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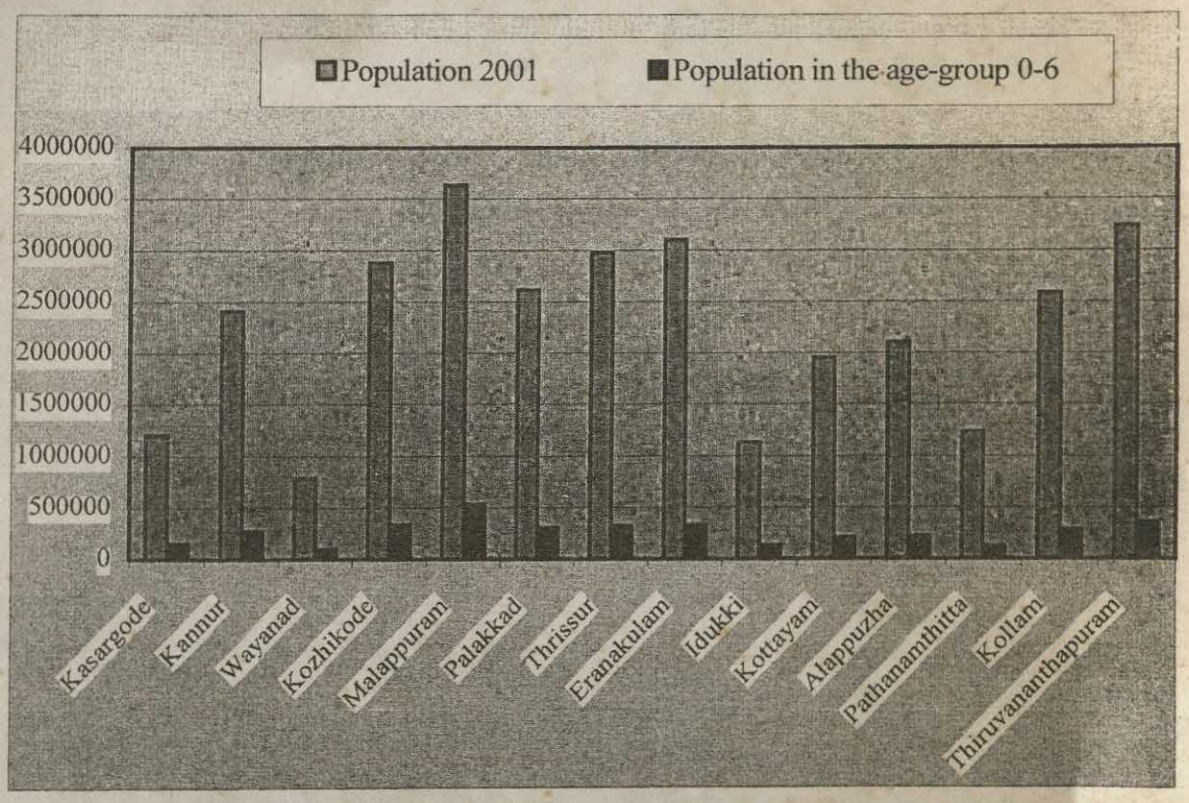

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Department of Economics & Statistics
Government of Kerala

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From Editors Desk

A three day quality improvement programme was conducted for the members of the staff during May 2000 in which all field functionaries in the cadre of Additional District Officers and above were participated. From the deliberations it is felt that publications containing technical subjects should be broughtout by the department. Being the first attempt a publication titled 'Sampling Techniques' is prepared. This will be published in a book form. In order to make available the information quickly it has been decided to publish the same serially in the 'Ecostat News'. The first chapter is appearing in this issue.

Reserve Bank of India officials have appreciated this publication and offered some suggestions to improve further. We are much obliged to them and assure that the modifications suggested would be introduced in the forthcoming issues

A.Meera Sahib,
Director & Chief Editor

Edited printed & published for Department of Economics and Statistics, Government of Kerala

Contents

POPULATION IN THE AGE-GROUP 0-6, NUMBER OF LITERATES AND LITERACY RATE FOR STATE AND DISTRICTS

Sl. No.	States/District	Population 2001	Population in the age-group 0-6	Number of literates*	Literacy rate**
1	2	3	4	5	6
	Kerala	31838619	3653578	25625698	90.92
1	Kasargode	1203342	150907	896367	85.17
2	Kannur	2412365	270200	1988014	92.80
3	Wayanad	786627	100231	587030	85.52
4	Kozhikode	2878498	334924	2351548	92.45
5	Malappuram	3629640	531256	2745398	88.61
6	Palakkad	2617072	302511	1951428	84.31
7	Thrissur	2975440	321910	2456081	92.56
8	Eranakulam	3098378	327058	2589038	93.42
9	Idukki	1128605	129367	885166	88.58
10	Kottayam	1952901	206769	1674592	95.90
11	Alappuzha	2105349	217442	1768261	93.66
12	Pathanamthitta	1231577	122235	1054837	95.09
13	Kollam	2584118	283010	2105396	91.49
14	Thiruvananthapuram	3234707	355758	2572542	89.36

* Literates exclude children in the age-group of 0-6 years who were by definition treated as illiterate in Census of India 2001

** Literacy rate is the percentage of literates to population aged 7 years and above.

Source: Census of India 2001

Population Trends Will Vary Widely

Region	Population (in millions)		% Change	Share of Growth (%)
	1998	2025		
Sub-Sahara	617	1,095	78	24
Middle East	307	523	70	11
Asia	3,358	4,398	31	52
Latin America	508	695	37	9
Europe	798	785	-1.6	0
North America	301	374	24	4

Source: Population Matters

GROWTH RATE SLASHED TO 5.2 P.C.

The slowdown in the economy which was detected last year has now been confirmed by the Central Statistical Organisation (CSO) which has now put out revised estimates to show that the gross domestic product (GDP) grew only 5.2 per cent during 2000-01. The advance estimates put out in February had projected the growth rate to be 6 per cent.

At this level, the GDP growth rate is back to the 1992-93 level when the economy grew at 5.3 per cent. Since then, the growth rates have been high, going up to 7.8 per cent in 1996-97, except for a dip down to 4.8 per cent in 1997-98. The 1999-2000 growth rate was 6.4 per cent.

The sectors which brought down the revised rate as compared to the advance estimates are agriculture, forestry and fishing which grew only 0.2 per cent against the earlier estimates of 0.9 per cent, mining and quarrying which actually grew 3.7 per cent and not 4.5 per cent as estimated earlier and electricity, gas and water supply at 4.7 per cent against 5.6 per cent expected earlier.

Other sectors too actually grew less than expected when the advance estimates were put out. For instance, manufacturing was down to 5.6 per cent against the advance estimates of 6.4 per cent, construction was up by only 5.5 per cent as compared to 8.7 per cent and trade, hotels, transport and communication actually grew by 6.9 per cent against the earlier estimates of a 8 per cent growth. Even financing, insurance, real estate and business services grew by 9.1 per cent against the earlier expectation of 9.6 per cent growth. Only community, social and personal services were up 7.8 per cent against the earlier estimates of 7.6 per cent.

In actual terms, the GDP at factor cost at constant (1993-94) prices in 2000-01 is now estimated at Rs. 12,11,747 crores against Rs. 12,21,174 crores estimated earlier, showing a growth rate of 5.2 per cent against the 6 per cent growth estimated earlier. The quick estimates of GDP during 1999-2000 had put it at Rs. 11,51,991 crores.

The net national income at factor cost (national income) at 1993-94 prices is now estimated at Rs. 10,63,479 crores compared to the earlier estimates of Rs. 10,72,906 crores during 2000-01. This reflects a 5.2 per cent growth over the 1999-2000 national income of Rs. 10,11,224 crores, which was a 6.6 per cent increase over the preceding year's national income.

The per capita income in real terms (1993-94) prices during 2000-01 is estimated to be Rs. 10,561 against the earlier estimate of Rs. 10,654.

The quick estimates for 1999-2000 had put the per capita income at Rs. 10,204. The growth in per capita income in 2000-01 over 1999-2000 is estimated at 3.5 per cent against a 4.8 per cent growth in the preceding year.

The population during 2000-01 has been estimated to be 1,007 million. GDP at factor cost in terms of current prices is estimated at Rs. 19,78,042 crores during 2000-01, showing a growth rate of 10.7 per cent over the quick estimates of GDP for 1999-2000 of Rs. 17,86,459 crores. The net national product at current prices is now estimated to be Rs. 17,65,238 crores as compared to Rs. 15,90,301 crores during 1999-2000, showing an increase of 11 per cent. The per capita income at current prices is estimated at Rs. 17,530 as compared to Rs. 16,047 in 1999-2000. The increase works out to 9.2 per cent.

The CSO has also put out the GDP growth for the fourth quarter of 2000-01 which showed a growth rate of 3.8 per cent only. The GDP in this quarter was Rs. 3, 29,244 crores against Rs. 3,17,235 crores in the corresponding period in 1999-2000.

The growth rates in the four quarters of 2000-01 show that it was 6.1 per cent in the first quarter, 6.2 per cent in the second quarter, 5 per cent in the third quarter and 3.8 per cent in the last quarter

	Revised Estimates 2000-01(in per cent)	Advance Estimates 2000-01(in per cent)
GDP	5.2	6.0
Manufacturing	5.6	6.4
Mining & quarrying	3.7	4.5
Electricity, gas & water supply	4.7	5.6

Source: The Hindu, June 30, 2001.

Foreign Direct Investment Approved by States (August 1991 to January 1997)

Industry	Approvals		Investment	
	Number	Share in total (%)	(Rs. Crore)	Share in Total (%)
1	2	3	4	5
Delhi	512	4.94	17330.4	17.1
Maharashtra	1355	13.08	12676.4	12.5
Karnataka	689	6.65	5493.9	5.4
Tamil Nadu	812	7.84	5468.8	5.4
Madhya Pradesh	192	1.85	5268.3	5.2
West Bengal	271	2.62	5249.5	5.2
Orrisa	77	0.74	3790.8	3.7
Gujarat	548	5.29	3762.5	3.7
Andhra Pradesh	439	4.24	2511.3	2.5
Uttar Pradesh	395	3.81	2444.5	2.4
Haryana	414	4.00	1788.4	1.8
Punjab	105	1.01	321.2	0.8
Rajasthan	193	1.86	605.5	0.6
Kerala	104	1.00	520.9	0.5
Himachal Pradesh	70	0.68	329.7	0.3
Goa	68	0.66	282.4	0.3
Pondichery	52	0.50	252.9	0.2
Bihar	69	0.67	130.7	0.1
Chandigarh	14	0.14	72.5	0.1
Dadar & Nagar Haveli	48	0.46	69.8	0.1
Arunachal Pradesh	2	0.02	11.1	0.0
Jammu & Kashmir	1	0.01	8.0	0.0
Daman Diu	16	0.15	5.7	0.0
Meghalaya	1	0.01	2.5	0.0
Assam	10	0.10	1.5	0.0
Andaman & Nicobar	5	0.05	1.0	0.0
Tripura	1	0.01	0.7	0.0
Lakshdweep	1	0.01	0.5	0.0
Nagaland	1	0.01	0.0	0.0
Unallocated	3894	37.59	32592.7	32.1
Total	10359	100.00	101494.0	100.0

Source: Quarterly Economic Report of the IIPO, July September, 2000.

China puts other emerging markets into shade

While every other stock market in the world is struggling for recovery, the Chinese market is on a dream run with the Shanghai B share index tripling since the beginning of 2001. China has emerged as the leader in market capitalisation in the Asia-Pacific region.

The largest company in terms of market cap, China Mobile, alone has a market cap of $90 billion, around three-fourths of that of the Bombay Stock Exchange's (BSE) total market cap of $130 billion.

The market capitalisation of China's bourses has tripled to over $616 billion in the last two years making it the second largest market in the Asia-Pacific after Japan, and the biggest among all the emerging markets in the world. India on the other hand has now slipped to the seventh position among the emerging markets compared to number five a year back.

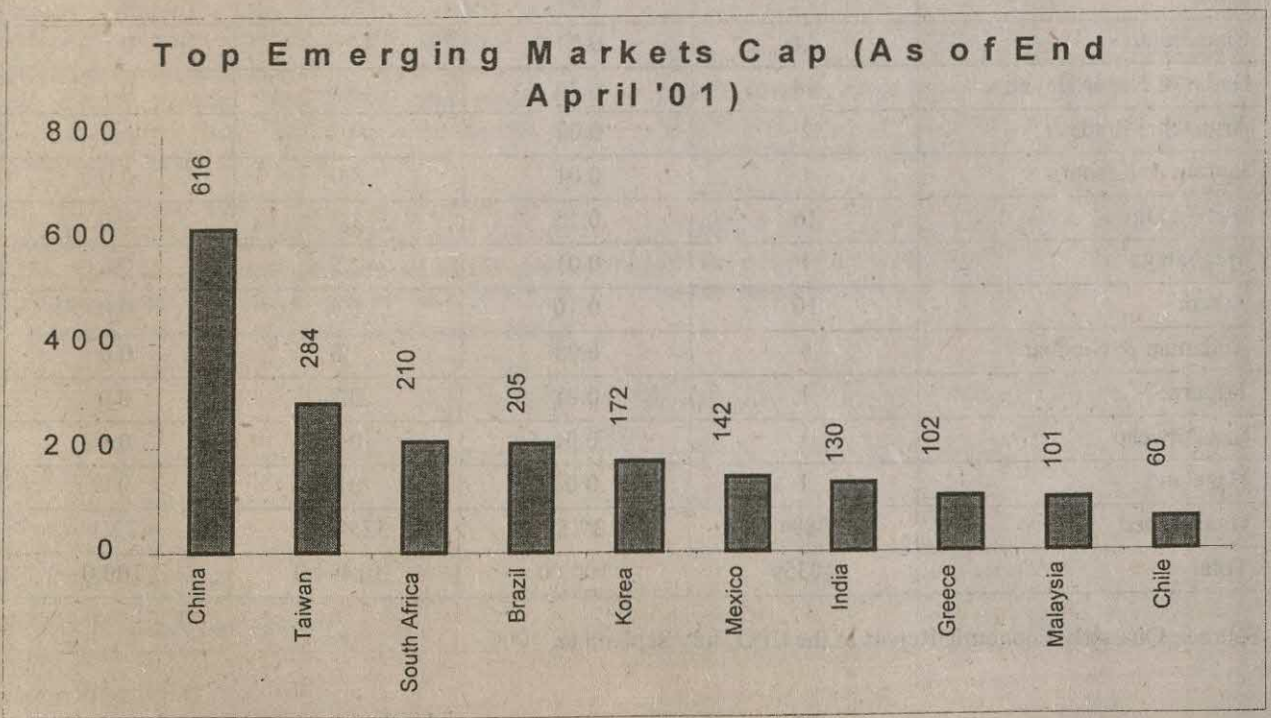
The Shanghai B-share index has gained 160 per cent while the Shenzhen B share index has gained 200 per cent since January 2001. In contrast, among the emerging markets, although Korea and Taiwan have gained slightly, India has lost 10 per cent while Philippines and Indonesia have lost 5 per cent each since the beginning of 2001. The performance of the developed markets has been even worse with the Nasdaq losing 13 per cent, GTSE 7 per cent, Hang Seng and the Singapore Strait times 13 per cent each.

The current run in China mainly started on the morning of February 26, 2001 when China's middle classes turned out in force to queue at their bank branches. Within a couple of hours, some 2,500 savers in Shanghai alone opened new accounts to buy something they hitherto could not: Chinese-listed shares denominated in hard currencies. When, two days later, trading in shares resumed after a one-week suspension, the market soared.

