(8)	1.8(10)	2.3(8)
Tea	1.6(9)	1.2(11)	1.1(10)
Cardamom	1.2(10)	2.0(9)	1.4(9)
Coffee	0.9(11)	2.3(7)	2.7(7)
Other Crops	15.6	12.8	15.2
All crops (In 000 Hectares)	100.0 2807	2501 100.0	100.0 3052

Note: Figures in brackets show ranking.

Source: Computed from data given in Government of Kerala, *Statistics for Planning*, and *Economic Review*, various issues.

## **Food Security and Access to Food**

Two important factors seemed to have weighed in according a higher priority for food security by the government in Kerala. One is the generalised nature of food shortage, especially that of foodgrains, and the consequent political implications. The other is the people's priority in social development, including social security, so that successive governments are compelled to accord a high priority for food security as part of a wider system of social security for the people. In an otherwise highly contested political terrain in Kerala, the question of food security has enjoyed, for the above reasons, a remarkable degree of political consensus cutting across the ideological spectrum.

Perhaps the most important protective social security in Kerala is the food security system (Kannan 1999b). This has three important components: (i) the PDS for all households, (ii) the supplementary nutrition programme for children in the age groups of 0-4, and 5-12; and (iii) old age pension for the poorer sections.

### ***(i) Public Distribution System***

Although the PDS in Kerala does not have the advantage of such a long period of positive public policy, as in the case of health care, its origins also go back to the pre-independent days when food rationing was introduced in India at the start of the second World War. It took almost a quarter of a century to establish a Public Distribution System in India as part of the public policy on food security (see, e.g. Mooij 1996:69-76). In Kerala the system was expanded during 1965 at a time when the state was undergoing an acute food shortage. This shortage, as we saw earlier, is structural to the Kerala economy in that a major share of value added in the agricultural sector is through the production of cash crops such as coconut, rubber, tea, coffee, spices, etc earning or saving considerable foreign exchange to the national economy. Even at the

best of times, Kerala could not produce more than 50 percent of its food grain requirements. This has been recognised by the central government which agreed to supply food grains (mainly rice and wheat) to meet the requirements of the PDS. Therefore the introduction of PDS in Kerala is part of the overall concern of the state to take care of its food security. As such almost all the households have been brought under the PDS. This resulted in the establishment of a large network of ration shops throughout the state. The relevant details are given in Table 4.

Several studies have underlined that the Kerala PDS is by far the most efficient and egalitarian under Indian conditions where access of the poor to food remains the single most factor in their poverty status. The salient features of the Kerala PDS, which has been showing signs of strain since the policy shift at the centre from the early nineties, may be summarised as follows since they assume much importance in the all India context of the need for an effective PDS.

***Universal coverage:*** The coverage is universal in that 97 per cent of the households have ration cards. In addition, a number of institutions have also been issued ration cards. This has been the case for the last three-and-a-half decades. As of 1998 there were 61 lakhs family ration cards and more than 17 thousand ration permits to institutions.

***Physical access:*** This is an important consideration in the Indian context. If the time and energy required to purchase the ration is significantly higher than what it would otherwise take, it involves an opportunity cost to the families. The widespread network of ration shops in Kerala amounting to more than 14 thousand has ensured physical access in both rural and urban areas. The First Economic Census of India, carried out in 1977, reported that 99 percent of the villages in Kerala have a Fair Price shop within two kms distance; Maharashtra came second with 67 percent. The all India average was just 35 percent.

**Urban bias:** One of the major drawbacks of the Indian PDS is its urban bias, something which is absent in Kerala. As Suryanaraya (1996) pointed out, if anything, it is somewhat rural-biased for the share of rural in total purchase of rice, wheat, sugar and kerosene is higher than its population. In the case of edible oil (70 percent), it is only somewhat lower than its population share (74 per cent).

**Table 4: Public Distribution System in Kerala**

Year	Household Ration Cards (lakhs)	Ration permits to institutions (Nos)	Distribution of			
			Rice ('000 M.Ts)	Wheat ('000 M.Ts)	Sugar * ('000 M.Ts)	Kerosene* ('000 KL)
1975	36.16	7634	531	490	97	107
1985	43.73	7922	1412	110	142	235
1995	56.54	13173	1130	423	150	360
1997	59.52	NA	1608	353	154	372

