

# **The Spatial Distribution of Calorie Deficiency in Rural India in the Last Three Quinquennial Rounds of NSS\***

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## **ABSTRACT**

This paper computes calorie deficiency indicators across 75 NSS regions for the quinquennial rounds of 1987–88, 1993–94 and 1999–2000. Calorie requirements according to sedentary, moderate and heavy levels of work are used. There appears to be a sharp drop in the incidence of calorie deficiency according to each of these norms. However, regional inequality in calorie deficiency has persisted over time. The economic reforms program has been unable to make any significant dent on the spatial distribution of caloriedeficiency. The results presented here facilitate easy identification of lagging areas on which nutrition enhancement policy must concentrate.

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## I. Introduction

This paper is addressed to the question of the spatial distribution of calorie deficiency and the severity thereof in the Indian economy. Although the current literature has estimated calorie deficiency as such, its intensity and particularly its spatial distribution across India have been largely unexplored.<sup>1</sup> A discussion of the spatial distribution has almost exclusively concentrated on the experience of various states. However, as has been discussed in the case of poverty (see Duby and Gangopadhyay (1998), Jha (2003) and Jha and Sharma (2003)), there are wide variations within individual states and one needs to work at an even more disaggregated level. This paper provides estimates of the extent and severity of calorie deficiency at the level of NSS regions for the 43<sup>rd</sup>, 50<sup>th</sup> and 55<sup>th</sup> rounds (corresnponding to the years 1987–88, 1993–94 and 1999–2000 respectively) of the National Sample Survey (NSS).<sup>2</sup> There are problems of comparability between the 55<sup>th</sup> and earlier rounds; however, these problems do not extend to fooditems and are confined to non-food items. However, the results for this round are provided herewith for the sake of completeness.

In the area of undernutrition the literature has focused on two interrelated aspects. One is the prevalence of food inadequacy (PFI) and the other dietary energy supply (DES) per caput. The latter is reported in the *Sixth World Food Survey* of the FAO (2001). The FAO uses a simple methodology to estimate undernutrition. Given DES data it fits a lognormal distribution to it. It then uses a common cutoff point (related to the Basic Metabolic Rate) for all countries and considers all those that fall below this as undernourished. This approach has been criticised by Svedberg (2000). He points out three possible sources of error. First, DES par caput may be measured with error. Second, the parameters of the lognormal distribution that food consumption is assumed to follow (in

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<sup>1</sup> Jha (2000) presented evidence on the non-convergence of poverty rates across states.

<sup>2</sup> The 55<sup>th</sup> round figures correspond to the 30-day recall.

essence, the coefficient of variation in the distribution, given that its mean is given by the average DES per caput) could be measured with substantial error. Svedberg also points to the possibility that lognormal distribution may be an inappropriate assumption in itself. Finally the calorie cut-off point which defines the threshold level below which individuals are assumed to be undernourished may be country specific<sup>3</sup> and it may therefore be inappropriate to assume a common cutoff related to the Basic Metabolic Rate). The approach to measuring undernourishment in this paper is an improvement since nutritional equivalents of consumption baskets are computed directly. This second approach is, therefore, more desirable.

Undernutrition has huge inefficiency costs associated with it. There is a substantial literature arguing that there is a direct link between nutrition and higher labour productivity. Arcand (2001) takes this logic one step further and models the impact of nutrition on economic growth in a cross-country panel data framework. After considering panel equations describing the growth of per capita GDP as a function of nutritional and other variables and taking account of problems in measurement of the DES (as enunciated by Svedberg (2000) as well as methodology (opting for GMM estimation in order to permit endogeneity of the nutrition variables) he finds a remarkable contribution of the nutrition variable to per capita GDP growth worldwide. The figure is 0.23 to 4.7 per cent worldwide. Countries with above-median PFI would have their annual rates of growth increase by 1.6 percentage points if they had raised their DES per caput to 2770 kcal/day. He argues that there are direct and indirect mechanisms through which higher nutrition positively affects economic growth. The direct mechanism is through improvements in labour productivity. He identifies the indirect mechanisms as those through higher life expectancy (although this is mainly in the long-run) and longer schooling and better schooling outcomes. He also models the phenomenon of nutrition traps in economic growth with low nutrition leading to low rates

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<sup>3</sup> However as Arcand (2001) argues, Svedberg's concerns do not necessarily translate themselves into the disappearance of the statistical significance of the impact of DES per caput or PFI on economic growth.

of economic growth, which then lead to poor nutrition outcomes. He uses a switching regression technique, which distinguishes between high PFI regimes and low PFI regimes. The most significant result of this analysis is that the mean growth rate of GDP per caput for low PFI countries (0.030) is almost four times that for high PFI countries (0.012). Hence countries with high incidence of nutritional inadequacy are likely to suffer considerably in terms of poor growth performance. However being a high PFI country does not condemn a country indefinitely to low rates of economic growth. What it does point out to is the strong relevance of high levels of nutrition to attaining high rates of economic growth. In fact Arcand goes on to argue that from a mean difference of just less than \$3000 in 1960 the mean difference in GDP per caput between low-median PFI countries and above-median PFI countries had grown to \$5000 by 1990. Had the DES per caput been raised to 2770 kcal/day in all countries, this difference would have increased only to \$3250. Thus improving nutritional outcomes in high-PFI countries would have considerably reduced income inequality across the world.

Until the publication of Behrman and Deolalikar (1987) there was a dominant view that the only way out of malnutrition for developing countries was to rely on higher economic growth. This was based on calculations, which revealed high elasticities of nutrition with respect to expenditure. The argument by Behrman and Deolalikar is that this literature confuses food expenditure and nutrition elasticities. Even at low levels of income households give considerable weight to such attributes as taste in making marginal food demand decisions, at least in comparison to the weight placed on nutrition. If this is the case then high food income elasticities may be consistent with low nutrient income elasticities. Computations by Behrman and Deolalikar for rural South Indian villages in the ICRISAT dataset reveal this indeed to be the case. Whereas income elasticities for food are high, elasticites for nutrients are uniformly (except in select cases for calories and carotene) and

insignificant. Hence there should not be any presumption that improvements in income will necessarily lead to better nutritional outcomes.

Ravallion (1990) pushed this point further and argued that an important distinction needs to be made between nutritional intake and nutritional deprivation. Conflicting results with respect to nutrient and food income elasticites could be reconciled once we realize that interpersonal nutrient distributions have high density in a neighbourhood of the minimum requirement levels relevant to assessing nutritional deprivation. This is because the marginal effects of a change in the incomes of undernourished households on a headcount index of undernutrition is determined by the product of the income slope of the nutrient intake (proxied by the relevant elasticity) and the slope of the cumulative distribution function of intake, evaluated at the nutrient norm. Using a data set from East Java Ravallion confirms the Behrman–Deolalikar result of low-income elasticity of nutrients. (He studied only calories.) However, he also finds that the calorie distribution function is quite steep in the neighbourhood of reasonable caloric requirements. Further, the income slope of the calorie demand function rise quite sharply as income falls. Thus the income elasticity of calorie demand at mean points can understand considerably the income elasticity of the prevalence of caloric undernutrition relative to fixed norms.

With this background the issue of the determinants of nutrition assumes importance. The literature on direct use of nutrient has been relatively scarce. Melville (1988) examined data from a cross section of developing countries and argued that nutritional status is related to the ownership of land but not to the amount of land owned. Cropping patterns do not seem to have much of an impact. However, considerable work remains to be done. The data set that we have access to permits a more complete inquiry into the determinants of nutritional status. Jha and Gaiha (2003) report on the determinants of undernurition in rural India for the three rounds of the NSS.

The plan of this paper is as follows. Section II briefly outlines the methodology for caloriedeficiency computation used in this paper. Section III provides results on caloriedeficiency and its severity for the 43<sup>rd</sup>, 50<sup>th</sup> and 55<sup>th</sup> quinquennial rounds of the NSS as well as changes in caloriedeficiency and its intensity across these three rounds. Section IV concludes.

## **II. The Approach of this Study**

### **(a) Computation of Nutritional deficiency**

In this paper nutritional status is defined taking into account calorie and calorieintakes as well as minimum cut-off points for either on the assumption of sedentary, moderate and heavy work (Gopalan, 1992, Gopalan et. al., 1971). An advantage of the latter is that we get lower and upper bounds on calorie and calorieintakes.

The official poverty line takes into account the cost of a nutritionally adequate diet in terms of per capita consumption expenditure. The poverty line is taken as per capita consumption worth Rs. 49 (Rs. 57) at 1973–74 prices for the rural (urban) sector. Expenditure is used as a proxy for income, since the NSS does not collect income data. Estimates using these poverty lines have been made by a number of authors. Our point of departure in this paper is to estimate nutritional deficiency calculated using nutritional equivalents of actual consumption baskets for households compared against recommended daily allowance as elaborated in Gopalan et al. (1971). The daily nutritional requirements for calories as reported by Gopalan et al. are reproduced in Table 1 below.

We use energy per capita (tepc) from the NSS (National Sample Survey) data files converted into nutritional equivalents. These data are computed as total consumption (of calories, calorieand other nutrients) of the households divided by variable “members” where the number of members in a household is calculated by giving unit weights to the adults and 0.5

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weight to the children. Age specific weights for children are not possible since ages of children are not recorded. In the case of the 55<sup>th</sup> round this data is based on 30 day recall.

**Table 1**  
**Daily Allowances of Calories for Indians**  
*(Recommended by the Nutrition Expert Group in 1968)*

<i>Group</i>	<i>Particulars</i>	<i>Calories</i>
Man	Sedentary work	2400
	Mode rate work	2800
	Heavy work	3900
Woman	Sedentary work	1900
	Mode rate work	2200
	Heavy work	3000
	Second half of pregnancy	+300
	Lactation up to one year	+700
Infants	0-6 months	120/kg
	7-12 months	100/kg
Children	1 year	1200
	2 years	1200
	3 years	1200
	4-6 years	1500
	7-9 years	1800
	10-12years	2100
Adolescents	13-15 years boys	2500
	13-15 years girls	2200
	16-18 years boys	3000
	16-18 years girls	2200

Source Adapted from Gopalan et al. (1971), pp. 27

The actual total consumption of the household per day (in nutrition equivalents) is calculated as:

(tepc\*members)/30 (since a 30 day recall period is used).

The threshold level of total consumption of a household for calories as given in Table 1 are computed as:

#male\*2400+ #female\*1900+#chmale\*1300+#chfemale\*1300 (for sedentary work)

#male\*2800+#female\*2200+#chmale\*1300+#chfemale\*1300 (for moderate work)

#male\*3900+#female\*3000+#chmale\*1300+#chfemale\*1300 (for heavy work)

This paper uses the popular Foster–Greer–Thorbecke (FGT) measures of poverty.

FGT poverty measure for a given population is defined by:

$$P_\alpha = \int_0^q \left( \frac{z-y}{z} \right)^\alpha dy$$

which in discrete terms is

$$P_\alpha = \frac{1}{N} \sum_{i=1}^q \left( \frac{z-y_i}{z} \right)^\alpha$$

where

- $N$  is the sample size,
- $y$  is the variable of interest (calorieintake),
- $z$  is the minimum calorierequirement (a number or a scalar).

Three caloriedeficiency measures are calculated based on three values of  $\alpha$ .

#### **Head Count Index of CalorieDeficiency (PG0) $\alpha = 0$ :**

$$P_0 = \frac{q}{N}$$

This measure fails to capture the extent to which calorie intake falls below the minimum requirement. Hence we use our second measure: the calorie deficiency gap index ( $P_1$ ) given by the aggregate calorieshortfall of the protein-deficient population as a proportion of the minimum calorierequirement and normalized by the population size.

#### **CalorieDeficiency Gap (PG1) $\alpha = 1$ :**

$$PG_1 = \frac{1}{N} \sum_{i=1}^q \left( \frac{z-y_i}{z} \right)$$

$P_1$  captures the acuteness of caloriedeficiency since it measures the total short fall of the protein-defeicent from the poverty line. In other words, it measures the total amount of calorie necessary to remove that caloriedeficiency. This measure has the drawback that it does not consider the importance of the number of people who are calorie deficient. For this reason, it is important to use both measures of caloriedeficiency jointly. There are certain policy changes that favor one group of caloriedeficienct and adversely affect another group. In such cases  $P_0$  may not register any change but  $P_1$  may get around this problem to some extent.

### Square CalorieDeficiency Gap ( $PG_2$ ) $\alpha = 2$ :

$$PG_2 = \frac{1}{N} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right)^2$$

This measures the severity of calorie deficiency even more accurately. In discussing calorie deficiency, therefore, it is important to use all three measures. The current analysis uses multipliers as the household sampling weights.<sup>4</sup>

### III. Results

Table 2 indicates the incidence calorie deficiency in rural India. This table is testimony of the spectacular success achieved in calorieentitlements. The proportion of the population being nutritionally deficient fell from 0.34 in 1987–88 to 0.028 in 1999–2000. The intensity of caloriedeficiency has also recorded impressive falls. In particular, the improvement in calorieintake was much higher than rural poverty reductions in the same period. Table 3 provides details of the NSS regions used in this paper. The NSS regional code has varied over the years but we use a common set here for purposes of consistency.

**Table 2a: CalorieDeficiency in Rural India (Sedentary)**

	1987–88	1993–94	1999–2000
PG0	0.55	0.28	0.047
PG1	0.14	0.08	0.011
PG2	0.056	0.039	0.006

**Table 2b: CalorieDeficiency in Rural India (Moderate)**

	1987–88	1993–94	1999–2000
PG0	0.69	0.38	0.07
PG1	0.19	0.11	0.016
PG2	0.08	0.05	0.007

<sup>4</sup> For a treatment of multipliers in the three rounds see the documentation for these rounds provided by NSS.

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**Table 2c: CalorieDeficiency in Rural India (Heavy)**

	1987–88	1993–94	1999–2000
PG0	0.87	0.59	0.16
PG1	0.31	0.19	0.03
PG2	0.14	0.088	0.01

**Table 3: NSS regions**

<i>State</i>	<i>Region</i>	<i>Code used in this paper</i>
Andhra Pradesh	Coastal	1
Andhra Pradesh	Inland Northern	2
Andhra Pradesh	South western	3
Andhra Pradesh	Inland southern	4
Arunachal Pradesh	Arunachal Pradesh	5
Assam	Plains Eastern	6
Assam	Plains Western	7
Assam	Hills	8
Bihar	Southern	9
Bihar	Northern	10
Bihar	Central	11
Goa	Goa	12
Gujarat	Eastern	13
Gujarat	Plains Northern	14
Gujarat	Plains Southern	15
Gujarat	Dry Areas	16
Gujarat	Saurashtra	17
Haryana	Eastern	18
Haryana	Western	19
Himachal Pradesh	Himachal Pradesh	20
J&K	Mountainious	21
J&K	Outer Hills	22
Karnataka	Cosatal and Ghatas	23
Karnataka	Inlans Eastern	24
Karnataka	Inland Southern	25
Karnataka	Inland Northern	26
Kerala	Northern	27
Kerala	Southern	28
Madhya Pradesh	Chattisgarh	29
Madhya Pradesh	Vindhya	30
Madhya Pradesh	Central	31
Madhya Pradesh	Malwa Plateau	32
Madhya Pradesh	South Central	33
Madhya Pradesh	South western	34
Madhya Pradesh	Northern	35
Maharashtra	Coastal	36
Maharashtra	Inland Western	37
Maharashtra	Inland Northern	38
Maharashtra	Inland Central	39
Maharashtra	Inland Eastern	40
Maharashtra	Eastern	41
Manipur	Plains	42
Manipur	Hills	43
Meghalaya	Meghalaya	44
Mizoram	Mizoram	45
Orissa	Coastal	46
Orissa	Southern	47
Orissa	Northern	48
Punjab	Northern	49
Punjab	Southern	50
Rajasthan	Western	51
Rajasthan	North Eastern	52
Rajasthan	Southern	53
Rajasthan	South Eastern	54
Sikkim	Sikkim	55

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Tamil Nadu	Coastal Northen	56
Tamil Nadu	Coastal	57
Tamil Nadu	Southern	58
Tamil Nadu	Inland	59
Tripura	Tripura	60
Uttar Pradesh	Himalayan	61
Uttar Pradesh	Western	62
Uttar Pradesh	Central	63
Uttar Pradesh	Eastern	64
Uttar Pradesh	Southern	65
West Bengal	Himalayan	66
West Bengal	Eastern Plains	67
West Bengal	Central Plains	68
West Bengal	Western Plains	69
Andaman & Nicobar	A&N	70
Chandigarh		71
Dadar & Nagar Haveli		72
Delhi		73
Lakshadweep		74
Pondicherry		75

The results on caloriedeficiency computations for the three quinquennial rounds

follow in Tables 4–6. These magnitudes are arranged in ascending order to facilitate ranking of regions by their caloriedeficiency profile.<sup>5</sup>

Thus in Table 4a, Himalayan West Bengal had the smallest calorie deficiency and Dadra and Nagar Haveli the highest in the 43<sup>rd</sup> round using sedentary norm. The position of India as a whole is also indicated in each of these tables.

**Table 4a: 43<sup>rd</sup> Round PG0 in ascending order (Sedentary)**

State	Region	Code	Value
West Bengal	Himalayan	66	0.195864
Andhra Pradesh	Coastal	1	0.318965
Manipur	Plains	42	0.331844
Uttar Pradesh	Southern	65	0.351687
J&K	Outer Hills	22	0.353767
Lakshadweep		74	0.35708
Madhya Pradesh	Northern	35	0.388291
Haryana	Western	19	0.391395
Rajasthan	Western	51	0.391911
Arunachal Pradesh	Arunachal Pradesh	5	0.400653
Manipur	Hills	43	0.41506
Himachal Pradesh	Himachal Pradesh	20	0.424937
Rajasthan	South Eastern	54	0.428292
Madhya Pradesh	Vindhya	30	0.434697
Maharashtra	Eastern	41	0.439986
Rajasthan	North-Eastern	52	0.442339
Maharashtra	Inland Central	39	0.44762
Andaman & Nicobar	A&N	70	0.460348
Madhya Pradesh	Malwa Plateau	32	0.461469
Andhra Pradesh	Inland Northern	2	0.475363
Tripura	Tripura	60	0.484155
Uttar Pradesh	Himalayan	61	0.491156

<sup>5</sup> Data on all regions may not be reported for each of the rounds. This is because of the lack of convergence of the computational algorithm in these cases.

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Bihar	Central	11	0.49544
Tamil Nadu	Coastal	57	0.506102
West Bengal	Western Plains	69	0.506917
Orissa	Coastal	46	0.511967
Andhra Pradesh	South western	3	0.512005
Madhya Pradesh	Chattisgarh	29	0.518649
Uttar Pradesh	Central	63	0.526156
Uttar Pradesh	Western	62	0.540535
Bihar	Northern	10	0.542214
Uttar Pradesh	Eastern	64	0.545541
Assam	Plains Western	7	0.549248
Tamil Nadu	Inland	59	0.552905
Maharashtra	Inland Eastern	40	0.555665
<b>India</b>			<b>0.556324</b>
Karnataka	Inland Northern	26	0.566972
Chandigarh		71	0.567932
J&K	Mountainious	21	0.57111
Meghalaya	Meghalaya	44	0.575235
Haryana	Eastern	18	0.594556
West Bengal	Central Plains	68	0.59496
Assam	Plains Eastern	6	0.597216
Punjab	Southern	50	0.597412
Gujarat	Plains Southern	15	0.60871
Madhya Pradesh	South western	34	0.618773
Kerala	Southern	28	0.622347
Orissa	Northern	48	0.622752
Bihar	Southern	9	0.626571
Madhya Pradesh	Central	31	0.630493
West Bengal	Eastern Plains	67	0.643061
Maharashtra	Inland Western	37	0.645242
Karnataka	Cosatal and Ghatas	23	0.649573
Delhi		73	0.655139
Madhya Pradesh	South Central	33	0.655684
Goa	Goa	12	0.660125
Orissa	Southern	47	0.66038
Mizoram	Mizoram	45	0.662527
Punjab	Northern	49	0.667795
Maharashtra	Inland Northern	38	0.669025
Andhra Pradesh	Inland southern	4	0.683395
Karnataka	Inlans Eastern	24	0.694289
Gujarat	Plains Northern	14	0.696534
Gujarat	Saurashtra	17	0.703848
Assam	Hills	8	0.707499
Tamil Nadu	Southern	58	0.714621
Rajasthan	Southern	53	0.721878
Maharashtra	Coastal	36	0.727757
Gujarat	Eastern	13	0.733209
Kerala	Northern	27	0.738918
Pondicherry		75	0.784688
Gujarat	Dry Areas	16	0.785063
Tamil Nadu	Coastal Northen	56	0.787701
Sikkim	Sikkim	55	0.837668
Karnataka	Inland Southern	25	0.87227
Dadar & nagar Haveli		72	0.963914

**Table 4b: 43<sup>rd</sup> Round PG1 in ascending order (Sedentary)**

State	Region	Code	Value
West Bengal	Himalayan	66	0.04082
Manipur	Plains	42	0.047367
Lakshadweep		74	0.061534
Manipur	Hills	43	0.062454
J&K	Outer Hills	22	0.068785
Uttar Pradesh	Southern	65	0.070119
Rajasthan	South Eastern	54	0.072371
Madhya Pradesh	Northern	35	0.073347

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Rajasthan	Western	51	0.078264
Andhra Pradesh	Coastal	1	0.080815
Himachal Pradesh	Himachal Pradesh	20	0.082672
Arunachal Pradesh	Arunachal Pradesh	5	0.086692
Haryana	Western	19	0.086972
Madhya Pradesh	Vindhya	30	0.088809
Andhra Pradesh	Inland Northern	2	0.095934
Madhya Pradesh	Malwa Plateau	32	0.097545
Maharashtra	Eastern	41	0.098437
Maharashtra	Inland Central	39	0.099379
Uttar Pradesh	Himalayan	61	0.101937
Tripura	Tripura	60	0.103174
Assam	Plains Western	7	0.10395
Meghalaya	Meghalaya	44	0.105881
Bihar	Central	11	0.10895
Uttar Pradesh	Central	63	0.109027
Assam	Plains Eastern	6	0.109666
Rajasthan	North-Eastern	52	0.110025
Bihar	Northern	10	0.110351
J&K	Mountainious	21	0.116357
Maharashtra	Inland Eastern	40	0.116913
Delhi		73	0.117512
Orissa	Coastal	46	0.119235
Madhya Pradesh	Chattisgarh	29	0.121164
Tamil Nadu	Coastal	57	0.123131
Uttar Pradesh	Eastern	64	0.123866
Uttar Pradesh	Western	62	0.124214
West Bengal	Western Plains	69	0.128616
Gujarat	Plains Southern	15	0.13494
Madhya Pradesh	Central	31	0.135018
Orissa	Northern	48	0.1367
<b>India</b>			<b>0.140397</b>
Andaman & Nicobar	A&N	70	0.143807
West Bengal	Central Plains	68	0.147087
Haryana	Eastern	18	0.148376
Madhya Pradesh	South western	34	0.148656
West Bengal	Eastern Plains	67	0.149542
Assam	Hills	8	0.149769
Punjab	Southern	50	0.151869
Karnataka	Cosalatal and Ghatas	23	0.153788
Maharashtra	Inland Western	37	0.155976
Bihar	Southern	9	0.159708
Punjab	Northern	49	0.162129
Gujarat	Plains Northern	14	0.162872
Chandigarh		71	0.163291
Gujarat	Saurashtra	17	0.164444
Tamil Nadu	Inland	59	0.165772
Andhra Pradesh	South western	3	0.169612
Orissa	Southern	47	0.170405
Karnataka	Inland Northern	26	0.171767
Madhya Pradesh	South Central	33	0.172998
Maharashtra	Inland Northern	38	0.176088
Rajasthan	Southern	53	0.183447
Mizoram	Mizoram	45	0.187536
Gujarat	Dry Areas	16	0.193893
Kerala	Southern	28	0.194812
Goa	Goa	12	0.208008
Maharashtra	Coastal	36	0.219442
Gujarat	Eastern	13	0.221692
Kerala	Northern	27	0.223998
Karnataka	Inlans Eastern	24	0.235887
Pondicherry		75	0.238862
Tamil Nadu	Southern	58	0.25043
Sikkim	Sikkim	55	0.257411
Tamil Nadu	Coastal Northen	56	0.267283
Andhra Pradesh	Inland southern	4	0.280209
Karnataka	Inland Southern	25	0.447156
Dadar & nagar Haveli		72	0.496619

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**Table 4c: 43<sup>rd</sup> Round PG2 in ascending order (Sedentary)**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>Value</i>
Manipur	Plains	42	0.012543
Manipur	Hills	43	0.01563
West Bengal	Himalayan	66	0.01564
Rajasthan	South Eastern	54	0.020256
Lakshadweep		74	0.021208
J&K	Outer Hills	22	0.02206
Madhya Pradesh	Northern	35	0.02283
Himachal Pradesh	Himachal Pradesh	20	0.026153
Uttar Pradesh	Southern	65	0.0277
Rajasthan	Western	51	0.028895
Delhi		73	0.030021
Assam	Plains Eastern	6	0.030917
Assam	Plains Western	7	0.031183
Andhra Pradesh	Inland Northern	2	0.031198
Meghalaya	Meghalaya	44	0.031548
Madhya Pradesh	Vindhya	30	0.031654
Uttar Pradesh	Himalayan	61	0.03202
Madhya Pradesh	Malwa Plateau	32	0.032294
Maharashtra	Eastern	41	0.033442
Uttar Pradesh	Central	63	0.03458
Maharashtra	Inland Central	39	0.034897
Bihar	Northern	10	0.035848
Tripura	Tripura	60	0.0369
Maharashtra	Inland Eastern	40	0.037331
Bihar	Central	11	0.037842
Haryana	Western	19	0.038251
Andhra Pradesh	Coastal	1	0.038761
J&K	Mountainious	21	0.0388
Arunachal Pradesh	Arunachal Pradesh	5	0.040585
Gujarat	Plains Southern	15	0.04245
Madhya Pradesh	Central	31	0.042825
Uttar Pradesh	Western	62	0.044249
Uttar Pradesh	Eastern	64	0.044947
Tamil Nadu	Coastal	57	0.045276
Assam	Hills	8	0.047729
Madhya Pradesh	Chattisgarh	29	0.048811
Orissa	Northern	48	0.049908
Gujarat	Saurashtra	17	0.051096
Rajasthan	North-Eastern	52	0.051514
West Bengal	Eastern Plains	67	0.05178
Gujarat	Plains Northern	14	0.052489
Madhya Pradesh	South western	34	0.053194
Orissa	Coastal	46	0.053289
Karnataka	Cosatal and Ghatas	23	0.054865
Maharashtra	Inland Western	37	0.055967
<b>India</b>			<b>0.056341</b>
West Bengal	Western Plains	69	0.056867
West Bengal	Central Plains	68	0.05775
Haryana	Eastern	18	0.05832
Punjab	Northern	49	0.059239
Chandigarh		71	0.060904
Bihar	Southern	9	0.062987
Punjab	Southern	50	0.065069
Madhya Pradesh	South Central	33	0.066072
Orissa	Southern	47	0.066434
Rajasthan	Southern	53	0.066623
Gujarat	Dry Areas	16	0.06751
Maharashtra	Inland Northern	38	0.071676
Andaman & Nicobar	A&N	70	0.071834
Tamil Nadu	Inland	59	0.07209
Mizoram	Mizoram	45	0.077393
Karnataka	Inland Northern	26	0.078313
Kerala	Southern	28	0.083775
Andhra Pradesh	South western	3	0.085389
Maharashtra	Coastal	36	0.088499

