

**Analytical Report on**

**the**

**2006 Kiribati HIES**

**Prepared By**

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## **Preface**

The 2006 Household Income and Expenditure Survey (HIES) was the second survey of its kind ever conducted in Kiribati by the National Statistics Office. The first one was in 1996 with re-basing the consumer price index (CPI) as its main objective. Only a few islands were surveyed at that time.

The 2006 HIES extended its purpose and scope. Apart from the income and expenditure data collected, information on education, health and labour force was also collected. It covered 11 islands. Makin, Abaiang and N. Tarawa represent the Northern Group, S. Tarawa represents the Urban area, Maiana and Abemama represent the Central group. The Southern group was represented by Nonouti, Beru, and Arorae while the Line and Phoenix group was represented by Kiritimati and Tabuaeran.

This report presents only the income and expenditure component of the survey. There is hope that the poverty analysis will be carried out next while health, education and labour force will be analysed at some later date.

I hope the information presented here is useful for planning and decision making.

I wish to acknowledge the contribution of ADB and AUSAid in funding this survey and the SPC Statistics and Demographic Programme, in particular Chris Ryan and Greg Keeble, for providing technical assistance throughout the survey.

I also wish to thank all supervisors and enumerators for the hard work they have done and all households who have participated in this survey for their cooperation.

Kam bati n rabwa.

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# Analytical Report on the 2006 Kiribati Household Income and Expenditure Survey

## ***1. Introduction***

### **1.1 Purpose and objectives**

Statistics on the income and expenditure of households in Kiribati was first collected in 1996. Following on from the 2005 Population Census, the National Statistics Office of Kiribati conducted a second Household Income and Expenditure Survey (HIES) in October 2006. The purpose of the HIES is to provide up-to-date statistical information on the social and economic activity of households which will inform policy and planning decisions of the government and international agencies.

The objectives of the survey are to:

- Provide information on income and expenditure distribution within the population
- Provide income estimates of household sector for national accounts
- Provide data for the re-base of the Consumer Price Index
- Provide data for the analysis of poverty and hardship
- Provide data for a nutritional analysis of household food consumption

This report contains a summary of the main findings of the 2006 HIES survey. It provides an analysis of the income and expenditure distribution of households within Kiribati. The report is divided into four parts: introduction and background, sampling method and survey operations, descriptive analysis with commentary, and summary of the main results. Detailed statistical tables are provided in the appendix together with technical notes.

## 1.2 Background

Kiribati is a country facing numerous economic, social, demographic and environmental challenges. A country with limited natural resources and, for those natural resources it does possess (e.g. fisheries), limited capacity to exploit such natural resources, the economic outlook is fragile. Social problems, such as in the health and education field, are challenging in themselves, but also create additional economic burden on the country's limited resources. The increased urbanisation of the population place an even greater load on limited infrastructure and accentuate many of the existing social difficulties.

To address these challenges a sound information base is required to ensure any actions taken to address these challenges are well targeted and effective. As well as the HIES, the information base will consist of data collected in the recent population census, a participatory poverty assessment, a quantitative poverty analysis, and a gender based violence study.

A Household Income and Expenditure Survey (HIES) provides invaluable information to address many of these issues. Following the completion of the HIES, the consumer price index will be re-based to better reflect current purchasing behaviour of households, estimates of the levels of poverty and hardship in the population will be produced, and an analysis of household food consumption will be undertaken.

The 2005 Population Census provided detailed geographic level data on a range of issues, but lacked the income and expenditure detail required for many purposes. However, the combination of census and household survey data will provide a substantial information database on which to base decisions relating to many of the key issues facing Kiribati.

Also in 2005 a Participatory Poverty Assessment (PPA) was conducted and involved community consultations and one-on-one interviews with key stakeholders to determine the key factors and causes of poverty. This qualitative information provides a valuable complimentary perspective to the quantitative poverty analysis derived from the HIES, providing context and explanation to the HIES results.

A Gender Based Violence (GBV) project is also planned for the near future. This will provide another complimentary information source on the welfare of women in Kiribati. GBV is often caused by economic and social hardship, and the results of the GBV project and the HIES will provide significant insights into gender based issues.