The market in question is for so-called B shares. Until now this was an unglamorous and illiquid category reserved for foreigners.

The Chinese were allowed to invest only in yuan-denominated A shares denied to foreigners. This system had produced tremendous liquidity problems for the B share market while denying Chinese people and institutions the opportunity to invest in some of the country's most promising companies.

Source: Economic Times, June 4, 2001.



Western Ghat Development PROGRAMME of KERALA

1. Introduction:

Western Ghat Development Programme (WGDP) has been implemented in Kerala since 1974-75. The Western Ghat Cell attached to the Planning and Economic Affairs Department in the Secretariat has been coordinating the implementation of this 100% centrally sponsored programme in the state. The influence of WGDP has been remarkable in maintenance and preservation of ecology of the State in general and the "sahyadri" region in particular.

2. Genesis of WGDP

The National Development Council accepted the adoption of area approach for accelerated development of important regions in the country with a view to bringing them on par with the adjoining developed areas. One such region identified by the Planning Commission was the Western Ghats Region, which lies in Maharahstra, Karnataka, Kerala, Tamil Nadu and the then Union Territory of Goa. The question of evolving a suitable plan for integrated development of this region was entrusted to a High Level Committee comprising Chief Ministers of Maharahstra, Karnataka, Kerala, Tamilnadu and the Union Territory of Goa under the chairmanship of Chief Minister of Maharahstra. The committee was entrusted with the task of evolving strategies, policies and Programmes for the integrated development of western Ghat Region. The Committee then considered that the economic well being of the local population should have overriding priority on the development strategy. It was first contemplated to adopt an integrated approach for the development of the Western Ghat region as a whole, which implied implementation of Programmes overlooking state boundaries. The High Level Committee gave emphasis on Programmes in key sectors like Agriculture, Animal Husbandry, Forestry, Diary Development, Minor Irrigation and Roads and various suitable schemes under these sectors were taken up. Since it was very difficult for the High Level Committee to meet very often, a Secretaries Committee consisting of concerned Secretaries of five States met regularly to review the progress etc. In December 1982 the High level Committee and the Secretaries Committee were reconstituted as a Committee of Chief Ministers headed by the Minister for Planning and Deputy Chairman, Planning Commission and the Secretaries Committee headed by the Member Planning Commission in charge of the Hill Areas.

Focus

In every major department viz. Animal Husbandry, Fisheries, Public Instructions, Public works Department, Health, Rural Development etc. one statistical cell is working. The officers and staff of this cell are borne from the Department of Economics and Statistics who are technically competent to collect and analyze the data a received from the respectie sectors. In every issue, in the "Focus:", one major department will be highlighted using the data collected on that particular sector. The fourth in the series is " Western Ghat Development Programme of Kerala "

3. WGDP in Kerala:

The Western Ghats Region in Kerala comprises 31 Taluks encompassing 72% of the total

This report is prepared by Sri. P.C. Jain, Joint Director, Western Ghats Cell

geographical area of the State and around 50% of the State's population. The population of this region increased from 68.8 lakhs to 158.16 lakhs in 2001. Western Ghat region in Kerala covers 450 Km (28.12%) out of the total length of 1600 Kms. This region spread over about 742 villages and 68 Urban centers. The density of population in this region is 515 per sq. km as against the State average of 748 per Sq km, as per 1991 Census. Taluk-wise details of area and population of Western Ghats in the state is furnished in Table-1 of Appendix

4. The problems of Sahyadri

Development Programmes for Western Ghat region in the state had mainly to address the following specific problems.

a) Landslides
b) Soil erosion
c) Flood/Draught
d) Reservoir sedimentation
e) Increasing pressure on land
f) Submergence of forest in Dam Catchments
g) Forest encroachment
h) Clear felling
i) Shifting Cultivation
j) Pollution
k) Eco-destruction

5. The Constraints

The main constraints of developmental activities in Western Ghat region of Kerala (Sahyadri) has been the following;

a) Demographic pressure
b) Over/wrong utilization of natural resources
c) Social aberrations
d) Health risk
e) Decreasing resources
f) Less per capita land availability

6. Western Ghats Development Strategy

The experience of WGDP implementation during the fifth plan emphasized the need for a balance between beneficiary oriented and infrastructure development schemes keeping in mind the vital importance of ecological restoration and conservation were keenly felt. Hence the sixth plan stressed the need for conceiving an integrated strategy for development of hill areas based on sound principles of ecology and economics. The general approach adopted during 7th plan has been of taking up development programmes for Western Ghats areas on watershed basis. The Eighth Plan though continued to be substantially the same as the 7th Plan its general approach was that of taking up integrated development programme on compact watershed basis keeping in view the over-riding priorities of eco-development and eco-restoration as well as the basic needs of the hilly people. A common approach for watershed development activities has been adopted in 9th Plan. Main points of the Common Approach for Watershed Development are as follows;

a. Implementation of Watershed Projects through Watershed Community
b. Facilitation, Co-ordination and Supervision role of Project Implementation Agency
c. Project proposals to be demand driven and should reflect the felt needs of the community
d. Development of Forest Lands in Watershed Areas

7. WGDP and Five Year Plans

The total investment in the country under WGDP during 5th Plan has been Rs.18.25 Crores of which the share of Kerala stood at 4.49 Crores. Investment in the country under WGDP during 6th Plan has been Rs.74.99 Crores of which the share of Kerala stood at 18.64 Crores. WGDP investment during 7th Plan has been Rs.138.64 Crores in India and Rs. 23.50 Crores in the state. Figures for 8th Plan have been Rs.213.33 for India and Rs.42.02 for Kerala. During 9th Plan (up to 31-3-2001) WGDP investment in India is Rs.192.34 Crores and that of Kerala Rs.47.75 Crores. Table 2 of appendix furnishes data on outlay and expenditure on WGDP in the country.

8. Financial progress of WGDP in Kerala at a Glance

Table-below furnishes a consolidated statement of outlay and expenditure of WGDP in the state over the plan periods since inception of the scheme

Outlay & Expenditure for Western Ghat Development Programme in Kerala Since Fifth Five Year Plan (Rs in Crores)

Five Year Plan	Outlay	Expenditure	% of Expenditure	All India Allocation	% of Kerala Share in Allocation
1	2	3	4	5	6
Fifth Plan (1974-1979)	4.88	4.49	92.01	19.92	24.50
Sixth Plan (1980-1985)	18.64	18.64	100.00	76.26	24.44
Seventh Plan (1986-1990)	26.22	23.50	89.63	144.44	18.15
Annual Plan (1990-1991)	6.05	6.12	101.16	37.81	16.00
Annual Plan (1991-1992)	6.05	5.76	95.21	37.81	16.00
Eighth Plan (1993-1997)	42.39	42.02	99.13	214.99	19.72
Ninth Plan (1998-2002)	61.44	47.75	77.72	289.52	21.22
Grand Total	165.67	148.28	89.50	820.75	20.19

9. Monitoring of W.G.D.P in the State

The Western Ghat Cell attached to the Planning & Economic Affairs Department is entrusted with the state level co-ordination and monitoring of this centrally sponsored programme. District level co-ordination of WGDP is done by the District Planning Officers under the direct supervision of the District Collectors. Periodic review meeting of implementing agencies are conducted at district and state levels to monitor the implementation of the programme.

The staffing pattern of Western Ghat Cell is as follows:

1) Joint Director - 1
2) Deputy Director - 1
3) Research Officer - 1
4) Statistical Officer - 1
5) U.D.Compiler - 1
6) L.D.Compiler - 2
7) L.D.Typist - 1
8) Peon - 1
9) Driver - 1

The Joint Director, Research officer, Statistical Officer and the Compilers are drawn from the Department of Economics & Statistics. The Deputy Director is drawn from the Department of Agriculture (Soil Survey) and all other staff are temporary additions from Administrative Secretariat.

The Western Ghat Cell is attached to the Planning & Economic Affairs Department in Administrative Secretariat. The administrative head is Secretary to Government (Planning). The administrative linkage is arranged through Planning (E) section consisting of a Joint Secretary, one Section Officer, one Assistant and a Typist

Table 1 - Area & Population of Western Ghat Region in Kerala

District	Taluk	Area in Sq.Km	Population-(1991 Census)	Provisional Population (2001Census)
1	2	3	4	5
1. Thiruvananthapuram	1. Neyyatinkara	548.7	757866	831643
	2. Nedumangad	928.9	574530	630444
2. Kollam	3. Pathanapuram	1238.8	415247	445502
	4. Kunnathur	138.1	178665	191742
	5. Kottarakkara	551.6	533447	572382
3. Pathanamthitta	6. Kozhencherry	358.6	336498	348659
	7. Adoor	327.2	283494	293484
	8. Ranni	1714.4	209347	216880
4. Kottayam	9. Meenachil	686.6	384594	410695
	10. Kanjirappally	423.7	239464	255634
5. Idukki	11. Thodupuzha	973.3	299540	313639
	12. Devikolam	1774.2	197916	207211
	13. Udumbanchola	1071.4	395678	407087
	14. Peermade	1307.8	184932	193555
6. Eranakulam	15. Muvattupuzha	430.8	301591	331836
	16. Kothamangalam	288.7	184805	202943
	17. Kunnathunad	669.5	389287	427886
7. Trissur	18. Mukundapuram	1328	738658	802773
8. Palakkad	19. Palakkad	720.3	517211	568166
	20. Chittoor	1155.1	408499	448566
	21. Mannarkkad	1185.6	308910	361875
9. Malappuram	22. Eranad	2176.6	1220788	1431167
10. Kozhikode	23. Quilandy	756.9	640965	704080
	24. Kozhikode	1026.6	1373275	1508621
	25. Vadakara	575.6	605701	666372
11. Wayanad	26. Mananthavady	740.08	203701	238348
	27. Vythiri	609.1	213030	249282
	28. Sulthan Batheri	774.8	255397	298918
12. Kannur	29. Thalipparamba	1330.6	668046	715507
	30. Thalasseri	1206	882607	945405
13. Kasargod	31. Hosdurg	989.6	531261	596496
TOTAL		**28007.28**	**14434950**	**15816798**

Table 2 - Western Ghat Development Programme
Plan Outlay for Western Ghat Development Programme in India (Rs in Crores)

Western Ghat Region	5th Plan (1974-79)		6th Plan (1980-85)		7th Plan (1986-90)		Annual Plan 1990-91		Annual Plan 1991-92		8th Plan (1992-97)		9th Plan (1997-02)	
	Outlay	Exp	Outlay	Exp	Outlay	Exp	Outlay	Exp	Outlay	Exp	Outlay	Exp	Outlay	Exp*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kerala	4.88	4.49	18.64	18.64	26.22	23.50	6.05	6.12	6.05	5.76	42.39	42.02	61.44	47.75
Maharashtra	6.45	6.16	24.19	24.06	50.04	49.63	13.50	13.31	13.50	13.42	71.85	72.33	97.91	75.83
Tamil Nadu	3.55	2.64	14.47	14.09	26.00	25.43	7.18	7.25	7.18	7.19	37.6	37.91	51.5	26.76
Karnataka	4.04	3.93	15.18	14.42	36.06	34.14	9.47	8.80	9.47	8.82	52.61	50.37	63.58	32.03
Goa	1.00	1.03	3.78	3.78	6.12	5.95	1.61	1.58	1.61	1.63	10.54	10.7	15.09	9.97
Total	19.92	18.25	76.26	74.99	144.44	138.65	37.81	37.06	37.81	36.82	214.99	213.33	289.52	192.34

(* Figures up to 2000-2001 only)

Table 3 - Western Ghat Development Programmes implemented in Kerala During 5th Five Year Plan(1974-1979)

Sl.No	Programme	Outlay (Rs in Lakhs)	Expenditure (Rs in lakhs)	% Exp
1	2	3	4	5
1	Organisation of Co-operative farm in Attappady	153.00	141.00	92
2	Dairy Development Schemes for Attappady	30.00	26.40	88
3	Dairy Development Schemes for Idukki	140.00	139.25	99
4	Deve.of Ponmudi Hill Station as Tourist Resort	12.00	9.50	79
5	Suganthagiri Cardamom Project of Wayanad	138.00	119.50	87
6	Afforestation&Agl Development of Idukki	7.00	5.80	83
7	Integrated Development of Chakkupallam	3.00	2.85	95
8	Tribal Collective farm of Pookot,Wayanad	2.00	2.00	100
9	Neyyar &Idukki Wild Life Sanctuary projects	3.00	2.80	93
	Total	**488.00**	**449.10**	92

Table 4 - Western Ghat Development Programmes implemented in Kerala During 6th Five Year Plan(1980-1985)

Sl.No	Programme	Outlay (Rs in Lakhs)	Expenditure (Rs in lakhs)	% Exp
1	2	3	4	5
1	Multi-purpose farn at Vallakkuzhy-Palakkad	90.00	89.10	99
2	Orchard at Naickerppady-Palakkad	40.00	40.00	100
3	Oilpalm cultivation in Pathanapuram taluk	68.00	68.00	100
4	Integrated Silvipasture & livestock production-Wyd	160.00	160.00	100
5	Rubber Plantation of State Farming Corporation	550.00	550.00	100
6	Rehabilitation of Tribals in Malakkippara-Trissur	45.00	45.00	100
7	Restiration of degraded forests in Palode regionn	9.00	9.00	100
8	Integrated Development of Kundali Hills-Idukki	13.00	13.00	100
9	Environment improvement of Pookkot lake-Wayanad	20.00	20.00	100
10	Watershed management in Karuvanchal-Kannur	38.00	38.00	100
11	Integrated Development of watersheds (20 Nos)	225.00	224.89	100
12	Devl. Of Chethiyanpara Tribal Colony-TVM	25.00	25.00	100
13	Environment improvement of Kuttiadi-Kozkikode	35.00	35.00	100
14	Imrovement of Communication facilities	45.00	45.00	100
15	Grass Development in Highranges	25.00	25.00	100
16	Orchid Development	40.00	40.00	100
17	Maitenance of Teakwood plantations	35.00	35.00	100
18	Maitenance of Softwoodtions	45.00	45.00	100
19	Bamboo & reed Plantations	45.00	45.00	100
20	Fire protection	65.00	65.00	100
21	Removal of llrathaus parasite from Teak trees	35.00	35.00	100
22	Eco preservation of Forests	105.00	105.00	100
23	Estt.of Arboratum in Western Ghats & Gemplasm	107.00	107.00	100
	Total	**1865.00**	**1863.99**	100

Table 5 - Western Ghat Development Programmes implemented in Kerala During 7th Five Year Plan(1985-1990)

Sl.No	Programme	Outlay (Rs in Lakhs)	Expenditure (Rs in lakhs)	% Exp
1	2	3	4	5
I	**Agriculture & Allied Activities**			
1)	Soil &Water Conservation	513.15	405.95	79
2)	Dairy Development including Pasture Decvelopmemt	92.83	111.31	120
3)	Fisheries Development	18.20	18.20	100
4)	Other Agricultural Programmes including Sericulture	182.05	148.98	82
5)	Forestry & Wild Life	832.45	696.47	84
6)	Plantations Including Rubber Plantations	100.14	148.64	148
7)	Afforestation & Watersheds	32.90	32.73	99
II	**Irrigation & CAD**			
	Minor Irrigation	400.37	344.56	86
III	**Minimum Needs Programme**			
1)	Water Supply	124.43	131.36	106
2)	Sanitation	3.00	1.50	50
3)	Electricity	7.00	0.00	0
4)	Anti-Erosion	23.15	22.00	95
5)	Link-Roads	17.25	17.43	101
6)	Foot Bridges	229.00	233.16	102
IV	**Science Technology &Environment**			
	Studies,Surveys,Evaluation,Eco-System Research Group	24.28	23.20	96
V	**General Economiic Services**			
	Western Ghat Cell	21.75	14.06	65
	Total	**2621.95**	**2349.55**	**90**