## The Spatial Distribution of CalorieDeficiency in Rural India:

Kerala	Northern	27	0.091296
Goa	Goa	12	0.091847
Pondicherry		75	0.092023
Gujarat	Eastern	13	0.095676
Sikkim	Sikkim	55	0.104478
Karnataka	Inlans Eastern	24	0.115023
Tamil Nadu	Coastal Northen	56	0.121476
Tamil Nadu	Southern	58	0.122812
Andhra Pradesh	Inland southern	4	0.160058
Karnataka	Inland Southern	25	0.281239
Dadar & nagar Haveli		72	0.287052

**Table 4d: 43<sup>rd</sup> Round PG0 in ascending order (Moderate)**

State	Region	Code	Value
West Bengal	Himalayan	66	0.351841
Andhra Pradesh	Coastal	1	0.447836
Arunachal Pradesh	Arunachal Pradesh	5	0.483739
J&K	Outer Hills	22	0.496323
Uttar Pradesh	Southern	65	0.508029
Manipur	Plains	42	0.513348
Madhya Pradesh	Northern	35	0.519785
Rajasthan	Western	51	0.540422
Madhya Pradesh	Vindhya	30	0.559467
Haryana	Western	19	0.561782
Lakshadweep		74	0.569553
Andaman & Nicobar	A&N	70	0.582643
Rajasthan	South Eastern	54	0.582783
Rajasthan	North-Eastern	52	0.584042
Manipur	Hills	43	0.587758
Himachal Pradesh	Himachal Pradesh	20	0.596013
Maharashtra	Eastern	41	0.598928
Maharashtra	Inland Central	39	0.610962
Andhra Pradesh	South western	3	0.616867
Madhya Pradesh	Malwa Plateau	32	0.628639
Bihar	Central	11	0.634584
Uttar Pradesh	Himalayan	61	0.641856
Andhra Pradesh	Inland Northern	2	0.645745
Tripura	Tripura	60	0.654936
West Bengal	Western Plains	69	0.655162
Orissa	Coastal	46	0.661841
Tamil Nadu	Inland	59	0.670054
Madhya Pradesh	Chattisgarh	29	0.671483
Uttar Pradesh	Central	63	0.671582
Karnataka	Inland Northern	26	0.67702
Uttar Pradesh	Western	62	0.677051
Tamil Nadu	Coastal	57	0.677845
<b>India</b>			<b>0.690878</b>
Bihar	Northern	10	0.695223
J&K	Mountainious	21	0.697719
Uttar Pradesh	Eastern	64	0.69906
Assam	Plains Western	7	0.703409
West Bengal	Central Plains	68	0.710485
Maharashtra	Inland Eastern	40	0.715974
Kerala	Southern	28	0.716445
Haryana	Eastern	18	0.719088
Punjab	Southern	50	0.732455
Goa	Goa	12	0.739974
Meghalaya	Meghalaya	44	0.741102
Gujarat	Plains Southern	15	0.741628
Madhya Pradesh	South western	34	0.74599
Bihar	Southern	9	0.753232
Karnataka	Inlans Eastern	24	0.756097
Chandigarh		71	0.75706
Maharashtra	Inland Western	37	0.76107
Orissa	Northern	48	0.763045
Delhi		73	0.765293

## The Spatial Distribution of Calorie Deficiency in Rural India:

Assam	Plains Eastern	6	0.771939
Orissa	Southern	47	0.77537
Andhra Pradesh	Inland southern	4	0.776573
Mizoram	Mizoram	45	0.778523
West Bengal	Eastern Plains	67	0.784188
Punjab	Northern	49	0.789487
Madhya Pradesh	Central	31	0.791136
Tamil Nadu	Southern	58	0.798269
Karnataka	Cosatal and Ghatas	23	0.802375
Madhya Pradesh	South Central	33	0.803473
Maharashtra	Inland Northern	38	0.814771
Rajasthan	Southern	53	0.817135
Kerala	Northern	27	0.819291
Gujarat	Saurashtra	17	0.826186
Gujarat	Plains Northern	14	0.831877
Maharashtra	Coastal	36	0.833506
Gujarat	Eastern	13	0.833516
Assam	Hills	8	0.846971
Tamil Nadu	Coastal Northen	56	0.85536
Pondicherry		75	0.86064
Gujarat	Dry Areas	16	0.895606
Sikkim	Sikkim	55	0.907968
Karnataka	Inland Southern	25	0.925912
Dadar & nagar Haveli		72	0.976111

**Table 4e: 43<sup>rd</sup> Round PG1 in ascending order (Moderate)**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>Value</i>
West Bengal	Himalayan	66	0.06425
Manipur	Plains	42	0.087687
Lakshadweep		74	0.103068
J&K	Outer Hills	22	0.104189
Uttar Pradesh	Southern	65	0.107812
Manipur	Hills	43	0.109145
Madhya Pradesh	Northern	35	0.11187
Andhra Pradesh	Coastal	1	0.113203
Rajasthan	South Eastern	54	0.113544
Rajasthan	Western	51	0.117584
Haryana	Western	19	0.122999
Arunachal Pradesh	Arunachal Pradesh	5	0.123418
Himachal Pradesh	Himachal Pradesh	20	0.130129
Madhya Pradesh	Vindhya	30	0.132519
Madhya Pradesh	Malwa Plateau	32	0.142931
Maharashtra	Eastern	41	0.144068
Maharashtra	Inland Central	39	0.144268
Andhra Pradesh	Inland Northern	2	0.145659
Uttar Pradesh	Himalayan	61	0.149267
Rajasthan	North-Eastern	52	0.150208
Tripura	Tripura	60	0.153082
Bihar	Central	11	0.155753
Assam	Plains Western	7	0.15892
Uttar Pradesh	Central	63	0.160048
Bihar	Northern	10	0.161874
Meghalaya	Meghalaya	44	0.16394
Orissa	Coastal	46	0.169563
J&K	Mountainious	21	0.170511
Assam	Plains Eastern	6	0.170816
Maharashtra	Inland Eastern	40	0.171235
Madhya Pradesh	Chattisgarh	29	0.171249
Uttar Pradesh	Western	62	0.174221
Uttar Pradesh	Eastern	64	0.176307
Tamil Nadu	Coastal	57	0.176366
West Bengal	Western Plains	69	0.177039
Delhi		73	0.178785
Andaman & Nicobar	A&N	70	0.18268
<b>India</b>			<b>0.191827</b>

## The Spatial Distribution of Calorie Deficiency in Rural India:

Madhya Pradesh	Central	31	0.193913
Gujarat	Plains Southern	15	0.195264
Orissa	Northern	48	0.199162
West Bengal	Central Plains	68	0.20023
Haryana	Eastern	18	0.20098
Madhya Pradesh	South western	34	0.202688
Punjab	Southern	50	0.206927
West Bengal	Eastern Plains	67	0.208584
Andhra Pradesh	South western	3	0.211462
Maharashtra	Inland Western	37	0.216218
Chandigarh		71	0.21636
Bihar	Southern	9	0.216547
Tamil Nadu	Inland	59	0.216685
Karnataka	Cosatal and Ghatas	23	0.21748
Assam	Hills	8	0.217602
Karnataka	Inland Northern	26	0.218034
Punjab	Northern	49	0.225374
Gujarat	Saurashtra	17	0.227809
Gujarat	Plains Northern	14	0.22921
Madhya Pradesh	South Central	33	0.231963
Orissa	Southern	47	0.233616
Maharashtra	Inland Northern	38	0.236189
Rajasthan	Southern	53	0.244306
Mizoram	Mizoram	45	0.246233
Kerala	Southern	28	0.250182
Goa	Goa	12	0.260302
Gujarat	Dry Areas	16	0.262719
Gujarat	Eastern	13	0.283666
Maharashtra	Coastal	36	0.283702
Kerala	Northern	27	0.284304
Karnataka	Inlans Eastern	24	0.289675
Tamil Nadu	Southern	58	0.307043
Pondicherry		75	0.308428
Sikkim	Sikkim	55	0.322358
Andhra Pradesh	Inland southern	4	0.330123
Tamil Nadu	Coastal Northen	56	0.3303
Karnataka	Inland Southern	25	0.496435
Dadar & nagar Haveli		72	0.546261

**Table 4f: 43<sup>rd</sup> Round PG2 in ascending order (Moderate)**

State	Region	Code	Value
West Bengal	Himalayan	66	0.022789
Manipur	Plains	42	0.023585
Manipur	Hills	43	0.029872
Lakshadweep		74	0.03315
Rajasthan	South Eastern	54	0.033971
J&K	Outer Hills	22	0.034462
Madhya Pradesh	Northern	35	0.036381
Uttar Pradesh	Southern	65	0.040058
Rajasthan	Western	51	0.041876
Himachal Pradesh	Himachal Pradesh	20	0.042358
Madhya Pradesh	Vindhya	30	0.047542
Madhya Pradesh	Malwa Plateau	32	0.048898
Andhra Pradesh	Inland Northern	2	0.048906
Uttar Pradesh	Himalayan	61	0.049923
Haryana	Western	19	0.050157
Andhra Pradesh	Coastal	1	0.050383
Assam	Plains Western	7	0.050842
Maharashtra	Eastern	41	0.051639
Maharashtra	Inland Central	39	0.051685
Meghalaya	Meghalaya	44	0.052193
Assam	Plains Eastern	6	0.052443
Delhi		73	0.052891
Arunachal Pradesh	Arunachal Pradesh	5	0.053238
Uttar Pradesh	Central	63	0.053824

## The Spatial Distribution of CalorieDeficiency in Rural India:

Bihar	Northern	10	0.054781
Tripura	Tripura	60	0.0551
Bihar	Central	11	0.056085
Maharashtra	Inland Eastern	40	0.058203
J&K	Mountainious	21	0.059488
Uttar Pradesh	Western	62	0.064686
Uttar Pradesh	Eastern	64	0.065517
Madhya Pradesh	Central	31	0.065581
Rajasthan	North-Eastern	52	0.066443
Tamil Nadu	Coastal	57	0.067154
Madhya Pradesh	Chattisgarh	29	0.068051
Gujarat	Plains Southern	15	0.068176
Orissa	Coastal	46	0.071641
Assam	Hills	8	0.074495
Orissa	Northern	48	0.074518
Madhya Pradesh	South western	34	0.075712
West Bengal	Western Plains	69	0.076074
West Bengal	Eastern Plains	67	0.076881
<b>India</b>			<b>0.078257</b>
Gujarat	Saurashtra	17	0.079689
West Bengal	Central Plains	68	0.080743
Haryana	Eastern	18	0.080908
Karnataka	Cosatal and Ghatas	23	0.081913
Gujarat	Plains Northern	14	0.082053
Maharashtra	Inland Western	37	0.08297
Punjab	Northern	49	0.087022
Chandigarh		71	0.087462
Punjab	Southern	50	0.08787
Bihar	Southern	9	0.088066
Andaman & Nicobar	A&N	70	0.090429
Madhya Pradesh	South Central	33	0.092598
Orissa	Southern	47	0.094764
Rajasthan	Southern	53	0.094973
Tamil Nadu	Inland	59	0.097173
Maharashtra	Inland Northern	38	0.098092
Gujarat	Dry Areas	16	0.099351
Karnataka	Inland Northern	26	0.101112
Mizoram	Mizoram	45	0.105927
Andhra Pradesh	South western	3	0.106494
Kerala	Southern	28	0.114313
Goa	Goa	12	0.119941
Maharashtra	Coastal	36	0.122972
Kerala	Northern	27	0.124202
Gujarat	Eastern	13	0.128195
Pondicherry		75	0.132042
Sikkim	Sikkim	55	0.141362
Karnataka	Inlans Eastern	24	0.146191
Tamil Nadu	Southern	58	0.155493
Tamil Nadu	Coastal Northen	56	0.158591
Andhra Pradesh	Inland southern	4	0.189925
Karnataka	Inland Southern	25	0.32023
Dadar & nagar Haveli		72	0.333248

**Table 4g: 43<sup>rd</sup> Round PG0 in ascending order (Heavy)**

State	Region	Code	Value
Arunachal Pradesh	Arunachal Pradesh	5	0.665586
Andhra Pradesh	Coastal	1	0.710171
West Bengal	Himalayan	66	0.716435
J&K	Outer Hills	22	0.734815
Madhya Pradesh	Vindhya	30	0.779558
Andaman & Nicobar	A&N	70	0.796914
Madhya Pradesh	Northern	35	0.80092
Rajasthan	North-Eastern	52	0.813914
Andhra Pradesh	South western	3	0.814628
Uttar Pradesh	Southern	65	0.823647

## The Spatial Distribution of Calorie Deficiency in Rural India:

Rajasthan	Western	51	0.824235
Haryana	Western	19	0.832535
Maharashtra	Inland Central	39	0.837637
Rajasthan	South Eastern	54	0.839201
Himachal Pradesh	Himachal Pradesh	20	0.842579
Kerala	Southern	28	0.842858
Manipur	Plains	42	0.845283
Bihar	Central	11	0.84678
Lakshadweep		74	0.848888
Karnataka	Inland Northern	26	0.850125
Tamil Nadu	Inland	59	0.852911
Maharashtra	Eastern	41	0.854375
Chandigarh		71	0.854618
Uttar Pradesh	Himalayan	61	0.85553
Andhra Pradesh	Inland Northern	2	0.856486
Goa	Goa	12	0.863482
Delhi		73	0.866159
Madhya Pradesh	Malwa Plateau	32	0.870169
Uttar Pradesh	Central	63	0.870688
West Bengal	Western Plains	69	0.871655
Tripura	Tripura	60	0.871776
Uttar Pradesh	Western	62	0.873827
<b>India</b>			<b>0.877376</b>
Karnataka	Inlands Eastern	24	0.877605
Manipur	Hills	43	0.878083
J&K	Mountainious	21	0.882416
Tamil Nadu	Coastal	57	0.884237
Uttar Pradesh	Eastern	64	0.886131
Madhya Pradesh	Chattisgarh	29	0.886859
Orissa	Coastal	46	0.888248
Bihar	Northern	10	0.888922
West Bengal	Central Plains	68	0.892817
Mizoram	Mizoram	45	0.897509
Maharashtra	Inland Western	37	0.902883
Gujarat	Plains Southern	15	0.907183
Assam	Plains Western	7	0.90944
Kerala	Northern	27	0.909956
Orissa	Southern	47	0.910151
Andhra Pradesh	Inland southern	4	0.910594
Punjab	Southern	50	0.913286
Madhya Pradesh	South western	34	0.914219
Bihar	Southern	9	0.914399
Haryana	Eastern	18	0.915759
Assam	Plains Eastern	6	0.918461
Karnataka	Cosalat and Ghatas	23	0.918862
Maharashtra	Inland Eastern	40	0.919045
Meghalaya	Meghalaya	44	0.922976
Tamil Nadu	Southern	58	0.925388
Orissa	Northern	48	0.926053
West Bengal	Eastern Plains	67	0.927386
Punjab	Northern	49	0.92751
Maharashtra	Coastal	36	0.929201
Madhya Pradesh	Central	31	0.939038
Tamil Nadu	Coastal Northen	56	0.943178
Pondicherry		75	0.94323
Rajasthan	Southern	53	0.943703
Maharashtra	Inland Northern	38	0.94638
Madhya Pradesh	South Central	33	0.953203
Gujarat	Eastern	13	0.957462
Gujarat	Saurashtra	17	0.963816
Assam	Hills	8	0.963934
Karnataka	Inland Southern	25	0.966849
Gujarat	Plains Northern	14	0.968056
Sikkim	Sikkim	55	0.972348
Gujarat	Dry Areas	16	0.979727
Dadar & nagar Haveli		72	0.992493

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 4h: 43<sup>rd</sup> Round PG1 in ascending order (Heavy)**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>Value</i>
West Bengal	Himalayan	66	0.158958
J&K	Outer Hills	22	0.207148
Andhra Pradesh	Coastal	1	0.211094
Manipur	Plains	42	0.214966
Arunachal Pradesh	Arunachal Pradesh	5	0.214996
Madhya Pradesh	Northern	35	0.223044
Uttar Pradesh	Southern	65	0.229781
Lakshadweep		74	0.23193
Rajasthan	Western	51	0.232087
Haryana	Western	19	0.232503
Rajasthan	South Eastern	54	0.238951
Madhya Pradesh	Vindhya	30	0.242246
Manipur	Hills	43	0.242796
Himachal Pradesh	Himachal Pradesh	20	0.257927
Rajasthan	North-Eastern	52	0.259949
Maharashtra	Inland Central	39	0.263342
Uttar Pradesh	Himalayan	61	0.267838
Madhya Pradesh	Malwa Plateau	32	0.26897
Maharashtra	Eastern	41	0.270458
Andhra Pradesh	Inland Northern	2	0.272277
Bihar	Central	11	0.273764
Tripura	Tripura	60	0.282775
Uttar Pradesh	Central	63	0.286205
Andaman & Nicobar	A&N	70	0.286716
Bihar	Northern	10	0.288041
Assam	Plains Western	7	0.292379
J&K	Mountainious	21	0.294383
Uttar Pradesh	Western	62	0.296212
Orissa	Coastal	46	0.297547
West Bengal	Western Plains	69	0.298377
Meghalaya	Meghalaya	44	0.298837
Madhya Pradesh	Chattisgarh	29	0.298965
Delhi		73	0.300787
Uttar Pradesh	Eastern	64	0.301886
Maharashtra	Inland Eastern	40	0.306624
Assam	Plains Eastern	6	0.308043
Tamil Nadu	Coastal	57	0.309625
<b>India</b>			<b>0.314582</b>
Andhra Pradesh	South western	3	0.314861
West Bengal	Central Plains	68	0.323644
Haryana	Eastern	18	0.325563
Karnataka	Inland Northern	26	0.327578
Madhya Pradesh	South western	34	0.327728
Madhya Pradesh	Central	31	0.330239
Gujarat	Plains Southern	15	0.330333
Punjab	Southern	50	0.333655
Orissa	Northern	48	0.338255
Tamil Nadu	Inland	59	0.338434
West Bengal	Eastern Plains	67	0.339204
Bihar	Southern	9	0.343842
Maharashtra	Inland Western	37	0.34606
Chandigarh		71	0.349063
Karnataka	Cosatal and Ghatas	23	0.351019
Assam	Hills	8	0.35725
Punjab	Northern	49	0.360998
Madhya Pradesh	South Central	33	0.363338
Gujarat	Saurashtra	17	0.366356
Orissa	Southern	47	0.366854
Maharashtra	Inland Northern	38	0.368103
Kerala	Southern	28	0.368575
Goa	Goa	12	0.369491
Mizoram	Mizoram	45	0.371338
Rajasthan	Southern	53	0.373781
Gujarat	Plains Northern	14	0.374551
Gujarat	Dry Areas	16	0.399449

## The Spatial Distribution of CalorieDeficiency in Rural India:

Kerala	Northern	27	0.402764
Karnataka	Inlands Eastern	24	0.402864
Maharashtra	Coastal	36	0.409311
Gujarat	Eastern	13	0.410644
Tamil Nadu	Southern	58	0.427647
Andhra Pradesh	Inland southern	4	0.438556
Pondicherry		75	0.442126
Sikkim	Sikkim	55	0.447099
Tamil Nadu	Coastal Northen	56	0.451339
Karnataka	Inland Southern	25	0.589739
Dadar & nagar Haveli		72	0.632242

**Table 4i: 43<sup>rd</sup> Round PG2 in ascending order (Heavy)**

State	Region	Code	Value
West Bengal	Himalayan	66	0.054785
Manipur	Plains	42	0.071968
J&K	Outer Hills	22	0.078119
Lakshadweep		74	0.083541
Madhya Pradesh	Northern	35	0.083618
Manipur	Hills	43	0.085732
Rajasthan	South Eastern	54	0.085806
Uttar Pradesh	Southern	65	0.089167
Rajasthan	Western	51	0.089759
Andhra Pradesh	Coastal	1	0.091818
Haryana	Western	19	0.093691
Arunachal Pradesh	Arunachal Pradesh	5	0.096413
Madhya Pradesh	Vindhya	30	0.0996
Himachal Pradesh	Himachal Pradesh	20	0.100508
Madhya Pradesh	Malwa Plateau	32	0.105818
Uttar Pradesh	Himalayan	61	0.106749
Maharashtra	Inland Central	39	0.107282
Andhra Pradesh	Inland Northern	2	0.108735
Maharashtra	Eastern	41	0.111646
Bihar	Central	11	0.113487
Assam	Plains Western	7	0.115579
Bihar	Northern	10	0.115741
Rajasthan	North-Eastern	52	0.115763
Uttar Pradesh	Central	63	0.116189
Tripura	Tripura	60	0.116604
Meghalaya	Meghalaya	44	0.119147
Delhi		73	0.121182
Assam	Plains Eastern	6	0.122467
J&K	Mountainious	21	0.122806
Maharashtra	Inland Eastern	40	0.12536
Uttar Pradesh	Western	62	0.12715
Uttar Pradesh	Eastern	64	0.129358
Madhya Pradesh	Chattisgarh	29	0.130219
Orissa	Coastal	46	0.13262
Tamil Nadu	Coastal	57	0.135954
West Bengal	Western Plains	69	0.136338
Madhya Pradesh	Central	31	0.136918
Madhya Pradesh	South western	34	0.142059
<b>India</b>			<b>0.143381</b>
Gujarat	Plains Southern	15	0.143549
Andaman & Nicobar	A&N	70	0.145054
Haryana	Eastern	18	0.147145
West Bengal	Central Plains	68	0.147472
West Bengal	Eastern Plains	67	0.148993
Orissa	Northern	48	0.149918
Assam	Hills	8	0.153644
Punjab	Southern	50	0.156042
Maharashtra	Inland Western	37	0.158919
Karnataka	Cosatal and Ghatas	23	0.159855
Bihar	Southern	9	0.159952
Gujarat	Saurashtra	17	0.160172
Karnataka	Inland Northern	26	0.163164

## The Spatial Distribution of CalorieDeficiency in Rural India:

Andhra Pradesh	South western	3	0.16393
Chandigarh		71	0.166055
Punjab	Northern	49	0.166535
Gujarat	Plains Northern	14	0.166875
Tamil Nadu	Inland	59	0.167287
Madhya Pradesh	South Central	33	0.167805
Rajasthan	Southern	53	0.172512
Maharashtra	Inland Northern	38	0.173625
Orissa	Southern	47	0.174975
Mizoram	Mizoram	45	0.182412
Gujarat	Dry Areas	16	0.184658
Goa	Goa	12	0.190392
Kerala	Southern	28	0.192323
Kerala	Northern	27	0.205441
Maharashtra	Coastal	36	0.208683
Gujarat	Eastern	13	0.211226
Karnataka	Inlands Eastern	24	0.223531
Pondicherry		75	0.230044
Sikkim	Sikkim	55	0.231426
Tamil Nadu	Southern	58	0.236697
Tamil Nadu	Coastal Northen	56	0.247317
Andhra Pradesh	Inland southern	4	0.263142
Karnataka	Inland Southern	25	0.403628
Dadar & nagar Haveli		72	0.424623

**Table 5a: 50th Round PG0 in ascending order (Sedentary)**

State	Region	Code	Value
Andaman & Nicobar	A&N	70	0.041162
Assam	Hills	8	0.046919
J&K	Mountainious	21	0.083682
Assam	Plains Western	7	0.092346
Manipur	Plains	42	0.093202
Lakshadweep		74	0.094638
West Bengal	Western Plains	69	0.100809
West Bengal	Himalayan	66	0.111155
Assam	Plains Eastern	6	0.121615
Tripura	Tripura	60	0.127825
Orissa	Coastal	46	0.12791
Chandigarh		71	0.132942
West Bengal	Eastern Plains	67	0.133471
West Bengal	Central Plains	68	0.141813
Uttar Pradesh	Western	62	0.147056
Haryana	Western	19	0.151047
Madhya Pradesh	Chattisgarh	29	0.159645
Punjab	Northern	49	0.162909
Orissa	Northern	48	0.163314
Uttar Pradesh	Southern	65	0.16962
Tamil Nadu	Coastal	57	0.174322
Haryana	Eastern	18	0.175108
Karnataka	Cosatal and Ghatas	23	0.183329
Delhi		73	0.190193
Bihar	Central	11	0.193236
Andhra Pradesh	Coastal	1	0.203006
Uttar Pradesh	Central	63	0.203721
Madhya Pradesh	Vindhya	30	0.204222
Punjab	Southern	50	0.207234
Andhra Pradesh	Inland Northern	2	0.213525
Bihar	Northern	10	0.229068
Mizoram	Mizoram	45	0.229651
Meghalaya	Meghalaya	44	0.239082
Madhya Pradesh	Northern	35	0.26271
Maharashtra	Eastern	41	0.265445
Manipur	Hills	43	0.266709
Uttar Pradesh	Eastern	64	0.267525
Andhra Pradesh	South western	3	0.268849

## The Spatial Distribution of CalorieDeficiency in Rural India:

Tamil Nadu	Inland	59	0.269375
Orissa	Southern	47	0.269415
Rajasthan	North-Eastern	52	0.283291
<b>India</b>			<b>0.289124</b>
Goa	Goa	12	0.305666
Tamil Nadu	Southern	58	0.309553
Andhra Pradesh	Inland southern	4	0.323074
Uttar Pradesh	Himalayan	61	0.329498
Kerala	Southern	28	0.335668
Kerala	Northern	27	0.348886
Madhya Pradesh	Malwa Plateau	32	0.350659
Karnataka	Inlands Eastern	24	0.358528
Madhya Pradesh	South Central	33	0.362825
Tamil Nadu	Coastal Northen	56	0.371166
Rajasthan	South Eastern	54	0.372037
Bihar	Southern	9	0.380027
Pondicherry		75	0.390041
Himachal Pradesh	Himachal Pradesh	20	0.395824
Madhya Pradesh	Central	31	0.396946
Sikkim	Sikkim	55	0.400801
Maharashtra	Coastal	36	0.402612
Gujarat	Saurashtra	17	0.429455
Gujarat	Plains Southern	15	0.439898
Gujarat	Plains Northern	14	0.452318
Gujarat	Eastern	13	0.485861
J&K	Outer Hills	22	0.510879
Gujarat	Dry Areas	16	0.520665
Maharashtra	Inland Western	37	0.547378
Rajasthan	Southern	53	0.570758
Maharashtra	Inland Northern	38	0.590672
Rajasthan	Western	51	0.591896
Karnataka	Inland Southern	25	0.598107
Arunachal Pradesh	Arunachal Pradesh	5	0.610139
Karnataka	Inland Northern	26	0.636288
Madhya Pradesh	South western	34	0.663773
Dadar & nagar Haveli		72	0.672502
Maharashtra	Inland Central	39	0.689251
Maharashtra	Inland Eastern	40	0.690465

**Table 5b: 50th Round PG1 in ascending order (Sedentary)**

State	Region	Code	Value
Assam	Hills	8	0.004355
Manipur	Plains	42	0.010836
Assam	Plains Western	7	0.012873
West Bengal	Western Plains	69	0.014335
Assam	Plains Eastern	6	0.015262
West Bengal	Himalayan	66	0.015577
West Bengal	Eastern Plains	67	0.015895
Andaman & Nicobar	A&N	70	0.016442
Orissa	Coastal	46	0.018558
J&K	Mountainious	21	0.020035
Chandigarh		71	0.021268
West Bengal	Central Plains	68	0.022042
Orissa	Northern	48	0.022841
Madhya Pradesh	Chattisgarh	29	0.025946
Haryana	Western	19	0.026255
Lakshadweep		74	0.026436
Tripura	Tripura	60	0.027613
Punjab	Northern	49	0.028862
Uttar Pradesh	Western	62	0.030454
Punjab	Southern	50	0.030807
Delhi		73	0.033639
Meghalaya	Meghalaya	44	0.033843
Haryana	Eastern	18	0.034606

