

# Preliminary Report of the RHEP Phase I Socio-economic Household Survey

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Design: Communique

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# PRELIMINARY REPORT OF THE RHEP PHASE 1 SOCIO-ECONOMIC HOUSEHOLD SURVEY

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## 1.0 INTRODUCTION

This report summarizes the findings of a baseline survey conducted in 1997 among households covered in Phase 1 of the RHEP. The survey aimed primarily at building a database and generating reliable information to shed light on the kind of households and villages covered in that initial phase of the programme. In RHEP, a better understanding of the situation in partner villages is critical for planning and execution of activities as well as for enabling an objective internal review of outcomes and impact of the programme.

Gram Vikas supervisors working in 11 districts covered in RHEP Phase 1 gathered the data utilized in this report. Standardized household survey questionnaires were utilized to solicit information from heads of individual households. Data on several variables including demographic, income, expenditure, health, housing, education, water supply, and credit status of households were collected. The data were then cross-checked for completeness and accuracy, and entered into the computer so as to enable running of frequencies and percentages on important variables, and to serve as a database for future use.

The household was the main focus and basic unit of analysis in the survey. It has been found logical therefore to use the same as the main reporting unit in this report. Where necessary comparisons of household characteristics across villages and districts covered in RHEP phase 1 have been made. Frequency and percentage tables have been used extensively in the presentation of data on key variables, so as to provide a snapshot on the general trends and patterns emerging from the survey data. Being merely a descriptive endeavor, the need for rigorous statistical analysis of the data

obtained in the survey was not found necessary. However, deeper statistical analysis may prove beneficial, if and when needed to test the level of significance of relationships emerging from the data.

This is a preliminary report, and in order to fulfil the present purposes, it has been found necessary to package it in a simple form. The report is organized as follows: following this introduction, section two provides a brief description of the RHEP, while section three gives the main findings of the survey. The findings are presented separately for key variables and, where applicable, they are discussed as they are presented. A summary of the findings and conclusions is provided at the end..

## 2.0 THE RURAL HEALTH & ENVIRONMENT PROGRAMME (RHEP)

The Rural Health and Environment Programme (RHEP) is one of the two main programmes of Gram Vikas, the other being the Integrated Tribal Development Programme (ITDP). Conceptualized in the 1990s as Gram Vikas was spinning off the Biogas programme, the RHEP aims at harnessing the physical, natural, social and human capital among the poor villages/habitation through convergent community action, so as to create a spiraling process of development.

RHEP's target beneficiaries have remained the adavasis, dalits and other poor communities in Orissa. The programme endeavors to motivate partner villages to initiate and carry forward sustainable development processes through improved living conditions (sanitation, protected water supply and housing), better livelihood

opportunities, financial independence, and self governing local bodies. One important feature of RHEP is the effort to cover all households in the villages the programme is implemented. This came about as a result of the realization that only when all families in partner villages agree to embrace and participate in the programme can real and sustainable gains be realised.

The RHEP is primarily focused on health, sanitation, and the environment, all of which are relevant to Gram Vikas's mission to improve the quality of life of conscientised rural communities. But more specifically, the programme activities bring invaluable benefits to the beneficiary groups in the areas of education, livelihood and secure food security, natural resource management, infrastructural development, governance, and health and sanitation.

The RHEP implementation plan was divided into phases. Phase 1 begun in 1992 with a pilot project involving 5 villages with 337 households in Ganjam and Bargarh districts of Orissa. 25% of the total households covered in the pilot were dalits, 5% tribal and the rest (70%) from the general category. Beginning January 1995, 35 more villages were included. Phase 1 ended in September 1998 having

achieved a total coverage of 3000 poor households from over 40 villages in 12 districts. The ongoing Phase 2 of the RHEP started in 1999, and so far, the phase has covered 27 villages with a total of 2002 households. Of these, 13% are dalits, 36 % tribal and the rest (51%) from the general category.

### 3.0 MAIN FINDINGS

#### 3.1 Household Coverage

Overall, 2891 households from 38 villages in 11 districts in Orissa were covered in phase 1 of the RHEP. The average number of households in each of the districts was 263 and 76 per village. The number of villages covered in the 11 districts ranged between 1 and 8 with Ganjam and Mayurbhanj having the largest number, 8 villages each. Nawarangpur and Rayagada districts had the smallest number, 1 village each.

In terms of households, Ganjam and Mayurbhanj had the largest number covered; 934 and 611 respectively. Rayagada (50), Subarnapur (83), and Gajapati (94) had the least; each had less than 100 households. Other districts that had below the overall average coverage of households were Koraput (114), Nawarangpur (120), Boudha (170), and Sambalpur (172)

**Table 1: Distribution of Villages and Households covered**

DISTRICT	No. of Villages Covered	Total Households	Average No. of Households per village
Bargarh	5	243	49
Bolangir	4	300	75
Boudha	3	170	57
Gajapati	2	94	47
Ganjam	8	934	117
Koraput	2	114	57
Mayurbhanj	8	611	76
Nawarangpur	1	120	120
Rayagada	1	50	50
Sambalpur	2	172	86
Subarnapur	2	83	42
OVERALL	38	2891	76

### 3.2 Distribution of Households by Type

Of the total (2891) households covered in the phase, 1879 (65%) were General, 545 (19%) ST, and 467(16%) SC. All were BPL households. In terms of villages, 28 villages (74%) were dominated by general households, 6 (16%) by ST households, and 4 (10%) by SC households. Therefore the survey data shows that although all the covered households were poor (Below the Poverty Line) general households and villages dominated overall.

Looked across districts, other than Gajapati and Koraput where majority of the households were from the ST category, general households were

more in the remaining 9 districts. It was also found that, comparatively, Nawarangpur, Sambalpur, and Gajapati had the lowest proportion of SC households covered; Bolangir, and Koraput had high coverage, while the remaining districts had medium coverage. For the ST category, Subarnapur, Nawarangpur, Ganjam, and Bargarh had the lowest comparative coverage; Gajapati, Koraput and Mayurbhanj had high, while the coverage in the remaining districts was moderate. Finally, Koraput and Gajapati had low coverage of general households; Bolangir, Boudha, and Mayurbhanj had medium; while the remaining districts had a high coverage.