## **2. Method**

### **2.1 Scope and coverage**

There are five main populations of interest for which estimates are required for the 2006 Kiribati HIES: South Tarawa, Northern, Central and Southern Gilbert Islands, and the Line Islands. For this reason, the analysis focused on households from each of the five sub-populations (or strata). Based on the 1995 census, 37% of the households are in South Tarawa (which is considered to be the urban area of Kiribati), 21% are in the Northern Gilberts, 11% in Central Gilberts, 21% in the Southern Gilberts, and 10% in the Line Islands. The population estimates produced by the survey represented almost all of the islands of Kiribati with the exception of Banaba and Kanton, which due to their remoteness and small population, were considered out of scope for the survey (they only contribute 0.5% to the total household population of Kiribati).

The survey coverage included only persons living in private households during the month of October 2006. Persons living in institutions, such as school dormitories, hospital wards, hostels, prisons, as well as those households which had temporarily vacated their dwellings to attend cultural events were excluded from the survey. Also excluded from the survey were ex-patriot temporary residents and permanent residents who were not residing (and intending to reside) in Kiribati for at least 12 months.

### **2.2 Sampling design**

The sampling design used a multi-stage selection methodology, based on two sampling methods: probability proportional to size and systematic sampling. The first method was used to select the islands and enumeration areas, the second method was used to select the households. The 2005 population and housing census was used as the sampling frame for the selections.

To achieve better representation within each island group, each group was further stratified by grouping “like” islands. An island was then selected from each stratum to represent it. As a result, 11 strata were formed, with each of the 23 populated islands of Kiribati allocated to one of these strata. The allocation of the sample to stratum within each island group was achieved by simply allocating the sample proportional to the population for that stratum.

To minimize the travel requirements of interviewers, and thus travel costs, a two stage process was adopted to selected households. The required number of EAs to select from each island was simply determined by dividing the number of households to sample on that island by 15, which was the cluster size chosen from each selected EA. Having selected the EAs, a systematic skip was run through the list of households for each EA to determine which households would be selected in sample.

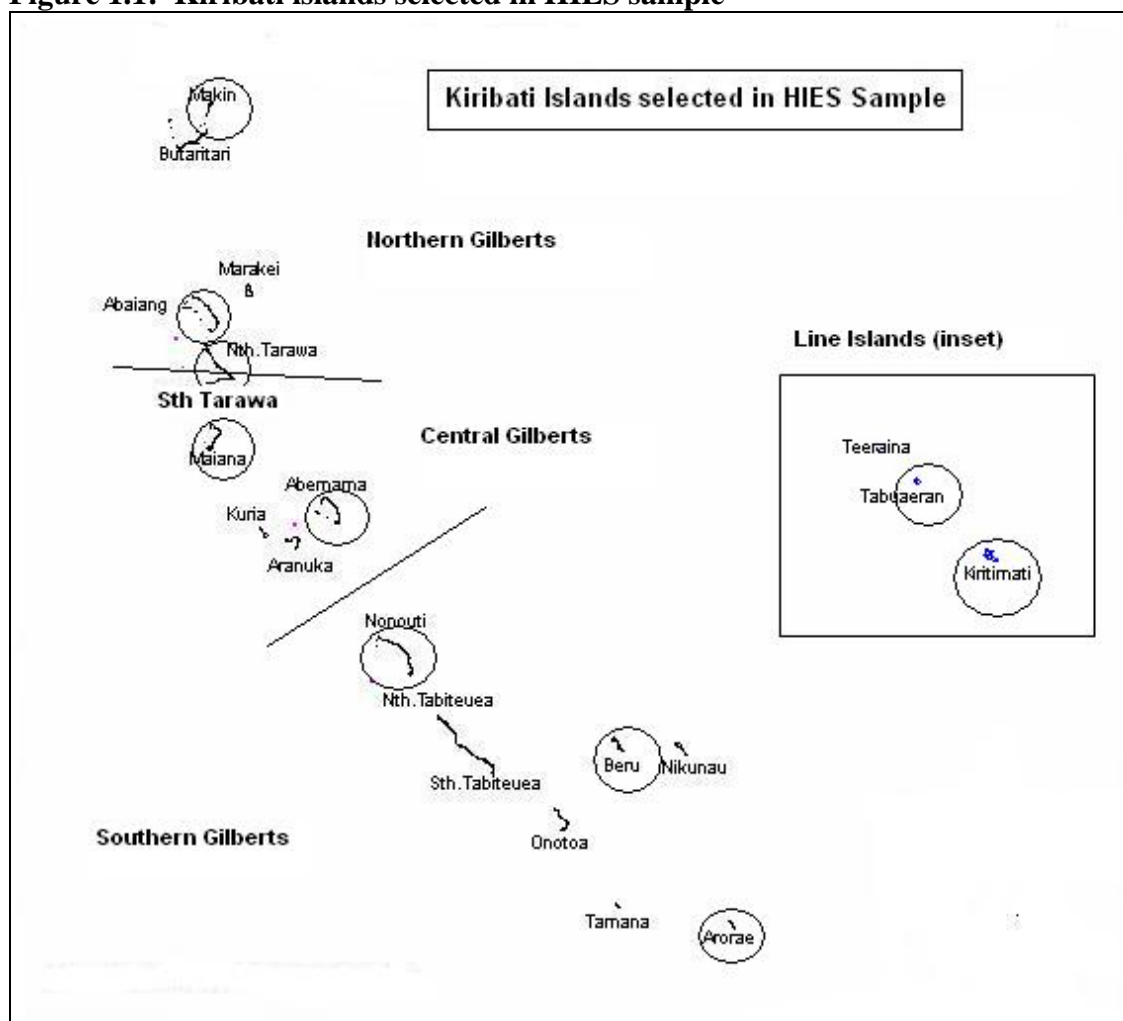
Overall 11% of all private households in Kiribati were selected for the survey. Proportionately fewer households were selected in South Tarawa and a greater percentage of households were selected in Central Gilberts and the Line islands. The following table presents the details of the sample selection for each island group:

**Table 1.1 Details of Sample Selection**

Area	Island Groups	Selected Islands	Household Population	Sample size	Percentage of Hholds selected
Urban	South Tarawa	Sth Tarawa	5,245	330	6.3%
Rural	Northern Gilbert	Makin, Abaiang, Nth Tarawa	3,046	326	10.7%
Rural	Central Gilbert	Maiana, Abemama	1,420	282	19.9%
Rural	Southern Gilbert	Nonouti, Beru, Arorae	2,941	318	10.8%
Rural	Line Islands	Tabuaeran, Kiritimati	1,347	290	21.5%
<b>Total</b>	<b>5 Island Groups</b>	<b>11 Islands</b>	<b>13,999</b>	<b>1,546</b>	<b>11.0%</b>

Weights for the survey were derived using the inverse of the households probability of selection. Allowances were also made for coverage reductions (ie, Banaba and Kanton) so estimates for the entire population of Kiribati could be produced. Figure 1.1 shows the selected islands (circled) in relation to the island groups on a map of Kiribati.

**Figure 1.1: Kiribati islands selected in HIES sample**





## 2.3 Survey operations

The survey was conducted over a 6 week period beginning on 2 October and finishing on 14 November 2006. The National Statistics Office recruited and trained 12 supervisors and x interviewers to conduct the survey in the 11 selected islands. Over the survey period each interviewer completed two workloads (around 30 households). The lack of air transportation to the outer islands during the survey period delayed the planned start date of the enumeration and also hindered the return of survey forms to the statistics office for processing.

Four questionnaire forms were designed to collect information on household size and composition, personal and household income, major household expenditure, and regular food and household supply expenditures in the diaries. The income and expenditure questionnaires were administered by interview during the survey period, and the diaries were completed by the households over a two-week period. An additional questionnaire was developed and administered to collect detailed information on health facility utilization and access, educational attendance and attainment, and labour force status.

The completed survey forms were processed by staff of the National Statistics Office who recorded their receipt from the supervisors and checked the questionnaires for completeness. The status of incomplete questionnaires was recorded as either out of scope, vacant dwelling, unable to be contacted, and refused to respond. The completed questionnaires were entered into a data entry system (CSpro) and after editing and imputation, the data was loaded into a database (MSAccess) and tabulated using Excel pivot tables.

## 2.4 Data quality

The quality of data obtained through a household survey is subject to both sampling and non-sampling error. Both types of error can be assessed using statistical measures and the level of error reported in a data quality evaluation.