### The Spatial Distribution of CalorieDeficiency in Rural India:

Tamil Nadu	Coastal	57	0.034765
Uttar Pradesh	Central	63	0.040645
Andhra Pradesh	Coastal	1	0.042257
Bihar	Central	11	0.042793
Mizoram	Mizoram	45	0.044703
Karnataka	Cosatal and Ghatas	23	0.044722
Bihar	Northern	10	0.045201
Uttar Pradesh	Eastern	64	0.045708
Andhra Pradesh	Inland Northern	2	0.04681
Madhya Pradesh	Vindhya	30	0.047
Uttar Pradesh	Southern	65	0.04903
Manipur	Hills	43	0.049919
Orissa	Southern	47	0.058046
Tamil Nadu	Inland	59	0.058066
Maharashtra	Eastern	41	0.072279
Madhya Pradesh	Central	31	0.073708
Uttar Pradesh	Himalayan	61	0.075529
Tamil Nadu	Southern	58	0.076468
Bihar	Southern	9	0.077768
Andhra Pradesh	South western	3	0.077928
Madhya Pradesh	Northern	35	0.081447
Goa	Goa	12	0.08364
<b>India</b>			<b>0.083845</b>
Pondicherry		75	0.08617
Kerala	Northern	27	0.088038
Sikkim	Sikkim	55	0.088061
Kerala	Southern	28	0.089095
Andhra Pradesh	Inland southern	4	0.091577
Tamil Nadu	Coastal Northen	56	0.096376
Madhya Pradesh	South Central	33	0.099238
Maharashtra	Coastal	36	0.099874
Karnataka	Inlans Eastern	24	0.103126
Rajasthan	South Eastern	54	0.106262
Rajasthan	North-Eastern	52	0.109764
Gujarat	Saurashtra	17	0.11865
Madhya Pradesh	Malwa Plateau	32	0.124391
Himachal Pradesh	Himachal Pradesh	20	0.12514
Gujarat	Plains Northern	14	0.129172
Gujarat	Plains Southern	15	0.150834
Gujarat	Eastern	13	0.154815
J&K	Outer Hills	22	0.171278
Gujarat	Dry Areas	16	0.178499
Arunachal Pradesh	Arunachal Pradesh	5	0.182266
Maharashtra	Inland Western	37	0.211822
Dadar & nagar Haveli		72	0.221402
Karnataka	Inland Southern	25	0.228832
Maharashtra	Inland Northern	38	0.263679
Karnataka	Inland Northern	26	0.273177
Rajasthan	Southern	53	0.274543
Maharashtra	Inland Eastern	40	0.285492
Rajasthan	Western	51	0.290596
Madhya Pradesh	South western	34	0.295444
Maharashtra	Inland Central	39	0.335798

**Table 5c: 50th. Round PG2in ascending order (Sedentary)**

State	Region	Code	Value
Assam	Hills	8	0.000755
Manipur	Plains	42	0.001705
Assam	Plains Western	7	0.003217
Assam	Plains Eastern	6	0.003402
West Bengal	Himalayan	66	0.003827
West Bengal	Eastern Plains	67	0.004215
West Bengal	Western Plains	69	0.004267
Orissa	Northern	48	0.005305
Orissa	Coastal	46	0.005516
West Bengal	Central Plains	68	0.007709

## The Spatial Distribution of Calorie Deficiency in Rural India:

Punjab	Southern	50	0.007905
Chandigarh		71	0.008277
Haryana	Western	19	0.008303
Tripura	Tripura	60	0.008462
Madhya Pradesh	Chattisgarh	29	0.009094
J&K	Mountainious	21	0.009401
Meghalaya	Meghalaya	44	0.010953
Punjab	Northern	49	0.011096
Andaman & Nicobar	A&N	70	0.011211
Uttar Pradesh	Western	62	0.011305
Tamil Nadu	Coastal	57	0.01266
Haryana	Eastern	18	0.012751
Mizoram	Mizoram	45	0.012921
Uttar Pradesh	Central	63	0.013773
Bihar	Northern	10	0.014475
Uttar Pradesh	Eastern	64	0.014555
Delhi		73	0.015305
Karnataka	Cosatal and Ghatas	23	0.015364
Lakshadweep		74	0.015433
Andhra Pradesh	Coastal	1	0.015707
Manipur	Hills	43	0.015866
Andhra Pradesh	Inland Northern	2	0.016506
Bihar	Central	11	0.016801
Orissa	Southern	47	0.019069
Tamil Nadu	Inland	59	0.019246
Madhya Pradesh	Vindhya	30	0.019266
Uttar Pradesh	Southern	65	0.022489
Madhya Pradesh	Central	31	0.025542
Uttar Pradesh	Himalayan	61	0.026071
Bihar	Southern	9	0.026161
Tamil Nadu	Southern	58	0.029688
Goa	Goa	12	0.0308
Pondicherry		75	0.03124
Kerala	Northern	27	0.03288
Andhra Pradesh	South western	3	0.033861
Kerala	Southern	28	0.035589
Maharashtra	Eastern	41	0.035916
Sikkim	Sikkim	55	0.036545
Tamil Nadu	Coastal Northen	56	0.038267
<b>India</b>			<b>0.039137</b>
Maharashtra	Coastal	36	0.039325
Madhya Pradesh	Northern	35	0.041075
Madhya Pradesh	South Central	33	0.041756
Karnataka	Inlans Eastern	24	0.041828
Andhra Pradesh	Inland southern	4	0.044352
Gujarat	Saurashtra	17	0.046214
Rajasthan	South Eastern	54	0.050896
Gujarat	Plains Northern	14	0.055663
Himachal Pradesh	Himachal Pradesh	20	0.057312
Rajasthan	North-Eastern	52	0.059446
Madhya Pradesh	Malwa Plateau	32	0.062763
Gujarat	Eastern	13	0.067146
Gujarat	Plains Southern	15	0.069395
J&K	Outer Hills	22	0.075162
Gujarat	Dry Areas	16	0.080237
Arunachal Pradesh	Arunachal Prades	5	0.084015
Dadar & nagar Haveli		72	0.099135
Maharashtra	Inland Western	37	0.10969
Karnataka	Inland Southern	25	0.116093
Maharashtra	Inland Northern	38	0.143635
Maharashtra	Inland Eastern	40	0.148541
Karnataka	Inland Northern	26	0.149474
Rajasthan	Southern	53	0.17069
Rajasthan	Western	51	0.177359
Madhya Pradesh	South western	34	0.178539
Maharashtra	Inland Central	39	0.200287

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 5d: 50th Round PG0 in ascending order (moderate)**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>Value</i>
Andaman & Nicobar	A&N	70	0.064084
Assam	Hills	8	0.121518
Chandigarh		71	0.162056
Tripura	Tripura	60	0.163388
Lakshadweep		74	0.164654
Manipur	Plains	42	0.167571
J&K	Mountainious	21	0.172091
West Bengal	Himalayan	66	0.172823
Assam	Plains Western	7	0.185998
West Bengal	Western Plains	69	0.1911
Assam	Plains Eastern	6	0.220721
Delhi		73	0.227331
Orissa	Coastal	46	0.228263
Uttar Pradesh	Western	62	0.228904
Karnataka	Cosatal and Ghatas	23	0.22976
West Bengal	Central Plains	68	0.245466
West Bengal	Eastern Plains	67	0.245647
Haryana	Western	19	0.247222
Tamil Nadu	Coastal	57	0.250418
Punjab	Northern	49	0.252859
Bihar	Central	11	0.272089
Haryana	Eastern	18	0.275828
Madhya Pradesh	Chattisgarh	29	0.291999
Orissa	Northern	48	0.293353
Uttar Pradesh	Southern	65	0.294767
Uttar Pradesh	Central	63	0.29752
Andhra Pradesh	Inland Northern	2	0.301484
Andhra Pradesh	Coastal	1	0.305774
Bihar	Northern	10	0.321158
Madhya Pradesh	Vindhya	30	0.322999
Mizoram	Mizoram	45	0.337159
Punjab	Southern	50	0.345951
Rajasthan	North-Eastern	52	0.35376
Manipur	Hills	43	0.359435
Madhya Pradesh	Northern	35	0.359603
Tamil Nadu	Inland	59	0.363906
Andhra Pradesh	South western	3	0.372011
Goa	Goa	12	0.372935
Uttar Pradesh	Eastern	64	0.375612
<b>India</b>			<b>0.382686</b>
Orissa	Southern	47	0.387028
Maharashtra	Eastern	41	0.388438
Andhra Pradesh	Inland southern	4	0.391109
Meghalaya	Meghalaya	44	0.398088
Tamil Nadu	Southern	58	0.40912
Kerala	Southern	28	0.410583
Madhya Pradesh	Malwa Plateau	32	0.41345
Kerala	Northern	27	0.423577
Karnataka	Inlans Eastern	24	0.424647
Rajasthan	South Eastern	54	0.450319
Madhya Pradesh	South Central	33	0.461155
Uttar Pradesh	Himalayan	61	0.466897
Tamil Nadu	Coastal Northen	56	0.471737
Pondicherry		75	0.479814
Bihar	Southern	9	0.503349
Himachal Pradesh	Himachal Pradesh	20	0.504861
Sikkim	Sikkim	55	0.51356
Maharashtra	Coastal	36	0.516126
Gujarat	Plains Southern	15	0.527288
Madhya Pradesh	Central	31	0.528255
Gujarat	Saurashtra	17	0.533328
Gujarat	Plains Northern	14	0.576903
Gujarat	Dry Areas	16	0.577691
J&K	Outer Hills	22	0.581478
Gujarat	Eastern	13	0.597968

## The Spatial Distribution of CalorieDeficiency in Rural India:

Maharashtra	Inland Western	37	0.618427
Maharashtra	Inland Northern	38	0.633446
Rajasthan	Western	51	0.659974
Rajasthan	Southern	53	0.663679
Karnataka	Inland Southern	25	0.678714
Arunachal Pradesh	Arunachal Pradesh	5	0.685485
Karnataka	Inland Northern	26	0.699808
Dadar & nagar Haveli		72	0.732208
Maharashtra	Inland Central	39	0.73441
Maharashtra	Inland Eastern	40	0.752813
Madhya Pradesh	South western	34	0.767593

**Table 5e: 50th Round PG1 in ascending order (moderate)**

State	Region	Code	Value
Assam	Hills	8	0.013801
Andaman & Nicobar	A&N	70	0.019834
Manipur	Plains	42	0.024348
Assam	Plains Western	7	0.025474
West Bengal	Western Plains	69	0.02662
West Bengal	Himalayan	66	0.028761
J&K	Mountainious	21	0.031351
Assam	Plains Eastern	6	0.031818
West Bengal	Eastern Plains	67	0.032775
Chandigarh		71	0.033571
Orissa	Coastal	46	0.035814
Lakshadweep		74	0.036537
West Bengal	Central Plains	68	0.038782
Tripura	Tripura	60	0.040112
Haryana	Western	19	0.043627
Orissa	Northern	48	0.043759
Uttar Pradesh	Western	62	0.046012
Madhya Pradesh	Chattisgarh	29	0.047112
Punjab	Northern	49	0.048985
Delhi		73	0.049701
Haryana	Eastern	18	0.05213
Tamil Nadu	Coastal	57	0.055088
Punjab	Southern	50	0.057666
Uttar Pradesh	Central	63	0.062717
Karnataka	Cosatal and Ghatas	23	0.062825
Bihar	Central	11	0.062897
Andhra Pradesh	Coastal	1	0.065477
Meghalaya	Meghalaya	44	0.066783
Uttar Pradesh	Southern	65	0.067025
Madhya Pradesh	Vindhya	30	0.069293
Mizoram	Mizoram	45	0.069476
Bihar	Northern	10	0.069547
Andhra Pradesh	Inland Northern	2	0.070442
Uttar Pradesh	Eastern	64	0.074816
Manipur	Hills	43	0.079762
Orissa	Southern	47	0.087549
Tamil Nadu	Inland	59	0.088544
Maharashtra	Eastern	41	0.099316
Andhra Pradesh	South western	3	0.103757
Madhya Pradesh	Northern	35	0.103908
Tamil Nadu	Southern	58	0.10873
<b>India</b>			<b>0.110999</b>
Uttar Pradesh	Himalayan	61	0.111602
Madhya Pradesh	Central	31	0.113236
Goa	Goa	12	0.115437
Bihar	Southern	9	0.115863
Andhra Pradesh	Inland southern	4	0.121163
Kerala	Northern	27	0.121892
Kerala	Southern	28	0.123028
Pondicherry		75	0.125663
Sikkim	Sikkim	55	0.129993
Rajasthan	North-Eastern	52	0.131316

## The Spatial Distribution of CalorieDeficiency in Rural India:

Tamil Nadu	Coastal Northern	56	0.131398
Madhya Pradesh	South Central	33	0.131551
Karnataka	Inlands Eastern	24	0.134096
Rajasthan	South Eastern	54	0.13647
Maharashtra	Coastal	36	0.142709
Madhya Pradesh	Malwa Plateau	32	0.15104
Gujarat	Saurashtra	17	0.156081
Himachal Pradesh	Himachal Pradesh	20	0.16148
Gujarat	Plains Northern	14	0.173286
Gujarat	Plains Southern	15	0.189065
Gujarat	Eastern	13	0.198571
J&K	Outer Hills	22	0.209992
Gujarat	Dry Areas	16	0.216328
Arunachal Pradesh	Arunachal Pradesh	5	0.233911
Maharashtra	Inland Western	37	0.253106
Dadar & nagar Haveli		72	0.27285
Karnataka	Inland Southern	25	0.274801
Maharashtra	Inland Northern	38	0.30091
Rajasthan	Southern	53	0.311491
Karnataka	Inland Northern	26	0.316053
Rajasthan	Western	51	0.325597
Maharashtra	Inland Eastern	40	0.335742
Madhya Pradesh	South western	34	0.340357
Maharashtra	Inland Central	39	0.376419

**Table 5f: 50th Round PG2 in ascending order (moderate)**

State	Region	Code	Value
Assam	Hills	8	0.002358
Manipur	Plains	42	0.005065
Assam	Plains Western	7	0.006256
West Bengal	Western Plains	69	0.007198
West Bengal	Himalayan	66	0.007342
Assam	Plains Eastern	6	0.007464
West Bengal	Eastern Plains	67	0.007723
Orissa	Coastal	46	0.00987
Orissa	Northern	48	0.010709
West Bengal	Central Plains	68	0.011874
Chandigarh		71	0.012057
J&K	Mountainious	21	0.012616
Andaman & Nicobar	A&N	70	0.01265
Haryana	Western	19	0.013451
Tripura	Tripura	60	0.013554
Madhya Pradesh	Chattisgarh	29	0.014287
Punjab	Southern	50	0.015277
Uttar Pradesh	Western	62	0.016273
Punjab	Northern	49	0.01695
Haryana	Eastern	18	0.018032
Lakshadweep		74	0.018598
Meghalaya	Meghalaya	44	0.019353
Tamil Nadu	Coastal	57	0.019562
Delhi		73	0.019826
Uttar Pradesh	Central	63	0.021165
Mizoram	Mizoram	45	0.021897
Bihar	Northern	10	0.02307
Karnataka	Cosatal and Ghatas	23	0.023569
Andhra Pradesh	Coastal	1	0.023636
Uttar Pradesh	Eastern	64	0.023693
Bihar	Central	11	0.023947
Andhra Pradesh	Inland Northern	2	0.02505
Manipur	Hills	43	0.02598
Madhya Pradesh	Vindhya	30	0.026798
Uttar Pradesh	Southern	65	0.029061
Orissa	Southern	47	0.02981
Tamil Nadu	Inland	59	0.031349
Madhya Pradesh	Central	31	0.038831
Uttar Pradesh	Himalayan	61	0.03948

## The Spatial Distribution of CalorieDeficiency in Rural India:

Bihar	Southern	9	0.039855
Tamil Nadu	Southern	58	0.043182
Andhra Pradesh	South western	3	0.045102
Maharashtra	Eastern	41	0.045761
Pondicherry		75	0.045864
Goa	Goa	12	0.047064
Kerala	Northern	27	0.048401
Madhya Pradesh	Northern	35	0.05073
<b>India</b>			<b>0.051021</b>
Kerala	Southern	28	0.051529
Sikkim	Sikkim	55	0.051738
Tamil Nadu	Coastal Northen	56	0.053523
Madhya Pradesh	South Central	33	0.056308
Maharashtra	Coastal	36	0.057035
Karnataka	Inlans Eastern	24	0.057041
Andhra Pradesh	Inland southern	4	0.05801
Gujarat	Saurashtra	17	0.063999
Rajasthan	South Eastern	54	0.065016
Rajasthan	North-Eastern	52	0.071748
Himachal Pradesh	Himachal Pradesh	20	0.074949
Gujarat	Plains Northern	14	0.076012
Madhya Pradesh	Malwa Plateau	32	0.077453
Gujarat	Eastern	13	0.090229
Gujarat	Plains Southern	15	0.091049
J&K	Outer Hills	22	0.097549
Gujarat	Dry Areas	16	0.103186
Arunachal Pradesh	Arunachal Pradesh	5	0.110218
Dadar & nagar Haveli		72	0.130137
Maharashtra	Inland Western	37	0.13584
Karnataka	Inland Southern	25	0.144914
Maharashtra	Inland Northern	38	0.171797
Karnataka	Inland Northern	26	0.178782
Maharashtra	Inland Eastern	40	0.182899
Rajasthan	Southern	53	0.195869
Rajasthan	Western	51	0.203236
Madhya Pradesh	South western	34	0.206245
Maharashtra	Inland Central	39	0.23206

**Table 5g: 50th Round PG0 in ascending order (heavy)**

State	Region	Code	Value
Andaman & Nicobar	A&N	70	0.136516
Tripura	Tripura	60	0.272912
Assam	Hills	8	0.29479
Lakshadweep		74	0.302177
Delhi		73	0.302253
Karnataka	Cosatal and Ghatas	23	0.329062
J&K	Mountainious	21	0.344534
West Bengal	Himalayan	66	0.354123
Assam	Plains Western	7	0.386637
Chandigarh		71	0.389921
Manipur	Plains	42	0.396904
Tamil Nadu	Coastal	57	0.448716
Haryana	Eastern	18	0.451326
Assam	Plains Eastern	6	0.45826
Haryana	Western	19	0.469234
West Bengal	Western Plains	69	0.469594
Uttar Pradesh	Western	62	0.473124
Punjab	Northern	49	0.482969
West Bengal	Eastern Plains	67	0.490539
West Bengal	Central Plains	68	0.491886
Orissa	Coastal	46	0.505457
Andhra Pradesh	Inland Northern	2	0.519515
Uttar Pradesh	Central	63	0.527394
Bihar	Central	11	0.528357
Andhra Pradesh	Coastal	1	0.530477
Rajasthan	North-Eastern	52	0.544617

## The Spatial Distribution of CalorieDeficiency in Rural India:

Mizoram	Mizoram	45	0.548745
Manipur	Hills	43	0.554081
Madhya Pradesh	Northern	35	0.557585
Kerala	Southern	28	0.558771
Bihar	Northern	10	0.558971
Kerala	Northern	27	0.58275
Orissa	Northern	48	0.5904
Uttar Pradesh	Eastern	64	0.592138
Madhya Pradesh	Chattisgarh	29	0.596747
<b>India</b>			<b>0.599241</b>
Karnataka	Inlans Eastern	24	0.600596
Madhya Pradesh	Malwa Plateau	32	0.601904
Tamil Nadu	Inland	59	0.604333
Punjab	Southern	50	0.612753
Meghalaya	Meghalaya	44	0.617851
Andhra Pradesh	Inland southern	4	0.625113
Andhra Pradesh	South western	3	0.628305
Tamil Nadu	Southern	58	0.639697
Goa	Goa	12	0.646078
Madhya Pradesh	Vindhya	30	0.650343
Uttar Pradesh	Himalayan	61	0.657095
Maharashtra	Eastern	41	0.658807
Uttar Pradesh	Southern	65	0.667906
Maharashtra	Coastal	36	0.69606
Tamil Nadu	Coastal Northen	56	0.697383
Himachal Pradesh	Himachal Pradesh	20	0.711851
Gujarat	Saurashtra	17	0.713471
Madhya Pradesh	South Central	33	0.722501
Orissa	Southern	47	0.722662
Maharashtra	Inland Northern	38	0.736808
Sikkim	Sikkim	55	0.739248
Rajasthan	South Eastern	54	0.739514
Gujarat	Plains Northern	14	0.744476
Gujarat	Dry Areas	16	0.745054
Gujarat	Plains Southern	15	0.745909
J&K	Outer Hills	22	0.750229
Pondicherry		75	0.750617
Bihar	Southern	9	0.750678
Madhya Pradesh	Central	31	0.769792
Gujarat	Eastern	13	0.770766
Maharashtra	Inland Western	37	0.774381
Arunachal Pradesh	Arunachal Pradesh	5	0.803302
Karnataka	Inland Northern	26	0.809325
Rajasthan	Western	51	0.816174
Maharashtra	Inland Central	39	0.818876
Rajasthan	Southern	53	0.829493
Karnataka	Inland Southern	25	0.84563
Dadar & nagar Haveli		72	0.867611
Maharashtra	Inland Eastern	40	0.882251
Madhya Pradesh	South western	34	0.890112

**Table 5h: 50th Round PG1 in ascending order (heavy)**

State	Region	Code	Value
Andaman & Nicobar	A&N	70	0.037418
Assam	Hills	8	0.055052
West Bengal	Himalayan	66	0.073911
Lakshadweep		74	0.077167
Tripura	Tripura	60	0.077923
J&K	Mountainious	21	0.079792
Manipur	Plains	42	0.079988
Assam	Plains Western	7	0.080052
West Bengal	Western Plains	69	0.087688
Chandigarh		71	0.088934
Delhi		73	0.093729
West Bengal	Eastern Plains	67	0.09818

## The Spatial Distribution of Calorie Deficiency in Rural India:

Assam	Plains Eastern	6	0.098274
Orissa	Coastal	46	0.105246
Uttar Pradesh	Western	62	0.105978
West Bengal	Central Plains	68	0.106483
Karnataka	Cosatal and Ghatas	23	0.107068
Haryana	Western	19	0.107392
Haryana	Eastern	18	0.112138
Punjab	Northern	49	0.119584
Tamil Nadu	Coastal	57	0.122309
Orissa	Northern	48	0.128926
Bihar	Central	11	0.130657
Madhya Pradesh	Chattisgarh	29	0.131695
Uttar Pradesh	Central	63	0.136908
Andhra Pradesh	Coastal	1	0.141956
Andhra Pradesh	Inland Northern	2	0.14325
Bihar	Northern	10	0.146661
Punjab	Southern	50	0.147616
Uttar Pradesh	Southern	65	0.149394
Mizoram	Mizoram	45	0.149414
Uttar Pradesh	Eastern	64	0.159154
Madhya Pradesh	Vindhya	30	0.159632
Manipur	Hills	43	0.162002
Meghalaya	Meghalaya	44	0.168795
Madhya Pradesh	Northern	35	0.173671
Tamil Nadu	Inland	59	0.179013
Andhra Pradesh	South western	3	0.185071
<b>India</b>			<b>0.190912</b>
Orissa	Southern	47	0.191106
Maharashtra	Eastern	41	0.192846
Rajasthan	North-Eastern	52	0.195365
Tamil Nadu	Southern	58	0.200931
Uttar Pradesh	Himalayan	61	0.20339
Kerala	Northern	27	0.203863
Kerala	Southern	28	0.204713
Andhra Pradesh	Inland southern	4	0.206034
Karnataka	Inlans Eastern	24	0.208781
Goa	Goa	12	0.210792
Bihar	Southern	9	0.222541
Madhya Pradesh	Central	31	0.222891
Madhya Pradesh	Malwa Plateau	32	0.224234
Madhya Pradesh	South Central	33	0.226533
Tamil Nadu	Coastal Northen	56	0.227554
Rajasthan	South Eastern	54	0.228185
Pondicherry		75	0.22831
Sikkim	Sikkim	55	0.241658
Maharashtra	Coastal	36	0.244528
Gujarat	Saurashtra	17	0.254392
Himachal Pradesh	Himachal Pradesh	20	0.258312
Gujarat	Plains Northern	14	0.282155
Gujarat	Plains Southern	15	0.288265
J&K	Outer Hills	22	0.300972
Gujarat	Eastern	13	0.303912
Gujarat	Dry Areas	16	0.304941
Arunachal Pradesh	Arunachal Pradesh	5	0.341853
Maharashtra	Inland Western	37	0.346087
Karnataka	Inland Southern	25	0.377646
Maharashtra	Inland Northern	38	0.378933
Dadar & nagar Haveli		72	0.380426
Rajasthan	Southern	53	0.402697
Karnataka	Inland Northern	26	0.406323
Rajasthan	Western	51	0.410289
Maharashtra	Inland Eastern	40	0.439936
Madhya Pradesh	South western	34	0.441212
Maharashtra	Inland Central	39	0.457557

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 5i: 50th Round PG2 in ascending order (heavy)**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>Value</i>
Assam	Hills	8	0.014176
Andaman & Nicobar	A&N	70	0.018629
West Bengal	Himalayan	66	0.022939
Manipur	Plains	42	0.023214
Assam	Plains Western	7	0.023439
West Bengal	Western Plains	69	0.02462
West Bengal	Eastern Plains	67	0.027488
J&K	Mountainious	21	0.028861
Assam	Plains Eastern	6	0.029477
Chandigarh		71	0.029669
Tripura	Tripura	60	0.030359
Lakshadweep		74	0.03249
Orissa	Coastal	46	0.032493
West Bengal	Central Plains	68	0.033539
Haryana	Western	19	0.035717
Uttar Pradesh	Western	62	0.037122
Delhi		73	0.037958
Orissa	Northern	48	0.038804
Haryana	Eastern	18	0.039751
Madhya Pradesh	Chattisgarh	29	0.041763
Punjab	Northern	49	0.043129
Tamil Nadu	Coastal	57	0.047029
Karnataka	Cosatal and Ghatas	23	0.047201
Punjab	Southern	50	0.048687
Uttar Pradesh	Central	63	0.050424
Bihar	Central	11	0.050458
Andhra Pradesh	Coastal	1	0.054525
Bihar	Northern	10	0.054646
Mizoram	Mizoram	45	0.054995
Andhra Pradesh	Inland Northern	2	0.055996
Uttar Pradesh	Southern	65	0.056666
Uttar Pradesh	Eastern	64	0.058535
Madhya Pradesh	Vindhya	30	0.058751
Meghalaya	Meghalaya	44	0.059728
Manipur	Hills	43	0.062922
Orissa	Southern	47	0.070714
Tamil Nadu	Inland	59	0.072536
Madhya Pradesh	Northern	35	0.081548
Andhra Pradesh	South western	3	0.081581
Uttar Pradesh	Himalayan	61	0.082988
Maharashtra	Eastern	41	0.083368
Madhya Pradesh	Central	31	0.086067
Tamil Nadu	Southern	58	0.087065
Bihar	Southern	9	0.08771
<b>India</b>			<b>0.088518</b>
Kerala	Northern	27	0.093088
Pondicherry		75	0.093593
Goa	Goa	12	0.096185
Kerala	Southern	28	0.097377
Karnataka	Inlans Eastern	24	0.098694
Andhra Pradesh	Inland southern	4	0.099281
Tamil Nadu	Coastal Northen	56	0.100573
Madhya Pradesh	South Central	33	0.10098
Sikkim	Sikkim	55	0.104875
Rajasthan	North-Eastern	52	0.105295
Rajasthan	South Eastern	54	0.107781
Maharashtra	Coastal	36	0.111037
Gujarat	Saurashtra	17	0.116072
Madhya Pradesh	Malwa Plateau	32	0.117582
Himachal Pradesh	Himachal Pradesh	20	0.126316
Gujarat	Plains Northern	14	0.136144
Gujarat	Plains Southern	15	0.148635
Gujarat	Eastern	13	0.152798
J&K	Outer Hills	22	0.154172
Gujarat	Dry Areas	16	0.15944