Table 2: Distribution of Households by Type

DISTRICT	No of villages	Number of Villages according to dominant household type	No of Households covered	SC %	ST%	GEN%	TOTAL as % of Overall
Bargarh	5	All general	243	14	9	77	8%
Bolangir	4	3 general, 1 ST	300	19	22	59	10%
Boudha	3	All general	170	16	30	54	6%
Gajapati	2	1 ST, 1 general	94	2	61	37	3%
Ganjam	8	7 general, 1 SC	934	13	1	86	32%
Koraput	2	1 ST, 1SC	114	25	54	21	4%
Mayurbhanj	8	4 general, 3 ST, 1 SC	611	11	38	51	21%
Nawarangpur	1	1 SC	120	7	5	88	4%
Rayagada	1	1 general	w50	14	16	70	2%
Sambalpur	2	2 general	172	7	12	81	6%
Subarnapur	2	2 general	83	12	7	81	3%
OVERALL	38	28 general, 6 ST, 4 SC	2891	16	19	65	100%

### 3.3 Household Density

On average, there were 76 households per each of the 38 villages covered in the phase. But most of the villages covered in a majority of the districts had either equal or below the average household density. This means that only in a few districts was the household density per village higher than the overall average. More specifically, Nawarangpur (120), Ganjam (117), and Sambalpur (86) had a high household density while that of Mayurbhanj (76), Bolangir (75) was about equal to the overall figure. The remaining districts had a lower than overall average household density per village. An important finding was that either SC or general households dominated villages in the three high household density districts, while general households dominated villages in the two districts with moderate density. Finally, either ST or general households dominated villages in the

districts with a household density lower than the overall average of 76 households per village. The above observations show that, in the districts covered in RHEP phase 1, SC villages were, in most cases, relatively large whereas those dominated by general households were either large or of medium size, while ST dominated villages were demonstratively smaller.

### 3.4 Population Distribution by Age and Sex

There were a total of 15741 people in all households covered in phase 1 of the RHEP. Of these, 12% were young children under 5 years, about 19% were children of school going age (6-14 years) while the age category 35-60 years represented 62% of the total population. The remaining proportion (7%) comprised persons aged over 60 years.

Table 3: Population Distribution by Age and Sex

AGE GROUP	Total Population by Age	Percentage (%)	SEX RATIO		
			Total Population by Sex		
			MALES	FEMALES	
Under 5	1849	12%	921 (49.8%)	928 (50.2%)	1:1
5-14	2961	19%	1553 (52%)	1408 (48%)	0.92:1
14-35	6092	39%	3171 (52%)	2921 (48%)	0.92:1
35-60	3615	23%	1928 (53%)	1687 (47%)	0.89:1
Over 60	1224	7%	652 (53%)	572 (47%)	0.89:1
OVERALL	15741	100%	8225 (52%)	7516 (48%)	0.92:1

NB: Figures in parenthesis represent the male/female proportion in each age group.

Evidently, there were more males than females in all age groups other than the under 5 age category where the sex ratio was observed to be about equal. It is important to note that the observed sex ratio is comparable to that of India (0.937:1) and for Orissa (0.971:1). The survey data do not show any significant difference in the distribution of population by age across the districts covered in the phase as shown in table 4 below.

**Table 4: Population Distribution by Age**

<b>DISTRICT</b>	<b>1-5 yrs*</b>	<b>6-14</b>	<b>14-35</b>	<b>35-60</b>	<b>Over 60</b>	<b>TOTAL</b>
Bargarh	126 (10%)	233 (18%)	506 (39%)*	304 (24%)	112 (9%)	1281(100%)
Bolangir	167 (10%)	320 (20%)	578 (36%)	415 (26%)	134 (8%)	1614 (100%)
Boudha	116 (13%)	168 (19%)	322 (36%)	211 (24%)	70 (8%)	887(100%)
Gajapati	54 (13%)	94 (23%)	116 (28%)	119 (29%)	27 (7%)	410 (100%)
Ganjam	646 (12%)	1054 (20%)	1978(38%)	1146 (22%)	391 (8%)	5215 (100%)
Koraput	63 (11%)	90 (16%)	224 (41%)	124 (23%)	41 (7%)	552 (100%)
Mayurbhanj	459 (13%)	637 (18%)	1351 (39%)	806 (23%)	251 (7%)	3505 (100%)
Nawarangpur	63 (10%)	116 (18%)	286 (43%)	143 (22%)	56 (8%)	664 (100%)
Rayagada	18 (9%)	35 (18%)	90 (46%)	41 (21%)	14 (7%)	198 (100%)
Sambalpur	91 (10%)	130 (15%)	355 (41%)	210 (24%)	88 (10%)	874 (100%)
Subarnapur	36 (8%)	84 (19%)	185 (42%)	96 (22%)	40 (9%)	441 (100%)
<b>OVERALL</b>	<b>1849 (12%)</b>	<b>2961 (19%)</b>	<b>6092(39%)</b>	<b>3615(23%)</b>	<b>12248%</b>	<b>15741 (100%)</b>

NB: Figures in parenthesis represent individual age group's proportion in each district.

### 3.5 Household Size

The overall average number of persons per household was 5 members. The figure remained about the same across the covered districts (see table 5 below) even though, it does appear that the average household size was higher than the overall average in 2 districts, namely Ganjam (6) and Mayurbhanj (6). Two other districts, Boudha and Rayagada had, on average, fewer members in their households i.e. 3 and 4 respectively.

The data in the above table shows that the average

number of persons in each of the 38 villages covered was 414 people and that, villages covered in Ganjam and Nawarangpur had relatively high population density. In contrast, the villages covered in Bargarh, Boudha, Gajapati, Koraput, Rayagada, and Subarnapur had, on average, fewer people. The figures for Bolangir, Mayurbhanj, and Sambalpur districts were moderate; the population density in the covered villages was either slightly higher or equal to the overall average.