Table 6 - Sectorwise Outlay &Expenditure under WGDP during 8th Five Year Plan (Rs in Lakhs)

Scheme/Sector	VIII[th] Plan Period											
	1992-93		1993-94		1994-95		1995-96		1996-97		VIII Plan Total	
	Outlay	Expen diture	Outlay	Expen diture	Outlay	Expen diture	Outlay	Expen diture	Outlay	Expen diture	Outlay	Expen diture
1	2	3	4	5	6	7	8	9	10	11	12	13
Soil Coservation	125.20	123.74	193.71	193.71	201.09	204.00	232.27	232.27	246.65	242.66	998.92	996.38
Horticulture/ Floricul	14.66	14.66	17.00	17.00	25.00	25.00	29.85	29.85	23.35	24.05	109.86	110.56
Dairy Development	40.46	40.44	62.50	62.50	65.97	65.97	68.97	68.97	57.96	58.11	295.86	295.99
Forestry	176.68	183.21	202.18	188.63	197.18	201.43	215.00	208.38	215.00	208.94	1006.04	990.59
Afforestation	11.12	11.33	10.73	10.73	12.00	11.82	9.87	9.87	4.72	5.94	48.44	49.69
Animal Husbandry	0.50	0.50	2.00	2.00	2.00	2.00	9.05	9.05	12.14	12.09	25.69	25.64
Environment							7.00	7.00	3.00	3.00	10.00	10.00
Agriculture Dev	33.18	34.68	56.84	56.84	56.06	56.06	62.70	62.70	62.12	62.82	270.90	273.10
Minor Irrigation	120.33	116.04	175.32	175.32	173.51	167.28	183.24	183.24	221.97	218.50	874.37	860.38
Village &Smll Industries			10.00	10.00	9.94	9.91	16.53	16.53	21.65	20.95	58.12	57.39
Foot Bridges	41.00	40.06	52.46	52.46	54.43	54.43	57.52	53.20	52.70	55.50	258.11	255.65
Water Supply	39.07	40.85	63.00	63.00	40.64	41.45	40.38	40.38	10.50	12.50	193.59	198.18
Non-Conventional Source Of Energy			1.64	1.64	4.10	4.10	6.81	6.81	2.24	2.24	14.79	14.79
WGD.Cell	4.38	4.48	5.62	5.62	6.85	6.85	6.41	6.81	8.00	6.08	31.26	29.84
Survey& Studies	4.00	4.16	13.75	13.75	7.23	5.35	6.90	6.77	10.00	6.52	41.88	36.55
Total	610.58	614.15	866.75	853.20	856.00	855.65	952.50	941.83	952.00	939.90	4237.83	4204.73

Table 7 - Sector wise Outlay &Expenditure under WGDP during 9th Five Year Plan (Rs in Lakhs)

Scheme/Sector	IX th PLAN PERIOD											
	1997-98		1998-99		1999-2000		2000-01		2001-2002		IX Plan Total	
	Outlay	Expen diture	Outlay	Expend iture	Outlay	Expen diture	Outlay	Expend iture	Outlay	Expen diture	Outlay	Expend iture
1	2	3	4	5	6	7	8	9	10	11	12	13
Soil Coservation	243.08	244.37	236.55	238.12	278.11	210.54	244.00	235.95	252.50		1254.24	928.98
Horticulture/ Floricul	19.06	19.06	20.00	20.00	31.50	12.50	20.00	20.00	10.00		100.56	71.56
Dairy Development	62.51	62.55	74.79	73.10	79.76	52.77	47.50	45.22	49.00		313.56	233.64
Forestry	200.00	179.31	220.00	221.48	319.67	237.68	328.00	323.50	349.00		1416.67	961.97
Afforestation	1.80	1.75	1.90	1.90	6.75	4.20	1.00	0.94			11.45	8.79
Animal Husbandry	16.56	16.56	35.26	34.12	43.26	36.40	30.00	28.98	21.00		146.08	116.06
Agriculture Dev	53.65	53.40	58.67	57.04	83.40	57.08	52.00	50.05	60.00		307.72	217.57
Fisheries									10.00			
Minor Irrigation	234.58	235.74	339.03	320.76	213.15	147.50	186.00	178.00	185.00		1157.76	882.00
Village &Smll Industries	25.44	25.44	16.00	16.00	68.20	50.50	77.00	77.00	96.00		282.64	168.94
Foot Bridges	61.99	61.99	100.00	105.10	106.00	71.70	62.00	59.52	75.00		404.99	298.31
Water Supply	10.00	10.00	0.50	0.50							10.50	10.50
Non-Conventional Source Of Energy	3.32	3.32	4.30	4.30	4.87	3.21	1.80	1.70	1.50		15.79	12.53
WGC	7.35	7.22	10.00	9.42	13.00	9.38	23.05	22.00	17.00		70.40	48.02
Survey& Studies	6.66	6.46	13.00	11.90	13.00	18.40	27.50	27.50	27.00		87.16	64.26
Ecorestoration & Sustainable Utilisation Of Plant Resources Of Western Ghats	50.00	50.00									50.00	50.00
Plantation			61.00	61.00	90.83	73.00	91.95	91.20	99.00		342.78	225.20
Maintanance Of Existing Assets Created Under Wgdp							123.00	117.74	50.00		173.00	117.74
Awareness Training							8.20	7.50	11.00		19.20	7.50
otal	996.00	977.17	191.0	1174.74	1351.50	984.86	1323.00	1286.80	1313.00	0.00	6174.50	4423.57

Classification of area under land utilization

(Area in hectares)

District	Total Geographical area	Forest	Land put to non agricultural use	Barren & uncultivable land	Permanent pastures and other gazing land	Land under misc. tree crops
1	2	3	4	5	6	7
Thiruvananthapuram	218600	49861	22564	502	8	69
Kollam	251838	81438	21705	256	3	103
Pathanamthitta	268750	155214	14986	446		90
Alappuzha	136058		22894	192		175
Kottayam	219550	8141	24840	1418		131
Idukki	514962	260907	14982	4136	155	5888
Eranakulam	235319	8123	39855	1120	16	281
Thrissur	299390	103619	32321	494	27	821
Palakkad	438980	136257	43891	3402	1	1794
Malappuram	363230	103417	32533	2932		955
Kozhikode	233330	41386	23436	1393	5	665
Wayanad	212560	78787	11647	338	22	1046
Kannur	296797	48734	28978	3693	16	1929
Kasaragod	196133	5625	19758	8562		4568
State	3885497	1081509	354390	28884	253	18515

Contd.

Classification of area under land utilization

(Area in hectares)

District	Cultivable waste	Fallow other than current fallow	Current fallow	Net area sown	Area sown more than once	Total cropped area
1	9	10	11	12	13	14
Thiruvananthapuram	448	432	930	143786	53705	197491
Kollam	698	949	3384	143302	69309	212611
Pathanamthitta	282	468	3547	93717	18564	112281
Alappuzha	2513	3796	5835	100653	38295	138948
Kottayam	1660	3194	5271	174895	45761	220656
Idukki	3132	1000	1762	223000	41726	264726
Eranakulam	4594	3258	6752	171320	56052	227372
Thrissur	3087	3555	7936	147530	50986	198516
Palakkad	16622	6570	13267	217176	87331	304507
Malappuram	4596	3670	11368	203759	60685	264444
Kozhikode	863	883	2111	162588	69719	232307
Wayanad	1735	949	2743	115293	93768	209061
Kannur	4741	2095	4032	202579	67670	270249
Kasaragod	13308	1319	3228	139765	8770	148535
State	58279	32138	72166	2239363	762341	3001704

The estimates are based on survey conducted in the Revenue land (as per Village Records). Therefore the area under cultivation in forestland is not included.

Source: Agricultural Statistics 1999-2000 - DES

STATEWISE AREA UNDER RUBBER AT THE END OF EACH YEAR (Hectares)

State	50-51	60-61	70-71	71-72	72-73	80-81	90-91	96-97	97-98	98-99	99-00p
1	2	3	4	5	6	7	8	9	10	11	12
Kerala	70365	135809	198424	200474	202761	253784	407821	455566	465282	469924	472900
Tamil Nadu	3025	6256	11712	12077	12677	15513	17150	18209	18470	18631	18659
Karnataka	1415	1659	6525	6767	7059	9004	13995	17324	18475	19323	19565
Tripura					103	2746	17320	21982	22582	24120	25380
Assam				*	*	568	9380	10243	10060	10805	11644
Meghalaya				*	*	923	3466	4345	3757	3958	3683
Nagaland							1300	980	1287	1416	1615
Mizoram						*	950	934	628	671	543
Manipur						216	1203	1214	1308	1401	1610
A&N	110	181	537	663	740	900	960	976	989	931	931
Goa					125	512	970	922	924	939	839
Orissa							245	277	149	358	408
Maharashtra							145	143	305	163	180
Arunachal Pradesh							*	69	128	161	244
West Bengal								62	115	158	285
Andhra Pradesh							178	*	75	82	98
Total	74915	143905	217198	219981	223465	284166	475083	533246	544534	553041	558584
Annual growth rate	1.20	8.68	3.03	1.28	1.58	7.15	3.20	1.75	2.12	1.56	1.00

* Upto 1993-94 total area less than 100 acres omitted, thereafter less than 50 acres omitted.

Source: Indian Rubber Statistics, 2000.

Average Market Price of Rubber – [Natural Rubber Rs. /100 kg]

Month	India (Price of RSS 4 in Kottayam market)	World (FOB price of RSS 3 in Kuala Lumpur market)	Month	India (Price of RSS 4 in Kottayam market)	World (FOB price of RSS 3 in Kuala Lumpur market)
1	2	3			
April 1999	2818	2434	April 2000	3199	3073
May 1999	3190	2474	May 2000	3356	3085
June 1999	3408	2518	June 2000	3248	3004
July 1999	3360	2381	July 2000	3253	2857
August 1999	3318	2364	August 2000	3198	3056
September 1999	2951	2513	September 2000	3122	2975
October 1999	2958	2750	October 2000	3061	3028
November 1999	3036	3133	November 2000	2909	2991
December 1999	2865	2902	December 2000	2867	3037
January 2000	3099	2762	January 2001	2853	2921
February 2000	3133	3180	February 2001	2694	2800
March 2000	3049	3032			
Average (99-2000)	3099	2704			

Source: Indian Rubber Statistics, 2000.

TAPPED AREA, PRODUCTION AND AVERAGE YIELD PER HECTARE OF RUBBER IN DIFFERENT STATES

(Area in hectares, Production in tonnes and Yield per hectare in Kilograms)

Year	KERALA			TAMIL NADU			KARNATAKA		
	Tapped area	Production	Yield	Tapped area	Production	Yield	Tapped area	Production	Yield
1	2	3	4	5	6	7	8	9	10
1960-61	65355	23175	354	3305	2040	617	1483	452	305
1970-71	134103	86773	647	5673	4859	857	1374	519	378
1971-72	142000	95499	673	5943	5140	865	1336	550	412
1972-73	146957	105934	721	6490	5739	884	1465	659	450
1980-81	179980	140320	780	9700	10446	1077	4004	2128	531
1990-91	284960	307521	1079	11873	13645	1149	6957	6665	958
1996-97	335400	512756	1529	12730	18505	1454	9760	11160	1143
1997-98	342420	541935	1583	13000	19175	1475	10365	12150	1172
1998-99	349683	559099	1599	13215	20263	1533	10685	12549	1174
1999-00p	354342	572820	1612	13377	21134	1580	10980	13115	1194

Year	OTHERS			TOTAL		
	Tapped area	Production	Yield	Tapped area	Production	Yield
1	11	12	13	14	15	16
1960-61	110	30	272	70253	25697	366
1970-71	26	20	769	141176	92171	653
1971-72	28	21	750	149307	101210	678
1972-73	50	32	640	154962	112364	725
1980-81	561	206	367	194245	153100	788
1990-91	2623	1784	680	306413	329615	1076
1996-97	7690	7004	911	365580	549425	1503
1997-98	11185	10570	945	376970	583830	1549
1998-99	13517	13134	972	387100	605045	1563
1999-00p	16101	15196	944	394800	622265	1576

Source: Indian Rubber Statistics, 2000.

Chemical Control for Coreid Bug of Coconut

Two dust formulations (fenvalerate and methyl parathion), two granular insecticides (Phorate and carbofuran) and Neem oil cake were evaluated at the Central Plantation Crops Research Institute to control the Coreid bug of coconut. The pesticides were placed in leaf axils of young bunches. Results showed that only Phorate 10g was effective in checking the pest. Quarterly application of 20g of mixture of Phorate and river sand in the ratio of 1:10 in the leaf axil, was found to provide protection from pest incidence. Graded doses of Phorate were also field tested. Phorate at 5g per palm kept in 2 perforated polythene sachets (2.5g per sachet) in the leaf axils of the young bunches provided full protection from pest attack.

Source: Agricultural Situation in India, September 2000, Department of Agriculture and Co-operation, Ministry of Agriculture, Government

FEMALE LABOUR PARTICIPATION ON THE RISE IN TAMIL NADU

Women power is on the rise in Tamil Nadu. Not necessarily in politics but on the economic front too. There has been a steady improvement in the female labour participation and also their entry into the organised labour market thanks mainly to the spread of education, the innate urge to contribute to the family etc.

Increase in women employment is more pronounced in the organised sector. According to 'Tamil Nadu – an economic appraisal document', share of women employed in the organised sector had increased from 14.6 per cent in March 1970 to 21.2 per cent in 1990 and further to 28.6 per cent in 1998.

As on March 1998, out of 25.6 lakhs total work force in both public and private sectors, women workers accounted for 7.32 lakhs. Of this, 4.08 lakhs were in the public sector and 3.25 in the private sector. "Employment makes women self-supporting and helps to improve their economic status", the document points out.

In terms of placement in private sector, it is found to be high in the manufacturing sector followed by community, social and personal services and agriculture. In public sector, community social services group account for 82 per cent of the women employed.

Between 1987-88 and 1993-94, female work participation rate had gone up from 101 lakh to 111.9 lakh workers. Primary sector accounted for 67.3 per cent of the work force followed by manufacturing sector (19 per cent) and tertiary sector (13.7 per cent). Handlooms, beedi rolling and food processing industries account for bulk of the employment.

Employment in trade related activities has declined from 5.7 lakh in 1987-88 to 5.1 lakh in 1993-94. About 2.5 per cent of female workers are engaged in the sector. In community services, about a million women are engaged accounting for a 10 per cent.share. This sector has recorded an impressive growth of 18.5 per cent during the period, the appraisal document pointed out Referring to several policy measures taken in the last two decades with direct focus on emancipation and empowerment of women, the document said the gains have been quite significant in the state. Female literacy rate has risen from 18 per cent in 1961 to 51 per cent in 1991. (It has increased to 64.55 per cent as per 2001 Census).

Enrolment of female children in 1997-98 stood at 94.2 per cent in the primary classes. Female dropout rate declined steeply from 24.5 per cent in 1987-88 to 16.2 per cent in 1997-98 for primary (1 to V Std.) Another favourable indicator is that the life expectancy of women in the state had gone up from 39 years to 63 years between 1991 and 1996.

"The need to empower women economically and make them self reliant was keenly felt. Recognising the advantages that go with their empowerment, multi-dimensional policy measures have been taken by the government to uplift their socioeconomic status," the document pointed out.