## The Spatial Distribution of CalorieDeficiency in Rural India:

Arunachal Pradesh	Arunachal Pradesh	5	0.178977
Maharashtra	Inland Western	37	0.198622
Dadar & nagar Haveli		72	0.204149
Karnataka	Inland Southern	25	0.214677
Maharashtra	Inland Northern	38	0.233831
Karnataka	Inland Northern	26	0.246234
Rajasthan	Southern	53	0.255984
Maharashtra	Inland Eastern	40	0.262228
Rajasthan	Western	51	0.263011
Madhya Pradesh	South western	34	0.273889
Maharashtra	Inland Central	39	0.300483

**Table 6a: 55th Round PG0 in ascending order (sedentary)**

State	Region	Code	Value
Haryana	Eastern	18	0.001699
Gujarat	Saurashtra	17	0.001792
Haryana	Western	19	0.001948
Rajasthan	Western	51	0.003421
Rajasthan	South Eastern	54	0.003531
Rajasthan	North-Eastern	52	0.003837
Uttar Pradesh	Himalayan	61	0.004234
Mizoram	Mizoram	45	0.00448
Gujarat	Plains Northern	14	0.004894
Punjab	Northern	49	0.004946
J&K	Mountainious	21	0.005182
Manipur	Hills	43	0.006097
Delhi		73	0.006364
Meghalaya	Meghalaya	44	0.007152
Madhya Pradesh	Northern	35	0.008927
Maharashtra	Inland Western	37	0.009421
Kerala	Southern	28	0.010606
Manipur	Plains	42	0.010913
Uttar Pradesh	Southern	65	0.011264
West Bengal	Eastern Plains	67	0.011744
Punjab	Southern	50	0.011984
West Bengal	Himalayan	66	0.013462
Karnataka	Inlands Eastern	24	0.013516
Himachal Pradesh	Himachal Pradesh	20	0.014063
West Bengal	Central Plains	68	0.014161
Madhya Pradesh	Vindhya	30	0.015495
Uttar Pradesh	Western	62	0.017065
Kerala	Northern	27	0.018323
Karnataka	Cosatal and Ghatas	23	0.018567
Rajasthan	Southern	53	0.02198
Gujarat	Plains Southern	15	0.023565
Karnataka	Inland Southern	25	0.023759
Gujarat	Dry Areas	16	0.023767
Uttar Pradesh	Central	63	0.025333
Lakshadweep		74	0.027039
Orissa	Coastal	46	0.030096
Karnataka	Inland Northern	26	0.030812
Chandigarh		71	0.031465
Assam	Plains Eastern	6	0.034322
Uttar Pradesh	Eastern	64	0.044813
Maharashtra	Inland Eastern	40	0.046509
<b>India</b>			<b>0.04713</b>
Maharashtra	Coastal	36	0.049747
Madhya Pradesh	Central	31	0.050839
Maharashtra	Eastern	41	0.0516
Madhya Pradesh	South Central	33	0.052395
Bihar	Northern	10	0.055173
Madhya Pradesh	Malwa Plateau	32	0.055382
Assam	Plains Western	7	0.0566
Andaman & Nicobar	A&N	70	0.057788
Assam	Hills	8	0.058525
Tamil Nadu	Coastal	57	0.059076

## The Spatial Distribution of CalorieDeficiency in Rural India:

Andhra Pradesh	Inland Northern	2	0.06259
Gujarat	Eastern	13	0.062889
Madhya Pradesh	South western	34	0.063917
Tripura	Tripura	60	0.064709
Maharashtra	Inland Central	39	0.065222
Andhra Pradesh	South western	3	0.067028
Tamil Nadu	Southern	58	0.069571
Bihar	Central	11	0.070408
Bihar	Southern	9	0.071381
Madhya Pradesh	Chattisgarh	29	0.080694
West Bengal	Western Plains	69	0.080907
Tamil Nadu	Inland	59	0.08494
Orissa	Northern	48	0.085224
Andhra Pradesh	Coastal	1	0.08725
Pondicherry		75	0.094308
Maharashtra	Inland Northern	38	0.101475
Andhra Pradesh	Inland southern	4	0.11288
Arunachal Pradesh	Arunachal Pradesh	5	0.141
Dadar & nagar Haveli		72	0.173134
Sikkim	Sikkim	55	0.17528
Tamil Nadu	Coastal Northen	56	0.235413
Orissa	Southern	47	0.250915

**Table 6b: 55th Round PG1 in ascending order (sedentary)**

State	Region	Code	Value
Haryana	Western	19	3.68E-05
Gujarat	Saurashtra	17	0.000112
Gujarat	Plains Northern	14	0.000163
J&K	Mountainious	21	0.000197
Haryana	Eastern	18	0.000243
Manipur	Hills	43	0.000272
Uttar Pradesh	Southern	65	0.000523
Mizoram	Mizoram	45	0.000577
Madhya Pradesh	Northern	35	0.00059
Uttar Pradesh	Himalayan	61	0.000866
Delhi		73	0.001247
Punjab	Northern	49	0.001254
Manipur	Plains	42	0.00157
Rajasthan	North-Eastern	52	0.00166
Meghalaya	Meghalaya	44	0.001708
Rajasthan	South Eastern	54	0.001854
West Bengal	Himalayan	66	0.002164
Rajasthan	Western	51	0.00224
Madhya Pradesh	Vindhya	30	0.002241
Maharashtra	Inland Western	37	0.002607
Kerala	Southern	28	0.003158
Punjab	Southern	50	0.003536
West Bengal	Central Plains	68	0.003986
West Bengal	Eastern Plains	67	0.004131
Kerala	Northern	27	0.004205
Uttar Pradesh	Central	63	0.004238
Himachal Pradesh	Himachal Pradesh	20	0.004351
Uttar Pradesh	Western	62	0.004849
Lakshadweep		74	0.005135
Assam	Plains Eastern	6	0.005855
Chandigarh		71	0.005934
Assam	Hills	8	0.00624
Bihar	Northern	10	0.007152
Uttar Pradesh	Eastern	64	0.007178
Gujarat	Dry Areas	16	0.007291
Maharashtra	Coastal	36	0.007487
Assam	Plains Western	7	0.007504
Orissa	Coastal	46	0.007599
Maharashtra	Eastern	41	0.008001
Karnataka	Inland Southern	25	0.008398
Madhya Pradesh	South Central	33	0.009555

## The Spatial Distribution of CalorieDeficiency in Rural India:

Madhya Pradesh	Central	31	0.009746
Karnataka	Inlands Eastern	24	0.009975
Maharashtra	Inland Eastern	40	0.010045
Rajasthan	Southern	53	0.010772
Bihar	Central	11	0.011227
Tamil Nadu	Coastal	57	0.011242
Bihar	Southern	9	0.011259
Andhra Pradesh	Inland Northern	2	0.012112
Karnataka	Cosatal and Ghatas	23	0.012148
Karnataka	Inland Northern	26	0.012703
Madhya Pradesh	South western	34	0.013108
Tamil Nadu	Southern	58	0.013276
Tripura	Tripura	60	0.014383
Gujarat	Plains Southern	15	0.016786
<b>India</b>			<b>0.011712</b>
Madhya Pradesh	Chattisgarh	29	0.017339
Madhya Pradesh	Malwa Plateau	32	0.01797
Andaman & Nicobar	A&N	70	0.018192
Orissa	Northern	48	0.018822
Tamil Nadu	Inland	59	0.019531
West Bengal	Western Plains	69	0.023004
Andhra Pradesh	Coastal	1	0.024101
Pondicherry		75	0.024335
Andhra Pradesh	Inland southern	4	0.025801
Gujarat	Eastern	13	0.026521
Andhra Pradesh	South western	3	0.027235
Maharashtra	Inland Central	39	0.041652
Arunachal Pradesh	Arunachal Pradesh	5	0.048994
Orissa	Southern	47	0.049002
Maharashtra	Inland Northern	38	0.058661
Dadar & nagar Haveli		72	0.063134
Sikkim	Sikkim	55	0.066247
Tamil Nadu	Coastal Northen	56	0.066802

**Table 6c: 55th Round PG2 in ascending order (sedentary)**

State	Region	Code	Value
Haryana	Western	19	6.94E-07
Gujarat	Plains Northern	14	6.47E-06
J&K	Mountainious	21	8.00E-06
Gujarat	Saurashtra	17	9.98E-06
Manipur	Hills	43	1.25E-05
Uttar Pradesh	Southern	65	3.24E-05
Haryana	Eastern	18	3.48E-05
Madhya Pradesh	Northern	35	0.000127
Uttar Pradesh	Himalayan	61	0.000247
Mizoram	Mizoram	45	0.000254
Delhi		73	0.00029
West Bengal	Himalayan	66	0.000354
Manipur	Plains	42	0.000378
Meghalaya	Meghalaya	44	0.000485
Punjab	Northern	49	0.000799
Rajasthan	South Eastern	54	0.000974
Lakshadweep		74	0.000975
Assam	Hills	8	0.001048
Rajasthan	North-Eastern	52	0.001072
Punjab	Southern	50	0.001073
Maharashtra	Inland Western	37	0.001083
Madhya Pradesh	Vindhya	30	0.001151
Maharashtra	Eastern	41	0.001559
Kerala	Northern	27	0.001617
Assam	Plains Western	7	0.001682
Rajasthan	Western	51	0.001688
Kerala	Southern	28	0.001811
Bihar	Northern	10	0.001853
Maharashtra	Coastal	36	0.00186
West Bengal	Central Plains	68	0.001942

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Uttar Pradesh	Western	62	0.001992
Uttar Pradesh	Central	63	0.002014
Uttar Pradesh	Eastern	64	0.00249
Assam	Plains Eastern	6	0.00256
Madhya Pradesh	Central	31	0.002591
West Bengal	Eastern Plains	67	0.002625
Himachal Pradesh	Himachal Pradesh	20	0.002629
Madhya Pradesh	South Central	33	0.002768
Tamil Nadu	Coastal	57	0.003248
Bihar	Southern	9	0.003393
Bihar	Central	11	0.003438
Gujarat	Dry Areas	16	0.003518
Chandigarh		71	0.003616
Maharashtra	Inland Eastern	40	0.003979
Orissa	Coastal	46	0.00435
Tripura	Tripura	60	0.00438
Andhra Pradesh	Inland Northern	2	0.00491
Karnataka	Inland Southern	25	0.005253
Madhya Pradesh	South western	34	0.005479
Tamil Nadu	Southern	58	0.005492
<b>India</b>			<b>0.006036</b>
Karnataka	Inland Northern	26	0.007943
Karnataka	Inlands Eastern	24	0.008278
Madhya Pradesh	Chattisgarh	29	0.009019
Rajasthan	Southern	53	0.009103
Andhra Pradesh	Inland southern	4	0.009373
Madhya Pradesh	Malwa Plateau	32	0.00967
Orissa	Northern	48	0.009763
Karnataka	Cosatal and Ghatas	23	0.010073
Pondicherry		75	0.010186
Tamil Nadu	Inland	59	0.010804
Andaman & Nicobar	A&N	70	0.011464
West Bengal	Western Plains	69	0.013639
Andhra Pradesh	Coastal	1	0.013683
Gujarat	Plains Southern	15	0.014183
Orissa	Southern	47	0.015741
Gujarat	Eastern	13	0.018336
Andhra Pradesh	South western	3	0.020178
Arunachal Pradesh	Arunachal Pradesh	5	0.02404
Tamil Nadu	Coastal Northen	56	0.030708
Maharashtra	Inland Central	39	0.03441
Sikkim	Sikkim	55	0.046529
Dadar & Nagar Haveli		72	0.04657
Maharashtra	Inland Northern	38	0.048128

**Table 6d: 55th Round PG0 in ascending order (mderate)**

State	Region	Code	Value
Haryana	Eastern	18	0.001699
Gujarat	Saurashtra	17	0.001792
J&K	Outer Hills	22	0.003105
Rajasthan	Western	51	0.003421
Rajasthan	North-Eastern	52	0.004691
Haryana	Western	19	0.004736
Uttar Pradesh	Himalayan	61	0.006581
Punjab	Northern	49	0.007421
Delhi		73	0.007683
Gujarat	Plains Northern	14	0.00824
Meghalaya	Meghalaya	44	0.009118
J&K	Mountainious	21	0.011538
Rajasthan	South Eastern	54	0.011727
Mizoram	Mizoram	45	0.011844
Punjab	Southern	50	0.011984
Manipur	Hills	43	0.014556
Karnataka	Inlans Eastern	24	0.016336
Madhya Pradesh	Northern	35	0.017142
Kerala	Southern	28	0.017436

## The Spatial Distribution of CalorieDeficiency in Rural India:

Karnataka	Cosatal and Ghatas	23	0.019173
Madhya Pradesh	Vindhya	30	0.021703
Uttar Pradesh	Southern	65	0.023148
West Bengal	Eastern Plains	67	0.023624
Himachal Pradesh	Himachal Pradesh	20	0.023663
Maharashtra	Inland Western	37	0.024816
Uttar Pradesh	Western	62	0.025027
Kerala	Northern	27	0.026211
West Bengal	Central Plains	68	0.027356
Manipur	Plains	42	0.028013
Karnataka	Inland Southern	25	0.028247
Rajasthan	Southern	53	0.030898
Gujarat	Dry Areas	16	0.03122
Gujarat	Plains Southern	15	0.033734
Uttar Pradesh	Central	63	0.037827
Lakshadweep		74	0.038353
Karnataka	Inland Northern	26	0.039747
Chandigarh		71	0.042518
West Bengal	Himalayan	66	0.04318
Assam	Plains Eastern	6	0.043629
Orissa	Coastal	46	0.055621
Madhya Pradesh	Malwa Plateau	32	0.061443
Maharashtra	Coastal	36	0.06536
Assam	Hills	8	0.068528
Maharashtra	Inland Eastern	40	0.06933
Madhya Pradesh	Central	31	0.070492
Andaman & Nicobar	A&N	70	0.07127
Tripura	Tripura	60	0.071617
<b>India</b>			<b>0.072454</b>
Uttar Pradesh	Eastern	64	0.074043
Gujarat	Eastern	13	0.074169
Maharashtra	Inland Central	39	0.079643
Andhra Pradesh	South western	3	0.084255
Madhya Pradesh	South Central	33	0.087668
Assam	Plains Western	7	0.089747
Tamil Nadu	Coastal	57	0.090576
Madhya Pradesh	South western	34	0.09173
Bihar	Northern	10	0.099148
Maharashtra	Eastern	41	0.102722
Andhra Pradesh	Inland Northern	2	0.10341
Bihar	Southern	9	0.1205
Tamil Nadu	Southern	58	0.121516
Bihar	Central	11	0.122234
Tamil Nadu	Inland	59	0.122826
Maharashtra	Inland Northern	38	0.127567
West Bengal	Western Plains	69	0.128006
Madhya Pradesh	Chattisgarh	29	0.13012
Orissa	Northern	48	0.134293
Andhra Pradesh	Coastal	1	0.139201
Andhra Pradesh	Inland southern	4	0.1559
Pondicherry		75	0.167748
Arunachal Pradesh	Arunachal Pradesh	5	0.176079
Sikkim	Sikkim	55	0.21468
Dadar & nagar Haveli		72	0.223655
Tamil Nadu	Coastal Northen	56	0.332647
Orissa	Southern	47	0.343206

**Table 6e: 55th. Round PG1 in ascending order (moderate)**

State	Region	Code	Value
J&K	Outer Hills	22	1.97E-05
Gujarat	Saurashtra	17	0.000237
Haryana	Western	19	0.000444
Haryana	Eastern	18	0.000451
J&K	Mountainious	21	0.000524
Gujarat	Plains Northern	14	0.000879
Manipur	Hills	43	0.000964

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Mizoram	Mizoram	45	0.001209
Uttar Pradesh	Himalayan	61	0.001214
Madhya Pradesh	Northern	35	0.001763
Punjab	Northern	49	0.001773
Rajasthan	North-Eastern	52	0.001849
Delhi		73	0.001894
Uttar Pradesh	Southern	65	0.001966
Meghalaya	Meghalaya	44	0.002313
Rajasthan	Western	51	0.002363
Rajasthan	South Eastern	54	0.003094
Manipur	Plains	42	0.003476
Madhya Pradesh	Vindhya	30	0.003552
West Bengal	Himalayan	66	0.004076
Maharashtra	Inland Western	37	0.004207
Kerala	Southern	28	0.004313
Punjab	Southern	50	0.004648
West Bengal	Eastern Plains	67	0.005308
West Bengal	Central Plains	68	0.005657
Himachal Pradesh	Himachal Pradesh	20	0.00573
Kerala	Northern	27	0.00598
Uttar Pradesh	Western	62	0.006296
Uttar Pradesh	Central	63	0.006696
Assam	Plains Eastern	6	0.008646
Chandigarh		71	0.008991
Gujarat	Dry Areas	16	0.009173
Lakshadweep		74	0.00949
Assam	Hills	8	0.010093
Karnataka	Inland Southern	25	0.010518
Karnataka	Inlands Eastern	24	0.010582
Orissa	Coastal	46	0.01091
Uttar Pradesh	Eastern	64	0.011706
Rajasthan	Southern	53	0.012182
Maharashtra	Coastal	36	0.012407
Karnataka	Cosatal and Ghatas	23	0.012998
Bihar	Northern	10	0.013302
Assam	Plains Western	7	0.013421
Maharashtra	Eastern	41	0.013964
Maharashtra	Inland Eastern	40	0.014435
Karnataka	Inland Northern	26	0.01493
Madhya Pradesh	Central	31	0.015072
Madhya Pradesh	South Central	33	0.016308
<b>India</b>			<b>0.016309</b>
Tamil Nadu	Coastal	57	0.017891
Gujarat	Plains Southern	15	0.018243
Bihar	Central	11	0.018551
Bihar	Southern	9	0.018764
Madhya Pradesh	South western	34	0.019159
Andhra Pradesh	Inland Northern	2	0.019234
Tripura	Tripura	60	0.019353
Madhya Pradesh	Malwa Plateau	32	0.02123
Tamil Nadu	Southern	58	0.021962
Andaman & Nicobar	A&N	70	0.022891
Madhya Pradesh	Chattisgarh	29	0.02512
Orissa	Northern	48	0.027862
Tamil Nadu	Inland	59	0.029607
Gujarat	Eastern	13	0.030139
West Bengal	Western Plains	69	0.03099
Andhra Pradesh	South western	3	0.03186
Andhra Pradesh	Coastal	1	0.033021
Pondicherry		75	0.034681
Andhra Pradesh	Inland southern	4	0.037355
Maharashtra	Inland Central	39	0.043156
Arunachal Pradesh	Arunachal Pradesh	5	0.05842
Maharashtra	Inland Northern	38	0.064217
Orissa	Southern	47	0.072417
Dadar & nagar Haveli		72	0.076917
Sikkim	Sikkim	55	0.079129
Tamil Nadu	Coastal Northen	56	0.089164

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**Table 6f: 55th Round PG2 in ascending order (moderate)**

State	Region	Code	Value
J&K	Outer Hills	22	1.26E-07
Gujarat	Saurashtra	17	3.82E-05
Haryana	Western	19	4.34E-05
J&K	Mountainious	21	5.17E-05
Haryana	Eastern	18	0.00012
Gujarat	Plains Northern	14	0.000132
Manipur	Hills	43	0.000143
Uttar Pradesh	Southern	65	0.000248
Madhya Pradesh	Northern	35	0.000337
Mizoram	Mizoram	45	0.000339
Uttar Pradesh	Himalayan	61	0.000389
Delhi		73	0.000543
Manipur	Plains	42	0.000749
Meghalaya	Meghalaya	44	0.000777
West Bengal	Himalayan	66	0.000778
Punjab	Northern	49	0.000963
Rajasthan	North-Eastern	52	0.001192
Rajasthan	South Eastern	54	0.001365
Madhya Pradesh	Vindhya	30	0.001393
Maharashtra	Inland Western	37	0.00147
Rajasthan	Western	51	0.001825
Punjab	Southern	50	0.001826
Assam	Hills	8	0.002029
Kerala	Southern	28	0.002254
Kerala	Northern	27	0.002291
West Bengal	Central Plains	68	0.00243
Uttar Pradesh	Central	63	0.002574
Lakshadweep		74	0.002659
Uttar Pradesh	Western	62	0.002661
West Bengal	Eastern Plains	67	0.002954
Maharashtra	Eastern	41	0.003113
Assam	Plains Western	7	0.00314
Himachal Pradesh	Himachal Pradesh	20	0.003143
Bihar	Northern	10	0.003181
Assam	Plains Eastern	6	0.003255
Maharashtra	Coastal	36	0.003493
Uttar Pradesh	Eastern	64	0.003638
Chandigarh		71	0.004223
Madhya Pradesh	Central	31	0.004326
Gujarat	Dry Areas	16	0.004329
Madhya Pradesh	South Central	33	0.004703
Orissa	Coastal	46	0.005224
Bihar	Central	11	0.005306
Bihar	Southern	9	0.00539
Maharashtra	Inland Eastern	40	0.005488
Tamil Nadu	Coastal	57	0.005554
Karnataka	Inland Southern	25	0.006248
Tripura	Tripura	60	0.006589
Andhra Pradesh	Inland Northern	2	0.006917
Madhya Pradesh	South western	34	0.007369
<b>India</b>			<b>0.007451</b>
Tamil Nadu	Southern	58	0.007883
Karnataka	Inlans Eastern	24	0.008721
Karnataka	Inland Northern	26	0.008924
Rajasthan	Southern	53	0.009411
Karnataka	Cosatal and Ghatas	23	0.010606
Madhya Pradesh	Chattisgarh	29	0.010999
Madhya Pradesh	Malwa Plateau	32	0.011283
Orissa	Northern	48	0.012094
Andaman & Nicobar	A&N	70	0.013179
Andhra Pradesh	Inland southern	4	0.013448
Tamil Nadu	Inland	59	0.013824
Pondicherry		75	0.014084
Gujarat	Plains Southern	15	0.014848
West Bengal	Western Plains	69	0.015914

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Andhra Pradesh	Coastal	1	0.016249
Gujarat	Eastern	13	0.019572
Andhra Pradesh	South western	3	0.021923
Orissa	Southern	47	0.02403
Arunachal Pradesh	Arunachal Pradesh	5	0.029143
Maharashtra	Inland Central	39	0.035019
Tamil Nadu	Coastal Northern	56	0.040176
Maharashtra	Inland Northern	38	0.050246
Dadar & nagar Haveli		72	0.050293
Sikkim	Sikkim	55	0.051079

**Table 6g: 55th Round PG0 in ascending order (heavy)**

State	Region	Code	Value
J&K	Outer Hills	22	0.003105
Haryana	Western	19	0.007433
Gujarat	Saurashtra	17	0.008792
Goa	Goa	12	0.010748
Rajasthan	Western	51	0.011126
Rajasthan	North-Eastern	52	0.014173
Punjab	Southern	50	0.015115
Haryana	Eastern	18	0.018186
Meghalaya	Meghalaya	44	0.019849
Punjab	Northern	49	0.025238
Karnataka	Cosatal and Ghatas	23	0.030042
Gujarat	Plains Northern	14	0.032313
Karnataka	Inlans Eastern	24	0.032685
Uttar Pradesh	Himalayan	61	0.0347
J&K	Mountainious	21	0.037505
Delhi		73	0.039636
Mizoram	Mizoram	45	0.040161
Rajasthan	South Eastern	54	0.043442
Kerala	Southern	28	0.04946
Uttar Pradesh	Western	62	0.052781
Lakshadweep		74	0.053393
Rajasthan	Southern	53	0.054367
Gujarat	Dry Areas	16	0.05518
Himachal Pradesh	Himachal Pradesh	20	0.05581
Madhya Pradesh	Northern	35	0.056866
Karnataka	Inland Southern	25	0.058162
West Bengal	Eastern Plains	67	0.069773
Kerala	Northern	27	0.071246
Uttar Pradesh	Southern	65	0.075462
West Bengal	Central Plains	68	0.078196
Madhya Pradesh	Vindhya	30	0.083321
Chandigarh		71	0.090537
Karnataka	Inland Northern	26	0.091149
Assam	Plains Eastern	6	0.100283
West Bengal	Himalayan	66	0.101688
Maharashtra	Inland Western	37	0.10468
Uttar Pradesh	Central	63	0.114051
Tripura	Tripura	60	0.115418
Madhya Pradesh	Central	31	0.13723
Maharashtra	Inland Central	39	0.138236
Manipur	Hills	43	0.13883
Gujarat	Plains Southern	15	0.145103
Maharashtra	Coastal	36	0.148481
Maharashtra	Inland Eastern	40	0.152318
Madhya Pradesh	Malwa Plateau	32	0.161228
Madhya Pradesh	South western	34	0.163569
<b>India</b>			<b>0.164062</b>
Andhra Pradesh	South western	3	0.167632
Manipur	Plains	42	0.169946
Orissa	Coastal	46	0.170249
Uttar Pradesh	Eastern	64	0.176152
Tamil Nadu	Coastal	57	0.177012
Gujarat	Eastern	13	0.178565

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Assam	Plains Western	7	0.189454
Andaman & Nicobar	A&N	70	0.191507
Madhya Pradesh	South Central	33	0.205086
Andhra Pradesh	Inland Northern	2	0.218378
Tamil Nadu	Inland	59	0.220082
Assam	Hills	8	0.223349
Maharashtra	Inland Northern	38	0.243256
Maharashtra	Eastern	41	0.258408
Tamil Nadu	Southern	58	0.262771
Bihar	Northern	10	0.26656
West Bengal	Western Plains	69	0.268226
Andhra Pradesh	Inland southern	4	0.283309
Arunachal Pradesh	Arunachal Pradesh	5	0.290054
Madhya Pradesh	Chattisgarh	29	0.292627
Andhra Pradesh	Coastal	1	0.294491
Bihar	Central	11	0.308512
Bihar	Southern	9	0.309624
Pondicherry		75	0.323789
Orissa	Northern	48	0.325994
Sikkim	Sikkim	55	0.371744
Dadar & nagar Haveli		72	0.464873
Tamil Nadu	Coastal Northen	56	0.537943
Orissa	Southern	47	0.608536