**Table 5: Average Household Size in covered Villages**

DISTRICT	No of Villages	No of Households covered	Total Population	Average No. of persons per household	Average No. of persons per village
Bargarh	5	243	1281	5	256
Bolangir	4	300	1614	5	404
Boudha	3	170	887	3	296
Gajapati	2	94	510	5	265
Ganjam	8	934	5215	6	652
Koraput	2	114	552	5	276
Mayurbhanj	8	611	3505	6	438
Nawarangpur	1	120	664	5	664
Rayagada	1	50	198	4	198
Sambalpur	2	172	874	5	437
Subarnapur	2	83	441	5	221
OVERALL	38	2891	15741	5	414

### 3.6 Land Ownership

A majority (86%) of the households covered in phase 1 of the RHEP owned some land, and as demonstrated by table 6 below, other than Rayagada, over 70% of the households covered in all districts were landholders.

The extent of land ownership, it can be seen, was highest in Boudha (98%) followed by Nawarangpur

(95%), Subarnapur (93%), and Bargarh (91%). In these areas, over 90% of households covered owned some land. It can also be seen that among the land owning households, each had, on average, 3.0 acres of land of all types. The size reduces slightly, however, when the average acreage is calculated using the total number of all households covered in the phase as the denominator.



Table 6: Extent of Land ownership among Households covered

DISTRICT	No of Villages	No of Households covered	No. of Households owning land	Percentage (%)	Total land owned (acres)	Average acreage per household *
Bargarh	5	243	222	91%	911	4.1
Bolangir	4	300	262	87%	1120	4.3
Boudha	3	170	166	98%	536	3.2
Gajapati	2	94	69	73%	265	3.8
Ganjam	8	934	788	84%	1503	1.9
Koraput	2	114	98	86%	419	4.3
Mayurbhanj	8	611	525	86%	1275	2.4
Nawarangpur	1	120	114	95%	458	4.0
Rayagada	1	50	23	46%	62	2.7
Sambalpur	2	172	145	84%	726	5.0
Subarnapur	2	83	77	93%	233	3.0
OVERALL	38	2891	2489	86%	7508	3.0

NB: \* the average acreage here applies only to the landowning households

Table 7 below gives a break down on the amount of land (by type) reported in the survey. Note that in order to allow comparisons of the data on land ownership with other variables covered in the survey, the average acreage (by type) per household has been calculated using the total number of households (2891) covered in the RHEP phase 1 as the denominator.

Table 7: Amount of Landholding by Type (acres)

DISTRICT	Non-irrigated	Irrigated	Wasteland	TOTAL
Bargarh	270 (1.1)	573 (2.3)	68 (0.3)	911 (3.7)
Bolangir	437 (1.4)	585 (2.0)	98 (0.3)	1120 (3.7)
Boudha	348 (2.08)	4 (0.02)	184 (1.1)	536 (3.2)
Gajapati	129 (1.4)	7 (0.8)	57 (0.6)	265 (2.8)
Ganjam	923 (1.0)	394 (0.4)	186 (0.2)	1503 (1.6)
Koraput	208 (1.9)	106 (0.9)	105 (0.9)	419 (3.7)
Mayurbhanj	950 (1.5)	218 (0.4)	107 (0.2)	1275 (2.1)
Nawarangpur	415 (3.46)	5 (0.04)	38 (0.3)	458 (3.8)
Rayagada	11 (0.2)	38 (0.7)	13 (0.3)	62 (1.2)
Sambalpur	12 (0.1)	558 (3.2)	150 (0.9)	726 (4.2)
Subarnapur	2 (0.03)	224 (2.67)	7 (0.1)	233 (2.8)
OVERALL	3705 ((1.3)	2784 (1.0)	1019 (0.3)	7508 (2.6)

Data in the above table demonstrate that collectively, phase 1 households owned a total of 7508 acres of land of all type. Of these, 3705 acres representing (49%) were non-irrigated, 2784 (37%) were irrigated, and 1019 (14%) were wasteland. The overall average ownership was 2.6 acres per household of which 1.0 acres was irrigated land, 1.3 acres was non-irrigated, and 0.3 acres wasteland. This implies that overall, about 63% of the total land owned was either non-irrigated or wasteland. Taken separately, only 14% of the total landholding was wasteland. A vast majority (86%) was either non-irrigated or irrigated.

These results imply that with availability of means, the households covered in phase-1 of the RHEP (specifically those that owned land) could improve their living standards by achieving maximum utilization of their land holdings. Perhaps, they could try to bring their non-irrigated land under irrigation, or grow coarse grains and other crops that did not rely on irrigation in their non-irrigated land. More importantly, they could also try to bring their wasteland into some productive use.

Looked across districts, Sambalpur, Subarnapur, Bargarh, and Bolangir had a high average proportion of household ownership of irrigated land, quite above the overall average. But four districts (Boudha, Ganjam, Nawarangpur, and Rayagada) portrayed some peculiarities in as far as the land ownership among the covered households was concerned.

In Boudha, the average amount of holding per household was above the overall average of 2.6 acres. Most of this was, however, non-irrigated and wasteland. In Ganjam, the average amount of land owned by individual households was quite small i.e. 1.6 acres compared to the overall average of 2.6 acres. Most of this land was non-irrigated. In Nawarangpur, though the average holding was 3.8 acres per household, which

is quite above the overall average, most of the land was non-irrigated. Unfortunately, very small amount (0.04 acres) of the holding was irrigated. Rayagada District had the disadvantage of having very small average holding per household i.e. 1.2 acres though about 67% of this was irrigated land.

The finding that a majority of the households covered in the phase owned some land regardless of size or quality attest to the fact that majority of the families in Orissa (poor and rich alike) are farming households. Statistics show, in these regards, that about 86 % of the total population in the state lives in rural areas and most of these people depend on agriculture. No wonder therefore that agriculture remains the dominant sector in the state's economy with rice and sugar cane as the main crops.

### **3.7 Household Access to Services and Resources**

Overall, four important services/resources (pension, ration, electricity and biogas energy) were accessed, even though not by all the people and households covered in Phase 1 of the RHEP. The following tables show the level of access of these benefits and resources among the households covered in the phase.