\* allotment only ; NA = not available

Source: Government of Kerala, *Economic Review*, Various issues

**Economic access:** One of the most powerful arguments for a PDS is the question of economic access. This is because of the unequal distribution of income and purchasing power rendering the poorer sections vulnerable to food security. Given the fundamental constraints (such as distribution of assets and income), the Kerala PDS seems to have addressed this issue effectively in a relative sense. Studies (e.g. UN/CDS 1975; George 1979; Suryanarayana 1996) have revealed that nearly two-thirds of the total purchase of rice of the poor in Kerala come



from PDS. For the whole population this is around half (51 percent for rural and 46 per cent for urban in 1986-87). The picture is similar for sugar but more than 90 percent for wheat for all the population. Consumption of wheat is low but is slowly picking up. It would appear that while the per capita consumption of cereal has increased in Kerala for all population - unlike all India - the increase among the poor is considerably higher than that of the population as a whole. Between 1961-94, the lowest three deciles increased their consumption between 32 and 49 per cent in rural areas and 27 to 59 per cent in urban areas whereas it was only a two per cent increase in rural areas and a six percent decrease in urban areas for the population as a whole (Suryanarayana 1996:23-24). While the average monthly per capita consumption of cereals of the lowest decile was only 52 percent of the average consumption of the population in 1961-62, it was 71 per cent in 1993-94 in rural areas and 45 and 76 per cent for urban areas. One of the facilitating features of the Kerala PDS in terms of economic access is its flexibility in permitting the card holders to purchase their ration in instalments rather than in one lot for a given period.

All these features should have led to a serious consideration of the Kerala PDS for replication in other parts of India where economic and physical access of the poor to food remains a major problem in ensuring their food security and consequently on alleviating poverty. Instead, the recent policy changes of the central government seem to threaten not only the well-established and institutionalised PDS in the food deficit Kerala but even the fragile system in the rest of the country (Suryanaraya 2000). The consequences of the change in the PDS policy of the central government to the Kerala PDS has been dealt with elsewhere in this paper.

***(ii) State Intervention in the Food Market***

In addition to the PDS, the state government intervenes in the market through procurement and distribution of essential commodities with a view to control market prices. This is done through the Kerala State Civil Supplies Corporation which has a network of 61 Taluk Depots, 665 retail outlets, 18 super markets and 29 mobile stores. The prices in these shops are lower than the open market prices by a reasonable margin. In addition, by their strong market intervention to sell essential items during festival seasons such as Onam, Christmas and Ramzan, the state is able to provide a measure of stability to the prices of essential commodities. The total sales of the Corporation rose from Rs.231 crores in 1993-94 to Rs.473 crores in 1997-98. Although there is considerable scope for improving the organisational efficiency of the Corporation (e.g. over staffing), intervention in the food market has helped to check the prices in the private trading sector.

***(iii) Free Noon Meal Scheme for School Children***

While the PDS in Kerala is the most important component of food security for the people in general and poorer sections in particular, provision of cooked food to the vulnerable among the poor (by self selection) has come to assume a crucial role in the larger scheme of social security.

The notable feature of this scheme is that food is distributed free to the targeted groups as against distribution of food grains at subsidised prices under the PDS. This scheme is also characterised by its relatively earlier vintage (introduced in 1961) as well as its spread throughout the state. The scheme provides approximately 410 calories and 15 grams of protein to the school-going children. Till the mid-eighties it was confined to children in the primary classes (I to IV) and in class V wherever these are attached to the primary schools. Since then the scheme

has been extended to children upto Class VII. This roughly corresponds to children in the age group of 6 to 12 years. The food (usually cooked rice and a curry) is usually prepared in the schools for which the services of an assistant is provided for. The Head Teacher is responsible for organising the scheme and the teachers help in arranging the children and serving the food. The budget provides for noon meals during 180 school-days in a year.

As mentioned earlier the scheme also has a pre-independence history. The CDS study on poverty and public policy traced its origins to the mid-1940s when “the princely states of Travancore and Cochin had established a system of free mid-day meals for poor children in the lower primary schools” (UN/CDS 1975:35). However, the scheme in its present form was introduced in 1961, much earlier than the currently well-known scheme introduced in the State of Tamil Nadu in 1982, covering the entire state. Until the mid-seventies commodity aid for the programme was received from a consortium of American voluntary organizations known as CARE (Cooperative for American Relief Everywhere); since then the state government has been providing the commodities required from its stock.