It should be noted that the analysis of the data contained in this report is based on a sample of households and therefore the estimates produced are subject to sampling error. It is anticipated that the relative standard error for the key estimates of total household income and expenditure will be less than five percent, which is the level at which the estimates are considered to be reliable. Standard errors for the key estimates will be calculated and included in the final report.

A total of 1161 households out of 1546 selected fully responded to the survey, representing an overall response rate of 75 percent. Of the non-responding households, 8.2% refused to respond to questions, 5.3% were not able to be contacted, 9.1% were vacant dwellings, and 2.3% were out of scope for the survey. Lower response rates (less than 70%) were obtained from Nonouti, North and South Tarawa than in the other surveyed islands. However, the response rate for each island group (apart from South Tarawa) was above the total response rate of 75%, indicating a very good level of response. Table 1.2 shows the number and percentage of responding households by island.

**Table 1.2. Number and Percentage of Responding Households by Island**

Island Group	Island	Selected Households	Responding Households	Response Rate
Sth Tarawa	Sth Tarawa	330	230	69.7%
Northern	Makin	96	84	87.5%
Northern	Abaiang	140	100	71.4%
Northern	Nth Tarawa	90	61	67.8%
Central	Maiana	72	55	76.4%
Central	Abemama	210	162	77.1%
Southern	Nonouti	150	103	68.7%
Southern	Beru	120	103	85.8%
Southern	Arorae	48	38	79.2%
Line	Kiritimati	140	114	81.4%
Line	Tabueran	150	111	74.0%
<b>Total</b>		<b>1546</b>	<b>1161</b>	<b>75.1%</b>

During the editing process, a number of imputations were made to adjust for non-response to key income and expenditure items. In particular, expenditure was imputed for households that reported no food purchases or own consumption, and rents were imputed for households which owned their own dwellings or occupied dwellings rent free. Apart for correcting data entry errors, no adjustments were made to either household income or expenditure where the difference between total income and expenditure amounts was large.

### 3. Analysis

#### 3.1 Demographic Profile

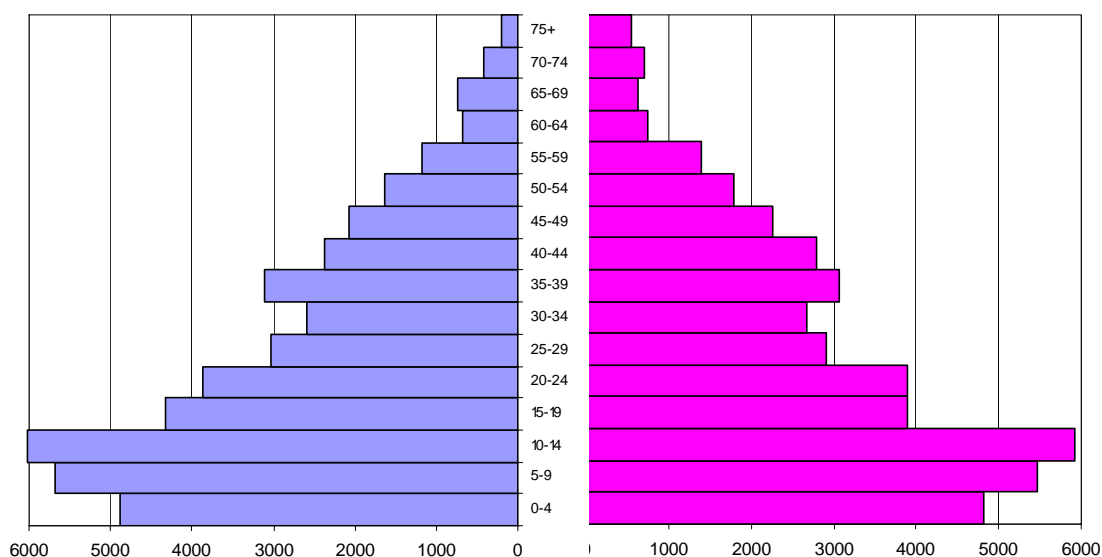
A comparison between the household and population counts of the 2005 Population Census and the 2006 HIES (Table 2.1) shows that the weighting of households in the HIES, while matching perfectly the number of private households in the census, recorded 2,337 fewer persons living in those households. Comparing the average household size by island group shows that fewer persons were recorded in the Central and Southern Gilberts than in the census (shaded figures). No explanation can be provided as to the reason for the difference in population counts as both the census and the HIES were conducted during the same month of the year.