Overall, a significant proportion (60%) of persons over 60 years received pension; however the percentage differs slightly across the districts. Mayurbhanj (98%) and Bolangir (90%) had the highest proportion, Gajapati (56%) had over half of the over 60 years being pensioners, while the remaining districts had less than half of persons over 60 years as pensioners. The proportion was particularly low in Subarnapur (7%) and Sambalpur (17%). Also noted was that while most (35) of the 38 villages covered had at least one pensioner, 2 of the five villages in Bargarh and 1 of the two villages in Subarnapur had none. Majority of the pensioners in Rayagada District and a significant proportion in Koraput were below 60 years.

**Table 8: Number of Pension Holders**

DISTRICT	No. of villages	No. of Households covered	Total Population	No. of Pensioners	No. of persons over 60 years	Proportion of people over 60 yrs with pension
Bargarh	5	243	1281	21	112	19%
Bolangir	4	300	1614	120	134	90%
Boudha	3	170	887	21	70	30%
Gajapati	2	94	510	15	27	56%
Ganjam	8	934	5215	68	391	43%
Koraput	2	114	552	78	41	*
Mayurbhanj	8	611	3505	246	251	98%
Nawarangpur	1	120	664	21	56	38
Rayagada	1	50	198	30	14	*
Sambalprur	2	172	874	15	88	17%
Subarnapur	2	83	441	3	40	7%
OVERALL	38	2891	15741	738	1224	60%

## ii) Access to Government Rations

All the 2891 households covered in RHEP Phase 1 were Ration Card Holders, which confirms the earlier finding that households covered in the phase came from the BPL category. It should be borne in mind in these regards that only households classified as BPL qualify to receive Government food rations. As such, data on the number of households who accessed government rations was solicited by asking the respondents to state whether or not their households bought some rations from the government's Public Distribution System (PDS).

Table 9: Number of Households with Ration Cards

DISTRICT	No. of villages	No. of Households covered	Total Population	No. of households with Ration Cards	Percentage (%)
Bargarh	5	243	1281	243	100%
Bolangir	4	300	1614	300	100%
Boudha	3	170	887	170	100%
Gajapati	2	94	510	94	100%
Ganjam	8	934	5215	934	100%
Koraput	2	114	552	114	100%
Mayurbhanj	8	611	3505	611	100%
Nawarangpur	1	120	664	120	100%
Rayagada	1	50	198	50	100%
Sambalpur	2	172	874	172	100%
Subarnapur	2	83	441	83	100%
OVERALL	38	2891	15741	2891	100%

### iii) Access to Electricity

Only few (26%) of the total households covered in the phase had access to electricity. The picture remained the same across the covered districts,

save for Sambalpur where about 71% of the involved households had electricity connection.

Table 10: Access to Electricity among Households covered

DISTRICT	No of Villages	No of Households covered	Total Population	No. of households with Electricity	Percentage (%)
Bargarh	5	243	1281	110	45%
Bolangir	4	300	1614	21	7%
Boudha	3	170	887	17	10%
Gajapati	2	94	510	31	33%
Ganjam	8	934	5215	218	23%
Koraput	2	114	552	33	29%
Mayurbhanj	8	611	3505	139	23%
Nawarangpur	1	120	664	26	22%
Rayagada	1	50	198	22	44%
Sambalpur	2	172	874	122	71%
Subarnapur	2	83	441	22	27%
OVERALL	38	2891	15741	761	26%

The survey data revealed that although most (36) of the 38 villages had some households with access to electricity, 2 villages i.e. Dimirimunda in Boudha District and Rangiatikira village in Subarnapur had no household with access to the service

#### iv) Utilization of Biogas Energy

Table 11: Number of Households with Biogas Plants

DISTRICT	No of villages	No. of Households covered	Total Population	No. of households with Biogas Plants	% of Households with Biogas Plants
Bargarh	5	243	1281	31	13%
Bolangir	4	300	1614	21	7%
Boudha	3	170	887	14	8%
Gajapati	2	94	510	29	31%
Ganjam	8	934	5215	117	12%
Koraput	2	114	552	5	4%
Mayurbhanj	8	611	3505	62	10%
Nawarangpur	1	120	664	0	0%
Rayagada	1	50	198	4	8%
Sambalpur	2	172	874	96	56%
Subarnapur	2	83	441	11	13%
OVERALL	38	2891	15741	390	13%

Like was the case with access to electricity, though slightly less overall, most of the households (87%) covered in RHEP phase 1 had no Biogas plants. There were only 390 Biogas plants overall, which meant that only 13% of total households had use of biogas energy. More specifically, Chandipalli village in Bargarh; Bangabaha in Bolangir;

Dirimurimunda in Boudha; Lauput in Ganjam; Badaputuka, Balimunduli, and Krushnachandra in Mayurbhanj; Badakumaini in Nawarangpur; and Kallatikira village in Subarnapur District had not a single Biogas plant. Looked across districts, the two villages in Sambalpur District had the highest (56%) proportion of households with Biogas plants.

## v) Household Access to Electricity and Biogas Energy Compared

Table 12: Household Access to Electricity and Biogas Energy

DISTRICT	No of villages	No of Households covered	% of Households with Electricity	% of Households with Biogas Plants
Bargarh	5	243	45%	13%
Bolangir	4	300	7%	7%
Boudha	3	170	10%	8%
Gajapati	2	94	33%	31%
Ganjam	8	934	23%	12%
Koraput	2	114	29%	4%
Mayurbhanj	8	611	23%	10%
Nawarangpur	1	120	22%	0%
Rayagada	1	50	44%	8%
Sambalpur	2	172	71%	56%
Subarnapur	2	83	27%	13%
OVERALL	38	2891	26%	13%

Evidently, though majority of the households covered in phase 1 of the RHEP had no access to electricity or Biogas i.e. 74% and 87% respectively, more households had access to electricity than Biogas apart from Bolangir where the figures almost equaled. Similarly, more villages had no

access to Biogas than electricity i.e. 7 and 1 villages respectively. Sambalpur had the highest average proportion of households with access to both electricity and Biogas than all the other districts covered in phase 1 of the RHEP.