Table 5 gives an idea of the coverage of this programme. During the sixties and until the end of the seventies the coverage of more than 70 percent of the children in the age group (since Kerala had already achieved high enrolment at the primary stage). The declining coverage ratio during the eighties may be interpreted as a sign of the declining incidence of poverty as families pull out their children from the scheme when they no longer consider it as a much-needed relief. When the scheme was extended to children in the upper primary stage, the coverage ratio increased but the nineties have been registering a declining ratio, again a sign of the continuing decline in the incidence of poverty. At

**Table 5 : Free Noon Meal for School Children (in lakhs)**

Year	No: of students in Primary level	No: of students in Upper Primary level	Total eligible students	Students enrolled in the scheme	(5)as % of (4)
1	2	3	4	5	6
1979-80	25.76	-		18.12	70
1984-85	25.01	-		14.81	59
1987-88	25.86	17.90	43.76*	32.00	73
1990-91	25.27	19.00	44.27	20.57	46
1991-92	24.72	19.30	44.02	24.10	55
1992-93	24.21	19.33	43.54	23.42	54
1993-94	23.72	19.08	42.80	24.00	56
1994-95	23.25	18.67	41.92	21.21	51
1995-96	22.51	18.39	40.90	20.86	51
1996-97	21.98	18.13	40.11	23.75	59

Source : GOK, *Economic Review*, various issues

\* Year in which the scheme was extended to students up to Class VII.

the same time, one should note that the coverage ratio is well above 50 percent, almost double the incidence of head-count poverty estimate for Kerala in 1993-94. While the latter provides a clear cut-off mark for poverty, the coverage ratio may be interpreted as a sign of families at the margin of the poverty line, even if somewhat above it, and consider the free noon meal for their children as a welcome relief.

**(iv) *Supplementary Nutrition for Pre-School Children and Nursing Mothers***

A third and equally important component in the food security is the various schemes for providing supplementary, but free, nutrition to

pre-school children and expectant or nursing mothers. This scheme is relatively recent (compared to the above two) in terms of its coverage. The CDS study, while noting the existence of such a programme, stated that “in terms of the quantity involved, this programme is not significant” (UN/CDS 1975:41). However by the late seventies, the programme assumed such a dimension as to cover more than a million pre-school children i.e. close to 40 per cent of the total number of children upto five years of age. This programmes in fact was a combination of a number of schemes such as Special Nutrition Programme(SNP), Applied Nutrition Programme(ANP), Composite Programme for Women and Children(CPWP), World Food Programme supported feeding scheme, One-Meal-a-Day Scheme, Health and Nutrition Programme and the by now well known national programme called Integrated Child Development Scheme (ICDS). Through a series of reorganisations, the ICDS has now emerged as the most important scheme followed by ANP/CPWP and the SNP.

The ICDS was started in the mid-seventies and is intended to provide 300 calories and 8.15 grams of protein per child. For women the provision is 500 calories and 15 grams of protein per day per person. These rates are roughly equivalent to one-fourth of the requirements of the beneficiary groups. This has to be provided for 300 days in a year. In Kerala approximately 84 percent of the beneficiaries are children and the rest expectant/nursing mothers. Table 6 shows that around a million beneficiaries are now covered by the scheme. The scheme is 80 percent supported by financial assistance from the Central Government. The Applied Nutrition and Composite Programme for Women and Children are slightly different in orientation and are also sponsored by the Central Government. The Special Nutrition Programme, started by the state through commodity aid from various agencies, has progressively

been integrated into the ICDS. Its aims are the same as that of ICDS. Currently SNP is in existence in areas which are not covered by the ICDS.

The supplementary nutrition programmes are implemented with the help of a large number of women's welfare organisations called *Mahila Samajams* and other organisations in the state. *Anganawadis* and *Balawadis* have been set up with the help of these organisations. Young, educated women in rural areas - who face the highest incidence of unemployment in Kerala - are recruited as volunteers and receive only a monthly honorarium. The 1999 rate of honorarium was around Rs.600 per month which is equivalent to nine days of the wages of female agricultural labourers. But there is a high social premium attached to a regular job outside the farm and hence this abundant supply at a very low wage. For all these programmes there are about 18,500 centres including 11,268 centres under the ICDS.

**Table 6: Number of Beneficiaries in Nutritional Programme for Children & Women ('000s)**

Year	ICDS	SNP	ANP/ CPWP	WFP	OMD	HNP	Total
1	2	3	4	5	6	7	8
1977-78	57	200		200	-	-	457
1980-81	117	319	610	230	462	165	1903
1991-92	855	47	200	-	-	99*	1201
1995-96	960	-	123	-	-	-	1083

Note: ICDS

\* refers to beneficiaries under the Feeding Centre Programme.

\*Closed in April 1985 as part of streamlining the nutrition programmes.

Source : Government of Kerala, *Economic Review*, various issues.