**Table 2.1: Comparison of Population from 2005 Census with 2006 HIES**

Island Group	Census	HIES	Census	HIES	Census	HIES
	2005	2006	2005	2006	2005	2006
	<b>Households</b>		<b>Persons</b>		<b>Avg. Hhold Size</b>	
<b>Sth Tarawa</b>	5245	5245	39186	39271	7.47	7.49
<b>Northern Gilberts</b>	3046	3046	18213	18010	5.98	5.91
<b>Central Gilberts</b>	1420	1420	7494	6866	5.28	4.84
<b>Southern Gilberts</b>	2941	2941	15401	13765	5.24	4.68
<b>Line &amp; Phoenix</b>	1347	1347	8350	8359	6.20	6.21
<b>Total</b>	<b>13999</b>	<b>13999</b>	<b>88644</b>	<b>86307</b>	<b>6.33</b>	<b>6.17</b>

The age-sex distribution of the population in the HIES (Figure 2.1) shows that there were relatively large numbers of persons aged 10-14 compared to other age groups for both sexes. Comparing the distribution with the census population reveals that the largest age group was in fact ages 5-9. Significantly fewer persons aged 15-19 were recorded in the HIES suggesting that the ages had been incorrectly reported during the enumeration. A possible reason for the under-reporting may be to avoid answering questions on income that were asked for persons aged 15 years and over.

**Figure 2.1: Population Distribution by Age Group and Sex (HIES 2006)**



The demographic profile of persons aged 15 years and over by sex is shown in Table 2.2. Around 61 percent of the adult population was married, 94 percent were of only Kiribati ethnicity, 29 percent had completed secondary education, 61 percent could read and write in both Kiribati and English, and less than 5 percent had used the internet over the last 12 months (mostly in South Tarawa). Slightly more females completed secondary education than males, and more males than females good read and write in both Kiribati and English.

**Table 2.2: Demographic Profile of Persons Aged 15 Years and Over**

Sex	Marital Status	Kiribati	Secondary	Literacy	Internet
		Ethnicity	Education	Kiribati & English	Usage
Male	60.6%	93.9%	27.5%	64.9%	4.6%
Female	61.5%	93.9%	29.7%	57.9%	4.4%
Total	61.1%	93.9%	28.6%	61.3%	4.5%

The main economic activity of the population aged 15 years and over by sex is shown in table 2.3. In all 38 percent of the adult population (44% of men and 33% of women) were currently engaged in work activity. Around 28 percent of men and 18 percent of women were working for wages and salaries in either full-time or part-time work. Four percent were working in their own business or selling produce, and 11 percent were working mainly for subsistence. Another 38 percent reported that they were unemployed and looking for cash work.

**Table 2.3: Percentage of Persons Aged 15+ by Sex and Economic Activity**

Sex	Work		Own	Sell	Subsist-
	Work Fulltime	Parttime	Business	Produce	ence
Male	24.5%	3.5%	2.2%	1.7%	11.8%
Female	15.4%	2.4%	1.9%	2.7%	10.8%
Total	19.8%	2.9%	2.0%	2.2%	11.3%

The distribution of population aged 15 years and over by economic activity for each island group is shown in table 2.4. A third of the adult population in South Tarawa and the Line Islands are currently engaged in wage and salary employment or run their own business compared to only 18 percent in the other island groups. Around 20 percent of the adult population are engaged in subsistence activities in the Northern, Central and Line Islands. Almost half of the Northern group consider they are mainly unemployed compared to a third of the other island groups.