### 3.8 Drainage, Bathing, and Latrine facilities

Data collected on the number of households with drainage, bathing, and latrine facilities reveals that the picture before the implementation of the RHEP

was actually grim amongst most household in all the 38 covered villages (see table 13 below).

Table 13: Number of Households with drainage, bathing, and latrine facilities\*

DISTRICT	No. of villages	No. of Households covered	No. of Households with drainage facility	No. of Households with Bathing facility	No. of Household with Latrines
Bargarh	5	243	101 (42%)	9 (4%)	0 (0%)
Bolangir	4	300	104 (35%)	1 (0.3%)	0 (0%)
Boudha	3	170	31 (18%)	0 (0%)	0 (0%)
Gajapati	2	94	43 (46%)	0 (0%)	0 (0%)
Ganjam	8	934	225 (24%)	4 (0.4%)	0 (0%)
Koraput	2	114	0 (0%)	2 (2%)	0 (0%)
Mayurbhanj	8	611	143 (23%)	14 (2%)	0 (0%)
Nawarangpur	1	120	1 (0.8%)	8 (7%)	0 (0%)
Rayagada	1	50	1 (2%)	1 (2%)	0 (0%)
Sambalpur	2	172	28 (16%)	25 (15%)	0 (0%)
Subarnapur	2	83	12 (14%)	0 (0%)	0 (0%)
OVERALL	38	2891	689 (24%)	64 (2%)	0 (0%)

NB: Data in the table shows the position before the implementation of the RHEP.



Overall, a very high proportion of the covered households did not have drainage, bathing and latrine facilities before the intervention of the RHEP in their villages. Noticeably, the situation was worst in relation to the latrines for none of the households had this facility. Relatively more households had drainage than the bathing facilities. Looked across districts, Gajapati, Bargarh, and Bolangir had, on average, more households with drainage facilities above the overall average figure. For bathing facilities, Bargarh, Nawarangpur and Sambalpur had above the average proportions.

### 3.9 HEALTH: Birth and Death Rates

Data on the number of births and deaths over a three-year period i.e. 1995, 1996, & 1997 revealed that overall, the average annual birth rate among the covered households was 2.3%. However, some districts, namely Rayagada and Nawarangpur had slightly lower rates i.e. 0.8% and 1.3% respectively. Boudha (2.8%) and Koraput (2.8%) had an average birth rate higher than the overall figure

Table 14: Number of Births in last 3 years\*

DISTRICT	No. of Villages	No. of Households covered	Total Population	No. of births	Average annual Birth Rate (%)
Bargarh	5	243	1281	76	2.0 %
Bolangir	4	300	1614	92	1.9 %
Boudha	3	170	887	74	2.8%
Gajapati	2	94	510	34	2.2%
Ganjam	8	934	5215	402	2.6%
Koraput	2	114	552	47	2.8%
M a y u r - bhanj	8	611	3505	265	2.5%
N a w a - rangpur	1	120	664	26	1.3%
Rayagada	1	50	198	5	0.8%
S a m b a l - pur	2	172	874	44	1.7%
Subarna - pur	2	83	441	22	1.7%
OVERALL	38	2891	15741	1087	2.3%

NB: Percentage annual birth rate was calculated as: total births (over the 3-year period) divided by total population divided by 3 multiplied by 1000.

The table below provides figures on the number of deaths reported over the 3-year period among the households covered in RHEP phase 1.

**Table 15: Number of Deaths in last 3 years**

DISTRICT	No. of Households covered	Total Population	Deaths among under 5 years	Deaths among over 5 years olds	Total Deaths
Bargarh	243	1281	2 (0.05%)	19 (0.5%)	21 (0.5%)
Bolangir	300	1614	9 (0.2%)	38 (0.8%)	47 (1.0%)
Boudha	170	887	5 (0.2%)	29 (1.1%)	34 (1.3%)
Gajapati	94	510	3 (0.2%)	4 (0.3%)	7 (0.5%)
Ganjam	934	5215	62 (0.4%)	71 (0.5%)	133 (0.9%)
Koraput	114	552	1 (0.1%)	4 (0.2%)	5 (0.3%)
Mayurbhanj	611	3505	17 (0.2%)	47 (0.4%)	64 (0.6%)
Nawarangpur	120	664	2 (0.1%)	8 (0.4%)	10 (0.5%)
Rayagada	50	198	0 (0%)	2 (0.3%)	2 (0.3%)
Sambalpur	172	874	0 (0%)	12 (0.5%)	12 (0.5%)
Subarnapur	83	441	2 (0.2%)	6 (0.5%)	8 (0.6%)
TOTAL	2891	15741	103 (0.2%)	240 (0.5%)	343 (0.7%)

NB: Figures in parenthesis represent average % annual death rate.

The average annual death rate among the households was found to be 0.7% against an overall birth rate of 2.3%. This implied that the average population growth rate was 1.6%. Looked across districts, Boudha (1.3%), and Bolangir (1.0%) had a higher than the overall average annual death rate. As reported earlier, the villages covered in Boudha were dominated by general households (but had a significant (30%) presence of ST households) while those in Bolangir were dominated by general households. In two other districts, Rayagada (0.3%) and Koraput (0.3%) the average annual death rate was lower than the overall figure. General households dominated the lone village covered in Rayagada, while most of the households in Koraput were ST.

Comparison between the under 5 and over 5 years deaths rates among the covered households and across districts revealed that the rate was highest among the over 5 years category. Furthermore, in two districts, namely Rayagada and Sambalpur there were no deaths reported among the under 5 over the 3-years period. Overall, 27 villages reported deaths among the under 5 years as compared to 37 villages in which deaths among the over 5 years was reported to have occurred.