"Thrust given to education, health services, employment opportunities, reservation of 33 per cent of jobs in public sector and 30 per cent of seas in law making bodies exclusively for women are a few pointers in the right direction," it observed.

Source: The Economic Times, 19th June, 2001

Demographic Pressures

- *Age structure – the most important demographic feature of a population*
- *Low fertility "ages" the population*
- *Without migration, slow-growth countries face rapid aging of population*
- *Aging will raise three critical issues:*
  - *how to support senior population*
  - *where to find new labour-force entrants*
  - *public* investment

Source: Population Matters

Percentage variation of retail prices of certain essential commodities for the month of March & April 2001

Sl. No.	Name of Commodity	Unit	Prices (in Rs.) 2nd Friday		Percentage variation
1	2	3	4	5	6
	A. RICE - Open Market				
I	Red - Matta	Kg	12.33	12.50	1.38
2	Red - Chamba	Kg	11.96	12.10	1.17
3	White - Andra Vella	Kg	11.89	12.00	0.93
	B. PULSES				
4	Green gram	Kg	30.36	30.89	1.75
5	Black gram split w/o husk	Kg	39.43	39.21	-0.56
6	Dhall(Tur)	Kg	28.08	28.54	1.64
	C. OTHER FOOD ITEMS				
7	Sugar(O.M)	Kg.	15.73	15.67	-0.38
8	Milk (Cow's)	Ltr.	12.96	12.96	0.00
9	Egg Hen's (White lagon)	Dozen	16.53	18.75	13.43
10	Mutton with bones	Kg	113.57	113.57	0.00
11	Tea (Kannan Devan)	1/2 kg	67.64	68.61	1.43
12	Coffee Powder (Brook Bond Gr.Label)	1/2 kg	69.36	69.38	0.03
	D. OIL AND OIL SEEDS				
13	Coconut oil	Kg	33.21	37.25	12.17
14	Groundnut oil	Kg	47.17	48.68	3.20
15	Refined oil (Postman)	Kg.	61.29	60.85	-0.72
16	Gingelly oil	Kg.	49.68	49.43	-0.50
17	Coconut without husk	100 nos	342.14	363.57	6.26
	E. SPICES AND CONDIMENTS				
18	Corriandar	Kg.	35.68	39.50	10.71
19	Chillies dry	Kg.	37.68	37.21	-1.25
20	Onion small	Kg.	12.74	11.29	-11.38
21	Tamarind without seeds loose	Kg.	24.50	23.79	-2.90
	F. TUBERS				
22	Chenai	Kg.	6.89	7.86	14.08
23	Tapioca Raw	Kg.	5.11	4.96	-2.94
24	Potato	Kg.	10.87	12.24	12.60
25	Colocassia	Kg.	13.14	15.00	14.16
	G. VEGETABLES				
26	Onion big	Kg.	6.18	6.44	4.21
27	Brinjal	Kg.	10.36	11.00	6.18
28	Cucumber	Kg.	7.64	8.21	7.46
29	Ladies Finger	Kg.	11.64	14.29	22.77
30	Cabbage	Kg	7.43	10.71	44.15
31	Bittergourd	Kg.	14.07	15.57	10.66
32	Tomatto	Kg.	11.43	11.00	-3.76
33	Chillies green	Kg.	15.71	23.07	46.85
34	Banana green	Kg.	12.86	12.86	0.00
35	Plantain green	Kg.	7.93	8.25	4.04
	H. MISCELLANEOUS ITEMS				
36	Washing Soap (501 Half Bar)	1/2 Bar	6.70	7.30	8.96
37	Toilet Soap - Lux	100 gm	10.54	10.82	2.66
38	Toothpaste - Colgate	100 gm	28.43	28.64	0.74
39	Cement - Sankar (Ord.Paper Bag)	each	200.83	193.91	-3.45

Monthly retail prices of certain essential commodities for the last one year

Sl. No.	Name of commodity	Unit	Retail prices on the second Friday of											
			Jul 2000	Aug-2000	Sep 2000	Oct 2000	Nov 2000	Dec 2000	Jan 2001	Feb 2001	Mar 2001	Apr 2001	May 2001	Jun 2001
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	(A) RICE Open Market													
1	Red - Matta	Kg	13.56	13.43	13.45	13.30	13.12	13.26	13.20	13.05	12.91	12.33	12.33	12.50
2	Red - Chamba	Kg	13.50	13.28	13.33	13.28	12.83	13.08	13.19	13.15	12.63	12.11	11.96	12.10
3	White - Andra Vella	Kg	12.75	12.43	12.39	12.32	12.32	12.66	12.61	12.42	12.22	11.98	11.89	12.00
	(B) PULSES													
4	Green gram	Kg	29.04	28.64	28.11	25.93	25.46	24.18	25.93	26.83	27.81	29.71	30.36	30.89
5	Black gram split w/o husk	Kg	41.69	40.14	40.21	40.43	41.14	42.43	42.25	38.23	38.37	39.11	39.43	39.21
6	Dhall (Tur)	Kg	30.54	30.31	30.04	29.46	29.31	29.92	29.17	28.02	28.48	28.15	28.08	28.54
	(C) OTHER FOOD ITEMS													
7	Sugar(O.M)	Kg.	15.59	15.96	16.54	15.51	15.41	15.26	15.07	14.73	14.95	16.15	15.73	15.67
8	Milk (Cow's)	Ltr.	13.04	13.04	13.04	13.04	12.93	12.93	12.93	12.92	12.92	12.96	12.96	12.96
9	Egg Hen's (White lagon)	Dozen	19.13	16.55	17.71	16.99	17.59	18.30	19.71	17.46	16.28	14.53	16.53	18.75
10	Mutton with bones	Kg	110.00	110.00	110.00	110.00	110.00	110.00	112.14	111.43	112.14	112.86	113.57	113.57
11	Tea (Kannan Devan)	1/2 kg	64.79	65.50	65.93	66.68	66.54	66.71	66.89	66.93	66.93	66.93	67.64	68.61
12	Coffee Powder (Brook Bond Gr.Label)	1/2 kg	70.02	70.05	70.02	69.96	69.98	69.68	69.61	69.86	69.50	69.48	69.36	69.38
	(D) OIL AND OIL SEEDS													
13	Coconut oil	Kg	36.46	37.46	37.89	34.18	34.75	36.93	34.64	35.35	36.50	35.14	33.21	37.25
14	Groundnut oil	Kg	48.80	49.86	49.73	50.05	48.77	49.35	47.95	47.00	47.78	48.20	47.17	48.68
15	Refined oil (Postman)	Kg.	59.40	61.83	61.83	61.43	61.29	62.00	61.34	61.34	61.52	61.25	61.29	60.85
16	Gingelly oil	Kg.	49.15	50.57	49.50	49.86	48.75	49.96	48.86	49.73	49.35	49.71	49.68	49.43
17	Coconut without husk	100 nos	373.08	360.36	372.50	344.64	348.57	373.93	353.57	364.23	376.54	358.57	342.14	363.57

Contd.

Monthly retail prices of certain essential commodities for the last one year (Contd.)

Sl. No	Name of commodity	Unit	Retail prices on the second Friday of											
			Jul 2000	Aug-2000	Sep 2000	Oct 2000	Nov 2000	Dec 2000	Jan 2001	Feb 2001	Mar 2001	Apr 2001	May 2001	Jun 2001
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	(E). SPICES AND CONDIMENTS													
18	Corriandar	Kg.	33.85	34.43	33.45	32.70	33.07	34.59	37.00	37.42	36.08	35.57	35.68	39.50
19	Chillies dry	Kg.	42.54	42.14	41.29	40.90	40.76	41.69	41.15	39.81	36.58	37.71	37.68	37.21
20	Onion small	Kg.	12.62	9.65	10.74	11.32	11.26	11.24	12.13	11.08	11.46	11.53	12.74	11.29
21	Tamarind without seeds loose	Kg.	29.08	28.50	27.79	27.43	27.21	26.86	26.43	25.85	25.31	25.32	24.50	23.79
	(F). TUBERS													
22	Chenai	Kg.	7.77	7.43	7.29	7.36	6.82	6.82	6.93	6.85	6.77	6.79	6.89	7.86
23	Tapioca Raw	Kg.	5.46	5.39	5.44	5.39	5.68	5.64	5.75	5.58	5.38	5.36	5.11	4.96
24	Potato	Kg.	8.85	8.79	8.25	8.01	8.35	8.71	8.36	7.55	7.69	7.84	10.87	12.24
25	Colocassia	Kg.	14.17	14.55	14.00	13.69	13.92	12.93	12.29	12.23	12.38	13.71	13.14	15.00
	(G). VEGE-TABLES													
26	Onion big	Kg.	6.23	5.79	6.32	7.44	10.64	10.89	10.06	8.28	7.23	6.74	6.18	6.44
27	Brinjal	Kg.	10.00	9.29	11.14	13.07	10.71	12.50	11.29	11.00	10.15	9.57	10.36	11.00
28	Cucumber	Kg.	6.85	7.71	9.64	9.43	8.86	8.43	7.36	7.69	7.62	7.00	7.64	8.21
29	Ladies Finger	Kg.	10.15	10.50	14.29	11.57	10.64	11.29	12.71	11.38	11.15	11.64	11.64	14.29
30	Cabbage	Kg	9.23	8.64	8.29	9.57	11.14	10.57	8.57	7.69	8.00	7.36	7.43	10.71
31	Bittergourd	Kg.	15.69	15.14	21.43	17.64	14.86	14.79	13.71	12.15	11.92	12.71	14.07	15.57
32	Tomatto	Kg.	9.08	7.64	10.07	13.21	16.43	11.00	7.71	8.08	7.15	7.86	11.43	11.00
33	Chillies green	Kg.	14.77	13.86	17.43	13.93	14.07	15.00	12.79	13.15	14.00	14.50	15.71	23.07
34	Banana green	Kg.	11.96	14.18	17.07	16.00	15.43	13.18	13.00	12.12	10.62	9.46	12.86	12.86
35	Plantain green	Kg.	7.92	9.11	10.07	10.29	9.71	9.36	9.39	9.81	9.38	7.93	7.93	8.25
	(H). MISCE-LLANEOUS ITEMS													
36	Washing Soap (501 Half Bar)	1/2 Bar	7.20	7.22	7.25	7.25	7.25	7.23	7.23	7.23	6.96	6.88	6.70	7.30
37	Toilet Soap - Lux	100 gm	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.54	10.82
38	Toothpaste - Colgate	100 gm	27.00	27.00	26.89	27.00	27.00	27.29	27.50	27.50	27.61	27.93	28.43	28.64
39	Cement - Sankar (Ord.Paper Bag)	each	172.38	186.46	190.95	190.50	195.25	197.55	202.59	204.38	204.38	203.96	200.83	193.91

Rupee against Dollar (RBI Rate) January – June 2001

Date	Value (in Rs.)
02/01/01	46.66
16/01/01	46.53
01/02/01	46.41
15/02/01	46.60
03/03/01	46.57
20/03/01	46.69
04/04/01	46.64
19/04/01	46.84
28/04/01	46.86
09/05/01	46.81
15/05/01	46.90
22/05/01	46.96
29/05/01	46.94
02/06/01	47.05
09/06/01	46.96
16/06/01	47.00
23/06/01	47.01

Gold Price – January to June – 2001

Date	London (dollar per oz.)	Bombay (Rs. for 10 gm)	Alappuzha (Rs. for 10 gm)
1	2	3	4
02/01/01	273.20	4550.00	4280.00
13/01/01	264.00	4450.00	4220.00
03/02/01	268.30	4450.00	4190.00
17/02/01	256.90	4280.00	4130.00
06/03/01	262.40	4230.00	4020.00
21/03/01	262.50	4280.00	4000.00
04/04/01	257.70	4215.00	3960.00
19/04/01	260.00	4260.00	4040.00
09/05/01	266.20	4330.00	4070.00
26/05/01	279.20	4560.00	4280.00
02/06/01	266.70	4350.00	4120.00
09/06/01	267.45	4350.00	4120.00
23/06/01	273.10	4425.00	4140.00

Consumer Price Index for Industrial Workers

(Base 1982 = 100)

States	Centre	Consumer Price Index Number for the month of										
		Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01
Southern States												
1. Kerala	1.Aluva	449	447	442	446	448	443	445	448	449	448	449
	2. Mundakayam	459	455	449	453	456	451	452	451	450	448	445
	3. Kollam	448	441	441	447	450	453	452	456	464	463	448
	4.Thiruvananthapuram	515	522	506	506	498	490	490	499	500	503	503
	Average	**468**	**466**	**460**	**463**	**463**	**459**	**460**	**464**	**466**	**466**	**461**
2. Tamilnadu	1. Chennai	476	476	475	475	486	489	483	479	471	470	472
	2. Coimbatore	437	437	432	431	439	441	440	436	432	432	436
	3. Coonoor	436	434	428	431	438	438	434	431	430	429	430
	4. Madurai	440	440	441	440	452	458	456	446	445	441	443
	5. Salem	433	432	434	429	441	435	442	441	435	431	428
	6.Tiruchirappalli	476	481	476	483	498	502	478	475	467	464	462
	Average	**450**	**450**	**448**	**448**	**459**	**461**	**456**	**451**	**447**	**445**	**445**
3. Andra Pradesh	1. Gudur	428	440	437	442	447	446	442	437	434	436	426
	2. Gundur	439	439	441	441	425	426	420	415	416	423	426
	3. Hyderabad	422	422	422	423	428	427	426	427	424	426	427
	4. Visakhapatanam	438	436	436	437	441	442	431	433	430	439	436
	5. Warangal	446	452	443	443	441	445	443	444	444	446	449
	Average	**435**	**438**	**436**	**437**	**436**	**437**	**432**	**431**	**430**	**434**	**433**
4. Karnataka	1. Bangalore	423	423	427	427	439	440	431	431	430	429	433
	2. Belgaum	477	479	473	475	472	468	471	473	466	465	469
	3. Hubli Dhanwar	436	439	434	433	438	435	436	437	436	441	442
	4. Meccara	460	454	454	454	463	464	460	456	453	451	450
	Average	**449**	**449**	**447**	**447**	**453**	**452**	**450**	**449**	**446**	**447**	**449**
5. Pndicherry	1. Pndicherry	476	479	474	474	488	486	495	491	480	473	464

Contd.

Consumer Price Index for Industrial Workers (Contd.)