**Table 2.4: Percentage of Persons Aged 15+ by Type of Economic Activity and Island Group**

Economic Activity	1.Sth Tarawa	2.Northern	3.Central	4.Southern	5.Linix	Total
Wages & Salaries	30.8%	14.7%	15.4%	14.3%	21.5%	22.8%
Own Business	3.5%	3.6%	2.6%	4.0%	11.0%	4.2%
Subsistence	4.1%	22.2%	19.4%	9.0%	20.2%	11.3%
Unemployed	38.4%	47.8%	34.9%	30.1%	33.2%	38.2%
Not Active	23.3%	11.7%	27.6%	42.5%	14.1%	23.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

## 3.2 Household Income

### 3.2.1 Total Annual Household income:

The total annual household income for Kiribati measured by the 2006 Household income and expenditure survey (HIES) was over 122 million dollars. The total annual household income for South Tarawa was over \$60 million while the rest of the islands have a total income of about 62 million dollars. While wages and salaries was the main source of income for the urban area (\$28 million or 47% of total urban income) it only represents 24 percent of the total rural income. Subsistence activity was the main source of income for the rural area. It accounts for 28 percent (\$17.5 m) of the total rural income.

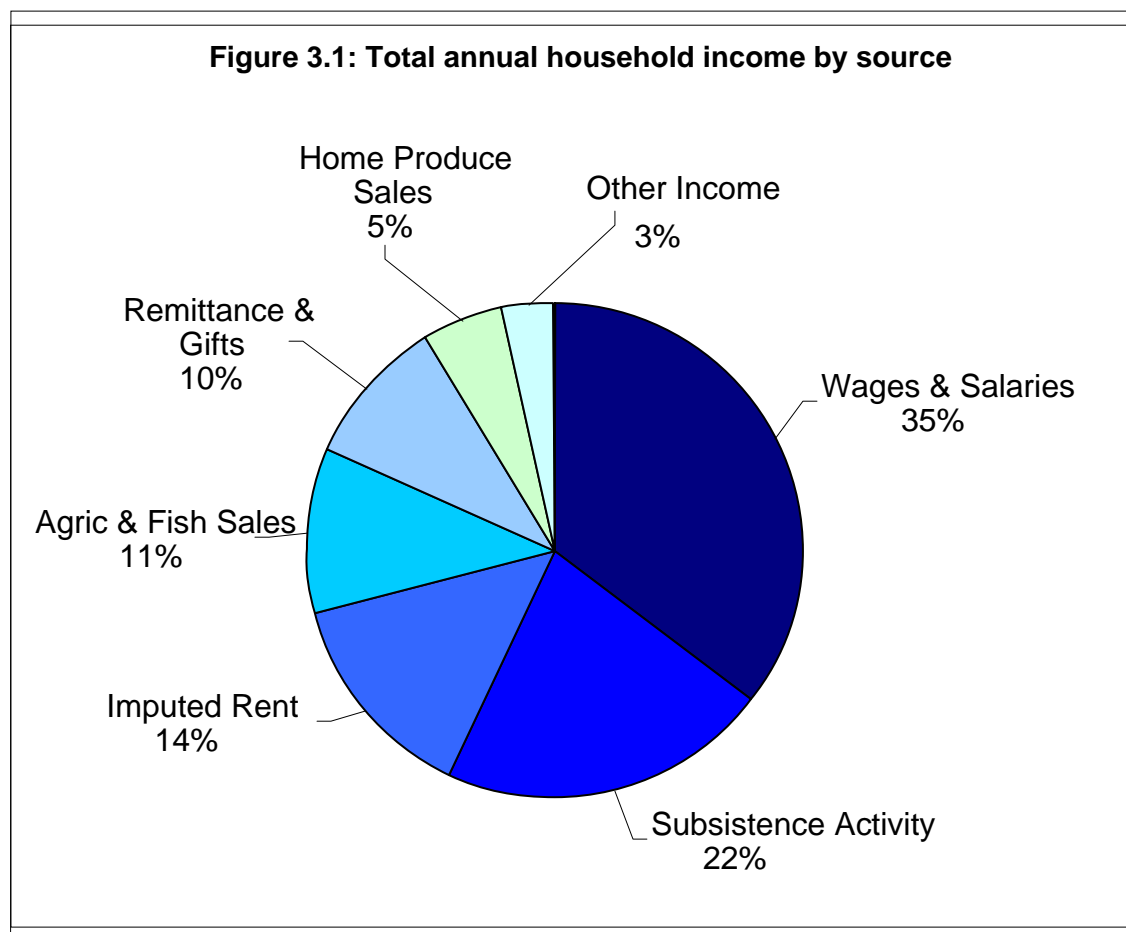
<b>Source of Income</b>	<b>S Tarawa</b>	<b>Outer Islands</b>	<b>Total</b>
Wages & Salaries	\$28,421,000	\$14,902,000	\$43,322,000
Self Employment	\$263,000	\$530,000	\$793,000
Agric & Fish Sales	\$2,502,000	\$10,871,000	\$13,373,000
Home Produce Sales	\$1,242,000	\$5,393,000	\$6,635,000
Remittance & Gifts	\$6,068,000	\$5,645,000	\$11,713,000
Casual Jobs	\$32,000	\$138,000	\$170,000
Welfare Allowances	\$111,000	\$211,000	\$322,000
Pensions	\$298,000	\$258,000	\$556,000
Subsistence Activity	\$8,782,000	\$17,542,000	\$26,323,000
Imputed Rent	\$11,336,000	\$5,710,000	\$17,047,000
Other Income	\$1,073,000	\$1,097,000	\$2,169,000
<b>Grand Total</b>	<b>\$60,128,000</b>	<b>\$62,296,000</b>	<b>\$122,423,000</b>