### 3.10 EDUCATION: Children School Attendance/Non-attendance

Table 16 below presents data on the number of children of school going age (6-14 years) attending or not attending school among the households covered in phase 1 of the RHEP

Table 16: Children's School Attendance Level

DISTRICT	Total Population	Total No. of Children (6-14yrs)	Total No. of Children (6-14yrs) attending school			Total No. of Children (6-14yrs) not attending school		
			Male	Female	Total	Male	Female	Total
Bargarh	1281	267	121 (45%)	108 (41%)	229 (86%)	14 (5%)	24 (9%)	38 (14%)
Bolangir	1614	401	203 (51%)	144 (35%)	347(86%)	23 (8%)	31 (6%)	54 (14%)
Boudha	887	185	70 (38%)	56 (30%)	126(68%)	2 <sup>3</sup> (12%)	36(20%)	59 (32%)
Gajapati	510	111	46 (41%)	27 (25%)	73 (66%)	10 (9%)	2 <sup>8</sup> (25%)	38 (34%)
Ganjam	5215	1311	620(47%)	518 (40%)	1138(87%)	67 (5%)	1 <sup>0</sup> <sub>6</sub> (8%)	173 (13%)
Koraput	552	121	52 (43%)	35 (29%)	87 (72%)	1 <sup>5</sup> (12%)	1 <sup>9</sup> (16%)	34 (28%)
M a y u r - bhanj	3505	798	388 (49%)	305(38%)	693 (87%)	46 (6%)	59 (7%)	105(13%)
Nawarangpur	664	153	81 (53%)	55 (36%)	136 (89%)	9 (6%)	8 (5%)	17 (11%)
Rayagada	198	37	17 (46%)	16 (43%)	33 (89%)	0 (0%)	4 (11%)	4 (11%)
Sambalpur	874	189	89 (47%)	81 (43%)	170 (90%)	9 (5%)	10 (5%)	19 (10%)
Subarna-pur	441	118	58 (49%)	53 (45%)	111 (94%)	3 (3%)	4 (3%)	7 (6%)
OVERALL	15741	3691	1745(47%)	1 <sup>3</sup> <sub>9</sub> <sup>8</sup> (38%)	3143 (85%)	2 <sup>1</sup> <sub>9</sub> (6%)	3 <sup>2</sup> <sub>9</sub> (9%)	548 (15%)

NB: Figures in parenthesis represent the proportion of children attending or not attending school

Several observations emerge from the data presented in the table above. Firstly, children of school going age were 3691, which represented 23% of the total population of 15741 persons covered in phase 1 of the RHEP. Of these children, 3143 (85%) attended school while the rest (15%) did not.

Secondly, though more than 65% of children of school going age from the covered households attended school, the level of attendance and non-attendance differed slightly across the districts. In Subarnapur and Sambalpur, the attendance level was much higher than the overall average i.e.

94% and 90% respectively. As seen earlier, general households dominated the 4 villages in the two districts. But 3 other districts, Gajapati, Boudha, and Koraput had a lower than average attendance level i.e. 66%, 68%, and 72 % respectively. As reported earlier, tribal households dominated majority of the villages in the 3 districts. This finding tend to imply that, tribal villages had, a comparatively lower average level of child school attendance than the SC and General households.

Thirdly, 121 (56%) of the 229 children who attended school were males and the rest (44%) females

which implied that more boys than girls from the 2891 households covered in phase 1 of the RHEP attended school and vice versa. This finding conform to the general picture in Orissa for statistics on primary education show that of the 4,437,000 children enrolled, 2,601,000 representing 58.6% were boys and the rest (41.4%) girls.

However, it can be observed, fourthly, that though the dominance of boys in school attendance is evident in all districts, the boy:girl attendance (and non-attendance) ratio was relatively high in 3 districts namely, Gajapati (41:25), Koraput (43:29), and Nawarangpur (53:36). In other words, 63%, 60%, 60% of children who attended school in Gajapati, Koraput, and Nawarangpur respectively were boys. Tribal households as seen earlier, dominated villages in two of these districts, i.e. Gajapati and Koraput. The implication here is that, compared, school attendance among the tribal households was favorably biased towards the boys than the

girls far more than was the case among the SC and general households

### 3.11 Household Income/Wealth Index

Data on household income for 1997 revealed that the households covered in Phase 1 of RHEP derived their livelihood from 7 different sources namely; land, animals, wage labor, service, business, fuelwood, and NTFP. The combined earnings from these sources was 63,042,379, which means an average of Rs. 21,806 per individual household. If this amount is divided by 5 (the average number of persons per each of the households covered in the phase) then the average individual income was Rs. 3,634, annually. The figure is slightly lower than the overall average individual annual income of Rs. 3,963 in Orissa, implying that indeed, the covered households were among the poorest in the state.

**Table 17: Average Annual Household Income (Rupees) by Source (1997?)**

DISTRICT	No. of House holds	SOURCES OF INCOME								TOTAL
		Land	Ani mals	Wage Labor	Service	Busi ness	Fuel wood	NTFP	Others	
Bargarh	243	18588	849	2083	1239	455	4	2.5	1244	24464
Bolangir	300	11928	787	2155	1895	642	141	101	481	18130
Boudha	170	6941	789	2753	1191	1651	142	121	1077	14663
Gajapati	94	6309	53	2577	3313	129	159	20	1659	14217
Ganjam	934	6999	514	6077	4547	1203	59	12	1098	20510
Koraput	114	4876	79	1620	8217	602	0	37	1448	16878
Mayurbhanj	611	5269	590	3315	7438	2066	8	3	866	19555
Nawarangpur	120	11603	1549	2862	3203	2989	183	182	1473	24045
Rayagada	50	2656	1234	4129	6420	2028	144	0	440	17051
Sambalpur	172	36736	5164	1932	2230	2284	0	0	1059	49405
Subarnapur	83	27139	720	724	535	476	0	0	1319	30914
OVERALL	2891	10473	908	3698	4236	1364	60	32	1036	21806

NB: The reported figures are average amounts across districts and not actual totals

Several observations emerge from the data presented in the above table. The first observation is that land was clearly the top main source of income for the covered households, while service, and wage labor took second and third position respectively. The three sources contributed about 84% of total earnings in individual households.