**Table 6h: 55th Round PG1 in ascending order (heavy)**

State	Region	Code	Value
J&K	Outer Hills	22	0.000468
Gujarat	Saurashtra	17	0.000951
Haryana	Western	19	0.00136
Goa	Goa	12	0.002184
Haryana	Eastern	18	0.002694
Rajasthan	Western	51	0.002976
Rajasthan	North-Eastern	52	0.00314
Uttar Pradesh	Himalayan	61	0.003805
J&K	Mountainious	21	0.00392
Gujarat	Plains Northern	14	0.004179
Punjab	Northern	49	0.004396
Meghalaya	Meghalaya	44	0.004674
Mizoram	Mizoram	45	0.005068
Delhi		73	0.006184
Punjab	Southern	50	0.006794
Madhya Pradesh	Northern	35	0.007405
Rajasthan	South Eastern	54	0.008024
Uttar Pradesh	Southern	65	0.010327
Kerala	Southern	28	0.010414
Madhya Pradesh	Vindhya	30	0.011644
Uttar Pradesh	Western	62	0.011723
West Bengal	Eastern Plains	67	0.011836
Himachal Pradesh	Himachal Pradesh	20	0.011953
Karnataka	Inlans Eastern	24	0.012868
Maharashtra	Inland Western	37	0.013479
West Bengal	Central Plains	68	0.013572
Kerala	Northern	27	0.014036
Manipur	Hills	43	0.014821
West Bengal	Himalayan	66	0.015056
Gujarat	Dry Areas	16	0.015538
Karnataka	Cosatal and Ghatas	23	0.016009
Karnataka	Inland Southern	25	0.016861
Rajasthan	Southern	53	0.017099
Lakshadweep		74	0.017707
Uttar Pradesh	Central	63	0.01829
Assam	Plains Eastern	6	0.01924
Manipur	Plains	42	0.021617
Chandigarh		71	0.022828
Karnataka	Inland Northern	26	0.023835
Assam	Hills	8	0.028284

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Orissa	Coastal	46	0.029732
Gujarat	Plains Southern	15	0.030359
Maharashtra	Coastal	36	0.030491
Maharashtra	Inland Eastern	40	0.0309
Uttar Pradesh	Eastern	64	0.030963
Madhya Pradesh	Central	31	0.031998
Tripura	Tripura	60	0.032593
<b>India</b>			<b>0.034954</b>
Madhya Pradesh	Malwa Plateau	32	0.035145
Assam	Plains Western	7	0.035751
Madhya Pradesh	South western	34	0.039362
Madhya Pradesh	South Central	33	0.040712
Tamil Nadu	Coastal	57	0.040749
Bihar	Northern	10	0.042744
Andaman & Nicobar	A&N	70	0.043651
Maharashtra	Eastern	41	0.046232
Andhra Pradesh	Inland Northern	2	0.046797
Gujarat	Eastern	13	0.047059
Andhra Pradesh	South western	3	0.050081
Maharashtra	Inland Central	39	0.052315
Bihar	Central	11	0.052665
Bihar	Southern	9	0.054473
Tamil Nadu	Southern	58	0.055939
Madhya Pradesh	Chattisgarh	29	0.059376
Tamil Nadu	Inland	59	0.060045
West Bengal	Western Plains	69	0.06255
Orissa	Northern	48	0.065562
Andhra Pradesh	Coastal	1	0.06873
Andhra Pradesh	Inland southern	4	0.073619
Pondicherry		75	0.075782
Maharashtra	Inland Northern	38	0.086493
Arunachal Pradesh	Arunachal Pradesh	5	0.090137
Sikkim	Sikkim	55	0.121188
Dadar & nagar Haveli		72	0.134408
Orissa	Southern	47	0.150452
Tamil Nadu	Coastal Northen	56	0.156836

**Table 6i: 55th Round PG2 in ascending order (heavy)**

State	Region	Code	Value
J&K	Outer Hills	22	7.05E-05
Gujarat	Saurashtra	17	0.000186
Haryana	Western	19	0.000314
Goa	Goa	12	0.000445
J&K	Mountainious	21	0.000613
Haryana	Eastern	18	0.000629
Uttar Pradesh	Himalayan	61	0.000946
Gujarat	Plains Northern	14	0.000956
Mizoram	Mizoram	45	0.001156
Rajasthan	North-Eastern	52	0.001569
Meghalaya	Meghalaya	44	0.00168
Delhi		73	0.001685
Madhya Pradesh	Northern	35	0.001693
Punjab	Northern	49	0.001737
Uttar Pradesh	Southern	65	0.002075
Rajasthan	Western	51	0.002114
Manipur	Hills	43	0.002678
Madhya Pradesh	Vindhya	30	0.002976
Rajasthan	South Eastern	54	0.003046
West Bengal	Himalayan	66	0.003383
Punjab	Southern	50	0.003597
Maharashtra	Inland Western	37	0.003768
Kerala	Southern	28	0.004223
Manipur	Plains	42	0.004434
West Bengal	Eastern Plains	67	0.004618
West Bengal	Central Plains	68	0.004687
Uttar Pradesh	Western	62	0.004751

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Kerala	Northern	27	0.004886
Himachal Pradesh	Himachal Pradesh	20	0.005234
Uttar Pradesh	Central	63	0.005595
Assam	Hills	8	0.006112
Assam	Plains Eastern	6	0.006349
Gujarat	Dry Areas	16	0.006961
Lakshadweep		74	0.008077
Chandigarh		71	0.008557
Karnataka	Inland Southern	25	0.009187
Uttar Pradesh	Eastern	64	0.009192
Maharashtra	Coastal	36	0.009881
Karnataka	Inlands Eastern	24	0.00994
Assam	Plains Western	7	0.009941
Orissa	Coastal	46	0.010221
Bihar	Northern	10	0.010861
Rajasthan	Southern	53	0.010864
Madhya Pradesh	Central	31	0.010916
Maharashtra	Inland Eastern	40	0.011422
Maharashtra	Eastern	41	0.011865
Karnataka	Inland Northern	26	0.012135
Karnataka	Cosatal and Ghatas	23	0.012161
Tripura	Tripura	60	0.012867
Madhya Pradesh	South Central	33	0.012964
<b>India</b>			<b>0.01346</b>
Tamil Nadu	Coastal	57	0.014242
Bihar	Central	11	0.014633
Madhya Pradesh	South western	34	0.014648
Bihar	Southern	9	0.015464
Andhra Pradesh	Inland Northern	2	0.015865
Madhya Pradesh	Malwa Plateau	32	0.015998
Gujarat	Plains Southern	15	0.017735
Tamil Nadu	Southern	58	0.019271
Andaman & Nicobar	A&N	70	0.020167
Madhya Pradesh	Chattisgarh	29	0.020914
Orissa	Northern	48	0.023493
Gujarat	Eastern	13	0.024472
West Bengal	Western Plains	69	0.025974
Tamil Nadu	Inland	59	0.026157
Andhra Pradesh	Coastal	1	0.027998
Andhra Pradesh	South western	3	0.028166
Andhra Pradesh	Inland southern	4	0.028279
Pondicherry		75	0.029247
Maharashtra	Inland Central	39	0.037526
Arunachal Pradesh	Arunachal Pradesh	5	0.043598
Orissa	Southern	47	0.053824
Maharashtra	Inland Northern	38	0.057888
Sikkim	Sikkim	55	0.067619
Dadar & nagar Haveli		72	0.06792
Tamil Nadu	Coastal Northen	56	0.070378

We now assess how the various regions have performed in respect of caloriedeficiency over this time period. In Table 7 we have subtracted the 50<sup>th</sup> round from the 43<sup>rd</sup> round PG0 and arranged these differences in ascending order. Thus Inland Central Maharashtra's PG0 actually increased between 1987–88 and 1993–94. The steepest decline was in Assam hills. In he following tables we compare the 43<sup>rd</sup>, 50<sup>th</sup> and 55<sup>th</sup> rounds for PG0, PG1, and PG2 for

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all three nutritional norms: sedentary, moderate and heavy. The top right-hand corner of each table indicates which round's figures are subtracted from which round's. Below it we have the norm used and the measure of deficiency. Thus in Table 7 we subtract 50<sup>th</sup> round figures from those for the 43<sup>rd</sup> round, the deficiency concept used is PG0 and the norm used is sedentary (s).

**Tables 7:**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-50 PG0(S) Value</i>
Maharashtra	Inland Central	39	-0.24163
Arunachal Pradesh	Arunachal Pradesh	5	-0.20949
Rajasthan	Western	51	-0.19998
J&K	Outer Hills	22	-0.15711
Maharashtra	Inland Eastern	40	-0.1348
Karnataka	Inland Northern	26	-0.06932
Madhya Pradesh	South western	34	-0.045
Himachal Pradesh	Himachal Pradesh	20	0.029113
Rajasthan	South Eastern	54	0.056256
Maharashtra	Inland Northern	38	0.078352
West Bengal	Himalayan	66	0.084709
Maharashtra	Inland Western	37	0.097864
Madhya Pradesh	Malwa Plateau	32	0.11081
Andhra Pradesh	Coastal	1	0.115959
Madhya Pradesh	Northern	35	0.125581
Manipur	Hills	43	0.148351
Rajasthan	Southern	53	0.15112
Rajasthan	North-Eastern	52	0.159049
Uttar Pradesh	Himalayan	61	0.161658
Gujarat	Plains Southern	15	0.168812
Maharashtra	Eastern	41	0.174541
Uttar Pradesh	Southern	65	0.182067
Madhya Pradesh	Vindhya	30	0.230476
Madhya Pradesh	Central	31	0.233547
Manipur	Plains	42	0.238642
Haryana	Western	19	0.240348
Andhra Pradesh	South western	3	0.243156
Gujarat	Plains Northern	14	0.244216
Bihar	Southern	9	0.246544
Gujarat	Eastern	13	0.247347
Andhra Pradesh	Inland Northern	2	0.261838
Lakshadweep		74	0.262442
Gujarat	Dry Areas	16	0.264398
Karnataka	Inland Southern	25	0.274163
Gujarat	Saurashtra	17	0.274394
Uttar Pradesh	Eastern	64	0.278016
Tamil Nadu	Inland	59	0.283531
Kerala	Southern	28	0.286679
Dadar & nagar Haveli		72	0.291412
Madhya Pradesh	South Central	33	0.292858
Bihar	Central	11	0.302204
Bihar	Northern	10	0.313146
Uttar Pradesh	Central	63	0.322435
Maharashtra	Coastal	36	0.325145
Tamil Nadu	Coastal	57	0.331781
Karnataka	Inlands Eastern	24	0.33576
Meghalaya	Meghalaya	44	0.336153
Goa	Goa	12	0.354459
Tripura	Tripura	60	0.35633
Madhya Pradesh	Chattisgarh	29	0.359004
Andhra Pradesh	Inland southern	4	0.360321

## The Spatial Distribution of CalorieDeficiency in Rural India:

Orissa	Coastal	46	0.384057
Kerala	Northern	27	0.390032
Punjab	Southern	50	0.390178
Orissa	Southern	47	0.390965
Uttar Pradesh	Western	62	0.393478
Pondicherry		75	0.394648
Tamil Nadu	Southern	58	0.405068
West Bengal	Western Plains	69	0.406108
Tamil Nadu	Coastal Northen	56	0.416535
Andaman & Nicobar	A&N	70	0.419186
Haryana	Eastern	18	0.419448
Mizoram	Mizoram	45	0.432876
Chandigarh		71	0.43499
Sikkim	Sikkim	55	0.436867
West Bengal	Central Plains	68	0.453146
Assam	Plains Western	7	0.456903
Orissa	Northern	48	0.459438
Delhi		73	0.464946
Karnataka	Cosatal and Ghatas	23	0.466244
Assam	Plains Eastern	6	0.475602
J&K	Mountainious	21	0.487429
Punjab	Northern	49	0.504886
West Bengal	Eastern Plains	67	0.50959
Assam	Hills	8	0.66058

**Table 8**

State	Region	Code	43-50 PG1(S) Value
Maharashtra	Inland Central	39	-0.23642
Rajasthan	Western	51	-0.21233
Maharashtra	Inland Eastern	40	-0.16858
Madhya Pradesh	South western	34	-0.14679
J&K	Outer Hills	22	-0.10249
Karnataka	Inland Northern	26	-0.10141
Arunachal Pradesh	Arunachal Pradesh	5	-0.09557
Rajasthan	Southern	53	-0.0911
Maharashtra	Inland Northern	38	-0.08759
Maharashtra	Inland Western	37	-0.05585
Himachal Pradesh	Himachal Pradesh	20	-0.04247
Rajasthan	South Eastern	54	-0.03389
Madhya Pradesh	Malwa Plateau	32	-0.02685
Gujarat	Plains Southern	15	-0.01589
Madhya Pradesh	Northern	35	-0.0081
Rajasthan	North-Eastern	52	0.000261
Manipur	Hills	43	0.012535
Gujarat	Dry Areas	16	0.015393
Uttar Pradesh	Southern	65	0.021089
West Bengal	Himalayan	66	0.025243
Maharashtra	Eastern	41	0.026157
Uttar Pradesh	Himalayan	61	0.026408
Gujarat	Plains Northern	14	0.0337
Lakshadweep		74	0.035098
Manipur	Plains	42	0.036531
Andhra Pradesh	Coastal	1	0.038557
Madhya Pradesh	Vindhya	30	0.041809
Gujarat	Saurashtra	17	0.045794
Andhra Pradesh	Inland Northern	2	0.049125
Haryana	Western	19	0.060717
Madhya Pradesh	Central	31	0.061309
Bihar	Northern	10	0.06515
Bihar	Central	11	0.066157
Gujarat	Eastern	13	0.066877
Uttar Pradesh	Central	63	0.068381
Meghalaya	Meghalaya	44	0.072038

## The Spatial Distribution of Calorie Deficiency in Rural India:

Madhya Pradesh	South Central	33	0.073761
Tripura	Tripura	60	0.075561
Uttar Pradesh	Eastern	64	0.078158
Bihar	Southern	9	0.08194
Delhi		73	0.083874
Tamil Nadu	Coastal	57	0.088366
Assam	Plains Western	7	0.091077
Andhra Pradesh	South western	3	0.091684
Uttar Pradesh	Western	62	0.09376
Assam	Plains Eastern	6	0.094403
Madhya Pradesh	Chattisgarh	29	0.095218
J&K	Mountainous	21	0.096322
Orissa	Coastal	46	0.100677
Kerala	Southern	28	0.105717
Tamil Nadu	Inland	59	0.107706
Karnataka	Cosatal and Ghatas	23	0.109066
Orissa	Southern	47	0.112359
Haryana	Eastern	18	0.11377
Orissa	Northern	48	0.113859
West Bengal	Western Plains	69	0.114281
Maharashtra	Coastal	36	0.119568
Punjab	Southern	50	0.121062
Goa	Goa	12	0.124368
West Bengal	Central Plains	68	0.125045
Andaman & Nicobar	A&N	70	0.127365
Karnataka	Inlans Eastern	24	0.132761
Punjab	Northern	49	0.133267
West Bengal	Eastern Plains	67	0.133647
Kerala	Northern	27	0.135961
Chandigarh		71	0.142023
Mizoram	Mizoram	45	0.142833
Assam	Hills	8	0.145414
Pondicherry		75	0.152692
Sikkim	Sikkim	55	0.16935
Tamil Nadu	Coastal Northen	56	0.170906
Tamil Nadu	Southern	58	0.173962
Andhra Pradesh	Inland southern	4	0.188632
Karnataka	Inland Southern	25	0.218323
Dadar & nagar Haveli		72	0.275217

**Table 9**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-50 PG2(S)</i>
Maharashtra	Inland Central	39	-0.16539
Rajasthan	Western	51	-0.14846
Madhya Pradesh	South western	34	-0.12535
Maharashtra	Inland Eastern	40	-0.11121
Rajasthan	Southern	53	-0.10407
Maharashtra	Inland Northern	38	-0.07196
Karnataka	Inland Northern	26	-0.07116
Maharashtra	Inland Western	37	-0.05372
J&K	Outer Hills	22	-0.0531
Arunachal Pradesh	Arunachal Pradesh	5	-0.04343
Himachal Pradesh	Himachal Pradesh	20	-0.03116
Rajasthan	South Eastern	54	-0.03064
Madhya Pradesh	Malwa Plateau	32	-0.03047
Gujarat	Plains Southern	15	-0.02695
Madhya Pradesh	Northern	35	-0.01824
Gujarat	Dry Areas	16	-0.01273
Rajasthan	North-Eastern	52	-0.00793
Gujarat	Plains Northern	14	-0.00317
Maharashtra	Eastern	41	-0.00247
Manipur	Hills	43	-0.00024
Gujarat	Saurashtra	17	0.004882
Uttar Pradesh	Southern	65	0.005211

## The Spatial Distribution of Calorie Deficiency in Rural India:

			74	0.005775
Lakshadweep		Himalayan	61	0.005949
Uttar Pradesh		Plains	42	0.010837
Manipur		Himalayan	66	0.011813
West Bengal		Vindhya	30	0.012387
Madhya Pradesh		Inland Northern	2	0.014693
Andhra Pradesh			73	0.014716
Delhi		Central	31	0.017283
Madhya Pradesh		Meghalaya	44	0.020595
Meghalaya		Central	63	0.020807
Uttar Pradesh		Central	11	0.021041
Bihar		Northern	10	0.021374
Bihar		Coastal	1	0.023054
Andhra Pradesh		South Central	33	0.024316
Madhya Pradesh		Plains Eastern	6	0.027515
Assam		Plains Western	7	0.027966
Assam		Tripura	60	0.028438
Tripura		Eastern	13	0.02853
Gujarat		Mountainious	21	0.029399
J&K		Western	19	0.029948
Haryana		Eastern	64	0.030392
Uttar Pradesh		Coastal	57	0.032616
Tamil Nadu		Western	62	0.032944
Uttar Pradesh		Southern	9	0.036826
Bihar		Cosatal and Ghatas	23	0.039501
Karnataka		Chattisgarh	29	0.039717
Madhya Pradesh		Northern	48	0.044603
Orissa		Eastern	18	0.045569
Haryana		Hills	8	0.046974
Assam		Southern	47	0.047365
Orissa		Eastern Plains	67	0.047565
West Bengal		Coastal	46	0.047773
Orissa		Northern	49	0.048143
Punjab		Southern	28	0.048187
Kerala		Coastal	36	0.049174
Maharashtra		Central Plains	68	0.050041
West Bengal		South western	3	0.051528
Andhra Pradesh		Western Plains	69	0.0526
West Bengal			71	0.052627
Chandigarh		Inland	59	0.052845
Tamil Nadu		Southern	50	0.057164
Punjab		Northern	27	0.058416
Kerala		A&N	70	0.060623
Andaman & Nicobar			75	0.060783
Pondicherry		Goa	12	0.061047
Goa		Mizoram	45	0.064472
Mizoram		Sikkim	55	0.067933
Sikkim		Inlans Eastern	24	0.073195
Karnataka		Coastal Northen	56	0.083209
Tamil Nadu		Southern	58	0.093124
Tamil Nadu		Inland southern	4	0.115707
Andhra Pradesh		Inland Southern	25	0.165146
Karnataka			72	0.187916
Dadar & nagar Haveli				

**Table 10**

State	Region	Code	43-55
			PGO(S)
West Bengal	Himalayan	66	Value
Andhra Pradesh	Coastal	1	0.182402
Arunachal Pradesh	Arunachal Pradesh	5	0.231715
Manipur	Plains	42	0.259652
Lakshadweep		74	0.320931
Uttar Pradesh	Southern	65	0.330041
J&K	Outer Hills	22	0.340422
			0.353767

## The Spatial Distribution of Calorie Deficiency in Rural India:

Madhya Pradesh	Northern	35	0.379364
Maharashtra	Inland Central	39	0.382398
Maharashtra	Eastern	41	0.388386
Rajasthan	Western	51	0.388489
Haryana	Western	19	0.389447
Andaman & Nicobar	A&N	70	0.40256
Madhya Pradesh	Malwa Plateau	32	0.406087
Manipur	Hills	43	0.408964
Orissa	Southern	47	0.409465
Himachal Pradesh	Himachal Pradesh	20	0.410874
Andhra Pradesh	Inland Northern	2	0.412773
Madhya Pradesh	Vindhya	30	0.419202
Tripura	Tripura	60	0.419446
Rajasthan	South Eastern	54	0.424761
Bihar	Central	11	0.425032
West Bengal	Western Plains	69	0.42601
Madhya Pradesh	Chattisgarh	29	0.437956
Rajasthan	North-Eastern	52	0.438502
Andhra Pradesh	South western	3	0.444977
Tamil Nadu	Coastal	57	0.447026
Tamil Nadu	Inland	59	0.467965
Orissa	Coastal	46	0.481871
Uttar Pradesh	Himalayan	61	0.486922
Bihar	Northern	10	0.487041
Assam	Plains Western	7	0.492648
Uttar Pradesh	Eastern	64	0.500729
Uttar Pradesh	Central	63	0.500822
Maharashtra	Inland Eastern	40	0.509156
Uttar Pradesh	Western	62	0.52347
Karnataka	Inland Northern	26	0.53616
Chandigarh		71	0.536467
Orissa	Northern	48	0.537527
Tamil Nadu	Coastal Northen	56	0.552288
Madhya Pradesh	South western	34	0.554856
Bihar	Southern	9	0.555191
Assam	Plains Eastern	6	0.562894
J&K	Mountainious	21	0.565928
Maharashtra	Inland Northern	38	0.567549
Meghalaya	Meghalaya	44	0.568082
Andhra Pradesh	Inland southern	4	0.570515
Madhya Pradesh	Central	31	0.579654
West Bengal	Central Plains	68	0.580799
Gujarat	Plains Southern	15	0.585145
Punjab	Southern	50	0.585427
Haryana	Eastern	18	0.592857
Madhya Pradesh	South Central	33	0.603289
Kerala	Southern	28	0.611741
Karnataka	Cosatal and Ghatas	23	0.631006
West Bengal	Eastern Plains	67	0.631317
Maharashtra	Inland Western	37	0.635821
Tamil Nadu	Southern	58	0.64505
Delhi		73	0.648775
Assam	Hills	8	0.648974
Mizoram	Mizoram	45	0.658047
Goa	Goa	12	0.660125
Sikkim	Sikkim	55	0.662388
Punjab	Northern	49	0.662849
Gujarat	Eastern	13	0.67032
Maharashtra	Coastal	36	0.67801
Karnataka	Inlans Eastern	24	0.680772
Pondicherry		75	0.69038
Gujarat	Plains Northern	14	0.69164
Rajasthan	Southern	53	0.699898
Gujarat	Saurashtra	17	0.702056
Kerala	Northern	27	0.720595
Gujarat	Dry Areas	16	0.761296
Dadar & nagar Haveli		72	0.79078
Karnataka	Inland Southern	25	0.848511

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 11**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-55 PG1(S) Value</i>
Arunachal Pradesh	Arunachal Pradesh	5	0.037698
West Bengal	Himalayan	66	0.038656
Manipur	Plains	42	0.045796
Lakshadweep		74	0.056399
Andhra Pradesh	Coastal	1	0.056714
Maharashtra	Inland Central	39	0.057728
Manipur	Hills	43	0.062182
J&K	Outer Hills	22	0.068785
Uttar Pradesh	Southern	65	0.069596
Rajasthan	South Eastern	54	0.070517
Madhya Pradesh	Northern	35	0.072758
Rajasthan	Western	51	0.076024
Himachal Pradesh	Himachal Pradesh	20	0.078321
Madhya Pradesh	Malwa Plateau	32	0.079575
Andhra Pradesh	Inland Northern	2	0.083823
Madhya Pradesh	Vindhya	30	0.086568
Haryana	Western	19	0.086935
Tripura	Tripura	60	0.08879
Maharashtra	Eastern	41	0.090436
Assam	Plains Western	7	0.096446
Bihar	Central	11	0.097723
Uttar Pradesh	Himalayan	61	0.101071
Bihar	Northern	10	0.103199
Assam	Plains Eastern	6	0.10381
Madhya Pradesh	Chattisgarh	29	0.103825
Meghalaya	Meghalaya	44	0.104173
Uttar Pradesh	Central	63	0.104789
West Bengal	Western Plains	69	0.105612
Maharashtra	Inland Eastern	40	0.106868
Rajasthan	North-Eastern	52	0.108365
Orissa	Coastal	46	0.111636
Tamil Nadu	Coastal	57	0.11189
J&K	Mountainious	21	0.116161
Delhi		73	0.116265
Uttar Pradesh	Eastern	64	0.116688
Maharashtra	Inland Northern	38	0.117428
Orissa	Northern	48	0.117878
Gujarat	Plains Southern	15	0.118154
Uttar Pradesh	Western	62	0.119365
Orissa	Southern	47	0.121403
Madhya Pradesh	Central	31	0.125272
Andaman & Nicobar	A&N	70	0.125614
Madhya Pradesh	South western	34	0.135547
Karnataka	Cosatal and Ghatas	23	0.14164
Andhra Pradesh	South western	3	0.142376
West Bengal	Central Plains	68	0.143101
Assam	Hills	8	0.143529
West Bengal	Eastern Plains	67	0.145411
Tamil Nadu	Inland	59	0.146241
Haryana	Eastern	18	0.148133
Punjab	Southern	50	0.148333
Bihar	Southern	9	0.148449
Maharashtra	Inland Western	37	0.153369
Chandigarh		71	0.157357
Karnataka	Inland Northern	26	0.159063
Punjab	Northern	49	0.160875
Gujarat	Plains Northern	14	0.162709
Madhya Pradesh	South Central	33	0.163443
Gujarat	Saurashtra	17	0.164332
Rajasthan	Southern	53	0.172676
Gujarat	Dry Areas	16	0.186602
Mizoram	Mizoram	45	0.186959
Sikkim	Sikkim	55	0.191164

## The Spatial Distribution of CalorieDeficiency in Rural India:

Kerala	Southern	28	0.191654
Gujarat	Eastern	13	0.195171
Tamil Nadu	Coastal Northen	56	0.20048
Goa	Goa	12	0.208008
Maharashtra	Coastal	36	0.211954
Pondicherry		75	0.214527
Kerala	Northern	27	0.219794
Karnataka	Inlans Eastern	24	0.225912
Tamil Nadu	Southern	58	0.237154
Andhra Pradesh	Inland southern	4	0.254408
Dadar & nagar Haveli		72	0.433485
Karnataka	Inland Southern	25	0.438758