Note: The total may not add up right due to rounding errors.

Other main sources of income for the urban area include imputed housing rents (\$11 million), consumption of own production (\$8 million) and remittances & gift valued at just over 6 million dollars.

In the rural area the main source of income are consumption of own produce (\$17.5 million), wages and salaries (\$14.9 million), the sale of agricultural products and fish (\$10.8 million). Remittance and gift and the sales of home produce contributed about \$5 million dollars each to the income.

Combining the incomes together, wages and salaries accounted for 35% of the total income and subsistence activity accounted for 22 percent. Other major sources of income included imputed rents, (14%) the sale of agricultural and fish sales (11%), remittances and gifts (10%) and the sales of home produce (5%). (See figure 3.1 below).



### 3.2.2 Average annual household income.

The average annual household income for Kiribati was about \$8,700 dollars. The highest average annual household income was found in the Lines and Phoenix group with \$12,300 compared to South Tarawa with \$11,500, the central group – \$7,800, the northern group - \$6,600, and the southern group with about \$5,000.

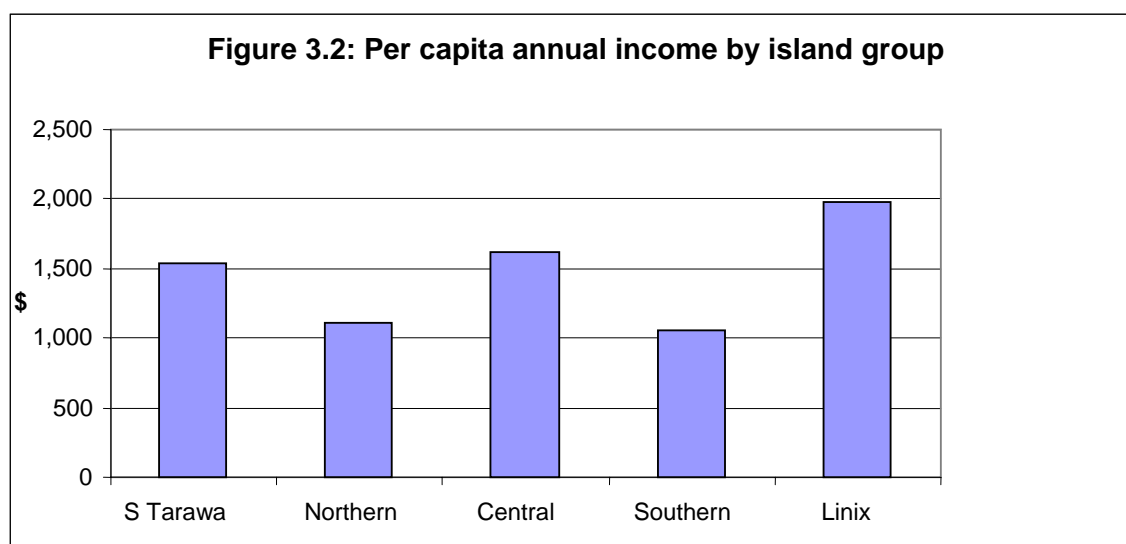
Table 3.2 shows the breakdown of average annual income by main sources for each island group. Wages and salaries was the main source of income for South Tarawa, the central group, the southern group, and the Line and phoenix group. Subsistence activity was the main source of income for the northern group. On average each household earned \$170 a week which comprised cash income and non-cash income such as imputed rents and consumption of own produce.