Secondly, it can be discerned that although land, service, and wage labor formed the main sources of income overall, their relative importance across districts varied. Land occupied top position in only 8 districts namely; Subarnapur (88%), Bargarh (76%), Sambalpur (74%), Bolangir (66%), Nawarangpur (48%), Boudha (47%), Gajapati (44%), and Ganjam (34%). Service was the top source of income in 3 districts namely, Koraput, Mayurbhanj, and Rayagada whose average contribution per household was 49%, 38%, and 38% respectively. Wage labor was not a top contributor in any of the 11 districts, but its relative contribution to the family purse was significant in most areas particularly in Rayagada (24%), Boudha (19%), Bolangir (12%), Nawarangpur 12%), and Bargarh (9%).

Thirdly, comparison across districts show that on average, households in 3 districts namely, Sambalpur, Subarnapur, and Bargarh had an annual income above the overall average. The respective figures were Rs. 49,405, Rs. 31,414, Rs. 24,464 for Sambalpur, Subarnapur, and Bargarh respectively. But, in contrast, four other districts i.e. Boudha (Rs. 914,663), Gajapati (Rs. 14,217),

Koraput (Rs. 16,878), and Rayagada (Rs. 17,051) registered an average annual income among the covered households lower than the overall figure.

The above finding appears to have some linkage with the size and quality of land owned by the households covered in these districts. For, in Boudha, though the average acreage per individual household (3.2 acres) was above the overall average of 2.6 acres, the quality of the land was not good; about 63% was non-irrigated, 34% wasteland, and only 3% was irrigated. In Gajapati, the average household acreage of 2.8 acres was slightly higher than the overall average, but like in Boudha, the quality of this land was bad; only about 29% was irrigated, the rest was either non-irrigated or wasteland. In Rayagada, the average acreage of 1.2 acres per household was far much lower than the overall average, although about 67% of this land was irrigated. The problem here appeared to be low acreage rather than the quality of land. In Koraput, the average acreage per household was found to be high (3.7 acres) but most of this land (73%) was either non-irrigated or wasteland.

### **3.12 Household Expenditure**

Table 18 below presents data on the average annual expenditure across districts for the 2891 households covered in RHEP Phase 1. A separate column on average annual household income is provided for comparison purposes

Table 18: Average Annual Household Expenditure (Rupees) \*

DISTRICT	No. of House holds covered	EXPENDITURE ITEMS					TOTAL AVERAGE EXPENDITURE	TOTAL AVERAGE EARNINGS
		Food	Clothing	Education	Health	Festivals		
Bargarh	243	12207	2670	907	1417	1119	18319	24464
Bolangir	300	12161	2063	649	1154	710	16738	18130
Boudha	170	9981	1430	317	757	494	12979	14663
Gajapati	94	8086	2212	566	1864	1580	14308	14217
Ganjam	934	12468	1881	721	1429	1374	17873	20510
Koraput	114	7466	2002	730	1149	1672	13020	16878
Mayurbhanj	611	10429	1797	1170	907	1163	15465	19555
Nawarangpur	120	15066	2299	1444	1353	1050	21213	24045
Rayagada	50	7498	3154	660	16044	1056	13972	17051
Sambalpur	172	19489	4444	1676	2613	1669	29891	49405
Subarnapur	83	17410	4383	1636	3163	1681	28273	30914
OVERALL	2891	12079 (68%)	2201 (12%)	908 (5%)	1373 (8%)	1213 (7%)	17773 (100%)	21806

Note: Figures in parenthesis represent the proportionate share for individual items of the total household expenditure.

\* The reported figures are average amounts across districts and not actual totals

Data obtained on household expenditure showed that the combined annual expenditure for all the households was Rs. 51,383,023 against total income of Rs. 63,042,379. The average annual expenditure per household was thus Rs. 17,773 against total average annual earnings of Rs. 21,806 per household. This means that the household income slightly exceeded the total expenditure. On average, only about 82% of the total earnings were spent; possibly the rest (18%) was either invested or saved. In this case, the level of savings and investment among the covered households and villages was apparently low.

Also revealed was that food was the single most important expenditure item among the covered households as it constituted about 68% of total household expenditure, and took about 55% of total household earnings. Clothing, health, and festivals in that order were the next important expenditure items. Education was the least, taking a mere 5% of total household expenditure.

The relatively high household annual expenditure on food implies that most of the covered households were not self-food sufficient. Possibly they relied on the market and government rations to supplement their own supplies. That they didn't produce enough may be explained, perhaps, by the earlier finding that most of the covered households either owned very small pieces of land, or that most of the holdings were of poor quality; either non-irrigated or wasteland. That the villagers may have been keener in rice growing against a background of insufficient irrigated parcels may have aggravated the observed food insecurity.

### 3.13 Household Credit Status

Overall, more than half of the covered households had access to credits (loans) of some type. The level and amount of credit accessed by these households varied across the 11 districts, however.

**Table 19: Household Access to Credits**

DISTRICT	No. of Households covered	No. of Households with credit	Percentage (%)	Total amount of credit (Rupees)	Average amount of credit per household (Rupees)
Bargarh	243	148	61%	2,211,984	14,946
Bolangir	300	174	58%	1,799,832	10,344
Boudha	170	89	52%	299,624	3,367
Gajapati	94	68	72%	405,900	5,969
Ganjam	934	590	63%	700,2762	11,869
Koraput	114	50	44%	818,931	16,379
Mayurbhanj	611	167	27%	1,424,533	8,530
Nawarangpur	120	83	69%	1,157,300	13,943
Rayagada	50	13	26%	115,000	8,846
Sambalpur	172	86	50%	1,552,940	18,057
Subarnapur	83	64	77%	994,083	15,533
OVERALL	2,891	1532	53%	17,782,889	11,608

Looked across districts, Subarnapur, Gajapati, and Nawarangpur had a relatively high percentage (>65%) of households with access to credits while two other districts namely, Mayurbhanj and Rayagada had the least proportion as only less than 30% of the households covered in these areas had access to credits.