### ***(V) Oldage Pensions to Destitutes and Rural Labourers***

Unlike the Public Distribution System, this one is targetted only on the poor based on their social or physical vulnerability or their status as labourers in the unorganised sector. The system of giving old-age pension has to come to occupy an important place in the social security provisioning in Kerala because its coverage, progressively being extended to most rural labourers, covered around 60 percent of the old-aged poor in Kerala in 1991 under the two major pension programmes viz, destitutes and agricultural labourers (see Table 7). The four most prominent schemes for oldage pension for the poor are (1) Pension to the Destitutes and Widows, (2) Pension for the Handicapped, (3) Pension for old-aged agricultural labourers, and (4) Pension for the old-aged fish workers. All these have been in existence for more than ten years now with the first one for forty years. The number of pension schemes now in vogue in Kerala is around 17.

The pension schemes can be divided into those that are directly borne by the state out of its budgetary resources and those that are introduced through the creation of social insurance mechanisms such as the setting of Welfare Funds. The four prominent ones mentioned above are directly met by the state. The schemes introduced through the Welfare Funds are yet to find a firm footing. There are problems of collection of contributions from the employers and employees. Although these schemes such as the ones for old-aged coir, cashew and handloom workers are in existence for the last ten years or so, there is no evidence to show that pensions are disbursed on a regular basis.

### **A Preliminary Assessment**

It is well known that social security programmes in Kerala are part of its public policy on economic development in general and poverty alleviation in particular. The emphasis on the latter has led to not only

protective measures but also promotional measures, thus implicitly recognising the importance of what is now called advancing 'entitlement' and 'capabilities'. Such divisions are more conceptual than practical in that those programmes intended as protective measures often have strong promotional implications. Programmes such as health care and supplementary nutrition are cases in point.

An important component of the social security programme in Kerala is that of food security. There are three major components to the food security system in Kerala. One is the Public Distribution System which covers 97 percent of the population. The needs of the poor are taken into account in this universal system by giving a higher level of subsidy. Apart from food, the system also meets almost the entire requirement of kerosene which is a basic need for cooking and/or lighting in poorer households. The second is the supplementary nutrition programme targeted on children; one on pre-school children with some health care elements and the other noon meal for school-going children upto 12 years of age. The third is the old-age and other disability pension for the poor. This started with destitutes and subsequently extended to physically handicapped, widows and rural labourers. This could be treated as food security as they are targeted only on the poor. We have attempted an estimation of the coverage of these food security schemes for 1991 and presented in Table 7. It is interesting to note that the major programmes such as PDS, supplementary nutrition and pension for agricultural workers cover more than the estimated poor below the poverty line. In fact, 92 percent of the population are covered under PDS, 44 percent of pre-school children are covered under the supplementary nutrition programme, 70 percent of the children between 5 and 12 years are covered by the free noon meal scheme and more than the 'main agricultural labourers' above 60 years are covered by the old-age pension scheme. In the case of agricultural labourers, the much



higher coverage is perhaps due to the fact many of them are only marginal agricultural labourers and have to do a variety of jobs in the casual labour market because of the declining employment in agriculture. However, they identify themselves as agricultural labourers during enumeration.

A valid question that could be raised here is: why should there be people below the poverty line in Kerala (the head count varied from 25 percent to 33 percent in 1991) when more than the estimated poor are covered by one or more of the social security schemes. The answer lies in the fact that the benefits are still so meagre as to pull them out of even the officially determined low poverty line. For instance, the PDS is able to cover only two-thirds of the requirements of rice of the poorer households, the calories provided for children cover only one-fourth of their daily requirements and the real value of old age and other pensions has steadily declined over the years as to hardly cover one meal a day. In 1980, the agricultural labourers pension was Rs. 45 per month; in 1991 the real (deflating it with the CPI-AL) value was only Rs. 25.

There are few income/employment generating programmes in Kerala that could come under food security. Those that are implemented are centrally sponsored poverty alleviation programmes such as the IRDP, JRY, etc. The per capita benefit of these programme is so meagre as to make any perceptible dent on poverty (see, e.g., Kannan 1995). In terms of employment generation, they hardly give employment for more than a few days per labourer. Here again, funds have been spread too thinly without being able to make significant reductions in poverty on their own.

**Table 7: Selected Food Security Cover for the Poor in Kerala: Some Estimates for 1991 (Nos in 000s)**

Total Population			Estimated Poor	Beneficiaries	(5) as % of (4)	(5) as % of (3)
1	2	3	4	5	6	7
Male	Female	Total	Public Distribution			
14289	14810	29099	9602	26696	278	92
Children (0-4)			Supplementary Nutrition			
Boys	Girls	Total				
1410	1349	2759	911	1201	132	44
Children (5-12)			Free Noon Meals			
Boys	Girls	Total				
1760	1701	3461	1142	2410	211	70
Old aged (60+)			Old age Pensions			
Male	Female	Total				
1689	1371	2560	845	505.3	60	20
Widows			Widows Pension			
Male	Female	Total				
137	1298	1435	474	129.3	27	9

contd.....