States	Centre	Consumer Price Index Number for the month of										
		Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01
Northern States												
1. Delhi	1. Delhi	520	524	520	516	522	519	513	513	513	518	526
2. Maharastra	1. Mumbai	513	512	507	507	513	516	512	517	515	517	521
	2. Nagpur	456	475	474	472	475	478	476	477	470	467	476
	3. Nasik	456	471	474	476	483	490	489	496	487	489	488
	4. Pune	491	497	503	501	503	509	511	511	505	504	507
	5. Solapur	468	483	481	468	462	464	460	459	455	457	458
	Average	**477**	**488**	**488**	**485**	**487**	**491**	**490**	**492**	**486**	**487**	**490**
3. Haryana	1. Faridabad	447	452	447	450	444	446	442	444	448	455	463
	2. Yamuna Nagar	416	416	415	416	422	422	419	419	418	420	422
	Average	**432**	**434**	**431**	**433**	**433**	**434**	**431**	**432**	**433**	**438**	**443**
4. West Bengal	1. Asansol	410	415	418	419	422	420	416	406	401	407	413
	2. Darjeeling	382	380	386	389	393	393	386	386	384	380	383
	3. Durgapur	461	473	479	487	501	499	489	481	476	486	491
	4. Haldia	476	479	482	483	497	495	485	481	480	491	491
	5. Howrah	495	501	505	512	530	522	510	500	498	501	509
	6. Jalpaiguri	393	405	406	406	410	404	400	393	390	395	402
	7. Kolkata	440	450	456	465	484	480	461	456	450	461	465
	8. Raniganj	379	378	379	379	389	397	388	386	381	384	390
	Average	**430**	**435**	**439**	**443**	**453**	**451**	**442**	**436**	**433**	**438**	**443**
5. Chandigarh	1. Chandigarh	457	463	462	466	467	471	471	472	473	474	481
6. Uttar Pradesh	1. Agra	401	402	403	404	405	410	404	403	403	408	416
	2. Ghaziabad	447	450	451	452	454	455	450	457	455	462	465
	3. Kanpur	427	433	431	429	431	431	428	430	435	440	442
	4. Saharaupur	398	401	411	412	410	407	405	403	403	406	410
	5. Varanasi	468	473	466	465	467	465	457	451	457	466	470
	Average	**428**	**432**	**432**	**432**	**433**	**434**	**429**	**429**	**431**	**436**	**441**
7. Madhya Pradesh	1. Balaghat	386	390	390	390	391	390	390	393	392	395	397
	2. Bhopal	452	455	452	449	456	457	457	461	469	468	470
	3. Indore	445	449	448	446	451	453	456	453	453	455	468
	4. Jabalpur	451	454	442	440	443	448	453	449	446	446	446
	Average	**434**	**437**	**433**	**431**	**435**	**437**	**439**	**439**	**440**	**441**	**445**
	All India	**442**	**445**	**443**	**444**	**449**	**450**	**446**	**445**	**443**	**445**	**448**

Consumer Price Index and % Variations of Index for Industrial Workers

State	Centre	CPI for the month of		% variation	CPI for the month of		% variation
		Mar-00	Mar-01		Apr-00	Apr-01	
Southern States							
1. Kerala	1. Aluva	437	448	2.52	439	449	2.28
	2. Mundakayam	453	448	-1.10	450	445	-1.11
	3. Kollam	454	463	1.98	450	448	-0.44
	4. Thiruvananthapuram	490	503	2.65	496	503	1.41
	Average	**459**	**466**	**1.51**	**459**	**461**	**0.53**
2. Tamilnadu	1. Chennai	467	470	0.64	473	472	-0.21
	2. Coimbatore	422	432	2.37	426	436	2.35
	3. Coonoor	434	429	-1.15	432	430	-0.46
	4. Madurai	433	441	1.85	423	443	4.73
	5. Salem	431	431	0.00	436	428	-1.83
	6.Tiruchirappalli	472	464	-1.69	480	462	-3.75
	Average	**443**	**445**	**0.34**	**445**	**445**	**0.14**
3. Andra Pradesh	1. Gudur	434	436	0.46	442	426	-3.62
	2. Gundur	426	423	-0.70	438	426	-2.74
	3. Hyderabad	412	426	3.40	422	427	1.18
	4. Visakhapatanam	432	439	1.62	436	436	0.00
	5. Warangal	424	446	5.19	435	449	3.22
	Average	**426**	**434**	**1.99**	**435**	**433**	**-0.39**
4. Karnataka	1. Bangalore	415	429	3.37	422	433	2.61
	2. Belgaum	470	465	-1.06	473	469	-0.85
	3. Hubli Dhanwar	429	441	2.80	435	442	1.61
	4. Meccara	460	451	-1.96	458	450	-1.75
	Average	**444**	**447**	**0.79**	**447**	**449**	**0.41**
5. Pndicherry	1. Pndicherry	467	473	1.28	475	464	-2.32

Contd..

Consumer Price Index and % Variations of Index for Industrial Workers

State	Centre	CPI for the month of		% variation	CPI for the month of		% variation
		Mar-00	Mar-01		Apr-00	Apr-01	
Northern States							
1. Delhi	1. Delhi	512	518	1.17	517	526	1.74
2. Maharastra	1. Mumbai	491	517	5.30	501	521	3.99
	2. Nagpur	447	467	4.47	451	476	5.54
	3. Nasik	446	489	9.64	452	488	7.96
	4. Pune	483	504	4.35	488	507	3.89
	5. Solapur	467	457	-2.14	465	458	-1.51
	Average	**467**	**487**	**4.32**	**471**	**490**	**3.98**
3. Haryana	1. Faridabad	437	455	4.12	441	463	4.99
	2. Yamuna Nagar	403	420	4.22	409	422	3.18
	Average	**420**	**438**	**4.17**	**425**	**443**	**4.08**
4. West Bengal	1. Asansol	401	407	1.50	405	413	1.98
	2. Darjeeling	369	380	2.98	376	383	1.86
	3. Durgapur	448	486	8.48	456	491	7.68
	4. Haldia	482	491	1.87	480	491	2.29
	5. Howrah	477	501	5.03	484	509	5.17
	6. Jalpaiguri	392	395	0.77	397	402	1.26
	7. Kolkata	434	461	6.22	434	465	7.14
	8. Raniganj	369	384	4.07	376	390	3.72
	Average	**422**	**438**	**3.86**	**426**	**443**	**3.89**
5. Chandigarh	1. Chandigarh	452	474	4.87	456	481	5.48
6. Uttar Pradesh	1. Agra	407	408	0.25	407	416	2.21
	2. Ghaziabad	446	462	3.59	446	465	4.26
	3. Kanpur	430	440	2.33	426	442	3.76
	4. Saharaupur	399	406	1.75	403	410	1.74
	5. Varanasi	470	466	-0.85	470	470	0.00
	Average	**430**	**436**	**1.41**	**430**	**441**	**2.39**
7. Madhya Pradesh	1. Balaghat	373	395	5.90	378	397	5.03
	2. Bhopal	449	468	4.23	452	470	3.98
	3. Indore	436	455	4.36	452	468	3.54
	4. Jabalpur	443	446	0.68	451	446	-1.11
	Average	425	441	3.70	433	445	2.77
	All India	434	445	2.53	438	448	2.28

Consumer Price Index for Agricultural Labourers

Base 1986-87 = 100

Sl. No	Centre	Index for		% Variation	Index for		% Variation
		Apr-00	Apr-01		May-00	May-01	
Southern States							
1	Kerala	315	320		323	323	
2	Tamilnadu	302	295	-2.32	304	300	-1.32
3	Anthrapradesh	316	309	-2.22	325	312	-4.00
4	Karnataka	313	294	-6.07	318	299	-5.97
Northern States							
5	Maharashtra	303	295	-2.64	308	298	-3.25
6	Haryana	310	316	1.94	310	318	2.58
7	West Bengal	292	295	1.03	291	296	1.72
8	Uttar Pradesh	304	303	-0.33	301	303	0.66
9	Madhya Pradesh	311	308	-0.96	312	309	-0.96
10	Assam	322	321	-0.31	326	323	-0.92
11	Bihar	300	278	-7.33	295	278	-5.76
12	Gujarat	315	315	0.00	319	320	0.31
13	Himachalpradesh	294	292	-0.68	295	289	-2.03
14	Jammu & Kashmir	325	326	0.31	333	330	-0.90
15	Manipur	314	312	-0.64	318	312	-1.89
16	Meghalaya	341	345	1.17	343	344	0.29
17	Orissa	311	299	-3.86	316	298	-5.70
18	Punjab	317	314	-0.95	318	318	0.00
19	Rajastan	314	310	-1.27	315	312	-0.95
20	Tripura	337	309	-8.31	337	315	-6.53
	All India	**307**	**301**	**-1.95**	**310**	**303**	**-2.26**

Indices (All India) for the last 12 months

Base Year	Indices	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00
1	2	3	4	5	6	7	8
1982 = 100	Industrial Workers	440	442	445	443	444	449
84-85 = 100	Non urban manual workers	364	366	370	370	370	375
86-87 = 100	Agricultural labourers	310	310	310	308	306	305
86-87 = 100	Rural labourers	311	311	311	309	308	307

Base Year	Indices	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01
1	2	9	10	11	12	13	14
1982 = 100	Industrial Workers	450	446	445	443	445	448
84-85 = 100	Non urban manual workers	376	375	376	376	NA	NA
86-87 = 100	Agricultural labourers	306	303	301	299	300	301
86-87 = 100	Rural labourers	308	306	303	301	302	303

Consumer Price Index for Industrial & Agricultural Workers (Kerala State)

Base 1970 = 100

Sl.No.	Centre	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	1098	1110	1119	1122	1126	1129
2	Kollam	1097	1106	1113	1115	1121	1125
3	Punalur	1053	1062	1069	1071	1075	1078
4	Alappuzha	1100	1110	1118	1121	1126	1131
5	Kottayam	1095	1106	1114	1117	1123	1129
6	Mundakkayam	1068	1078	1085	1087	1092	1096
7	Munnar	1062	1072	1079	1082	1089	1095
8	Ernakulam	1050	1061	1070	1073	1077	1082
9	Chalakkudy	1114	1124	1133	1136	1142	1147
10	Thrissur	1074	1084	1092	1094	1099	1103
11	Palakkad	1083	1094	1102	1104	1110	1115
12	Malappuram	1076	1086	1095	1097	1101	1104
13	Kozhikkode	1073	1083	1092	1095	1099	1103
14	Meppady	1141	1152	1160	1162	1167	1172
15	Kannur	1069	1079	1087	1090	1095	1101
	State	**1084**	**1094**	**1102**	**1104**	**1109**	**1114**

Sl.No.	Centre	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01
1	2	9	10	11	12	13	14
1	Thiruvananthapuram	1128	1129	1135	1137	1142	1143
2	Kollam	1125	1126	1131	1136	1140	1140
3	Punalur	1078	1079	1083	1087	1090	1091
4	Alappuzha	1131	1132	1136	1139	1144	1146
5	Kottayam	1129	1131	1136	1140	1144	1146
6	Mundakkayam	1095	1096	1099	1103	1106	1106
7	Munnar	1095	1096	1101	1105	1109	1110
8	Ernakulam	1081	1083	1087	1090	1093	1095
9	Chalakkudy	1147	1148	1152	1155	1158	1160
10	Thrissur	1102	1104	1108	1110	1113	1114
11	Palakkad	1115	1117	1121	1123	1126	1128
12	Malappuram	1103	1104	1108	1111	1115	1117
13	Kozhikkode	1102	1103	1108	1110	1113	1114
14	Meppady	1172	1173	1178	1181	1185	1187
15	Kannur	1101	1103	1108	1111	1114	1115
	State	**1114**	**1115**	**1119**	**1123**	**1126**	**1127**

Weekly Wholesale Price Index for all commodities and inflation rate

Date	Wholesale Price Index (Base = 1993 - 94 = 100)	Inflation Rate (Jan. - June 2001)
1	2	3
Jan 13	157.8	8.16
Jan 27	158.1	8.21
Feb 10	158.4	8.57
Feb 24	158.5	7.53
Mar 10	158.8	6.51
Mar 17	158.9	6.50
Mar 31	159.2	4.87
Apr 7	159.4	4.94
Apr 21	160.0	5.47
May 5	159.8	5.41
May 12	160.0	5.47
May 26	160.5	5.52
June 2	160.6	5.52
June 9	160.8	5.44

Stock Exchange Indices January – June 2001

Date	Bombay Stock Exchange Index	National Stock Exchange Index
1	2	3
02/01/01	3955.08	2023.82
16/01/01	4046.76	2077.20
01/02/01	4326.72	2209.31
17/02/01	4330.32	2219.68
03/03/01	4095.16	2021.59
20/03/01	3722.49	1784.34
03/04/01	3566.26	1659.26
19/04/01	3438.75	1636.29
08/05/01	3544.81	1733.84
22/05/01	3640.10	1766.36
02/06/01	3557.64	1734.90
09/06/01	3495.84	1706.75
16/06/01	3372.94	1642.94
23/06/01	3381.76	1620.20

Index of Industrial Production for April 2001

The quick estimates of I.I.P. with base 93-94 for April 2001, have been released by Central Statistical Organisation. The general Index stands at 160.8 which is higher by 2.7% as compared to the month of April 2000. The average for 99-2000 – (April to March) was 154.9 and 2000-01 was 162.7. . The Index for April to March 2001 had shown a growth rate of 5.0 as compared to 6.7 during 99-2000. While Jute and other manufacturing industries showed positive growth, metal products, wood products etc. showed a negative growth rate. As per use based classification consumer non-durable goods had recorded a positive growth rate

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All India Index of Industrial Production (BASE 1993-94=100 (general Index))

Year	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1999-00	147.0	151.0	146.3	149.0	150.2	149.9	147.4	152.0	166.1	163.2	161.6	179.5
2000-01	156.5	160.0	154.9	156.5	157.7	158.7	157.4	163.3	172.1	170.6	166.1	178.2
2001-02	160.8*											

* quick estimate

Source: Central Statistical Organisation

Where are We Now?

Current world population = 6 billion
Adding 1 billion new people every 12-13 years (1.4 percent/year)
Growth rate has begun to slow
Projections suggest approximately 9 billion by 2050
Rapid growth is a very recent phenomenon

Source: Population Matters

Polling percentage in the Kerala Assembly elections

Year of election	Votes polled	Percentage
1957	5,899,822	66.62
1960	8,228,812	85.70
1965	6,428,937	75.12
1967	6,518,272	75.67
1970	7,634,451	75.07
1977	9,078,459	79.20
1980	9,587,663	72.28
1982	9,649,083	73.56
1987	12,839,457	80.53
1991	1,44,33,354	73.46
1996	1,47,06,806	71.16
2001	1,44,83,343	71.03

Sales Tax Payments (Inclusive PF MST and CST) on Petroleum Products made by the Oil Companies to State Government during the years 1990-91 to 1998-99

STATE/ UTs	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
POI PRODUCTS									
Kerala	27512	30518	39708	41540	45693	56791	70780	83885	89928
All India	322478	429640	500192	580772	686182	794062	977944	1181100	1243464

Number of Retail Outlets, LDO/SKO Dealers and LPG Distributors as on 01-04-98 and 01-04-99 – Kerala and All India

State/UTs	Retail Outlets		LDO/SKO Dealers		LPG Distributors	
	1.4.98	1.4.99	1.4.98	1.4.99	1.4.98	1.4.99
Kerala	747	749	240	240	206	208
All India	16935	17185	6382	6383	5538	5648

Number of Retail Outlets (ROS) and those Selling Unleaded Petrol (ULP) (As On 1-4-1999) Kerala And All India

State/uts	Total number of ROS						Number of ROS selling ulp					
	IOC	AOD	BPCL	HPCL	IBP	TOTAL	IOC	AOD	BPCL	HPCL	IBP	TOTAL
Kerala	250	0	209	249	41	749	10	0	13	10	21	54
All India	6624	311	4413	4381	1448	17177	790	6	530	632	304	2262

Number of LPG Domestic Consumers as on 1-4-98 (Figs In Lakhs) - Kerala and All India

STATE	IOC (MD)	IOC (AOD)	IOC (TOTAL)	BPC	HPC	TOTAL	Percentage
Kerala	8.02	0.00	8.02	3.26	1.54	12.82	3.80
All India	164.66	5.01	169.66	80.33	87.13	337.43	100

Number of LPG Domestic Consumers as on 1-4-99 (Figs In Lakhs) – Kerala and All India

STATE	IOC (MD)	IOC (AOD)	IOC (TOTAL)	BPC	HPC	TOTAL	Percentage
Kerala	9.12	0.00	9.12	3.70	1.75	14.57	3.82
All India	185.67	5.93	191.60	91.06	98.34	381.01	100

AOD- Assam Oil Division
BPC- Bharat Petroleum Corporation
L.D.O- Light Diesel Oil
HSD- High Speed Diesel
IOC Indian Oil Corporation
HPC- Hindustan Petroleum Corporation
S.K.O. Superior Keroseine Oil
LPG Liquified Petroleum Gas

Sampling

Introduction

Statistics

Statistics in a *sense* is as old as the human society itself. Its origin can be traced to the old days when it was regarded as the "Science of State-craft" and was the byproducts of administration activity. The word " Statistics" seems to have been derived from the Latin word 'Status' or Italian word 'Statistics' or German word 'Statistik' each of which means 'a political state'. In ancient times Government used to collect details regarding the population and property of wealth of the country.