**Table 12**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-55 PG2(S) Value</i>
Maharashtra	Inland Central	39	0.000487
Manipur	Plains	42	0.012165
West Bengal	Himalayan	66	0.015285
Manipur	Hills	43	0.015618
Arunachal Pradesh	Arunachal Pradesh	5	0.016545
Rajasthan	South Eastern	54	0.019282
Lakshadweep		74	0.020233
J&K	Outer Hills	22	0.02206
Madhya Pradesh	Malwa Plateau	32	0.022623
Madhya Pradesh	Northern	35	0.022704
Himachal Pradesh	Himachal Pradesh	20	0.023524
Maharashtra	Inland Northern	38	0.023548
Andhra Pradesh	Coastal	1	0.025079
Andhra Pradesh	Inland Northern	2	0.026288
Rajasthan	Western	51	0.027207
Uttar Pradesh	Southern	65	0.027668
Gujarat	Plains Southern	15	0.028266
Assam	Plains Eastern	6	0.028357
Assam	Plains Western	7	0.029501
Delhi		73	0.029731
Madhya Pradesh	Vindhya	30	0.030503
Meghalaya	Meghalaya	44	0.031063
Uttar Pradesh	Himalayan	61	0.031773
Maharashtra	Eastern	41	0.031884
Tripura	Tripura	60	0.03252
Uttar Pradesh	Central	63	0.032566
Maharashtra	Inland Eastern	40	0.033352
Bihar	Northern	10	0.033995
Bihar	Central	11	0.034404
Haryana	Western	19	0.038251
J&K	Mountainious	21	0.038792
Madhya Pradesh	Chattisgarh	29	0.039792
Orissa	Northern	48	0.040145
Madhya Pradesh	Central	31	0.040233
Tamil Nadu	Coastal	57	0.042028
Uttar Pradesh	Western	62	0.042257
Uttar Pradesh	Eastern	64	0.042457
West Bengal	Western Plains	69	0.043228
Karnataka	Cosatal and Ghatas	23	0.044792
Assam	Hills	8	0.046681
Madhya Pradesh	South western	34	0.047716
Orissa	Coastal	46	0.048939
West Bengal	Eastern Plains	67	0.049155
Rajasthan	North-Eastern	52	0.050442
Orissa	Southern	47	0.050694
Gujarat	Saurashtra	17	0.051086
Gujarat	Plains Northern	14	0.052482
Maharashtra	Inland Western	37	0.054885
West Bengal	Central Plains	68	0.055807
Chandigarh		71	0.057288
Rajasthan	Southern	53	0.05752
Sikkim	Sikkim	55	0.057949
Haryana	Eastern	18	0.058285
Punjab	Northern	49	0.05844

### The Spatial Distribution of Calorie Deficiency in Rural India:

Bihar	Southern	9	0.059595
Andaman & Nicobar	A&N	70	0.06037
Tamil Nadu	Inland	59	0.061287
Madhya Pradesh	South Central	33	0.063304
Gujarat	Dry Areas	16	0.063992
Punjab	Southern	50	0.063997
Andhra Pradesh	South western	3	0.065211
Karnataka	Inland Northern	26	0.070371
Mizoram	Mizoram	45	0.07714
Gujarat	Eastern	13	0.07734
Pondicherry		75	0.081837
Kerala	Southern	28	0.081964
Maharashtra	Coastal	36	0.086639
Kerala	Northern	27	0.089679
Tamil Nadu	Coastal Northen	56	0.090768
Goa	Goa	12	0.091847
Karnataka	Inlans Eastern	24	0.106745
Tamil Nadu	Southern	58	0.11732
Andhra Pradesh	Inland southern	4	0.150685
Dadar & nagar Haveli		72	0.240482
Karnataka	Inland Southern	25	0.275986

**Table 13**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>50-55 PG0(S) Value</i>
Andaman & Nicobar	A&N	70	-0.01663
Assam	Hills	8	-0.01161
Orissa	Southern	47	0.0185
West Bengal	Western Plains	69	0.019901
Assam	Plains Western	7	0.035746
Tripura	Tripura	60	0.063116
Lakshadweep		74	0.067599
Orissa	Northern	48	0.078089
J&K	Mountainious	21	0.078499
Madhya Pradesh	Chattisgarh	29	0.078952
Manipur	Plains	42	0.082289
Assam	Plains Eastern	6	0.087292
West Bengal	Himalayan	66	0.097693
Orissa	Coastal	46	0.097814
Chandigarh		71	0.101476
Tamil Nadu	Coastal	57	0.115246
Andhra Pradesh	Coastal	1	0.115756
West Bengal	Eastern Plains	67	0.121727
Bihar	Central	11	0.122828
West Bengal	Central Plains	68	0.127652
Uttar Pradesh	Western	62	0.129992
Tamil Nadu	Coastal Northen	56	0.135752
Haryana	Western	19	0.149099
Andhra Pradesh	Inland Northern	2	0.150935
Punjab	Northern	49	0.157963
Uttar Pradesh	Southern	65	0.158355
Karnataka	Cosatal and Ghatas	23	0.164762
Haryana	Eastern	18	0.173408
Bihar	Northern	10	0.173895
Uttar Pradesh	Central	63	0.178387
Delhi		73	0.183829
Tamil Nadu	Inland	59	0.184434
Madhya Pradesh	Vindhya	30	0.188727
Punjab	Southern	50	0.195249
Andhra Pradesh	South western	3	0.201821
Andhra Pradesh	Inland southern	4	0.210194
Maharashtra	Eastern	41	0.213845
Uttar Pradesh	Eastern	64	0.222713
Mizoram	Mizoram	45	0.225171
Sikkim	Sikkim	55	0.225521
Meghalaya	Meghalaya	44	0.23193

## The Spatial Distribution of Calorie Deficiency in Rural India:

Tamil Nadu	Southern	58	0.239982
Madhya Pradesh	Northern	35	0.253783
Manipur	Hills	43	0.260613
Rajasthan	North-Eastern	52	0.279453
Madhya Pradesh	Malwa Plateau	32	0.295277
Pondicherry		75	0.295733
Goa	Goa	12	0.305666
Bihar	Southern	9	0.308647
Madhya Pradesh	South Central	33	0.31043
Kerala	Southern	28	0.325063
Uttar Pradesh	Himalayan	61	0.325264
Kerala	Northern	27	0.330563
Karnataka	Inlands Eastern	24	0.345012
Madhya Pradesh	Central	31	0.346107
Maharashtra	Coastal	36	0.352865
Rajasthan	South Eastern	54	0.368506
Himachal Pradesh	Himachal Pradesh	20	0.381761
Gujarat	Plains Southern	15	0.416334
Gujarat	Eastern	13	0.422972
Gujarat	Saurashtra	17	0.427662
Gujarat	Plains Northern	14	0.447424
Arunachal Pradesh	Arunachal Pradesh	5	0.469139
Maharashtra	Inland Northern	38	0.489197
Gujarat	Dry Areas	16	0.496898
Dadar & nagar Haveli		72	0.499369
J&K	Outer Hills	22	0.510879
Maharashtra	Inland Western	37	0.537957
Rajasthan	Southern	53	0.548778
Karnataka	Inland Southern	25	0.574348
Rajasthan	Western	51	0.588474
Madhya Pradesh	South western	34	0.599856
Karnataka	Inland Northern	26	0.605476
Maharashtra	Inland Central	39	0.624029
Maharashtra	Inland Eastern	40	0.643956

**Table 14**

State	Region	Code	50-55 PG1(S) Value
West Bengal	Western Plains	69	-0.00867
Assam	Hills	8	-0.00188
Andaman & Nicobar	A&N	70	-0.00175
Orissa	Northern	48	0.004019
Assam	Plains Western	7	0.005369
Madhya Pradesh	Chattisgarh	29	0.008607
Orissa	Southern	47	0.009044
Manipur	Plains	42	0.009265
Assam	Plains Eastern	6	0.009407
Orissa	Coastal	46	0.010959
West Bengal	Eastern Plains	67	0.011764
Tripura	Tripura	60	0.01323
West Bengal	Himalayan	66	0.013413
Chandigarh		71	0.015335
West Bengal	Central Plains	68	0.018055
Andhra Pradesh	Coastal	1	0.018157
J&K	Mountainious	21	0.019839
Lakshadweep		74	0.021301
Sikkim	Sikkim	55	0.021814
Tamil Nadu	Coastal	57	0.023524
Uttar Pradesh	Western	62	0.025605
Haryana	Western	19	0.026218
Punjab	Southern	50	0.027271
Punjab	Northern	49	0.027608
Tamil Nadu	Coastal Norther	56	0.029574
Bihar	Central	11	0.031566

## The Spatial Distribution of Calorie Deficiency in Rural India:

Meghalaya	Meghalaya	44	0.032135
Delhi		73	0.032392
Karnataka	Cosatal and Ghatas	23	0.032574
Haryana	Eastern	18	0.034363
Andhra Pradesh	Inland Northern	2	0.034698
Uttar Pradesh	Central	63	0.036408
Bihar	Northern	10	0.038049
Uttar Pradesh	Eastern	64	0.03853
Tamil Nadu	Inland	59	0.038536
Mizoram	Mizoram	45	0.044126
Madhya Pradesh	Vindhya	30	0.044759
Uttar Pradesh	Southern	65	0.048507
Manipur	Hills	43	0.049647
Andhra Pradesh	South western	3	0.050692
Pondicherry		75	0.061834
Tamil Nadu	Southern	58	0.063192
Madhya Pradesh	Central	31	0.063962
Maharashtra	Eastern	41	0.064279
Andhra Pradesh	Inland southern	4	0.065776
Bihar	Southern	9	0.066509
Uttar Pradesh	Himalayan	61	0.074663
Madhya Pradesh	Northern	35	0.080857
Goa	Goa	12	0.08364
Kerala	Northern	27	0.083833
Kerala	Southern	28	0.085937
Madhya Pradesh	South Central	33	0.089683
Maharashtra	Coastal	36	0.092386
Karnataka	Inlans Eastern	24	0.093151
Rajasthan	South Eastern	54	0.104408
Madhya Pradesh	Malwa Plateau	32	0.106422
Rajasthan	North-Eastern	52	0.108104
Gujarat	Saurashtra	17	0.118537
Himachal Pradesh	Himachal Pradesh	20	0.12079
Gujarat	Eastern	13	0.128294
Gujarat	Plains Northern	14	0.129009
Arunachal Pradesh	Arunachal Pradesh	5	0.133272
Gujarat	Plains Southern	15	0.134048
Dadar & nagar Haveli		72	0.158268
Gujarat	Dry Areas	16	0.171209
J&K	Outer Hills	22	0.171278
Maharashtra	Inland Northern	38	0.205018
Maharashtra	Inland Western	37	0.209216
Karnataka	Inland Southern	25	0.220435
Karnataka	Inland Northern	26	0.260474
Rajasthan	Southern	53	0.263772
Maharashtra	Inland Eastern	40	0.275447
Madhya Pradesh	South western	34	0.282336
Rajasthan	Western	51	0.288356
Maharashtra	Inland Central	39	0.294147

**Table 15**

State	Region	Code	50-55 PG2(S) Value
Sikkim	Sikkim	55	-0.00998
West Bengal	Western Plains	69	-0.00937
Orissa	Northern	48	-0.00446
Assam	Hills	8	-0.00029
Andaman & Nicobar	A&N	70	-0.00025
Madhya Pradesh	Chattisgarh	29	7.47E-05
Assam	Plains Eastern	6	0.000842
Orissa	Coastal	46	0.001166
Manipur	Plains	42	0.001328
Assam	Plains Western	7	0.001535
West Bengal	Eastern Plains	67	0.00159

## The Spatial Distribution of Calorie Deficiency in Rural India:

Andhra Pradesh	Coastal	1	0.002025
Orissa	Southern	47	0.003328
West Bengal	Himalayan	66	0.003473
Tripura	Tripura	60	0.004081
Chandigarh		71	0.004661
Karnataka	Cosalat and Ghatas	23	0.005291
West Bengal	Central Plains	68	0.005767
Punjab	Southern	50	0.006833
Tamil Nadu	Coastal Northen	56	0.007559
Haryana	Western	19	0.008303
Tamil Nadu	Inland	59	0.008442
Uttar Pradesh	Western	62	0.009313
J&K	Mountainious	21	0.009393
Tamil Nadu	Coastal	57	0.009412
Punjab	Northern	49	0.010297
Meghalaya	Meghalaya	44	0.010468
Andhra Pradesh	Inland Northern	2	0.011595
Uttar Pradesh	Central	63	0.01176
Uttar Pradesh	Eastern	64	0.012065
Bihar	Northern	10	0.012621
Mizoram	Mizoram	45	0.012667
Haryana	Eastern	18	0.012717
Bihar	Central	11	0.013363
Andhra Pradesh	South western	3	0.013683
Lakshadweep		74	0.014458
Delhi		73	0.015015
Manipur	Hills	43	0.015853
Madhya Pradesh	Vindhya	30	0.018115
Pondicherry		75	0.021054
Uttar Pradesh	Southern	65	0.022457
Bihar	Southern	9	0.022769
Madhya Pradesh	Central	31	0.02295
Tamil Nadu	Southern	58	0.024197
Uttar Pradesh	Himalayan	61	0.025824
Goa	Goa	12	0.0308
Kerala	Northern	27	0.031263
Karnataka	Inlans Eastern	24	0.03355
Kerala	Southern	28	0.033777
Maharashtra	Eastern	41	0.034358
Andhra Pradesh	Inland southern	4	0.034979
Maharashtra	Coastal	36	0.037465
Madhya Pradesh	South Central	33	0.038988
Madhya Pradesh	Northern	35	0.040948
Gujarat	Saurashtra	17	0.046204
Gujarat	Eastern	13	0.04881
Rajasthan	South Eastern	54	0.049922
Dadar & nagar Haveli		72	0.052565
Madhya Pradesh	Malwa Plateau	32	0.053092
Himachal Pradesh	Himachal Pradesh	20	0.054683
Gujarat	Plains Southern	15	0.055212
Gujarat	Plains Northern	14	0.055656
Rajasthan	North-Eastern	52	0.058374
Arunachal Pradesh	Arunachal Pradesh	5	0.059976
J&K	Outer Hills	22	0.075162
Gujarat	Dry Areas	16	0.076719
Maharashtra	Inland Northern	38	0.095507
Maharashtra	Inland Western	37	0.108607
Karnataka	Inland Southern	25	0.11084
Karnataka	Inland Northern	26	0.141531
Maharashtra	Inland Eastern	40	0.144562
Rajasthan	Southern	53	0.161587
Maharashtra	Inland Central	39	0.165877
Madhya Pradesh	South western	34	0.173061
Rajasthan	Western	51	0.175671

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 16**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-50 PG0(M) Value</i>
Arunachal Pradesh	Arunachal Pradesh	5	-0.20175
Maharashtra	Inland Central	39	-0.12345
Rajasthan	Western	51	-0.11955
J&K	Outer Hills	22	-0.08515
Maharashtra	Inland Eastern	40	-0.03684
Karnataka	Inland Northern	26	-0.02279
Madhya Pradesh	South western	34	-0.0216
Himachal Pradesh	Himachal Pradesh	20	0.091152
Rajasthan	South Eastern	54	0.132464
Andhra Pradesh	Coastal	1	0.142062
Maharashtra	Inland Western	37	0.142643
Rajasthan	Southern	53	0.153456
Madhya Pradesh	Northern	35	0.160182
Uttar Pradesh	Himalayan	61	0.174959
West Bengal	Himalayan	66	0.179019
Maharashtra	Inland Northern	38	0.181324
Maharashtra	Eastern	41	0.210491
Uttar Pradesh	Southern	65	0.213262
Gujarat	Plains Southern	15	0.21434
Madhya Pradesh	Malwa Plateau	32	0.21519
Manipur	Hills	43	0.228323
Rajasthan	North-Eastern	52	0.230282
Gujarat	Eastern	13	0.235548
Madhya Pradesh	Vindhya	30	0.236468
Dadar & nagar Haveli		72	0.243904
Andhra Pradesh	South western	3	0.244856
Karnataka	Inland Southern	25	0.247198
Bihar	Southern	9	0.249883
Gujarat	Plains Northern	14	0.254974
Madhya Pradesh	Central	31	0.262881
Gujarat	Saurashtra	17	0.292858
Kerala	Southern	28	0.305862
Tamil Nadu	Inland	59	0.306147
Haryana	Western	19	0.314561
Maharashtra	Coastal	36	0.31738
Gujarat	Dry Areas	16	0.317915
Uttar Pradesh	Eastern	64	0.323448
Karnataka	Inlands Eastern	24	0.33145
Madhya Pradesh	South Central	33	0.342318
Meghalaya	Meghalaya	44	0.343014
Andhra Pradesh	Inland Northern	2	0.344261
Manipur	Plains	42	0.345777
Bihar	Central	11	0.362495
Goa	Goa	12	0.367039
Uttar Pradesh	Central	63	0.374062
Bihar	Northern	10	0.374065
Madhya Pradesh	Chattisgarh	29	0.379484
Pondicherry		75	0.380826
Tamil Nadu	Coastal Northen	56	0.383623
Andhra Pradesh	Inland southern	4	0.385465
Punjab	Southern	50	0.386504
Orissa	Southern	47	0.388342
Tamil Nadu	Southern	58	0.389149
Sikkim	Sikkim	55	0.394409
Kerala	Northern	27	0.395715
Lakshadweep		74	0.404899
Tamil Nadu	Coastal	57	0.427428
Orissa	Coastal	46	0.433578
Mizoram	Mizoram	45	0.441364
Haryana	Eastern	18	0.44326
Uttar Pradesh	Western	62	0.448146
West Bengal	Western Plains	69	0.464062
West Bengal	Central Plains	68	0.465019

## The Spatial Distribution of Calorie Deficiency in Rural India:

Orissa	Northern	48	0.469692
Tripura	Tripura	60	0.491547
Assam	Plains Western	7	0.517411
Andaman & Nicobar	A&N	70	0.518559
J&K	Mountainious	21	0.525628
Punjab	Northern	49	0.536628
Delhi		73	0.537961
West Bengal	Eastern Plains	67	0.538541
Assam	Plains Eastern	6	0.551219
Karnataka	Cosatal and Ghatas	23	0.572616
Chandigarh		71	0.595003
Assam	Hills	8	0.725453

**Table 17**

State	Region	Code	43-50
			PG1(M)
Maharashtra	Inland Central	39	-0.23215
Rajasthan	Western	51	-0.20801
Maharashtra	Inland Eastern	40	-0.16451
Madhya Pradesh	South western	34	-0.13767
Arunachal Pradesh	Arunachal Pradesh	5	-0.11049
J&K	Outer Hills	22	-0.1058
Karnataka	Inland Northern	26	-0.09802
Rajasthan	Southern	53	-0.06718
Maharashtra	Inland Northern	38	-0.06472
Maharashtra	Inland Western	37	-0.03689
Himachal Pradesh	Himachal Pradesh	20	-0.03135
Rajasthan	South Eastern	54	-0.02293
Madhya Pradesh	Malwa Plateau	32	-0.00811
Gujarat	Plains Southern	15	0.006198
Madhya Pradesh	Northern	35	0.007962
Rajasthan	North-Eastern	52	0.018892
Manipur	Hills	43	0.029384
West Bengal	Himalayan	66	0.035489
Uttar Pradesh	Himalayan	61	0.037665
Uttar Pradesh	Southern	65	0.040787
Maharashtra	Eastern	41	0.044752
Gujarat	Dry Areas	16	0.046391
Andhra Pradesh	Coastal	1	0.047726
Gujarat	Plains Northern	14	0.055924
Madhya Pradesh	Vindhya	30	0.063226
Manipur	Plains	42	0.063339
Lakshadweep		74	0.066531
Gujarat	Saurashtra	17	0.071728
Andhra Pradesh	Inland Northern	2	0.075216
Haryana	Western	19	0.079372
Madhya Pradesh	Central	31	0.080677
Gujarat	Eastern	13	0.085095
Bihar	Northern	10	0.092327
Bihar	Central	11	0.092856
Meghalaya	Meghalaya	44	0.097157
Uttar Pradesh	Central	63	0.097331
Madhya Pradesh	South Central	33	0.100413
Bihar	Southern	9	0.100685
Uttar Pradesh	Eastern	64	0.101492
Andhra Pradesh	South western	3	0.107705
Tripura	Tripura	60	0.11297
Tamil Nadu	Coastal	57	0.121278
Madhya Pradesh	Chattisgarh	29	0.124137
Kerala	Southern	28	0.127154
Tamil Nadu	Inland	59	0.128141
Uttar Pradesh	Western	62	0.128209
Delhi		73	0.129083
Assam	Plains Western	7	0.133445
Orissa	Coastal	46	0.133749

## The Spatial Distribution of CalorieDeficiency in Rural India:

Assam	Plains Eastern	6	0.138998
J&K	Mountainious	21	0.13916
Maharashtra	Coastal	36	0.140993
Goa	Goa	12	0.144865
Orissa	Southern	47	0.146066
Haryana	Eastern	18	0.148851
Punjab	Southern	50	0.149261
West Bengal	Western Plains	69	0.150419
Karnataka	Cosatal and Ghatas	23	0.154655
Orissa	Northern	48	0.155403
Karnataka	Inlans Eastern	24	0.15558
West Bengal	Central Plains	68	0.161447
Kerala	Northern	27	0.162412
Andaman & Nicobar	A&N	70	0.162846
West Bengal	Eastern Plains	67	0.175809
Punjab	Northern	49	0.176389
Mizoram	Mizoram	45	0.176757
Pondicherry		75	0.182765
Chandigarh		71	0.182789
Sikkim	Sikkim	55	0.192365
Tamil Nadu	Southern	58	0.198313
Tamil Nadu	Coastal Northen	56	0.198903
Assam	Hills	8	0.203801
Andhra Pradesh	Inland southern	4	0.208961
Karnataka	Inland Southern	25	0.221635
Dadar & nagar Haveli		72	0.273411

**Table 18**

State	Region	Code	43-50
			PG2(M)
Maharashtra	Inland Central	39	-0.18038
Rajasthan	Western	51	-0.16136
Madhya Pradesh	South western	34	-0.13053
Maharashtra	Inland Eastern	40	-0.1247
Rajasthan	Southern	53	-0.1009
Karnataka	Inland Northern	26	-0.07767
Maharashtra	Inland Northern	38	-0.07371
J&K	Outer Hills	22	-0.06309
Arunachal Pradesh	Arunachal Pradesh	5	-0.05698
Maharashtra	Inland Western	37	-0.05287
Himachal Pradesh	Himachal Pradesh	20	-0.03259
Rajasthan	South Eastern	54	-0.03105
Madhya Pradesh	Malwa Plateau	32	-0.02856
Gujarat	Plains Southern	15	-0.02287
Madhya Pradesh	Northern	35	-0.01435
Rajasthan	North-Eastern	52	-0.0053
Gujarat	Dry Areas	16	-0.00383
Manipur	Hills	43	0.003892
Maharashtra	Eastern	41	0.005877
Gujarat	Plains Northern	14	0.006041
Uttar Pradesh	Himalayan	61	0.010444
Uttar Pradesh	Southern	65	0.010996
Lakshadweep		74	0.014552
West Bengal	Himalayan	66	0.015447
Gujarat	Saurashtra	17	0.01569
Manipur	Plains	42	0.01852
Madhya Pradesh	Vindhya	30	0.020744
Andhra Pradesh	Inland Northern	2	0.023856
Andhra Pradesh	Coastal	1	0.026747
Madhya Pradesh	Central	31	0.026751
Bihar	Northern	10	0.031711
Bihar	Central	11	0.032137
Uttar Pradesh	Central	63	0.032659
Meghalaya	Meghalaya	44	0.03284
Delhi		73	0.033065

## The Spatial Distribution of CalorieDeficiency in Rural India:

Madhya Pradesh	South Central	33	0.03629
Haryana	Western	19	0.036707
Gujarat	Eastern	13	0.037966
Tripura	Tripura	60	0.041546
Uttar Pradesh	Eastern	64	0.041824
Assam	Plains Western	7	0.044586
Assam	Plains Eastern	6	0.044978
J&K	Mountainious	21	0.046871
Tamil Nadu	Coastal	57	0.047592
Bihar	Southern	9	0.048211
Uttar Pradesh	Western	62	0.048412
Madhya Pradesh	Chattisgarh	29	0.053765
Karnataka	Cosatal and Ghatas	23	0.058344
Andhra Pradesh	South western	3	0.061392
Orissa	Coastal	46	0.061771
Kerala	Southern	28	0.062784
Haryana	Eastern	18	0.062876
Orissa	Northern	48	0.063808
Orissa	Southern	47	0.064954
Tamil Nadu	Inland	59	0.065824
Maharashtra	Coastal	36	0.065937
West Bengal	Central Plains	68	0.068869
West Bengal	Western Plains	69	0.068876
West Bengal	Eastern Plains	67	0.069158
Punjab	Northern	49	0.070072
Assam	Hills	8	0.072137
Punjab	Southern	50	0.072593
Goa	Goa	12	0.072878
Chandigarh		71	0.075405
Kerala	Northern	27	0.075801
Andaman & Nicobar	A&N	70	0.077779
Mizoram	Mizoram	45	0.08403
Pondicherry		75	0.086178
Karnataka	Inlans Eastern	24	0.08915
Sikkim	Sikkim	55	0.089623
Tamil Nadu	Coastal Northen	56	0.105067
Tamil Nadu	Southern	58	0.112311
Andhra Pradesh	Inland southern	4	0.131916
Karnataka	Inland Southern	25	0.175316
Dadar & nagar Haveli		72	0.203111

**Table 19**

State	Region	Code	43-55 PGO(M) Value
Arunachal Pradesh	Arunachal Pradesh	5	0.30766
Andhra Pradesh	Coastal	1	0.308635
West Bengal	Himalayan	66	0.308661
Orissa	Southern	47	0.432164
Uttar Pradesh	Southern	65	0.484881
Manipur	Plains	42	0.485335
J&K	Outer Hills	22	0.493218
Maharashtra	Eastern	41	0.496207
Madhya Pradesh	Northern	35	0.502642
Andaman & Nicobar	A&N	70	0.511373
Bihar	Central	11	0.51235
Tamil Nadu	Coastal Northen	56	0.522713
West Bengal	Western Plains	69	0.527156
Lakshadweep		74	0.5312
Maharashtra	Inland Central	39	0.53132
Andhra Pradesh	South western	3	0.532612
Rajasthan	Western	51	0.537001
Madhya Pradesh	Vindhya	30	0.537765
Madhya Pradesh	Chattisgarh	29	0.541363
Andhra Pradesh	Inland Northern	2	0.542335
Tamil Nadu	Inland	59	0.547228

## The Spatial Distribution of Calorie Deficiency in Rural India:

Haryana	Western	19	0.557047
Madhya Pradesh	Malwa Plateau	32	0.567197
Rajasthan	South Eastern	54	0.571056
Himachal Pradesh	Himachal Pradesh	20	0.57235
Manipur	Hills	43	0.573202
Rajasthan	North-Eastern	52	0.579351
Tripura	Tripura	60	0.583319
Tamil Nadu	Coastal	57	0.587269
Bihar	Northern	10	0.596075
Orissa	Coastal	46	0.606219
Assam	Plains Western	7	0.613662
Andhra Pradesh	Inland southern	4	0.620674
Uttar Pradesh	Eastern	64	0.625017
Orissa	Northern	48	0.628752
Bihar	Southern	9	0.632732
Uttar Pradesh	Central	63	0.633755
Uttar Pradesh	Himalayan	61	0.635274
Karnataka	Inland Northern	26	0.637272
Maharashtra	Inland Eastern	40	0.646645
Uttar Pradesh	Western	62	0.652024
Madhya Pradesh	South western	34	0.654261
Tamil Nadu	Southern	58	0.676753
West Bengal	Central Plains	68	0.683129
J&K	Mountainous	21	0.686182
Maharashtra	Inland Northern	38	0.687204
Pondicherry		75	0.692893
Sikkim	Sikkim	55	0.693289
Kerala	Southern	28	0.699009
Gujarat	Plains Southern	15	0.707894
Chandigarh		71	0.714542
Madhya Pradesh	South Central	33	0.715805
Haryana	Eastern	18	0.717389
Punjab	Southern	50	0.720471
Madhya Pradesh	Central	31	0.720645
Assam	Plains Eastern	6	0.728311
Meghalaya	Meghalaya	44	0.731983
Maharashtra	Inland Western	37	0.736255
Karnataka	Inlands Eastern	24	0.73976
Goa	Goa	12	0.739974
Dadar & nagar Haveli		72	0.752457
Delhi		73	0.75761
Gujarat	Eastern	13	0.759347
West Bengal	Eastern Plains	67	0.760564
Mizoram	Mizoram	45	0.766679
Maharashtra	Coastal	36	0.768146
Assam	Hills	8	0.778443
Punjab	Northern	49	0.782067
Karnataka	Cosatal and Ghatas	23	0.783202
Rajasthan	Southern	53	0.786237
Kerala	Northern	27	0.793081
Gujarat	Plains Northern	14	0.823637
Gujarat	Saurashtra	17	0.824394
Gujarat	Dry Areas	16	0.864387
Karnataka	Inland Southern	25	0.897665