Total Agricultural labourers(60+) Main Workers (Total cultivators + AL 60+ Main Workers)			Pension for Agricultural Labourers			
Male	Female	Total				
108 (298)	40 (55)	148 (353)	87 (151)	344.3	396 (228)	233 (96)
Divorced/Deserted/ Widowed			Pension			
Male	Female	Total				
167	1461	1628	537	51.76	10	3
Physically Disabled			Penison			
Male	Female	Total				
NA	NA	145	48	8.35	17	6

Note: 1. Except for 'Physically Disabled', Columns 1, 2 and 3 are from the 1991 Population Census Reports. For Physically Disabled, the source is the *Report of the National Family and Health Survey: Kerala for 1992-93*. The information pertain to, on a per 1000 population basis, 11.0 for partial blindness, 3.0 for complete blindness and 6.6 for physical impairment. The number of estimated poor is based on an incidence of 33.3 percent as the Head Count Ratio for 1991.

2. The number of estimated poor for 1991 is based on the highest estimate of the available figures. The Planning Commission's Expert Committee estimated the percentage of population below the poverty line in Kerala as 25.43 for 1993-94 while the World Bank estimated it at 33.8 for 1990-91 and 31.07 for 1993-94.

We have taken the 1990-91 estimate and estimated the number of poor by taking the HCR at one-third of the population (33.33%). For agricultural labourers, it is well known that the HCR is much higher than for the general population. For 1993-94 this has been estimated as 58.8 percent for India. We have applied this for Kerala. The HCR for self-employed in agriculture was 31.1 percent in 1993-94.

3. The estimate of the number of physically disabled is from the National Family Health Survey for Kerala in 1992-93.
4. The beneficiaries under children 0-4 refer to the various nutritional care programmes such as the Integrated Child Development Service, Special Nutrition Programme, etc. The number of beneficiaries may include women (as mothers) but is likely to form only a small proportion of the total.
5. The beneficiaries under children 5-12 years refer to the number of children availing of the Free Noon Meal in Schools.
6. The old-aged (60+) beneficiaries refer to those receiving old-age pension from the State. The categories included here are destitute and agricultural labourers.
7. All other beneficiaries refer to those receiving old age or special (as in the case of widows) pension.

### **Performance Indicators of Food Security**

The various state interventions in ensuring food security can only give us an idea of the effort but not their outcome. The latter will have to be examined in the light of the human development indicators that are related to food security. Nutritional status of a population, especially its vulnerable sections, is perhaps the closest to find out the impact of food security measures. However this will have a bearing on more broader and perhaps robust indicators such as life expectancy, infant mortality and, to some extent, on the incidence of absolute poverty. When we examine Kerala's food security in terms of these indicators, its performance is the best (or one among the best achievers). This relatively

better record of Kerala is well known in informed circles but what makes it exceptional is the fact that it scores over states which are economically much more advanced in terms of per capita income, food consumption, urbanisation and industrialisation.

According to a study by the National Nutritional Monitoring Bureau, Kerala ranked first in terms of lowest percentage of undernutrition among children (below four years) among the eight states studied in two time periods viz., 1974-79 and 1988-90. At the same time it improved its position by reducing the incidence of severe under nutrition among children by 59 percent and overall under nutrition by 31 per cent. In 1988-90 Kerala was followed by Tamil Nadu, Maharashtra and the three other southern states. This performance sharply contrasts with Kerala's position in average consumption of nutrients at the household level as the second lowest both in terms of energy and protein. Tamil Nadu, equally interestingly, has the lowest position (see Table 8).

Nearly half the children (51 percent) suffered from malnutrition in India in 1994 and the picture was reportedly the same for adult rural population at 46 percent. The regional pattern was similar to those among children with Kerala recording the lowest (33 percent) followed by Tamil Nadu (37 percent) and higher in Gujarat, Maharashtra and Madhya Pradesh - all above 50 percent (Radhakrishna 1999:96). Commenting on the interstate variations in the malnutrition levels of children under five years, Radhakrishna writes that

“In 1994, the percentage of moderately and severely malnourished children varied between 34 percent in Kerala and 57 percent in Gujarat. Middle-income states such as Kerala, Tamil Nadu and Andhra Pradesh performed better than high-income states like Gujarat and Maharashtra in

terms of the nutritional status of children. Not surprisingly, poorer states such as Madhya Pradesh and Orissa performed the worst. Tamil Nadu could perform better. The National Family Health Survey data also reveal more or less similar patterns as the NNMB data” (*ibid.*96).