Seventeenth Century saw the origin of 'Vital Statistics'. Captain. John Graunt of London (1620-1674) known as the 'father of vital statistics' was the first to work out mortality tables. The calculation of Life Expectancy Tables led to the establishment of 'Life Insurance' Schemes and institutions. The development of modern statistics came during the mid-seventeenth century with the backup of 'theory of probability and theory of games and chances'. Pascal founded the theory. Sir. R.A. Fisher known as the 'father of modern statistics' placed statistics in a sound footing by applying it to various diversified fields such as genetics, biometry, education, agriculture etc. In its early days it was confined only to affairs of the state but now it embraces almost every sphere of human activity. Statistics is defined in two ways i.e. Statistics may be considered either as singular or as plural. Statistics (plural) are the figures themselves suitably classified and tabulated, together with any secondary statistics such as percentages or averages derived from them; it is in this sense that the public usually think of statistics. Statistics (singular) is the study, better described as Statistical Methods, which deals with the collection, analysis and interpretation of the figures.

Statistical tools are widely used in almost every sectors of human activity and it is associated with all the sciences, social as well as physical. It is used in Planning, Economics, Business, Industry, Astronomy, Medical Science, Agriculture, Psychology, Education etc. It is rightly said that 'A knowledge of statistics is like knowledge of foreign language'. It may prove of use at any time under any circumstances.

Statistical Method may be broadly divided into two, (i) Descriptive Statistics and (ii) Mathematical Statistics. Descriptive Statistics deals with the compilation and presentation of data as actually recorded, not for the purpose of refined analysis but simply to provide concise information on which decisions can be taken. Mathematical Statistics is based on the theory of probability and attempts to draw precise general conclusion from the data. It may also help to decide how the data can be obtained most efficiently and economically.

Most important is that Statistics deal with only measurable aspects of things and therefore can seldom give the complete solution to a problem. On the contrary they provide a basis for judgment but not the whole judgment. Hence, the limitations of statistics must be known by both the interpreters and the users.

Limitations

1. Interference on elementary units will not be realistic.
2. Statistical laws are not exact.
3. It is liable to be misused, Statistical arguments based on an incomplete data often lead to fallacious conclusion.

Definitions

Population and Sample

Any kind of statistical study involves collections of data with respect to one or more characteristics and their variation relating to individuals belonging to a group. The whole group of individuals under study is called the 'population or universe' and the individuals whose characteristics are to be measured in the analysis are called ultimate units. This population is an aggregate of objects, animate or inanimate. The population may be finite or infinite.

Eg: When we want to study about area under different crops in the state, the whole land (divided in to the survey divisions) is the population. When we want to study about the mean age of students in a college, all the students in that college constitutes the population. If we want to study the cost of cultivation of coconut, all the coconut cultivators constitute the population.

A finite subset of ultimate units of a population is called a Sample and the number of individuals or elementary units in a sample is called the sample size.

Primary and Secondary Data

Data may be classified as primary and secondary. Broadly speaking primary data are the raw material, the figure collected at first hand, while secondary data are statistics taken from someone else after being worked upto some extent eg: which is available from some previous studies or from records. Such data is called **secondary data**. Before using

secondary data one should ascertain the suitability of data for the study in hand, viz. -By whom and for what purpose and when it was collected, the precision level of data collected etc. If secondary data is not available or not suitable, data is to be collected from the units/individuals of the population. This is called **primary data**.

Questionnaire/Schedule

For any statistical collection of data a questionnaire/schedule is to be prepared. Questionnaire/Schedule is a well-structured form of questions for filling up the answers. When the data is collected through investigation, after asking questions to the informant the forms used is called **schedule** and when the data is collected through mail, or filled by the informant the form used is knows as **Questionnaire**. Care should be taken to see that the objective of the survey is fully covered and the required outputs can be obtained. Questions should be simple. Unnecessary and duplicate questions should be avoided. Inter relations of the various parts should be well established. Concepts, definitions and meaning of each term used should be clearly explained. The question may be arranged and layout should be prepared in such a way for the easy computerisation of data.

Methods of Data Collection

Mainly in large surveys the data is collected either by engaging person (Investigators) to contact the informant and collect data or to mail the question to the informant and obtain data. The following are the main methods usually adopted to capture the data.

1. Direct personal enquiry by the Survey authorities - This can be done only in a very limited study.
2. By engaging enumerators/investigators - This is the most commonly used method. The success of the survey or Census depends on the quality of the data turned in by the investigators. Hence qualified and well-trained persons are to be used as investigators.
3. By post or supplying and collecting schedules at specified point - The informant themselves fills the forms. In this case the questions should be minimum as simple as possible and to be easily understandable.

Complete Enumeration Survey or Census

One way of obtaining the required information is to collect the data for each and every unit (person, household, field, factory, shop etc as the case may be) belonging to the population. This method is called 'Complete Enumeration' or Census. The effort, money and time required for complete enumeration may be generally large. However if information is required for each and every unit in the domain of study a census is necessary. Eg: We want to have a list of households below poverty line to implement a housing scheme.

Sample Survey

But in many situations a complete enumeration is not necessary or not possible (eg. Testing of explosives, life of bulb, to assess the paddy production in the country etc). In such cases, individuals in a sample only are observed. Then the sample characteristics are used to approximately determine or estimate the population characteristics. This method is called 'Sampling'. The error involved in such approximation is called 'Sampling error'. 'Sampling error' decreases as sample size increases and non-existent in census. However the errors mainly arising at the stages of the ascertainment and processing of data 'which are termed as non-sampling errors are common to both complete enumeration and sample surveys'. The non-sampling errors increase as sample size increases. The advantage of sampling over census that the sampling is supported by the mathematical theory of probability and we can have fairly good results at reasonable level of accuracy. It is also possible to estimate the sampling error. We can also fix the sample size in such a way that the sampling error is less than a fixed value.

Sampling Unit

Elementary units or groups of such units, which, besides being clearly defined, identifiable and observable, are convenient for purposes of sampling, are called sampling units. For instance, in a family budget enquiry, a household is considered as the sampling unit. In EARAS, each surveys no. in the BTR is a sampling unit, since it is found to be convenient for sampling and for ascertaining the required information.

Sampling Frame

For using sampling methods in the collection of data, it is essential to have a frame of all the sampling units belonging to the population to be studied with their proper identification particulars and such a frame is termed the sampling frame. This may be a list of units with their identification particulars or a map showing the boundaries of the sampling units. Eg: List of households, List of Plots, list of the Blocks / Panchayats etc.

Probability sample

One or more sampling units selected from a population according to some specified procedure are said to constitute a sample. The sample will be considered as random or probability sample, if its selection is governed by ascertainable laws of probability. In other words, a random or probability sample is a sample drawn in such a manner that each unit in the population has a predetermined probability of selection.

Sample Size, Sampling Fraction

The units selected from population to be included in the sample may be termed as sample units and the values of the characteristics under study obtained from the sample units are known as sample observations. The number of sampling units selected in a sample is termed sample size (usually denoted by 'n'), and the ratio of sample size to total number of population units is termed sampling fraction (f). If N is the population size and 'n' sample size, then f = n/N

Non-Random Sample - Purposive Sample

A sample selected by a non-random process is termed non-random sample. A non-random sample, which is drawn using certain amount of judgement with a view to getting a representative sample, is termed judgement or purposive sample. In purposive sampling, units are selected by considering the available auxiliary information more or less subjectively with a view to ensuring a reflection of the population in the sample. Normally this is used in research studies or benchmark surveys and generalisations of the results are to be done cautiously.

Population Parameter

A characteristic of population (eg. Mean/Standard deviation) under study is known as the Population Parameter. For eg. Rice production, Area under crops, etc. In a Census type enquiry these values are directly obtained and in sample survey these are to be estimated using some Sample characteristics. Usually these are denoted by capital letters.

Sample Statistic / Estimator

A characteristic of the sample under study is called Sample Statistics. eg. Sample mean, Sample variance etc. These are used as estimators of population parameter. These are usually denoted by small letters. Eg: Sample mean is used as an estimator for population mean. In short, 'statistic' is a function of sample observations. An estimator is a 'Statistic' obtained by a specified procedure for estimating a population parameter, The value of the estimator varies from sample to sample. The particular value which an estimator takes for a given sample is known as 'estimate'.

Standard error, accuracy, precision, reliability and efficiency

Let 't' is an estimator for the population parameter 'Q' - 'ti' is the estimate based on ith sample, 'ti – Q' is called the error of the estimate. This error varies from sample to sample. Mean of the squared error is a measure of 'accuracy' and is known as mean square error. It's square root is known as root mean square error.

The expected value of the squared deviation of the estimator from its expected value is termed as Sampling Variance. (Sample Variance). This is a measure of 'precision of the estimator 't'. If the estimator is unbiased (ie. Expected value of t = Q) [E (t) = Q] then both these values are equal. The square root of sampling variance is called the standard error of the estimate. The reciprocal of standard error is taken as a measure of reliability of the sample. An estimator with lesser sample variance is said to be more 'efficient'.

Confidence Interval

Instead of finding a single value as estimate for population parameter an interval can be estimated based on the sampling distribution of the estimator. Such an interval estimated is called a confidence interval and the probability that the value falls in that interval is called the confidence. Coefficient and the values estimated are known as confidence limits.

Raising factor / Multiplier

Since Sample observations are used to obtain population values, the sample observations are weighted with certain weights for obtaining an estimate of the population parameter. These weights are known as multipliers, inflation factors or raising factors. In a sample if we are taking 'n' samples out of 'N' using SRS - N/n is used as the multiplier. For e.g. as a simple case in Agricultural Census the multipliers are used say as follows. 5 wards are selected out of 23 wards in a Block for listing and there are 100, 110, 105, 75, 82 operational holdings in the selected wards. To obtain an estimate of the population (23 wards) we do as follows. Total in the sample = 100 + 110 + 105 + 75 + 82 = 472.

Average = 472/5 = 94.4 (This can be taken as an estimate for the average number of holdings per ward). The multiplying factor =23 / 5. Estimated number of Total holdings = 472 x 23/5 = 2171.2 = 2171.

Will be continued.....

THE STORY OF 'COINS' IN TRAVANCORE

The history of Travancore coins dates back to remote times. The earliest mint of which there are records is the Mint at Padmanabhapuram founded in 965 M.E. (1790). The mint issued gold coins called Anantharayan Panam, silver chuckrams and copper cash. The gold coins minted were of two kinds, one weighing 1½ manchadis and the other three-fourths of a manchadi. Gold coins of the weight of 9 to 13½ manchadis, called Anantharayan Pagoda were also coined. In 985 M.E. (1810) coins of the value of two and a half chuckrams each were issued which, however, were soon discontinued.

Till 988 M.E. (1813) the purpose required for coining the chuckrams was obtained by melting Bombay rupees. During the next ten years Spanish and German dollars and Surat rupees were used for the purpose. Copper Cash was issued in 991 M.E. and again in 1006 M.E. and 1014 M.E. the designs varying each time. Besides these, there were also quarter and one-eight chuckrams which were subsequently discontinued. The coins that were current during the time of Lieutenants Ward and Conner (1816-20) were the Anantharayan Panam (gold), the silver chuckram and copper coins of different values. There were certain nominal coins such as Gally (Kaliyan panam), Rasi-panam worth 10 chuckrams, and the Katcha Rupee worth quarter of a pagoda, which were largely used for calculation of Sircar accounts.

The Mint which was established at Padmanabhapuram was removed to Trivandrum, then to Mavelikkara, Quilon and Paravur and was finally re-established in Trivandrum in 999 M.E. It was closed in (1003 M.E.) but was revived shortly after. For some years after 1019 M.E. (1844) the work of the Mint was almost confined to copper coinage owing to shortage of imported silver bullion and the free use of the British Indian rupee which was legal tender in the State. The fanam with the design of a crescent and a few dots above it on one side and the words 'fanam one' and the year on the other side was introduced in 1036 M.E. Government of India currency notes were recognized as legal tender throughout the State in 1037 M.E. In the next year two stamping presses were got down for striking new silver coins of the value of four chuckrams. Seven years later the Government issued a notification ordering the acceptance of British Indian coins by the Sircar treasuries and the public as media of exchange.

In 1052 M.E. under command of Ayilyam Thirunal Maharaja gold coins called Travancore Varahan and half varahan, of the value of Rs. 7½ and Rs. 3¾ respectively, were minted. But their issue had to be soon stopped as they failed to have any circulation. With a view to securing gold coins which were frequently wanted for temple offerings Visakham Thirunal Maharaja commanded the striking of gold coins of two sizes, one equal to the English sovereign in weight and quality and the other equal to the English half-sovereign. As these were to be merely token coins and not a part of the State currency, 1,000 sovereigns, 2,000 half-sovereigns and 10,000 Anantharayan panams only were struck.

In 1064 M.E. (1889) two new copper coins, viz., 8 cash and 4 cash pieces, were issued. As the small silver chuckram gave opportunities for counterfeiting, a Proclamation was issued in 1076 M.E., ordering the issue of silver coins of the value of 2 chuckrams, and copper coins of the value of 1 ch., ½ ch. and ¼ ch. in additional to the coins already in use, and the discontinuance of the minting of silver coins of the value of 1 chuckram. The markets became flooded with counterfeit silver chuckrams which therefore were withdrawn. The delay in supplying new coins instead created a crisis. But it was soon overcome by increasing the operations of the Mint and by importing minted copper coins as well as copper discs in large quantities from Birmingham. Four different kinds of silver fanams with different designs had been minted since 1036 M.E. (1861), but the older ones had not been withdrawn. The absence of any rules for cutting and returning counterfeit coins coupled with the fall in the value of silver led to the counterfeiting of these silver coins. The people naturally hesitated to accept even the genuine coins. Regulation III of 1086 M.E. (1911) was therefore promulgated under which the supply of copper coins was largely increased. The minting of silver coins at the Government Mint was stopped in 1087 M.E. (1912), the quantity absolutely necessary being minted at Birmingham. The old silver coins were withdrawn by proclamation and new ones, – half and quarter rupees and fanams – introduced. Another Proclamation concerning the Durban coins was issued in 1089 M.E. and rules were framed under Regulation III of 1086 M.E. authorising all Treasury Officers to cut or break diminished, defaced or counterfeit British Indian coins.

The British Indian silver coins, rupee weighing 180 grains of silver, half, quarter and one-eighth rupee pieces are legal tender in the State, but not the copper coins. The established rate of exchange is 28½ chuckrams per British Indian rupee. The Travancore rupee which is not represented by any coin is computed at 28 chuckrams. The Sircar currency is as follows:-

16 Cash	-1 Chuckram
4 Chuckrams	-1 Fanam
3½ Fanams	-1 Chithra
2 Chithras	-1 Travancore Rupee

The silver coins now in circulation are the Chithra and quarter rupees valued at 14 chs. and 7 chs. respectively and the fanam at 4 chs. The copper coins minted are those of the value of one chuckram, eight cash, four cash and one cash.