**Table 20**

State	Region	Code	43-55
			PG1(M)
West Bengal	Himalayan	66	Value
Arunachal Pradesh	Arunachal Pradesh	5	0.060175
Andhra Pradesh	Coastal	1	0.064999
Manipur	Plains	42	0.080182
Lakshadweep		74	0.084211
Maharashtra	Inland Central	39	0.093578
J&K	Outer Hills	22	0.101111
			0.10417

## The Spatial Distribution of CalorieDeficiency in Rural India:

Uttar Pradesh	Southern	65	0.105845
Manipur	Hills	43	0.108181
Madhya Pradesh	Northern	35	0.110107
Rajasthan	South Eastern	54	0.110451
Rajasthan	Western	51	0.115221
Madhya Pradesh	Malwa Plateau	32	0.121701
Haryana	Western	19	0.122555
Himachal Pradesh	Himachal Pradesh	20	0.124399
Andhra Pradesh	Inland Northern	2	0.126424
Madhya Pradesh	Vindhya	30	0.128966
Maharashtra	Eastern	41	0.130104
Tripura	Tripura	60	0.133729
Bihar	Central	11	0.137202
Assam	Plains Western	7	0.145499
West Bengal	Western Plains	69	0.146049
Madhya Pradesh	Chattisgarh	29	0.146129
Uttar Pradesh	Himalayan	61	0.148053
Rajasthan	North-Eastern	52	0.148359
Bihar	Northern	10	0.148572
Uttar Pradesh	Central	63	0.153351
Maharashtra	Inland Eastern	40	0.1568
Tamil Nadu	Coastal	57	0.158476
Orissa	Coastal	46	0.158653
Andaman & Nicobar	A&N	70	0.159788
Orissa	Southern	47	0.161199
Meghalaya	Meghalaya	44	0.161627
Assam	Plains Eastern	6	0.162169
Uttar Pradesh	Eastern	64	0.164602
Uttar Pradesh	Western	62	0.167925
J&K	Mountainious	21	0.169987
Orissa	Northern	48	0.1713
Maharashtra	Inland Northern	38	0.171972
Delhi		73	0.17689
Gujarat	Plains Southern	15	0.177021
Madhya Pradesh	Central	31	0.178841
Andhra Pradesh	South western	3	0.179603
Madhya Pradesh	South western	34	0.183528
Tamil Nadu	Inland	59	0.187079
West Bengal	Central Plains	68	0.194572
Bihar	Southern	9	0.197784
Haryana	Eastern	18	0.200529
Punjab	Southern	50	0.202279
Karnataka	Inland Northern	26	0.203104
West Bengal	Eastern Plains	67	0.203276
Karnataka	Cosatal and Ghatas	23	0.204482
Chandigarh		71	0.207369
Assam	Hills	8	0.207509
Maharashtra	Inland Western	37	0.212011
Madhya Pradesh	South Central	33	0.215655
Punjab	Northern	49	0.223601
Gujarat	Saurashtra	17	0.227572
Gujarat	Plains Northern	14	0.228331
Rajasthan	Southern	53	0.232124
Tamil Nadu	Coastal Northen	56	0.241136
Sikkim	Sikkim	55	0.243229
Mizoram	Mizoram	45	0.245025
Kerala	Southern	28	0.245869
Gujarat	Eastern	13	0.253528
Gujarat	Dry Areas	16	0.253546
Goa	Goa	12	0.260302
Maharashtra	Coastal	36	0.271295
Pondicherry		75	0.273747
Kerala	Northern	27	0.278324
Karnataka	Inlans Eastern	24	0.279093
Tamil Nadu	Southern	58	0.28508
Andhra Pradesh	Inland southern	4	0.292768
Dadar & nagar Haveli		72	0.469345
Karnataka	Inland Southern	25	0.485917

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 21**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-55 PG2(M)</i> <i>Value</i>
Maharashtra	Inland Central	39	0.016666
West Bengal	Himalayan	66	0.022011
Manipur	Plains	42	0.022835
Arunachal Pradesh	Arunachal Pradesh	5	0.024094
Manipur	Hills	43	0.02973
Lakshadweep		74	0.030492
Rajasthan	South Eastern	54	0.032607
Andhra Pradesh	Coastal	1	0.034134
J&K	Outer Hills	22	0.034462
Madhya Pradesh	Northern	35	0.036044
Madhya Pradesh	Malwa Plateau	32	0.037615
Himachal Pradesh	Himachal Pradesh	20	0.039215
Uttar Pradesh	Southern	65	0.03981
Rajasthan	Western	51	0.040051
Andhra Pradesh	Inland Northern	2	0.041989
Madhya Pradesh	Vindhya	30	0.04615
Assam	Plains Western	7	0.047702
Maharashtra	Inland Northern	38	0.047846
Tripura	Tripura	60	0.048512
Maharashtra	Eastern	41	0.048526
Assam	Plains Eastern	6	0.049188
Uttar Pradesh	Himalayan	61	0.049535
Haryana	Western	19	0.050114
Bihar	Central	11	0.050778
Uttar Pradesh	Central	63	0.051249
Meghalaya	Meghalaya	44	0.051416
Bihar	Northern	10	0.0516
Delhi		73	0.052348
Maharashtra	Inland Eastern	40	0.052716
Gujarat	Plains Southern	15	0.053328
Madhya Pradesh	Chattisgarh	29	0.057053
J&K	Mountainious	21	0.059436
West Bengal	Western Plains	69	0.06016
Madhya Pradesh	Central	31	0.061255
Tamil Nadu	Coastal	57	0.0616
Uttar Pradesh	Eastern	64	0.061879
Uttar Pradesh	Western	62	0.062025
Orissa	Northern	48	0.062424
Rajasthan	North-Eastern	52	0.065251
Orissa	Coastal	46	0.066417
Madhya Pradesh	South western	34	0.068343
Orissa	Southern	47	0.070734
Karnataka	Cosatal and Ghatas	23	0.071307
Assam	Hills	8	0.072466
West Bengal	Eastern Plains	67	0.073926
Andaman & Nicobar	A&N	70	0.077249
West Bengal	Central Plains	68	0.078313
Gujarat	Saurashtra	17	0.079651
Haryana	Eastern	18	0.080789
Maharashtra	Inland Western	37	0.0815
Gujarat	Plains Northern	14	0.081922
Bihar	Southern	9	0.082676
Chandigarh		71	0.083239
Tamil Nadu	Inland	59	0.08335
Andhra Pradesh	South western	3	0.084571
Rajasthan	Southern	53	0.085562
Punjab	Southern	50	0.086044
Punjab	Northern	49	0.086059
Madhya Pradesh	South Central	33	0.087895
Sikkim	Sikkim	55	0.090283
Karnataka	Inland Northern	26	0.092188
Gujarat	Dry Areas	16	0.095023
Mizoram	Mizoram	45	0.105588

## The Spatial Distribution of CalorieDeficiency in Rural India:

Gujarat	Eastern	13	0.108622
Kerala	Southern	28	0.11206
Pondicherry		75	0.117957
Tamil Nadu	Coastal Northen	56	0.118414
Maharashtra	Coastal	36	0.119478
Goa	Goa	12	0.119941
Kerala	Northern	27	0.121911
Karnataka	Inlans Eastern	24	0.13747
Tamil Nadu	Southern	58	0.14761
Andhra Pradesh	Inland southern	4	0.176477
Dadar & nagar Haveli		72	0.282955
Karnataka	Inland Southern	25	0.313983

**Table 22**

State	Region	Code	50-55
			PG0(M)
Andaman & Nicobar	A&N	70	-0.00719
Orissa	Southern	47	0.043822
Assam	Hills	8	0.05299
West Bengal	Western Plains	69	0.063094
Tripura	Tripura	60	0.091771
Assam	Plains Western	7	0.096251
Chandigarh		71	0.119539
Lakshadweep		74	0.1263
West Bengal	Himalayan	66	0.129643
Tamil Nadu	Coastal Northen	56	0.139091
Manipur	Plains	42	0.139558
Bihar	Central	11	0.149855
Orissa	Northern	48	0.15906
Tamil Nadu	Coastal	57	0.159841
J&K	Mountainious	21	0.160554
Madhya Pradesh	Chattisgarh	29	0.16188
Andhra Pradesh	Coastal	1	0.166573
Orissa	Coastal	46	0.172641
Assam	Plains Eastern	6	0.177092
Andhra Pradesh	Inland Northern	2	0.198074
Uttar Pradesh	Western	62	0.203877
Karnataka	Cosatal and Ghatas	23	0.210587
West Bengal	Central Plains	68	0.21811
Delhi		73	0.219648
Bihar	Northern	10	0.22201
West Bengal	Eastern Plains	67	0.222023
Andhra Pradesh	Inland southern	4	0.235209
Tamil Nadu	Inland	59	0.241081
Haryana	Western	19	0.242486
Punjab	Northern	49	0.245439
Uttar Pradesh	Central	63	0.259693
Uttar Pradesh	Southern	65	0.271619
Haryana	Eastern	18	0.274129
Maharashtra	Eastern	41	0.285716
Tamil Nadu	Southern	58	0.287605
Andhra Pradesh	South western	3	0.287756
Sikkim	Sikkim	55	0.29888
Madhya Pradesh	Vindhya	30	0.301296
Uttar Pradesh	Eastern	64	0.301569
Pondicherry		75	0.312067
Mizoram	Mizoram	45	0.325315
Punjab	Southern	50	0.333967
Madhya Pradesh	Northern	35	0.342461
Manipur	Hills	43	0.344879
Rajasthan	North-Eastern	52	0.349069
Madhya Pradesh	Malwa Plateau	32	0.352007
Goa	Goa	12	0.372935
Madhya Pradesh	South Central	33	0.373487
Bihar	Southern	9	0.382849

## The Spatial Distribution of CalorieDeficiency in Rural India:

Meghalaya	Meghalaya	44	0.38897
Kerala	Southern	28	0.393147
Kerala	Northern	27	0.397366
Karnataka	Inlands Eastern	24	0.40831
Rajasthan	South Eastern	54	0.438592
Maharashtra	Coastal	36	0.450766
Madhya Pradesh	Central	31	0.457763
Uttar Pradesh	Himalayan	61	0.460316
Himachal Pradesh	Himachal Pradesh	20	0.481198
Gujarat	Plains Southern	15	0.493554
Maharashtra	Inland Northern	38	0.505879
Dadar & nagar Haveli		72	0.508553
Arunachal Pradesh	Arunachal Pradesh	5	0.509406
Gujarat	Eastern	13	0.523799
Gujarat	Saurashtra	17	0.531535
Gujarat	Dry Areas	16	0.546471
Gujarat	Plains Northern	14	0.568663
J&K	Outer Hills	22	0.578373
Maharashtra	Inland Western	37	0.593612
Rajasthan	Southern	53	0.632781
Karnataka	Inland Southern	25	0.650467
Maharashtra	Inland Central	39	0.654767
Rajasthan	Western	51	0.656552
Karnataka	Inland Northern	26	0.660061
Madhya Pradesh	South western	34	0.675863
Maharashtra	Inland Eastern	40	0.683484

**Table 23**

State	Region	Code	50-55
			PG1(M)
West Bengal	Western Plains	69	-0.00437
Andaman & Nicobar	A&N	70	-0.00306
Assam	Hills	8	0.003708
Assam	Plains Western	7	0.012054
Orissa	Southern	47	0.015132
Orissa	Northern	48	0.015897
Tripura	Tripura	60	0.020759
Manipur	Plains	42	0.020873
Madhya Pradesh	Chattisgarh	29	0.021992
Assam	Plains Eastern	6	0.023172
Chandigarh		71	0.02458
West Bengal	Himalayan	66	0.024685
Orissa	Coastal	46	0.024904
Lakshadweep		74	0.027047
West Bengal	Eastern Plains	67	0.027467
J&K	Mountainious	21	0.030827
Andhra Pradesh	Coastal	1	0.032456
West Bengal	Central Plains	68	0.033125
Tamil Nadu	Coastal	57	0.037197
Uttar Pradesh	Western	62	0.039716
Tamil Nadu	Coastal Northen	56	0.042234
Haryana	Western	19	0.043183
Bihar	Central	11	0.044346
Punjab	Northern	49	0.047212
Delhi		73	0.047807
Karnataka	Cosatal and Ghatas	23	0.049827
Sikkim	Sikkim	55	0.050864
Andhra Pradesh	Inland Northern	2	0.051208
Haryana	Eastern	18	0.051679
Punjab	Southern	50	0.053018
Uttar Pradesh	Central	63	0.05602
Bihar	Northern	10	0.056245
Tamil Nadu	Inland	59	0.058937
Uttar Pradesh	Eastern	64	0.06311
Meghalaya	Meghalaya	44	0.06447

## The Spatial Distribution of Calorie Deficiency in Rural India:

Uttar Pradesh	Southern	65	0.065058
Madhya Pradesh	Vindhya	30	0.065741
Mizoram	Mizoram	45	0.068268
Andhra Pradesh	South western	3	0.071897
Manipur	Hills	43	0.078797
Andhra Pradesh	Inland southern	4	0.083808
Maharashtra	Eastern	41	0.085352
Tamil Nadu	Southern	58	0.086768
Pondicherry		75	0.090981
Bihar	Southern	9	0.097099
Madhya Pradesh	Central	31	0.098165
Madhya Pradesh	Northern	35	0.102145
Uttar Pradesh	Himalayan	61	0.110388
Madhya Pradesh	South Central	33	0.115242
Goa	Goa	12	0.115437
Kerala	Northern	27	0.115912
Kerala	Southern	28	0.118715
Karnataka	Inlands Eastern	24	0.123514
Rajasthan	North-Eastern	52	0.129466
Madhya Pradesh	Malwa Plateau	32	0.12981
Maharashtra	Coastal	36	0.130302
Rajasthan	South Eastern	54	0.133376
Himachal Pradesh	Himachal Pradesh	20	0.15575
Gujarat	Saurashtra	17	0.155844
Gujarat	Eastern	13	0.168433
Gujarat	Plains Southern	15	0.170823
Gujarat	Plains Northern	14	0.172407
Arunachal Pradesh	Arunachal Pradesh	5	0.175492
Dadar & nagar Haveli		72	0.195934
Gujarat	Dry Areas	16	0.207155
J&K	Outer Hills	22	0.209972
Maharashtra	Inland Northern	38	0.236692
Maharashtra	Inland Western	37	0.248898
Karnataka	Inland Southern	25	0.264283
Rajasthan	Southern	53	0.299309
Karnataka	Inland Northern	26	0.301123
Madhya Pradesh	South western	34	0.321198
Maharashtra	Inland Eastern	40	0.321308
Rajasthan	Western	51	0.323235
Maharashtra	Inland Central	39	0.333262

**Table 24**

State	Region	Code	50-55
			PG2(M)
West Bengal	Western Plains	69	-0.00872
Orissa	Northern	48	-0.00138
Andaman & Nicobar	A&N	70	-0.00053
Assam	Hills	8	0.00033
Sikkim	Sikkim	55	0.00066
Assam	Plains Western	7	0.003116
Madhya Pradesh	Chattisgarh	29	0.003288
Assam	Plains Eastern	6	0.004209
Manipur	Plains	42	0.004315
Orissa	Coastal	46	0.004646
West Bengal	Eastern Plains	67	0.004769
Orissa	Southern	47	0.00578
West Bengal	Himalayan	66	0.006564
Tripura	Tripura	60	0.006966
Andhra Pradesh	Coastal	1	0.007387
Chandigarh		71	0.007833
West Bengal	Central Plains	68	0.009444
J&K	Mountainious	21	0.012565
Karnataka	Cosalatal and Ghatas	23	0.012963
Tamil Nadu	Coastal Northen	56	0.013347
Haryana	Western	19	0.013407

## The Spatial Distribution of Calorie Deficiency in Rural India:

Punjab	Southern	50	0.013451
Uttar Pradesh	Western	62	0.013612
Tamil Nadu	Coastal	57	0.014008
Lakshadweep		74	0.01594
Punjab	Northern	49	0.015987
Tamil Nadu	Inland	59	0.017526
Haryana	Eastern	18	0.017913
Andhra Pradesh	Inland Northern	2	0.018133
Meghalaya	Meghalaya	44	0.018576
Uttar Pradesh	Central	63	0.018591
Bihar	Central	11	0.018641
Delhi		73	0.019283
Bihar	Northern	10	0.019889
Uttar Pradesh	Eastern	64	0.020055
Mizoram	Mizoram	45	0.021558
Andhra Pradesh	South western	3	0.023179
Madhya Pradesh	Vindhya	30	0.025405
Manipur	Hills	43	0.025838
Uttar Pradesh	Southern	65	0.028814
Pondicherry		75	0.03178
Bihar	Southern	9	0.034465
Madhya Pradesh	Central	31	0.034504
Tamil Nadu	Southern	58	0.0353
Uttar Pradesh	Himalayan	61	0.039091
Maharashtra	Eastern	41	0.042649
Andhra Pradesh	Inland southern	4	0.044562
Kerala	Northern	27	0.04611
Goa	Goa	12	0.047064
Karnataka	Inlands Eastern	24	0.04832
Kerala	Southern	28	0.049276
Madhya Pradesh	Northern	35	0.050392
Madhya Pradesh	South Central	33	0.051606
Maharashtra	Coastal	36	0.053542
Rajasthan	South Eastern	54	0.063652
Gujarat	Saurashtra	17	0.063961
Madhya Pradesh	Malwa Plateau	32	0.06617
Rajasthan	North-Eastern	52	0.070556
Gujarat	Eastern	13	0.070657
Himachal Pradesh	Himachal Pradesh	20	0.071806
Gujarat	Plains Northern	14	0.07588
Gujarat	Plains Southern	15	0.076201
Dadar & Nagar Haveli		72	0.079844
Arunachal Pradesh	Arunachal Pradesh	5	0.081075
J&K	Outer Hills	22	0.097548
Gujarat	Dry Areas	16	0.098857
Maharashtra	Inland Northern	38	0.121551
Maharashtra	Inland Western	37	0.134371
Karnataka	Inland Southern	25	0.138667
Karnataka	Inland Northern	26	0.169858
Maharashtra	Inland Eastern	40	0.177411
Rajasthan	Southern	53	0.186458
Maharashtra	Inland Central	39	0.197041
Madhya Pradesh	South western	34	0.198875
Rajasthan	Western	51	0.201411

**Table 25**

State	Region	Code	43-50
			PGO(H)
Arunachal Pradesh	Arunachal Pradesh	5	-0.13772
J&K	Outer Hills	22	-0.01541
Rajasthan	Western	51	0.008061
Maharashtra	Inland Central	39	0.018761
Madhya Pradesh	South western	34	0.024106
Maharashtra	Inland Eastern	40	0.036794
Karnataka	Inland Northern	26	0.040801

## The Spatial Distribution of CalorieDeficiency in Rural India:

Rajasthan	South Eastern	54	0.099686
Rajasthan	Southern	53	0.11421
Karnataka	Inland Southern	25	0.121218
Dadar & nagar Haveli		72	0.124882
Maharashtra	Inland Western	37	0.128501
Madhya Pradesh	Vindhya	30	0.129216
Himachal Pradesh	Himachal Pradesh	20	0.130727
Uttar Pradesh	Southern	65	0.155741
Gujarat	Plains Southern	15	0.161274
Bihar	Southern	9	0.163721
Madhya Pradesh	Central	31	0.169246
Andhra Pradesh	Coastal	1	0.179695
Andhra Pradesh	South western	3	0.186323
Gujarat	Eastern	13	0.186696
Orissa	Southern	47	0.187489
Pondicherry		75	0.192613
Maharashtra	Eastern	41	0.195568
Uttar Pradesh	Himalayan	61	0.198435
Maharashtra	Inland Northern	38	0.209572
Goa	Goa	12	0.217405
Gujarat	Plains Northern	14	0.22358
Madhya Pradesh	South Central	33	0.230702
Sikkim	Sikkim	55	0.2331
Maharashtra	Coastal	36	0.233142
Gujarat	Dry Areas	16	0.234673
Madhya Pradesh	Northern	35	0.243335
Tamil Nadu	Coastal Northen	56	0.245795
Tamil Nadu	Inland	59	0.248578
Gujarat	Saurashtra	17	0.250345
Madhya Pradesh	Malwa Plateau	32	0.268265
Rajasthan	North-Eastern	52	0.269297
Karnataka	Inlans Eastern	24	0.27701
Kerala	Southern	28	0.284087
Andhra Pradesh	Inland southern	4	0.28548
Tamil Nadu	Southern	58	0.285692
Madhya Pradesh	Chattisgarh	29	0.290112
Uttar Pradesh	Eastern	64	0.293992
Punjab	Southern	50	0.300533
Meghalaya	Meghalaya	44	0.305126
Bihar	Central	11	0.318424
Manipur	Hills	43	0.324002
Kerala	Northern	27	0.327207
Bihar	Northern	10	0.329951
Orissa	Northern	48	0.335653
Andhra Pradesh	Inland Northern	2	0.336971
Uttar Pradesh	Central	63	0.343294
Mizoram	Mizoram	45	0.348764
West Bengal	Himalayan	66	0.362312
Haryana	Western	19	0.363301
Orissa	Coastal	46	0.382791
Uttar Pradesh	Western	62	0.400703
West Bengal	Central Plains	68	0.400931
West Bengal	Western Plains	69	0.402061
Tamil Nadu	Coastal	57	0.435521
West Bengal	Eastern Plains	67	0.436847
Punjab	Northern	49	0.444541
Manipur	Plains	42	0.448379
Assam	Plains Eastern	6	0.460201
Haryana	Eastern	18	0.464433
Chandigarh		71	0.464697
Assam	Plains Western	7	0.522802
J&K	Mountainious	21	0.537883
Lakshadweep		74	0.546711
Delhi		73	0.563906
Karnataka	Cosatal and Ghatas	23	0.589799
Tripura	Tripura	60	0.598864
Andaman & Nicobar	A&N	70	0.660398
Assam	Hills	8	0.669144

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 26**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-50 PG1(H)</i> <i>Value</i>
Maharashtra	Inland Central	39	-0.19422
Rajasthan	Western	51	-0.1782
Maharashtra	Inland Eastern	40	-0.13331
Arunachal Pradesh	Arunachal Pradesh	5	-0.12686
Madhya Pradesh	South western	34	-0.11348
J&K	Outer Hills	22	-0.09382
Karnataka	Inland Northern	26	-0.07875
Rajasthan	Southern	53	-0.02892
Maharashtra	Inland Northern	38	-0.01083
Himachal Pradesh	Himachal Pradesh	20	-0.00039
Maharashtra	Inland Western	37	-2.7E-05
Rajasthan	South Eastern	54	0.010767
Gujarat	Plains Southern	15	0.042068
Madhya Pradesh	Malwa Plateau	32	0.044736
Madhya Pradesh	Northern	35	0.049373
Uttar Pradesh	Himalayan	61	0.064448
Rajasthan	North-Eastern	52	0.064584
Andhra Pradesh	Coastal	1	0.069138
Maharashtra	Eastern	41	0.077613
Uttar Pradesh	Southern	65	0.080387
Manipur	Hills	43	0.080793
Madhya Pradesh	Vindhya	30	0.082614
West Bengal	Himalayan	66	0.085048
Gujarat	Plains Northern	14	0.092396
Gujarat	Dry Areas	16	0.094509
Gujarat	Eastern	13	0.106733
Madhya Pradesh	Central	31	0.107349
Gujarat	Saurashtra	17	0.111964
Bihar	Southern	9	0.121301
Haryana	Western	19	0.125111
Andhra Pradesh	Inland Northern	2	0.129027
Andhra Pradesh	South western	3	0.12979
Meghalaya	Meghalaya	44	0.130042
Manipur	Plains	42	0.134978
Madhya Pradesh	South Central	33	0.136805
Bihar	Northern	10	0.14138
Uttar Pradesh	Eastern	64	0.142732
Bihar	Central	11	0.143107
Uttar Pradesh	Central	63	0.149297
Lakshadweep		74	0.154763
Goa	Goa	12	0.158699
Tamil Nadu	Inland	59	0.159421
Kerala	Southern	28	0.163862
Maharashtra	Coastal	36	0.164784
Madhya Pradesh	Chattisgarh	29	0.167269
Orissa	Southern	47	0.175748
Punjab	Southern	50	0.186038
Tamil Nadu	Coastal	57	0.187316
Uttar Pradesh	Western	62	0.190234
Orissa	Coastal	46	0.192301
Karnataka	Inlands Eastern	24	0.194083
Kerala	Northern	27	0.198901
Tripura	Tripura	60	0.204852
Sikkim	Sikkim	55	0.205441
Delhi		73	0.207058
Orissa	Northern	48	0.209329
Assam	Plains Eastern	6	0.209769
West Bengal	Western Plains	69	0.210689
Karnataka	Inland Southern	25	0.212093
Assam	Plains Western	7	0.212327
Haryana	Eastern	18	0.213425
Pondicherry		75	0.213816
J&K	Mountainious	21	0.214591

## The Spatial Distribution of CalorieDeficiency in Rural India:

West Bengal	Central Plains	68	0.217161
Mizoram	Mizoram	45	0.221924
Tamil Nadu	Coastal Northen	56	0.223785
Tamil Nadu	Southern	58	0.226716
Andhra Pradesh	Inland southern	4	0.232522
West Bengal	Eastern Plains	67	0.241024
Punjab	Northern	49	0.241415
Karnataka	Cosatal and Ghatas	23	0.243951
Andaman & Nicobar	A&N	70	0.249298
Dadar & nagar Haveli		72	0.251816
Chandigarh		71	0.260129
Assam	Hills	8	0.302198

**Table 27**

State	Region	Code	43-50
			PG2(H)
Maharashtra	Inland Central	39	-0.1932
Rajasthan	Western	51	-0.17325
Maharashtra	Inland Eastern	40	-0.13687
Madhya Pradesh	South western	34	-0.13183
Rajasthan	Southern	53	-0.08347
Karnataka	Inland Northern	26	-0.08307
Arunachal Pradesh	Arunachal Pradesh	5	-0.08256
J&K	Outer Hills	22	-0.07605
Maharashtra	Inland Northern	38	-0.06021
Maharashtra	Inland Western	37	-0.0397
Himachal Pradesh	Himachal Pradesh	20	-0.02581
Rajasthan	South Eastern	54	-0.02198
Madhya Pradesh	Malwa Plateau	32	-0.01176
Gujarat	Plains Southern	15	-0.00509
Madhya Pradesh	Northern	35	0.002071
Rajasthan	North-Eastern	52	0.010468
Manipur	Hills	43	0.02281
Uttar Pradesh	Himalayan	61	0.023761
Gujarat	Dry Areas	16	0.025219
Maharashtra	Eastern	41	0.028278
Gujarat	Plains Northern	14	0.030731
West Bengal	Himalayan	66	0.031846
Uttar Pradesh	Southern	65	0.032501
Andhra Pradesh	Coastal	1	0.037294
Madhya Pradesh	Vindhya	30	0.040849
Gujarat	Saurashtra	17	0.0441
Manipur	Plains	42	0.048754
Madhya Pradesh	Central	31	0.050852
Lakshadweep		74	0.051051
Andhra Pradesh	Inland Northern	2	0.052739
Haryana	Western	19	0.057974
Gujarat	Eastern	13	0.058428
Meghalaya	Meghalaya	44	0.059419
Bihar	Northern	10	0.061095
Bihar	Central	11	0.063029
Uttar Pradesh	Central	63	0.065765
Madhya Pradesh	South Central	33	0.066825
Uttar Pradesh	Eastern	64	0.070823
Bihar	Southern	9	0.072242
Andhra Pradesh	South western	3	0.082349
Delhi		73	0.083224
Tripura	Tripura	60	0.086245
Madhya Pradesh	Chattisgarh	29	0.088456
Tamil Nadu	Coastal	57	0.088924
Uttar Pradesh	Western	62	0.090028
Assam	Plains Western	7	0.09214
Assam	Plains Eastern	6	0.09299
J&K	Mountainious	21	0.093945
Goa	Goa	12	0.094208