However, when all states are compared for another measure of nutritional status viz. Weight-for-Age available from the National Family and Health Survey (1992-93), the ‘southern advantage’, suggested by Radhakrishna, disappears. Kerala retains its first place along with such north-eastern states as Mizoram and Nagaland (at 28 percent), almost half of the national average of 53 percent. Andhra Pradesh (49 percent), Karnataka (54 per cent) and Tamil Nadu (47 per cent) are behind the north-eastern states (except Tripura) as well as the north-western states of Punjab, Haryana Rajasthan and Gujarat and Jammu and Kashmir (see Table 9).

In terms of life expectancy at birth, Kerala (more than 70 years in 1991) is at least ten years higher than the all India (close to 60 years). As Amartya Sen has argued, this measure has to be reckoned as a robust one, for, all efforts at human improvement are intended to achieve a longer and healthy life. Under five and infant mortality rates are also one of the lowest in Kerala outperformed by only two states viz., Mizoram and Nagaland (see Table 9).

The comparatively better performance of some of the north-eastern states in a number of human development indicators and close to Kerala’s achievement in many others warrants a closer study of these societies in terms of their traditional socio-economic organisation and the current dynamics of state and society. While Kerala has received considerable attention and subjected to close examination through several studies, a similar focus on the north-east is lacking. It is my view that the social

**Table 8: Ranking of States According to Nutritional Status and Energy Consumption (NNMB data-1988-90 and 1974-79)**

State	Ranking* According to Nutritional status	Nutritional status of children below four years		Ranking according to energy consumption**	Average consumption of nutrients (Cu/day) (at household level)	
		<-2SD	<-3SD		Energy (kcal)	Protein (g)
Kerala	1(1)	42.5(61.2)	11.8(28.9)	6(7)	2,140(1,978)	52.9(46.4)
Tamil Nadu	2(3)	56.6(66.3)	22.6(34.7)	7(5)	1,871(2,275)	45.6(54.8)
Maharashtra	3(7)	60.1(72.8)	24.0(40.6)	5(3)	2,211(2,300)	61.7(64.5)
Andhra Pradesh	4(4)	60.7(66.9)	28.4(35.6)	4(2)	2,340(2,447)	55.7(59.8)
Karnataka	5(6)	65.9(71.6)	31.1(36.4)	2(1)	2,431(2,932)	65.4(79.3)
Gujarat	6(8)	67.2(74.4)	36.9(43.4)	3(6)	2,375(2,162)	69.3(64.2)
Madhya Pradesh	7(5)	68.9(70.8)	41.8(41.3)	1(4)	2,614(2,283)	82.5(71.5)
Orissa	8(2)	69.5(62.8)	35.7(33.2)	NA	U	U

Note: Figures in parentheses correspond to 1974-79 values.

\* Rank of state with lowest per cent of undernutrition=1

\*\* Rank of the state with highest level of energy consumption=1

U=Not Available; NA=Not Applicable.

<-3SD indicates severe under-nutrition.

<-2SD indicates overall (mild, moderate and severe) under-nutrition.

science community needs to be alerted to what may promise to be another interesting development within the otherwise depressing Indian scenario in human development.

### **Concerns Over Sustaining Food Security: The Impact of Economic Reforms**

One of the consequences of the change in the policy of the central government, arising out of the process of economic reform, has been on the PDS. The decision to limit the PDS subsidy to those 'below the poverty line' from 1997 has meant a decline in the availability of food grains at a subsidised price to the states for their Public Distribution Systems. Secondly, the differing interpretations of those 'below the poverty line' by the central and state governments have led to an additional burden on the states. In Kerala, the state government continued its universal coverage of the PDS but introduced a dual pricing system. Under this system, 42 per cent of the family ration card holders were treated as 'below poverty line'. This 42 per cent was identified as part of the exercise for implementation of the Integrated Rural Development Programme (IRDP). This meant that 17 per cent of the card holders were supplied with foodgrains at a subsidised price over and above the 25 per cent recognised by the central government. In 1998, these card holders were given 10 kg of rice per family (as per the central government norm) at a subsidised price of Rs.3.90 per kg (revised to Rs.4 from January 1999). Any additional requirement of rice for these families was met at a price of Rs.8.60 inclusive of a one rupee subsidy by the state government. All the non-poor card holders were also given rice at this subsidised price of Rs.8.60 per kg. The estimated subsidy for rice alone works out to nearly Rs.188 crores per annum.