In 1093 M.E. the Mint was placed in charge of the Superintendent of the Stamp Manufactory, under the administrative control of the Financial Secretary to Government. But with the separation of the Finance and Accounts Departments during 1111 M.E. the administrative control of the Mint was tentatively transferred to the Accountant General.

A Ganapathi shrine has always been attached to the Mint. The charges for the pujas were originally debited to the contingent expenses of the Mint. In 1098 M.E., with the separation of the Devaswams from the Revenue, the control of the shrine was transferred to the Devaswam Department, from that of the Revenue Department.

Some coins mentioned in old State records

(Collected from Huzur Central Records & Mathilakam)

Kasu
Thankakkasu (35 fs.)
Mudrayitta Thankakkasu
Thulabharakkasu
Thankavilakkasu (33½ fs.)
Chempukantakkasu
Chillikkasu
Cheriyakasu
Arabikkasu
Arabi arakkasu
Sulthankasu
Chempukasu
Alkasu (35½ fs.)
Mahaniaramahanivilakkasu
Chemputhuttukasu
Kuthirakkasu (1 5/8 fs.)
Thankathotuvacha kasu (32 fs.)
Anakkasu (31¾ fs.)
Chanthavilkasu (41½ fs.)
Ilamudrakkasu (33½ fs.)
Chanthamikkasu (39¾ fs.)
Vella irayan kasu (14½ fs.)
Vella Goa kasu (1)

Chakram
Chackram
Kochuchakram
Cheriyachakram
Irattachakram
Chinnachakram
Arachakram
Horabalachakram

Fanam
Anantharamanpanam
Chinnappanam (7/8 fs.)
Vellippanam (1¼ fs.)
Palayapanam
Kanippanam
Kanthirajanpanam
Namappanam (1 ¼ or 1 1/3 fs.)
Chakrappanam
Cheriya Anantharamanpanam
Mayilpanam (1 1/16 fs.)
Nakappanam
Thanchavurpanam
Vellappanam
Kannurppanam (1¼ fs.)
Virarayanpanam (1¾ fs.)
Sulthanpanam (1 9/16 or 2¼ fs.)
Thiruvithamkottupanam (1 fs.)
Madhuravellappanam (16 fs.)
Kolikkottu thankappanam (1¾ fs.)
Kaliyan thankappanam (1 f.)
Amaranchippanam (1¼ fs.)
Desappanam (1¾ fs.)
Ikkerippanam (2 fs.)
Thiruppathippanam (2 fs.)
Ramanathapuram panam (1 1/8 fs.)
Madurakkalippanam (1 5/8 fs.)

Rupee
ChannamulaMulurupa (7 fs.)
Ararupa
Kalrupa
Kumpini mulurupa (7 1/8 fs.)
Anarupa (5¼ or 5 fs.)
Anchupanamrupa
Panamrupa
Kumpini ararupa
Kumpini Kalrupa
Kumpini Mahanirupa
Arakkalrupa
Chinnamulurupa
Surattikkattarupa
Purupa (7¼ fs.)
Chikkar rupa (7 fs.)

Varahan
Puvarahan (26 fs.)
Vellikkal puvarahan
Ikkerivarahan (28 fs.)
Varahan
Mummurthi varahan (24½ fs. Or 24¾ fs.)

Sankumurthi varahan
Anavarahan (35 fs.)
Pavalakkattu varahan (24½ fs.)
Ananthavarahan (24 3/8 fs. or 24 ½ fs.)
Parankivarahan (23 fs. or 20¾ fs.)
Sulthanvarahan (28 or 29 fs.)
Thankampadivarahan (20 fs.)
Pothapputhuvarahan (16 or 29 fs.)
Kumpinivarahan (24¼ fs. or 25 fs.)
Ekamurthivarahan (24½ fs.)
Bathilppettavarahan (16 fs.)
Kumbhakonamvarahan (20 or 21 fs.)
Kattapparankivarahan (24½ fs.)
Sauthallivarahan (24½ fs.)
Puthuvarahan (20 fs.)
Kalivarahan (25 fs.)
Velliyarappuvarahan (6½ fs.)
Parimalavarahan (20½ fs.)
Arappuvarahan (13¼ fs.)
Nalithaticha Sulthanvarahan (708 fs.)
Arisuvarahan (21¾ fs.)
Kalpuvarahan (6¼ fs.)
Velliyarappuvrahan (12½ fs.)
Thankappuvarahan (25 fs.)
Chenathallivarahan (24½ fs.)
Mathilavithuvarahan (16 fs.)

Kali-Rasi

Madhurakkali
Thiruvithamkottukali (1 3/16 fs.)
Irattavalanrasi (2¾ fs)
Mathsyarasi
Chararasi (2¾ fs.)
Kalamanrasi
Velliyilpulliyillatharasi (2¾ fs.)
Muthalavalanrasi (2¾ fs.)
Rasi (2¾ fs.)
Chankittarasi (2¾ fs.)

Sovereign

Pavan
Kottappavan
Arabippavan

Other Coins

Anantharaman valiyathu
Chempu aramahani thuttu
Thankamuharam
Panchi
Kasumuharam
Kumpini munnilonnu muharam
Talasserivella (1 7/16 fs.)
Kochirattaputhan
Kochiputhan (5/16 fs.)
Virarayanpanam (1¾ fs.)
Kopali (3/4 fs.)
Valiyamayil
Cheriyamayil
Ponmutamutichi
Pakala
Ponnurukku
Pathakku (126¼ fs.)
Sulthan make (99¾ fs.)
Guliyan
Cheriya Anu
Madhuravella (1½ fs.)
Vellinurukku
Palayapathakku
Mahanimuharam
Channamulamuhar (101½ fs.)
Thadippathakku (15 1/8 fs.)
Thalappathakku (14 3/8 fs.)
Vellithatipathakku (15 1/8 fs.)
Nurukku
Sorathimukar (106½ fs.)
Arabimuhar (90½ fs.)
Irattappathakku (264½ fs.)
Kalpathakku (39¾ fs.)
Pon-irattathala-ottapathakku (14½ fs.)
Bombay muhar (106 7/8 fs.)
Malamudrathanakamuhar (100 fs.)
Mahanimuhar (6¼ fs.)
Thiramam
Achu.

Source: Travancore State Manual 1940

Computing detects a new virus

K7 Computing, anti-virus solution provider, has encountered a new virus – VBS, Haptime.A – which infects pure text files like .htm, .vbs, .asp and .htt. The virus uses the error in Outlook Express to run automatically and can causes damage to web content developers. K7 Computing has provided a solution for detecting this virus in its product Vx2000 Plus. It has also provided a solution to remove the virus from infected text files, says a company press release.

Source: The Hindu, May 26, 2001

Inagural Speech of Prime Minister Shri Atal Bihari Vajpayee

On Golden Jubilee Celebrationsof theNational Sample Survey Organization

Dr. Rangarajan, Dr. Arun Shourie, Shri Irniraya, Dr. Sastry, Distinguished professors and experts, ladies and gentlemen,

I am very happy to be with you this morning to participate in the inaugural session of the NSS Golden Jubilee International Seminar.

Since its inception fifty years ago, the National Sample Survey Organization has become a byword for credibility and reliability. It owes its high reputation to the exemplary dedication and competence of the professionals who have worked for it. Today is an occasion for us to remember with grateful appreciation all those who have contributed to the growth of your organization, especially its illustrious founder Dr. P. C. Mahalanobis. I urge all of you to uphold the tradition of innovation and excellence set by your predecessors.

The NSSO has the distinction of being a Government agency whose activities are being guided by an autonomous Governing Council. This Council consists of experts from outside the Government and the Chairman of the Governing Council has always been an eminent social scientist. Such autonomy is the source of NSSO's credibility and the high levels of technical standards that its surveys have always maintained.

The role of your organization in India's development planning is that of a contributor of invaluable raw material, but a contributor who remains, most of the times, unseen and unhonored. It is not often recognized that, behind every piece of statistical information, lies the dedicated work of hundreds of NSS investigators who have conducted painstaking surveys and interviews, often in remote areas. The integrity and reliability of the data they collect is the basis for the formulation of any sound plan and its effective implementation.

It is hardly surprising, therefore, that the work of the NSSO has been commended over the years by several luminaries, both in India and abroad.

It is often said that a picture is more powerful than a thousand words. The same is true of numbers. A single, authentic piece of statistics can tell the story of the success of a governmental initiative far more powerfully than many essays. I was reminded of the power of NSSO surveys when it was revealed recently that there has been a reduction of as much as ten percentage points in the poverty ratio from 36 percent in 1993 - 94 to 26.1 percent in 1999 - 2000.

Nothing shows more conclusively than this finding of the NSSO, that the economic reforms initiated in the nineties are beginning to achieve the desired results of poverty elimination.

I am not saying this because our Government wants to take credit for this achievement. After all, our Government has been in office only for the past three years. The process of economic reforms was initiated by a Congress Government. It was later carried forward by two United Front Governments. In different ways, State Governments ruled by various political parties are also pursuing economic reforms of their own. Thus, there is a broad consensus on the need for reforms for achieving faster and more balanced growth.

Had any political party or leader earlier claimed that reforms are helping the country and the people, such an assertion would perhaps have been open to question. It could have been termed as partisan propaganda. But nobody can question the authenticity of what your survey has revealed. Governments come and go, but an autonomous organization like yours functions without being affected by political and governmental changes.

Now that NSSO has shown that our combined efforts at reforming the economy have resulted in a significant reduction in the level of poverty, there is no need for questioning the basic direction of our reforms process. We may have to fine-tune our policies and programmes based on our experience of the past decade. We certainly should correct the mistakes, wherever mistakes become apparent. We should effectively respond to changes in the global economic environment to defend the nation's interests.

But there cannot be any change in the direction that India has adopted for itself. The need of the hour is to further strengthen the national consensus for reforms so that we can employ the full energy of the Central Government, the State Governments, and all sections of our people for building a strong and prosperous India.

It is important to identify the specific economic and social factors, which have contributed to the reduction of poverty in the nineties. This will help us to accelerate reforms to achieve a further significant reduction in poverty by the end of this decade.

The results of the employment and unemployment survey of the NSSO have also corroborated the essential soundness of our economic reforms. They have revealed that the unemployment rates among the educated in rural and urban areas have come down since 1993 - 94. The reduction in the unemployment rate is more pronounced amongst

women in both rural and urban areas. These are the kinds of successes on which we must build on in the coming years.

I compliment your organization for conducting, for the first time in India, a survey of the entire informal sector. This survey reveals that informal non-agricultural enterprises provide employment to about 94 million people in the country, which is much more than the employment potential in the organized sector. Most of these enterprises are located in rural and semi-urban areas. They have the potential to employ far many more people and thus reduce the pressure on agriculture. This, once again, points to the urgent need to strengthen the implementation of all our rural development programmes, so that we can create more opportunities for employment and income generation.

Friends, there should be a close relationship between statistical information, policy formulation, programme coordination, and review. I especially urge district-level planners and administrators to make greater use of economic and social data. The statistical system of the country needs to take care of this requirement.

I am told that the NSSO has improved its survey capabilities by taking advantage of the advances in information technology and improved human resource management systems. Yet its activities are limited to a few chosen subject areas and its surveys are capable of producing national and state level estimates only. The devolution of power to Panchayati Raj Institutions through the 73rd and 74th Constitutional Amendments has created a demand for necessary developmental data at grassroots levels. I am happy that this issue is being discussed in one of the technical sessions of the seminar.

The dynamic changes taking place in the economy and society have rendered some of the conventional data collection procedures outdated and ineffective. Reliable data is often not available on those segments of India's economy, which have become relatively more important in recent years. These are some of the new challenges for the statistical system of the country, and the NSSO will have to re-orient itself to meet the new demands. It is also important that your organization improves its data transmission and dissemination by taking full advantage of the Internet.

The National Statistical Commission, under the able leadership of Dr. Rangarajan, is looking into most of these aspects. I hope that the Commission would present its final recommendations to the Government within the next two months. I am sure that early implementation of these recommendations would lead to the availability of reliable and timely data for development planning and informed decision making in the Government.

I wish all success for this seminar and declare it open.

Thank you.

Speech of Shri Rangarajan

Golden Jubilee of the National Sample Survey Organization

REFORMING THE INDIAN STATISTICAL SYSTEM

I am delighted to be here today at this International Seminar which constitutes the concluding part of the NSS Golden Jubilee Celebrations. A year ago, when I delivered the Keynote address at the inaugural function of the celebrations, I had mentioned about the need for a credible, timely and adequate statistical system. Having had the opportunity to look closely at the functioning of the Indian Statistical System during the past fifteen months as part of the labours of the National Statistical Commission, I am convinced more than ever of the necessity to take urgent measures to restore trust in official statistics and to ensure the integrity of the data system. We are indeed very grateful to the Prime Minister for his presence here with us this morning, despite many demands on his time. This is a reflection of his concern to tone up the Indian Statistical System.

The focus of this Seminar is on the role of sample surveys in enabling us to understand socio-economic changes. The National Sample Survey or NSS, as it is familiarly known in India, has demonstrated the effectiveness of sample survey technique as a cost effective and reliable way of getting information. In fact, in some areas such as consumption, employment and assets, it is the major, if not the only, source of detailed and comparable data over time. Sample survey as a technique for collecting information is growing in importance. Sample survey is far less expensive and the results obtained much more quickly than a complete count. Interestingly, data obtained through statistical samples are of better quality and of greater accuracy than complete enumeration. It is interesting to note what Prof. R.A.Fisher had to say in this context as early as 1949, "I have made four claims for the sampling procedure. About the first three, adaptability, speed and economy, I need say nothing further. Too many examples are already available to show how much the new method has to give in these ways. But, why do I say that it is more scientific than the only procedure with which it

may sometimes be in competition, the complete enumeration? The answer, in my view, lies in the primary process of designing and planning an enquiry by sampling. Rooted as it is in the mathematical theory of the errors of random sampling, the idea of precision is from the first in the forefront."

The NSS is a massive operation. NSS was the brainchild of Prof. P.C. Mahalanobis whose vision and courage helped to launch such a massive scheme. Today it covers nearly 2.5 lakhs of households through both Central and State samples. The success of the survey depends on a number of factors. First and foremost the sample design has to be appropriate. A number of interesting issues arise in this context and these have been the subjects of debates among academicians and scholars. Some of these issues will be discussed by you in this seminar. While there is no full stop to academic debates, a broad consensus has emerged in relation to several issues. Besides sample design, survey methodology involving issues such as questionnaire design, response pattern and recall abilities also require attention. Second, apart from scientifically trained staff at higher levels, there is need for well- trained field investigators for collection of data. The integrity and sincerity of investigators are crucial for ensuring the reliability and quality of data. Third, there has to be a speedy processing and early dissemination of data collected. The computer revolution has come in handy here. It is heartening to note that the NSSO has been successful not only in clearing the backlogs in the release of all the earlier survey results but also in releasing the current survey findings with practically no time lag. Due to the special drive undertaken by the NSSO for backlog clearance, it released as many as thirty one (31) reports covering results of seven NSS rounds i.e. 48th (January - December 1992) to 54th (January - June 1998) rounds during 1998 and 1999. And fourth, there has to be an effective coordination between the Centre and States, as we operate in the framework of a federal structure. In all these areas, there have been substantial improvements as well as significant deteriorations. Over years, questions have been raised about the differences between the estimates generated by NSS and other sources. Even in relation to population, estimates as per the NSS are found to be generally lower than the census data. The limitation of sample size in the NSS does not permit generation of district or lower geographical level estimates. Perhaps application of small area estimation techniques may help to produce the necessary data. In relation to NSS or for that matter with respect to the generation of any data, we need to pay attention to two aspects. First, the collection of data must be grounded on scientific principles. It is this scientific approach that will provide the basic credibility. Second, the administrative machinery associated with the collection, processing and dissemination of data has to be committed and efficient. The first without the second yields no results or fruits while the second without the first has no roots.