The earlier findings revealed that villages covered in Mayurbhanj were dominated by either general households or had a significant proportion of tribal households. It was also found that, on average, the villages covered in the district had below overall average acreage per household (2.1 acres most of which was non-irrigated or wasteland) and that service was the main source of income for most households. Moreover, all households were ration cardholders, and access to both electricity and biogas energy was relatively low. In Rayagada, the lone village covered in RHEP phase 1 was dominated by general households; average household land holding was very small (1.2 acres); service was the main source of income for most households; and all the households were ration card holders. Only 44% and 8% of households covered in this district had access to electricity and biogas respectively.

It was also found that households covered in Sambalpur, Koraput, Subarnapur, and Bargarh had, a relatively high average amount of credit, quite above the overall average of Rs. 11,608. The average household amount of credits in these districts was Rs. 18,057, Rs. 16,379, Rs. 15,533, and Rs. 14,494 respectively. Other than Koraput, these districts also reported a relatively high level of average household annual income. But in contrast, 3 other districts namely, Boudha, Gajapati, and Rayagada had relatively low average household amount of credits. They too had low average household annual income.

The above finding tend to imply that in RHEP phase 1, those villages and districts that had low household annual income also had the lowest comparative access to credits. Interpreted broadly, the finding intimate that the poorest of the households covered in phase 1 of the RHEP had little income most of which they spent on food, owned little or had no land of their own, and that they had little access to credits. Regrettable situations these, which appear to render credence to RHEP's intervention among the households covered in the phase.

## 4.0 SUMMARY OF THE FINDINGS AND CONCLUSIONS

Below is a summary of the main findings of the survey.

- ♦ In phase 1 of the RHEP, coverage was skewed in favor of general households; about 65% of total households covered came from this category. Only 19% and 16% were from the SC and ST categories respectively. Similarly, there were far more villages that were dominated by general households as compared to the SC and ST ones. Specifically, the villages covered in Gajapati and Koraput areas were tribal dominated, while general households dominated villages in the remaining 9 districts.
- ♦ Villages dominated by SC households were large, while those dominated by general households were either large or of medium size. Those dominated by ST households were comparatively smaller.
- ♦ All the households covered in the phase were poor (lived below the national poverty line). Relatedly, all were cardholders for government food rations.
- ♦ The average household size was 5 members; the size is comparable with the national and state figures. Importantly, no significant difference in family size was found among the SC, ST and general households covered in the phase.
- ♦ Of the 15741 people from the households covered in the phase, there were more males than females. Again, the sex ratio was comparable with the national and state figures. But whereas the ratio between the sexes was approximately equal among the under 5 group, it deteriorated against women from age 5 onwards; the deterioration being remarkable from age 15 onwards.
- ♦ Whereas a majority (86%) of the households covered in the phase owned land, 2.6 acres on average, a significant proportion of the holding was either non-irrigated or wasteland.
- ♦ Use of electricity and biogas energy among the covered households was very low, even though there was seemingly slight differences in level of use among households across the covered districts.
- ♦ Before the implementation of the RHEP, and in



as far as water and sanitation were concerned, the picture in the 38 villages covered in phase 1 of the programme was very grim. Only very few households had a drainage facility in their house, or a bathing facility, but even more worse, none of the households had a latrine. The picture remained about the same in all villages across the districts covered.

- ♦ Of the total households covered, all were poor and land was the single most important source of income for most, contributing, about (48%) of the family annual earnings. Service, wage labor, and business were also main income earners for most households.
- ♦ The average annual income among the households covered in the phase was Rs. 21,806, which was lower than the national and state averages. Because the average family size was noted to be 5 members, individual persons in the covered households earned, on average, only Rs. 3,634 per annum as compared to the state average of Rs. 3,963.
- ♦ Food was the single most important expenditure item among the households covered in RHEP phase 1 where it constituted about 68% of total household expenditure and took about 55% of total household earnings. Clothing, health, and festivals in that order were the next important expenditure items while education was the least, taking a mere 5% of total household expenditure.
- ♦ Households covered in the survey spent a large proportion (82%) of their income on direct consumption, which meant that the propensity to save and by extension the level of investment among these households was apparently low.
- ♦ That food was the main expenditure items for the households covered in the phase, was indicative that most households were food insecure; these households relied on the market and government rations to supplement their own production.
- ♦ Whereas a significant proportion (53%) of the households covered in phase 1 of the RHEP had access to loans of various types, and of varying amounts and interest rates, the level of access varied across the villages and districts covered in the phase. Noticeably, the poorest of households i.e. those that had little income, those that owned little or had no land of their

own, had little or no access to credits.

- ♦ Children of school going age (5-16 years) comprised a significant proportion (19%) of the total population from the households covered in RHEP phase 1 and, more importantly, a majority of these children attended school although quite a significant proportion were males.
- ♦ Comparatively more girls than boys in the covered households did not attend school; in Rayagada, all the non-attendees were even found to be girls.
- ♦ Though the level of school attendance and non-attendance among the households covered in the phase remained about the same across districts, the preference level for boys was most remarkable among the tribal households than was the case with the SC and general ones.
- ♦ The birth rate among the covered households was low and comparable with the national and state figures, and the rate remained about the same across districts and did not appear to vary significantly among the different types of households.
- ♦ The death rate was also seen to be low and compared well with the national as well as the figures for Orissa. But the rate was seen to be higher among the over 5 as compared to the under 5. The number of deaths across the districts and among the different household types did not seem to differ significantly.

In concluding, the findings emerging from the survey, even though only a basic descriptive analysis of the data has been achieved so far, do have implications for the RHEP work. The overall aim of the survey i.e. to provide a clearer picture of the situation that existed among the households and villages covered in RHEP phase 1, and the RHEP team's effort to gather that data is most appreciable.

Indeed the survey succeeded in bringing forth important data sets, which, upon further analysis to confirm observed relationships for key variables, could prove beneficial in the programme's planning and execution processes. And, more importantly, the data remains of great use in providing a benchmark on which an objective internal assessment of the outcomes and impacts achieved by the RHEP in that initial phase can be based.



Preliminary Report of the RHEP Phase I Socio-economic Household Survey

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