The recent hike in issue prices for the PDS announced by the Union Finance Minister in his Budget Speech (29 February 2000) has dealt a



severe blow to the PDS in Kerala threatening its very survival. If that happens, it will be the end of a PDS hailed as a model for other states. The contours of the emerging economics of Kerala's PDS are only beginning to be realised. Take the case of rice which is the single most important item in the PDS. Kerala's PDS distributed, on an average, around 15 lakh tonnes of rice per annum in the nineties. The poor (taking 42 per cent of the 61 lakh family card holders) consume around 8.7 kg of rice per capita per month of which only 5 kg was purchased from the PDS. The state government has announced that it will continue the existing prices (i.e. Rs.4 per kg for the poor and Rs.8.60 for the non-poor) and will continue the universal coverage of the PDS. The issue price of the central government is pegged at 50 per cent of the economic cost for those 'below the poverty line' (BPL) and full cost for those 'above the poverty line' (APL). This works out, including handling charges around Rs.6 per kg for the BPL and Rs.12 per kg for the APL. The subsidy involved will then range from Rs.450 crores per annum assuming 20 kg of rice per poor family per month to Rs. 645 crores assuming 25 kg per poor family per month actually purchased by them.

There are a number of issues involved in the changed context of the role of PDS. First, the strict application of official 'poverty line' will exclude a number of households who are just above but around the poverty line. This calls for a broad band in determining the eligible poor households rather than a strict line. Such an approach is already in existence in the case of the implementation of IRDP. Second, pegging the PDS price to the 'economic cost' will have no incentive for enhancing the efficiency of the Food Corporation of India in storage and handling. In fact, there are already complaints on the inefficiency of the FCI. The question therefore is one of adopting 'cost effective' approaches in handling and storage. Third, and linked to the above point, is the increasing buffer stock and the consequent cost increase to the

**Table 9: State-wise Comparison of Nutritional Status and Mortality Rates of Children Under Four Years (NFHS, 1992-93)**

State	Sex of child	Nutritional status (Weight -for-age) Per cent		Mortality rates*			Death rate** (0-4) Year
		<-3SD	<-2SD	Neonatal	Infant	Under five	
India	M	20.2	53.3	57.0	88.6	115.4	23.0
	F	21.0	48.1	48.1	83.9	122.4	23.6
	T	20.6	52.7	52.7	83.3	118.8	23.3
Kerala	T	6.1	28.5	15.5	23.8	32.0	3.8
Tamilnadu	T	13.3	48.2	46.2	67.7	86.5	17.7
Karnataka	T	19.4	54.3	45.3	65.4	87.3	13.7
Andhra Pradesh	T	15.6	49.1	45.3	70.4	91.2	18.5
Haryana	T	9.0	37.9	38.4	73.3	98.7	22.1
Delhi	T	12.0	41.6	34.9	65.4	83.1	18.6
Punjab	T	14.2	45.9	31.2	53.7	68.0	14.9
Rajasthan	T	19.2	41.6	37.2	72.6	102.6	26.3
Gujarat	T	17.6	50.1	42.3	68.7	104.0	20.6

Maharashtra	T	21.3	54.2	36.4	50.5	70.3	12.1
Goa	T	8.9	35.0	20.6	31.9	38.9	4.9
Madhya Pradesh	T	22.3	57.4	53.2	85.2	130.3	27.3
Bihar	T	31.1	62.6	54.8	89.2	127.5	28.0
Uttar Pradesh	T	24.6	59.9	59.0	99.9	141.3	31.6
Himachal Pradesh	T	12.9	47.0	34.2	55.8	69.1	15.5
Jammu & Kashmir	T	13.8	44.5	31.9	45.4	59.1	15.6
Orissa	T	22.7	53.3	64.7	112.1	131.0	27.3
West Bengal	T	18.6	48.8	51.8	75.3	99.3	18.7
Assam	T	18.7	50.4	50.9	88.7	142.2	32.1
Arunachal Pradesh	T	14.5	39.7	17.5	40.0	72.0	U
Manipur	T	7.2	30.1	25.1	42.4	61.7	U
Meghalaya	T	17.2	45.5	37.8	64.2	86.9	U
Mizoram	T	5.3	28.1	8.3	14.6	29.3	U
Nagaland	T	7.6	28.7	10.0	17.2	20.7	U
Tripura	T	18.6	48.8	43.6	75.8	104.6	U