## The Spatial Distribution of CalorieDeficiency in Rural India:

Tamil Nadu	Inland	59	0.094751
Kerala	Southern	28	0.094946
Maharashtra	Coastal	36	0.097647
Orissa	Coastal	46	0.100127
Orissa	Southern	47	0.104261
Punjab	Southern	50	0.107355
Haryana	Eastern	18	0.107394
Orissa	Northern	48	0.111114
West Bengal	Western Plains	69	0.111718
Kerala	Northern	27	0.112354
Karnataka	Cosatal and Ghatas	23	0.112654
West Bengal	Central Plains	68	0.113933
West Bengal	Eastern Plains	67	0.121505
Punjab	Northern	49	0.123405
Karnataka	Inlans Eastern	24	0.124837
Andaman & Nicobar	A&N	70	0.126425
Sikkim	Sikkim	55	0.12655
Mizoram	Mizoram	45	0.127417
Chandigarh		71	0.136386
Pondicherry		75	0.136451
Assam	Hills	8	0.139467
Tamil Nadu	Coastal Northen	56	0.146745
Tamil Nadu	Southern	58	0.149633
Andhra Pradesh	Inland southern	4	0.163861
Karnataka	Inland Southern	25	0.188951
Dadar & nagar Haveli		72	0.220474

**Table 28**

State	Region	Code	43-55 PG0(H)
Orissa	Southern	47	0.301615
Arunachal Pradesh	Arunachal Pradesh	5	0.375532
Tamil Nadu	Coastal Northen	56	0.405235
Andhra Pradesh	Coastal	1	0.41568
Dadar & nagar Haveli		72	0.52762
Bihar	Central	11	0.538268
Madhya Pradesh	Chattisgarh	29	0.594232
Maharashtra	Eastern	41	0.595967
Orissa	Northern	48	0.60006
Sikkim	Sikkim	55	0.600604
West Bengal	Western Plains	69	0.603429
Bihar	Southern	9	0.604775
Andaman & Nicobar	A&N	70	0.605407
West Bengal	Himalayan	66	0.614747
Pondicherry		75	0.61944
Bihar	Northern	10	0.622362
Andhra Pradesh	Inland southern	4	0.627285
Tamil Nadu	Inland	59	0.632828
Andhra Pradesh	Inland Northern	2	0.638109
Andhra Pradesh	South western	3	0.646996
Tamil Nadu	Southern	58	0.662617
Manipur	Plains	42	0.675337
Madhya Pradesh	Vindhya	30	0.696237
Maharashtra	Inland Central	39	0.699401
Maharashtra	Inland Northern	38	0.703124
Tamil Nadu	Coastal	57	0.707224
Madhya Pradesh	Malwa Plateau	32	0.708942
Uttar Pradesh	Eastern	64	0.709979
Orissa	Coastal	46	0.717999
Assam	Plains Western	7	0.719986
J&K	Outer Hills	22	0.73171
Manipur	Hills	43	0.739253
Assam	Hills	8	0.740586
Madhya Pradesh	Northern	35	0.744054
Madhya Pradesh	South Central	33	0.748116

## The Spatial Distribution of CalorieDeficiency in Rural India:

Uttar Pradesh	Southern	65	0.748185
Madhya Pradesh	South western	34	0.75065
Tripura	Tripura	60	0.756359
Uttar Pradesh	Central	63	0.756637
Karnataka	Inland Northern	26	0.758976
Gujarat	Plains Southern	15	0.76208
Chandigarh		71	0.764081
Maharashtra	Inland Eastern	40	0.766726
Gujarat	Eastern	13	0.778897
Maharashtra	Coastal	36	0.78072
Himachal Pradesh	Himachal Pradesh	20	0.786768
Kerala	Southern	28	0.793398
Lakshadweep		74	0.795495
Rajasthan	South Eastern	54	0.795759
Maharashtra	Inland Western	37	0.798203
Rajasthan	North-Eastern	52	0.799742
Madhya Pradesh	Central	31	0.801808
Rajasthan	Western	51	0.813109
West Bengal	Central Plains	68	0.814622
Assam	Plains Eastern	6	0.818178
Uttar Pradesh	Himalayan	61	0.82083
Uttar Pradesh	Western	62	0.821045
Haryana	Western	19	0.825102
Delhi		73	0.826523
Kerala	Northern	27	0.838711
J&K	Mountainious	21	0.844912
Karnataka	Inlans Eastern	24	0.84492
Goa	Goa	12	0.852734
Mizoram	Mizoram	45	0.857349
West Bengal	Eastern Plains	67	0.857612
Karnataka	Cosatal and Ghatas	23	0.888819
Rajasthan	Southern	53	0.889335
Haryana	Eastern	18	0.897573
Punjab	Southern	50	0.898171
Punjab	Northern	49	0.902273
Meghalaya	Meghalaya	44	0.903128
Karnataka	Inland Southern	25	0.908687
Gujarat	Dry Areas	16	0.924546
Gujarat	Plains Northern	14	0.935742
Gujarat	Saurashtra	17	0.955024

**Table 29**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>43-55 PG1(H) Value</i>
Arunachal Pradesh	Arunachal Pradesh	5	0.12486
Andhra Pradesh	Coastal	1	0.142364
West Bengal	Himalayan	66	0.143902
Manipur	Plains	42	0.193349
J&K	Outer Hills	22	0.20668
Maharashtra	Inland Central	39	0.211027
Lakshadweep		74	0.214223
Madhya Pradesh	Northern	35	0.215639
Orissa	Southern	47	0.216402
Uttar Pradesh	Southern	65	0.219454
Bihar	Central	11	0.221099
Maharashtra	Eastern	41	0.224226
Andhra Pradesh	Inland Northern	2	0.225481
Manipur	Hills	43	0.227975
Rajasthan	Western	51	0.229111
Madhya Pradesh	Vindhya	30	0.230602
Rajasthan	South Eastern	54	0.230927
Haryana	Western	19	0.231143
Madhya Pradesh	Malwa Plateau	32	0.233825
West Bengal	Western Plains	69	0.235828
Madhya Pradesh	Chattisgarh	29	0.239589

## The Spatial Distribution of Calorie Deficiency in Rural India:

Andaman & Nicobar	A&N	70	0.243065
Bihar	Northern	10	0.245297
Himachal Pradesh	Himachal Pradesh	20	0.245974
Tripura	Tripura	60	0.250182
Assam	Plains Western	7	0.256628
Rajasthan	North-Eastern	52	0.256809
Uttar Pradesh	Himalayan	61	0.264033
Andhra Pradesh	South western	3	0.264781
Orissa	Coastal	46	0.267815
Uttar Pradesh	Central	63	0.267915
Tamil Nadu	Coastal	57	0.268876
Uttar Pradesh	Eastern	64	0.270923
Orissa	Northern	48	0.272693
Maharashtra	Inland Eastern	40	0.275724
Tamil Nadu	Inland	59	0.27839
Maharashtra	Inland Northern	38	0.281609
Uttar Pradesh	Western	62	0.284489
Madhya Pradesh	South western	34	0.288366
Assam	Plains Eastern	6	0.288803
Bihar	Southern	9	0.28937
J&K	Mountainious	21	0.290463
Meghalaya	Meghalaya	44	0.294164
Tamil Nadu	Coastal Northen	56	0.294504
Delhi		73	0.294603
Madhya Pradesh	Central	31	0.298242
Gujarat	Plains Southern	15	0.299974
Karnataka	Inland Northern	26	0.303743
West Bengal	Central Plains	68	0.310072
Madhya Pradesh	South Central	33	0.322626
Haryana	Eastern	18	0.32287
Sikkim	Sikkim	55	0.325911
Chandigarh		71	0.326235
Punjab	Southern	50	0.326861
West Bengal	Eastern Plains	67	0.327369
Assam	Hills	8	0.328966
Maharashtra	Inland Western	37	0.332581
Karnataka	Cosatal and Ghatas	23	0.33501
Punjab	Northern	49	0.356603
Rajasthan	Southern	53	0.356682
Kerala	Southern	28	0.358161
Gujarat	Eastern	13	0.363585
Andhra Pradesh	Inland southern	4	0.364937
Gujarat	Saurashtra	17	0.365405
Mizoram	Mizoram	45	0.36627
Pondicherry		75	0.366344
Goa	Goa	12	0.367308
Gujarat	Plains Northern	14	0.370371
Tamil Nadu	Southern	58	0.371708
Maharashtra	Coastal	36	0.37882
Gujarat	Dry Areas	16	0.383911
Kerala	Northern	27	0.388728
Karnataka	Inlans Eastern	24	0.389996
Dadar & nagar Haveli		72	0.497834
Karnataka	Inland Southern	25	0.572879

**Table 30**

State	Region	Code	43-55 PG2(H) Value
West Bengal	Himalayan	66	0.051402
Arunachal Pradesh	Arunachal Pradesh	5	0.052815
Andhra Pradesh	Coastal	1	0.06382
Manipur	Plains	42	0.067534
Maharashtra	Inland Central	39	0.069756
Lakshadweep		74	0.075463
J&K	Outer Hills	22	0.078049

## The Spatial Distribution of Calorie Deficiency in Rural India:

Madhya Pradesh	Northern	35	0.081926
Rajasthan	South Eastern	54	0.082759
Manipur	Hills	43	0.083054
Uttar Pradesh	Southern	65	0.087092
Rajasthan	Western	51	0.087645
Madhya Pradesh	Malwa Plateau	32	0.08982
Andhra Pradesh	Inland Northern	2	0.09287
Haryana	Western	19	0.093378
Himachal Pradesh	Himachal Pradesh	20	0.095274
Madhya Pradesh	Vindhya	30	0.096624
Bihar	Central	11	0.098854
Maharashtra	Eastern	41	0.099781
Tripura	Tripura	60	0.103738
Bihar	Northern	10	0.10488
Assam	Plains Western	7	0.105638
Uttar Pradesh	Himalayan	61	0.105803
Madhya Pradesh	Chattisgarh	29	0.109304
West Bengal	Western Plains	69	0.110364
Uttar Pradesh	Central	63	0.110594
Maharashtra	Inland Eastern	40	0.113938
Rajasthan	North-Eastern	52	0.114195
Maharashtra	Inland Northern	38	0.115737
Assam	Plains Eastern	6	0.116118
Meghalaya	Meghalaya	44	0.117467
Delhi		73	0.119497
Uttar Pradesh	Eastern	64	0.120166
Orissa	Southern	47	0.121151
Tamil Nadu	Coastal	57	0.121712
J&K	Mountainious	21	0.122193
Uttar Pradesh	Western	62	0.122399
Orissa	Coastal	46	0.122399
Andaman & Nicobar	A&N	70	0.124886
Gujarat	Plains Southern	15	0.125814
Madhya Pradesh	Central	31	0.126003
Orissa	Northern	48	0.126424
Madhya Pradesh	South western	34	0.127411
Andhra Pradesh	South western	3	0.135764
Tamil Nadu	Inland	59	0.14113
West Bengal	Central Plains	68	0.142784
West Bengal	Eastern Plains	67	0.144375
Bihar	Southern	9	0.144488
Haryana	Eastern	18	0.146517
Assam	Hills	8	0.147532
Karnataka	Cosalatal and Ghatas	23	0.147694
Karnataka	Inland Northern	26	0.151029
Punjab	Southern	50	0.152445
Madhya Pradesh	South Central	33	0.154841
Maharashtra	Inland Western	37	0.155151
Chandigarh		71	0.157498
Gujarat	Saurashtra	17	0.159986
Rajasthan	Southern	53	0.161648
Sikkim	Sikkim	55	0.163806
Punjab	Northern	49	0.164797
Gujarat	Plains Northern	14	0.16592
Tamil Nadu	Coastal Northern	56	0.176939
Gujarat	Dry Areas	16	0.177697
Mizoram	Mizoram	45	0.181257
Gujarat	Eastern	13	0.186754
Kerala	Southern	28	0.1881
Goa	Goa	12	0.189948
Maharashtra	Coastal	36	0.198802
Kerala	Northern	27	0.200555
Pondicherry		75	0.200797
Karnataka	Inlands Eastern	24	0.213591
Tamil Nadu	Southern	58	0.217427
Andhra Pradesh	Inland southern	4	0.234863
Dadar & nagar Haveli		72	0.356703
Karnataka	Inland Southern	25	0.394441

The Spatial Distribution of CalorieDeficiency in Rural India:

**Table 31**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>PGO(H)</i>
			<i>Value</i>
Andaman & Nicobar	A&N	70	-0.05499
Assam	Hills	8	0.071441
Orissa	Southern	47	0.114126
Tripura	Tripura	60	0.157494
Tamil Nadu	Coastal Northen	56	0.15944
Assam	Plains Western	7	0.197184
West Bengal	Western Plains	69	0.201368
Bihar	Central	11	0.219845
Manipur	Plains	42	0.226958
Andhra Pradesh	Coastal	1	0.235986
Lakshadweep		74	0.248785
West Bengal	Himalayan	66	0.252435
Delhi		73	0.262617
Orissa	Northern	48	0.264407
Tamil Nadu	Coastal	57	0.271703
Bihar	Northern	10	0.292411
Karnataka	Cosatal and Ghatas	23	0.29902
Chandigarh		71	0.299385
Andhra Pradesh	Inland Northern	2	0.301137
Madhya Pradesh	Chattisgarh	29	0.304119
J&K	Mountainious	21	0.307029
Orissa	Coastal	46	0.335209
Andhra Pradesh	Inland southern	4	0.341805
Assam	Plains Eastern	6	0.357977
Sikkim	Sikkim	55	0.367504
Tamil Nadu	Southern	58	0.376926
Tamil Nadu	Inland	59	0.384251
Maharashtra	Eastern	41	0.400399
Dadar & nagar Haveli		72	0.402738
Uttar Pradesh	Central	63	0.413343
West Bengal	Central Plains	68	0.41369
Manipur	Hills	43	0.415251
Uttar Pradesh	Eastern	64	0.415987
Uttar Pradesh	Western	62	0.420343
West Bengal	Eastern Plains	67	0.420765
Pondicherry		75	0.426828
Haryana	Eastern	18	0.43314
Madhya Pradesh	Malwa Plateau	32	0.440677
Bihar	Southern	9	0.441054
Punjab	Northern	49	0.457732
Andhra Pradesh	South western	3	0.460673
Haryana	Western	19	0.461801
Maharashtra	Inland Northern	38	0.493552
Madhya Pradesh	Northern	35	0.500719
Mizoram	Mizoram	45	0.508584
Kerala	Southern	28	0.509311
Kerala	Northern	27	0.511504
Arunachal Pradesh	Arunachal Pradesh	5	0.513247
Madhya Pradesh	South Central	33	0.517414
Rajasthan	North-Eastern	52	0.530445
Maharashtra	Coastal	36	0.547579
Madhya Pradesh	Vindhya	30	0.567022
Karnataka	Inlans Eastern	24	0.56791
Gujarat	Eastern	13	0.592201
Uttar Pradesh	Southern	65	0.592444
Punjab	Southern	50	0.597638
Meghalaya	Meghalaya	44	0.598002
Gujarat	Plains Southern	15	0.600805
Uttar Pradesh	Himalayan	61	0.622395
Madhya Pradesh	Central	31	0.632562
Goa	Goa	12	0.635329
Himachal Pradesh	Himachal Pradesh	20	0.656041
Maharashtra	Inland Western	37	0.669701

## The Spatial Distribution of Calorie Deficiency in Rural India:

Maharashtra	Inland Central	39	0.68064
Gujarat	Dry Areas	16	0.689874
Rajasthan	South Eastern	54	0.696072
Gujarat	Saurashtra	17	0.70468
Gujarat	Plains Northern	14	0.712163
Karnataka	Inland Northern	26	0.718175
Madhya Pradesh	South western	34	0.726543
Maharashtra	Inland Eastern	40	0.729933
J&K	Outer Hills	22	0.747124
Rajasthan	Southern	53	0.775125
Karnataka	Inland Southern	25	0.787468
Rajasthan	Western	51	0.805048

**Table 32**

State	Region	Code	50-55
			PG1(H)
Andaman & Nicobar	A&N	70	-0.00623
West Bengal	Western Plains	69	0.025138
Assam	Hills	8	0.026768
Orissa	Southern	47	0.040654
Assam	Plains Western	7	0.044301
Tripura	Tripura	60	0.04533
Manipur	Plains	42	0.058371
West Bengal	Himalayan	66	0.058854
Lakshadweep		74	0.05946
Orissa	Northern	48	0.063364
Chandigarh		71	0.066106
Tamil Nadu	Coastal Northen	56	0.070719
Madhya Pradesh	Chattisgarh	29	0.07232
Andhra Pradesh	Coastal	1	0.073226
Orissa	Coastal	46	0.075514
J&K	Mountainious	21	0.075872
Bihar	Central	11	0.077992
Assam	Plains Eastern	6	0.079034
Tamil Nadu	Coastal	57	0.08156
West Bengal	Eastern Plains	67	0.086344
Delhi		73	0.087545
Karnataka	Cosatal and Ghatas	23	0.09106
West Bengal	Central Plains	68	0.092911
Uttar Pradesh	Western	62	0.094255
Andhra Pradesh	Inland Northern	2	0.096454
Bihar	Northern	10	0.103917
Haryana	Western	19	0.106032
Haryana	Eastern	18	0.109445
Punjab	Northern	49	0.115188
Uttar Pradesh	Central	63	0.118618
Tamil Nadu	Inland	59	0.118969
Sikkim	Sikkim	55	0.12047
Uttar Pradesh	Eastern	64	0.128191
Andhra Pradesh	Inland southern	4	0.132415
Andhra Pradesh	South western	3	0.134991
Uttar Pradesh	Southern	65	0.139067
Punjab	Southern	50	0.140822
Mizoram	Mizoram	45	0.144346
Tamil Nadu	Southern	58	0.144991
Maharashtra	Eastern	41	0.146614
Manipur	Hills	43	0.147181
Madhya Pradesh	Vindhya	30	0.147988
Pondicherry		75	0.152528
Meghalaya	Meghalaya	44	0.164122
Madhya Pradesh	Northern	35	0.166267
Bihar	Southern	9	0.168069
Madhya Pradesh	South Central	33	0.185821
Madhya Pradesh	Malwa Plateau	32	0.18909
Kerala	Northern	27	0.189827

### The Spatial Distribution of CalorieDeficiency in Rural India:

Madhya Pradesh	Central	31	0.190893
Rajasthan	North-Eastern	52	0.192225
Kerala	Southern	28	0.194299
Karnataka	Inlands Eastern	24	0.195913
Uttar Pradesh	Himalayan	61	0.199585
Goa	Goa	12	0.208609
Maharashtra	Coastal	36	0.214037
Rajasthan	South Eastern	54	0.22016
Dadar & nagar Haveli		72	0.246018
Himachal Pradesh	Himachal Pradesh	20	0.246359
Arunachal Pradesh	Arunachal Pradesh	5	0.251716
Gujarat	Saurashtra	17	0.253441
Gujarat	Eastern	13	0.256852
Gujarat	Plains Southern	15	0.257906
Gujarat	Plains Northern	14	0.277975
Gujarat	Dry Areas	16	0.289402
Maharashtra	Inland Northern	38	0.29244
J&K	Outer Hills	22	0.300504
Maharashtra	Inland Western	37	0.332609
Karnataka	Inland Southern	25	0.360786
Karnataka	Inland Northern	26	0.382489
Rajasthan	Southern	53	0.385598
Madhya Pradesh	South western	34	0.40185
Maharashtra	Inland Central	39	0.405243
Rajasthan	Western	51	0.407313
Maharashtra	Inland Eastern	40	0.409036

**Table 33**

<i>State</i>	<i>Region</i>	<i>Code</i>	<i>50-55 PG2(H) Value</i>
Andaman & Nicobar	A&N	70	-0.00154
West Bengal	Western Plains	69	-0.00135
Assam	Hills	8	0.008065
Assam	Plains Western	7	0.013498
Orissa	Northern	48	0.01531
Orissa	Southern	47	0.01689
Tripura	Tripura	60	0.017493
Manipur	Plains	42	0.01878
West Bengal	Himalayan	66	0.019557
Madhya Pradesh	Chattisgarh	29	0.020849
Chandigarh		71	0.021112
Orissa	Coastal	46	0.022273
West Bengal	Eastern Plains	67	0.022871
Assam	Plains Eastern	6	0.023128
Lakshadweep		74	0.024412
Andhra Pradesh	Coastal	1	0.026527
J&K	Mountainious	21	0.028248
West Bengal	Central Plains	68	0.028851
Tamil Nadu	Coastal Northen	56	0.030195
Uttar Pradesh	Western	62	0.032371
Tamil Nadu	Coastal	57	0.032788
Karnataka	Cosatal and Ghatas	23	0.03504
Haryana	Western	19	0.035404
Bihar	Central	11	0.035825
Delhi		73	0.036273
Sikkim	Sikkim	55	0.037256
Haryana	Eastern	18	0.039123
Andhra Pradesh	Inland Northern	2	0.040131
Punjab	Northern	49	0.041392
Bihar	Northern	10	0.043785
Uttar Pradesh	Central	63	0.044829
Punjab	Southern	50	0.04509
Tamil Nadu	Inland	59	0.046379
Uttar Pradesh	Eastern	64	0.049343
Andhra Pradesh	South western	3	0.053414

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Mizoram	Mizoram	45	0.05384
Uttar Pradesh	Southern	65	0.054591
Madhya Pradesh	Vindhya	30	0.055775
Meghalaya	Meghalaya	44	0.058048
Manipur	Hills	43	0.060244
Pondicherry		75	0.064346
Tamil Nadu	Southern	58	0.067794
Andhra Pradesh	Inland southern	4	0.071002
Maharashtra	Eastern	41	0.071503
Bihar	Southern	9	0.072246
Madhya Pradesh	Central	31	0.075151
Madhya Pradesh	Northern	35	0.079855
Uttar Pradesh	Himalayan	61	0.082042
Madhya Pradesh	South Central	33	0.088016
Kerala	Northern	27	0.088202
Karnataka	Inlands Eastern	24	0.088754
Kerala	Southern	28	0.093154
Goa	Goa	12	0.09574
Maharashtra	Coastal	36	0.101155
Madhya Pradesh	Malwa Plateau	32	0.101584
Rajasthan	North-Eastern	52	0.103727
Rajasthan	South Eastern	54	0.104734
Gujarat	Saurashtra	17	0.115886
Himachal Pradesh	Himachal Pradesh	20	0.121082
Gujarat	Eastern	13	0.128326
Gujarat	Plains Southern	15	0.130901
Gujarat	Plains Northern	14	0.135189
Arunachal Pradesh	Arunachal Pradesh	5	0.135379
Dadar & nagar Haveli		72	0.136229
Gujarat	Dry Areas	16	0.152479
J&K	Outer Hills	22	0.154101
Maharashtra	Inland Northern	38	0.175943
Maharashtra	Inland Western	37	0.194854
Karnataka	Inland Southern	25	0.20549
Karnataka	Inland Northern	26	0.234098
Rajasthan	Southern	53	0.24512
Maharashtra	Inland Eastern	40	0.250806
Madhya Pradesh	South western	34	0.259241
Rajasthan	Western	51	0.260897
Maharashtra	Inland Central	39	0.262957

At this juncture, it is natural to ask whether the ranks of NSS regions by measures of caloriedeficiency differ significantly across the years. To address this we calculate Kendall's coefficient of concordance (see Boyle and McCarthy (1997)) to track the mobility of individual NSS regions over time. The motivation for calculating it in the context of our work is to determine if the regions that were reatively deprived earlier are still deprived or whether there has been any convergence. Kendall's coefficient of concordance,  $W$ , is used to determine the association among the rankings obtained by various regions in different years. (For a lucid discussion of this methodology as used in this paper as well as by Boyle and McCarthy (1997) see Seigel (1956)).

If all the regions had the same ranks in all three years, then the variance of the sum of the ranks over the years of all the regions would be the maximum. The coefficient of concordance can be thought of as an index of divergence of the actual agreement from the maximum possible (perfect) agreement. The degree of actual agreement in ranks obtained by the regions in various years is reflected by the degree of variance among the  $J$  (total number of regions) sums of the ranks. Thus  $W$  is calculated as:

$$W = s / \{(1/12)(k^2)J(J^2-1)\}$$

where,  $s$  = sum of squares of the observed deviations from the mean of  $R_j$  (the sum of the ranks obtained by a particular region in different years), that is,

$$s = \left[ \sum_j R_j - \sum_j R_j / N \right]^2$$

and

$k$  = no. of years (the set of rankings.)

$J$  = no. of regions.

Now,  $(1/12)k^2(J^3-J)$  = maximum possible sum of squared deviations, i.e. the sum of  $s$  which would occur with perfect agreement among  $k$  rankings.

The value of the rank concordance index ranges from zero to one. The coefficient of concordance is calculated for the three years 1987–88, 1993–94 and 1999–2000. This enables us to study the mobility of ranks at each point in time. The probability associated with the occurrence under  $H_0$  (rankings are unrelated to each other) of any value as large as an observed  $W$  can be determined by finding  $\chi^2$  by the formula

$$\chi^2 = s / [(1/12)kJ(J+1)] = k(J-1)W$$

with degrees of freedom  $J-1$ . The results are indicated in Table 34. There appears to be no rank convergence across the various regions. Thus regional patterns in nutritional deprivation appear to be persistent over time.

**Table 34**

		<i>Kandell statistic</i>	<i>P Value</i>
Sedentary	PG0	0.4823	0.007
	PG1	0.5345	0.008
	PG2	0.572	0
Moderate	PG0	0.4615	0.015
	PG1	0.5144	0.001
	PG2	0.5561	0
Heavy	PG0	0.63	0
	PG1	0.485	0.006
	PG2	0.514	0.001

#### IV. Conclusions

The spatial distribution of poverty in India has emerged as a matter of urgent concern in recent times. Although much of this spatial analysis has concentrated on the poverty experiences of states, there is considerable evidence of wide variations within states particularly, but not exclusively, the larger ones. Along with poverty nutritional deficiency has also been a matter of concern. This paper has presented evidence on the calorie deficiency experiences of 75 NSS regions for the quinquennial rounds of 1987–88, 1993–94 and 1999–2000. The results presented here facilitate easy identification of lagging areas on which anti-poverty policy must concentrate.

Furthermore, regional inequality in protein deficiency has persisted over time. The economic reforms program has been unable to make any significant dent on the spatial distribution of caloriedeficiency.

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