The Indian Statistical System, as it exists now has evolved over the last several hundred years. During the British rule, the data collection system was confined to meet a limited set of needs of the colonial rulers. It did not develop into an integrated or well coordinated system. Nevertheless, a base was created. Since Independence, a conscious effort has been made to create a data base which would cover a variety of social and economic variables. The setting up of the National Income Committee in 1949, National Sample Survey in 1950, Central Statistical Organisation in 1951 and the National Sample Survey Organisation in 1970 are important institutional landmarks in the evolution of the Indian statistical system. Despite impressive and commendable progress over the last fifty years, there is a growing concern about the reliability, timeliness and adequacy of data that are made available.

Let me illustrate the problems that have arisen in relation to data credibility by taking a look at agricultural statistics. Crop production is normally estimated as a product of area and yield rate. The two components are estimated separately. At present, statistics on area under various crops are compiled with the help of Village Reporting Agency (Patwari) in the temporarily settled parts of the country, and specially appointed field staff in the permanently settled states (Kerala, Orissa & West Bengal) under a scheme known as "Establishment of an Agency for Reporting Agricultural Statistics (EARAS)". The remaining areas adopt conventional crop estimates based on personal assessment of village officials. The yield estimates are based on scientifically designed crop cutting experiments conducted under General Crop Estimation Survey (GCES) covering around 68 crops. For improving the timeliness and quality of crop statistics two schemes, namely. Timely Reporting Scheme (TRS) and the Scheme for improvement of Crop Statistics (ICS) are in operation since the seventies.

ICS reports, which act as a cross check on the work done by others, have over the years observed that (i) Patwaris submit crop statements without completing the field-to-field crop inspection (Girdawari) in about 8-9% of the villages, (ii) crop entries are with one or other type of errors in about 1/3 of the survey numbers inspected, (iii) TRS statements are forwarded only from around 75% of the sample villages and from only about 45% by due date and (iv) the crop cutting experiments under General Crop

Estimation Survey are being conducted properly in only around 2/3rd of the cases. The major reason for the poor quality of area statistics is the failure of patwari agency to devote adequate time and attention to the girdawari. The main problem in producing reliable yield estimates, in spite of scientific and time tested methodology of crop cutting experiments, has been the poor performance of field operations. In addition to the questions relating to the quality of data, significant data gaps exist in relation to agricultural and allied activities. These relate to the output of fruits and vegetables and certain minor crops, estimates of meat and meat products and production of inland fishery.

More or less similar problems arise in relation to a number of statistical series including industrial production, national income, corporate and trade statistics. Revisions of data when they are too often or too steep create doubts. The concern for improving the data system is, however, not unique to India. In the recent years many countries including, UK, Australia and Canada have focussed attention on this area. In UK, the Central Statistical Office was set up in 1941. This was during the wartime. The aim, in Churchill's words, was: "To consolidate and make sure that agreed figures only are used. The utmost confusion is caused when people argue on different statistical data .... The various Departmental statistical branches will, of course, continue as at present, but agreement must be reached between them and the Central Statistical Office". However, the system was subject to many criticisms during the next five decades. The British Government issued in 1998 a consultation document- called "Statistics A Matter of Trust". At the time of the issue of the Document, the Government accepted that public confidence in the integrity of the official statistics had been called into question. The consultation document was followed by a White Paper entitled "Building Trust in Statistics" which outlined British Government's proposals to revamp the statistical system. The system since then has been revamped with the setting up of an independent non-executive body called Statistics Commission and the appointment of National Statistician. The statistical system in USA is essentially decentralised by agencies and departments, but the statistical activities per se are codified in their laws. The overall monitoring of the statistical activities is done by the Office of Management and Budget (0 MB), located in the Office of the President. The debate that followed the ranking of the national statistical offices by the London Weekly, The Economist led to the adoption by the Statistical Commission of the United Nations in 1994 of what came to be known as "Fundamental Principles of Official Statistics". These Fundamental Principles which are ten in number, are now widely accepted as constituting the appropriate framework for National Statistical Offices. One of the principles affirms that "To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data".

Coming back to the Indian Statistical System, with respect to the improvement of individual time series, a fourfold approach may be adopted.

First, in relation to data that are currently being generated, if the existing methodology is appropriate and scientific, efforts must be made to improve the present system of collection of data.

Second, alternative techniques must be explored in relation to the existing statistics, if the present system for collecting data is under strain for whatever reasons.

Third, as the economy expands, new data demands will enlarge. The whole area of service sector is under going far-reaching changes with the application of Information Technology. More of intangible goods are getting exchanged. In this rapidly changing scenario, we must identify the new data series that are to be generated. In this context, I must also emphasize the need for the generation of a wide variety of socio-economic indicators in the areas of education, health, population and environment. In these areas, on some aspects data do not exist; with respect to others, consistent and reliable data are not available, even though the system does produce a large volume of data. Mechanisms like Civil Registration System have so far had a poor response.

Four, in relation to the new data requirements, appropriate methodologies for collection must be evolved. The old techniques may not necessarily be applicable. Just as Indian statisticians evolved, four or five decades ago, appropriate techniques to make estimates taking into account Indian realities, the time has come for Indian Statisticians of today to take the lead to provide new techniques, in the context of the new demands for data and the changing technological scene.

What I have indicated above relate to individual data series. However, there is another set of problems relating to the system as a whole which needs to be addressed. Presently data are generated through three sources. There are censuses such as population census, sample surveys such as National Sample Survey and data flowing through executive agencies of Government. Data generated through administrative departments of Government both at the Central and State levels have suffered deterioration for

a variety of reasons. One aspect of the Indian Statistical System is that it is both decentralized and centralized. Large-scale statistical operations such as population census, economic census and nation-wide large-scale sample surveys are centralized. In addition, the compilation of macroeconomic aggregates like national accounts, price indices and industrial production are largely central activities. However, the State Governments and State statistical organisations are also engaged in collecting and generating data on a number of variables. Even where the responsibility for policy formulation lies with the Central Ministries, the actual collection of data may be done by the State Governments through their agencies.

At the moment, as the system operates, there is no effective coordination either horizontally i.e., among different departments even at the Centre or vertically between the Centre and the States. Now the responsibilities for horizontal and vertical coordination and maintenance of statistical standards rest with the Ministry of Statistics and Programme Implementation. However, it is found that this Ministry is not in a position to ensure that the other Ministries or State Governments adhere to certain commonly accepted procedures. With the position of the Director General of the Central Statistical Organisation lying vacant, the task has become more difficult. The lack of an effective and adequately empowered coordination mechanism is a major weakness in the system. Besides, there is no statistics policy making body or authority for evolving a national statistical strategy. Though the National Advisory Board on Statistics was constituted with this objective, its impact has been minimal. The system also lacks a comprehensive Statistics Act. The present Collection of Statistics Act, 1953 is weak. Besides, ensuring reliability of statistics and efficiency of the operations, a strong Act should take into account the citizens' rights for information.

The need for an independent statistical authority free from political interference has been articulated in many countries. This is a felt need in our country as well. The credibility of official statistics will be enhanced, if such an independent authority which is non-executive in character were set up to supervise and monitor data generation and dissemination. Such an authority should have the power to set the priorities with respect to core statistics and to ensure quality standards of statistical processes. In the Indian context, there is an additional role which such an authority can play. That is to bring about an effective coordination laterally among 7 departments and vertically between the Centre and States.

Very often, the term 'statistics' and 'data' are used interchangeably. This is an incorrect use of the terms. Statistics both as a discipline and methodology go very much beyond data. As an eminent statistician once said "There can be no statistics without data and no statistics with data alone". Statistics began as a collection and presentation of numerical data in such a manner as to reveal their salient features. The origin of the term 'statistics' is associated with this concept which is to describe the state. Imaginative ways of displaying and summarising very large data sets have still a role to play. Nevertheless, the big jump happened when the discipline moved from statistical enumeration to statistical inference, that is, from Descriptive Data Analysis to Inferential Data Analysis. Statistics, however, builds on data. Statistical inference will be fruitless, if the basic data are faulty or inaccurate or unreliable. That is why we have to pay attention to data collection in all its dimensions. A good statistical system is the key to sound decision making.

India has produced outstanding statisticians like Prof. P.C. Mahalanobis and Dr. C.R. Rao. Our statistical system must be a fitting tribute to them. The National Statistical Commission will submit its final Report in mid July. This is not the first time a Committee has been set up to examine the deficiencies of the Indian Statistical System. However, the National Statistical Commission has a broad mandate. It will submit recommendations regarding improvements in the individual time series as well as systemic improvements. The latter may be as important as the former. The institutional set up that we build must have the dynamism and flexibility to make changes on its own.

State wise Physical and Financial Progress of Social Housing Schemes during Eighth Plan

ame of the tate	EWS		LIG		MIG		RHS		TOTAL	
	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
Andhra Pradesh	1251711*	69649.07*	-	-	-	-	-	-	1251711	69649.07
Assam	3624	775.31	987	566.78	979	525.44	562	620.00	6152	2487.53
Bihar	1028	656.20	-	-	-	-	-	-	1028	656.20
Goa	383	110.12	430	766.88	60	49.60	-	-	873	926.60
Gujarat	11212	3505.00	9167	2335.00	14004	11480.56	-	-	34383	17320.56
Haryana	1447	6018.44	6485	-	1677	-	-	-	9609	6018.44
Himachal Pradesh	225	30.69	707	159.37	347	140.78	-	13.09	1279	343.93
Karnataka	12711*	19400.80*	-	-	-	-	-	-	12711	19400.80
Kerala	235422	12385.54*	20244	-	18620	-	-	-	274286	12385.54
Madhya Pradesh	4992	3553.26	9120	-	6429	-	-	-	20541	3553.26
Maharashtra	3520	136.93	28931	1725.55	5747	2903.91	-	-	38198	4766.39
Manipur	343	57.20	1250	448.00	-	-	-	-	1593	505.20
Meghalaya	-	-	4622	410.20	-	1.28	10	22.14	4632	433.62
Mizoram	-	-	1421	426.30	1732	766.00	-	-	3153	1192.30
Nagaland	1184	226.80	6323	1985.70	66	59.20	-	-	7573	2271.70
Orissa	10082	2076.66	841	145.71	518	148.97	-	-	11441	2371.34
Punjab	3278	1113.73	3299	2711.84	1306	5514.88	397	824.43	8280	10164.88
Rajasthan	43	9.80	1979	695.33	1041	1032.47	683	2992.69	3746	4730.29
Sikkim	460	128.50	-	-	-	-	-	-	460	128.50
Tamil Nadu	26085	6170.13	27001	13342.20	44862	45345.96	-	-	97948	64858.29
Tripura	1418	216.99	682	179.25	-	-	14565	2853.11	16665	3249.35
Uttar Pradesh	10700	1350.00	2223	1601.00	555	300.00	-	-	13478	3251.00
Union Territories										
Dadra and Nagar Haveli	-	-	20	13.76	-	-	-	-	20	13.76
Pondicherry	10605	698.77	-	-	-	-	24	292.78	10629	991.55
TOTAL	1590473	128269.94	125732	26676.37	97943	67501.77	16241	7618.24	1830389	231670.10

Physical: No., Financial: Rs. in Lakhs., *: Including data of LIG, MIG & RHS also.

Source: Compendium on Social Housing Schemes during 8th plan.

Doctorate holders Congratulated

Smt. T. Bhavana, Deputy Director got Doctorate from Kerala University for her research work on the topic 'Cropping pattern and Income Distribution in Kerala'

Smt. Merly Mole Joseph, Research Officer got Doctorate from Cochin University of Science and Technology for her research work on 'Stochastic Processes - Inventory Control'.

Both of them were given a 'standing applause' in the Annual Training Conference held on 26.06.01. Sri. A. Meera Sahib, Director appreciated both of them and requested them to make use of their knowledge for the betterment of statistical system in the state. He requested other officers to follow suit

State level training Conference of EARAS

State level training Conference of EARAS was held at Thiruvananthapuram on 25th and 26th June, 2001. The Conference was inaugurated by Sri. S.M. Vijayanand, I.A.S, Secretary to Government, Planning & Economic Affairs Department. Sri. Sajeevan, Deputy Director, NSSO offered felicitations Sri. A. Meera Sahib, Director presided over the inaugural function in which Sri. M.R. Balakrishnan, Additional Director (G) welcomed the gathering and Smt. M.S. Valsala, Additional Direction (SI) proposed vote of thanks. All District level officers actively participated in the two day deliberations. Intensive training on Agricultural Statistics (EARAS), other ongoing schemes like prices, Cost of Cultivation and Evaluation etc. was also imparted.

State level training of N.S.S 57th Round

State level training of N.S.S 57th round was held at Thiruvananthapuram on 27th June, 2001. 57th round of NSS covers unorganised service sector (Except finance and trade). Deputy Directors & Research Officers of the districts, Statistical Inspectors (N.S.S) and Investigators (N.S.S) participated. The survey period is 1st July, 2001 to 30th June, 2002.

Training Imparted to Statistical staff of Lakshadweep

As per the request of the Planning Department of Lakshadweep Administration, the Directorate of Economics & Statistics, Govt. of Kerala had imparted a 2 weeks training to the statistical staff of the Union Territory of Lakshadweep at Kavarathi in May 2001 by deputing a team of Officers from the Directorate consisting of Sri. P. Kochunarayana Pillai (Joint Director), Sri. P. Surendran Pillai (Deputy Director) and Sri. P.A. Joseph (Assistant Director). The subjects covered include statistical methods, Price statistics, conduct of Family Budget Surveys, Computation of Consumer Price Index Numbers, computation of State Income, etc.

Good bye Colleques

August
~~April~~ 2001

Sri. M.P. Shanmugham, Additional District Officer, District Office, Eranakulam

May 2001

Sri. M. Karunakarn, Additional District Officer, Malappuram

Smt. B. Renuka, Scrutiny Officer, Directorate of Economics & Statistics, Thiruvananthapuram.

Congratulation

Promotion

June 2001

9 UD Investigators were promoted as Research Assistant/Statistical Inspector, EO(P&M).

Phone Numbers of the District Office of Economics & Statistics Department

	Officers	Code	Number
1.	Thiruvananthapuram	0471	330573
2.	Kollam	0474	793418
3.	Pathanamthitta	0473	322748
4.	Alappuzha	0477	252312
5.	Kottayam	0481	562073
6.	Idukki	0486	222856
7.	Eranakulam	0484	422533
8.	Thrissur	0487	361339
9.	Palakkad	0491	533106
10.	Malappuram	0493	734939
11.	Kozhikkode	0495	370343
12.	Wayanad	0493	602633
13.	Kannur	0497	700405
14.	Kasargode	0499	430474

Phone Numbers in the Directorate of Economics & Statistics Department, Vikasbhavan

	Officers	Code	Number
1.	Director	0471	305318
2.	Additional Director (General) (Sample registration, Publication, Planning & Computer)	0471	304711
3.	Additional Director (Price) (EARAS, Price Agricultural Census & Cost of cultivation)	0471	306039
4.	Additional Director (State Income) (State Income, Surveys & Design, I.I.P, A.S.I & Evaluation)	0471	306039
5.	Joint Director (Planning & Co-ordination)	0471	307419
6.	Joint Director (Surveys & Design)	0471	305552
7.	Joint Director (TRS)	0471	307419
8.	Joint Director (Agricultural Census)	0471	307419
9.	Administrative Officer	0471	303935
10.	Administrative Assistants	0471	303404

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