U=Not Available. \* Mortality rates for India are calculated for the 10 year period preceding the survey while mortality rates for the states are for a five- year period preceding the survey in 1992-93. \*\* The age-specific death rate is based on the annual number of deaths reported during the two-year period prior to theNFHS,1992-93.  
Source: Rai and Jyoti (1996)

government<sup>2</sup>. This calls for determining the basic minimum for buffer and the speedy disposal of the surplus stocks. Fourth, can the PDS sustain itself by excluding the non-poor, a majority of whom are not really rich? If such an exclusion is implemented, what will be the impact on the open market prices and the possibility of speculative price increases of an unexpected nature. The last, but not least, is the question of priorities in reducing government subsidies. Should the PDS be targetted first or should it come last, if at all. The procurement prices, benefitting the rich farmers, have by now become a sort of subsidy. As soon as the cut in PDS subsidies were announced, the central government has enhanced the procurement prices. Is this administered price mechanism the best way to encourage food grains production or should the government concentrate on long term technological and institutional solutions? There are also other implicit and explicit subsidies to the non-poor. Take the case of zero income tax of agricultural income, subsidies to the public sector, etc. Given such a scenario the anti-poor bias in the policy of the central government has come in for sharp criticism.

### **Long Term Solutions for Food Security in Kerala**

The regional perspective on food security, from the point of view of a 'food deficit' state like Kerala, is that a region may remain vulnerable even when national self-reliance is achieved in terms of availability. In Kerala's case, the increasing specialisation of its agriculture towards non-food grain crops has meant a sharp decline in the regional availability of food grains. While the better-off sections in the state are able to take care of their food grain requirements through the open market, a large section of the population, both absolutely poor and nearly-poor, have come to depend on the PDS for a major part of their food grains requirement. Since the state has to depend on the centre for allocation of food grains for the PDS, the system is also vulnerable to changes in

national policy. The long-term solution is to ensure that the extent of dependency is reduced. In the case of Kerala, the potential output of rice is close to 21 lakh tonnes i.e. a little more than half its requirement. Given that the farmers in Kerala are price takers in both the product market and the input market, the solution lies in increasing productivity. This calls for improving the water control measures. It is in this sphere that the state has failed, and miserably so. Scarce public resources invested in medium and major irrigation projects have become sunk costs with project time and cost overruns. A majority of the projects are still in a state of incompleteness for periods ranging from twenty to thirty-five years! Very little work has been done beyond irrigation. Water shed management is yet to make any headway. This has resulted in a very slow diffusion of innovation in agriculture. In fact, the area under high-yielding varieties is on the decline for quite some time. Farmers' attempts at introducing mechanical technology in the context of increasing labour costs have also met with resistance from organised labour.

The establishment of the new Panchayat Raj, since 1995, following the constitutional amendments, has opened up possibilities for strengthening the basic developmental works for agricultural development. Nearly 40 per cent of the plan funds are now being earmarked for the Panchayats. Land and water management at the level of the village, block and district panchayats should have been taken up as a first priority for strengthening the agricultural sector. In the first few years of the working of the new panchayats, the priorities continue to be dominated by welfare programmes for individuals and households (with some honourable exceptions where voluntary organisations worked hard to change priorities in favour of public goods). Distributional programmes with considerable scope for decentralised rent-seeking within a culture of patently partisan politics is what characterises the so called 'People's Planning' in 'progressive' Kerala. A concerted effort is

needed to focus on the problem of developing public and collective goods at the local level especially for the agricultural sector.

### **Concluding Remarks**

There are important lessons to be learnt from the Kerala experience of ensuring food security in the context of food deficit in internal supply as well as the existence of a sizeable section of the population below the poverty line. The policy change at the national level with a view to cut subsidy to the Public Distribution System has however raised questions about the sustainability of Kerala's PDS. The state government has been forced to choose between continuation of the existing PDS with universal coverage involving unsustainable subsidies and restricting the PDS only to the poor with implications for enhancing the state's vulnerability to food security. Either way, it will be a hard choice.

## End Notes

1. The food consumption data presented here is based on a survey of 2000 households (30 percent in urban areas and 70 percent in rural areas) as part of a study on “Socio-Economic Changes in Kerala” conducted during 1990-91 by the Kerala Statistical Institute, Thiruvananthapuram. The results of this survey (for consumption data) were found to be comparable to the results obtained in the 45th round (1998-90) of National Sample Survey. This means that the results of the study carried out in different localities, when pooled together, could give reasonably satisfactory state level estimates. For details, see KSI 1992).
2. The problem has already surfaced within a few months of the announcement of the new policy on Public Distribution System. The Government of India is now saddled with a huge stock of food grains (around 41 million tonnes as against the 25 million it wants to handle) leading to damage due to paucity of storage facilities and an increase in cost of stocking.

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