**Table 3.2 Average annual household income by income sources and by island group**

Income Source	S Tarawa	Northern	Central	Southern	Linix	Grand Total
Wages & Salaries	\$5,419	\$1,208	\$1,813	\$1,254	\$3,683	\$3,095
Self Employment	\$50	\$106	\$10	\$6	\$129	\$57
Agric & Fish Sales	\$477	\$920	\$2,148	\$824	\$1,927	\$955
Home Produce Sales	\$237	\$406	\$574	\$507	\$1,374	\$474
Remittance & Gifts	\$1,157	\$678	\$568	\$559	\$840	\$837
Casual Jobs	\$6	\$18	\$17	\$16	\$8	\$12
Welfare Allowances	\$21	\$22	\$29	\$34	\$2	\$23
Pensions	\$57	\$51	\$16	\$2	\$56	\$40
Subsistence activity	\$1,674	\$2,326	\$1,760	\$1,110	\$3,485	\$1,880
Imputed Rent	\$2,161	\$736	\$727	\$507	\$703	\$1,218
Other Income	\$205	\$119	\$154	\$112	\$138	\$155
<b>Total Income</b>	<b>\$11,464</b>	<b>\$6,589</b>	<b>\$7,815</b>	<b>\$4,930</b>	<b>\$12,345</b>	<b>\$8,745</b>

### 3.2.3 Per capita annual income

The per-capita annual income for all people in Kiribati was \$1,400 (refer to figure 3.2). The highest income was found in the Line and Phoenix group with more than \$1,900 per person per year followed by the central group with an annual per capita income of about \$1,600. South Tarawa was next with an income of about \$1,500 per person per year. The northern group had a per capita income of \$1,100 while the southern group has an income of just over \$1,000 per person per year.



When comparing South Tarawa and the rest of the islands, in terms of per capita income, South Tarawa (Urban area) was much better off than the rural area. However it should be noted that some group of islands, the Line group and the central group, have a higher per capita income than South Tarawa. Table 3.3 below shows details of per capita income from various sources for urban and rural area. The per capita income for people in the urban area was \$1,500 compared to \$1,300 for the rural area. In the urban area, each person earns approximately \$700 each year from wages and salaries compared to about \$300 per person for the rural area. Consumption of own production per person was much higher in the rural area (\$370) every year compared to \$220 per person per year in the urban area.

<b>Table 3.3 Per capita income by source and Urban/Rural</b>			
<b>Source of Income</b>	<b>S Tarawa</b>	<b>Outer Islands</b>	<b>Total</b>
Wages & Salaries	\$724	\$317	\$502
Self Employment	\$7	\$11	\$9
Agric & Fish Sales	\$64	\$231	\$155
Home Produce Sales	\$32	\$115	\$77
Remittance & Gifts	\$155	\$120	\$136
Casual Jobs	\$1	\$3	\$2
Welfare Allowances	\$3	\$4	\$4
Pensions	\$8	\$5	\$6
Subsistence Activity	\$224	\$373	\$305
Imputed Rent	\$289	\$121	\$198
Other Income	\$27	\$23	\$25
<b>Total Income</b>	<b>\$1,531</b>	<b>\$1,324</b>	<b>\$1,418</b>



### 3.3 Household Expenditure

#### 3.3.1 Total Annual Household Expenditure:

The total annual expenditure for Kiribati was about 132 million dollars. This comprised 69 million dollars spend in the urban area and 63 million dollars spend in the rural area. The total annual expenditure exceeded the total annual income by almost 10 million dollars. Figure 4.1 shows the proportion of expenditure for each major expenditure group. Expenditure on food contributed to 46 percent of the total expenditure. Housing spending was 17 percent, household operations – 10 percent. Goods given or received contributed to 9 percent, transport & travel – 5 percent. Other major expenditure groups represent less than 5 percent.

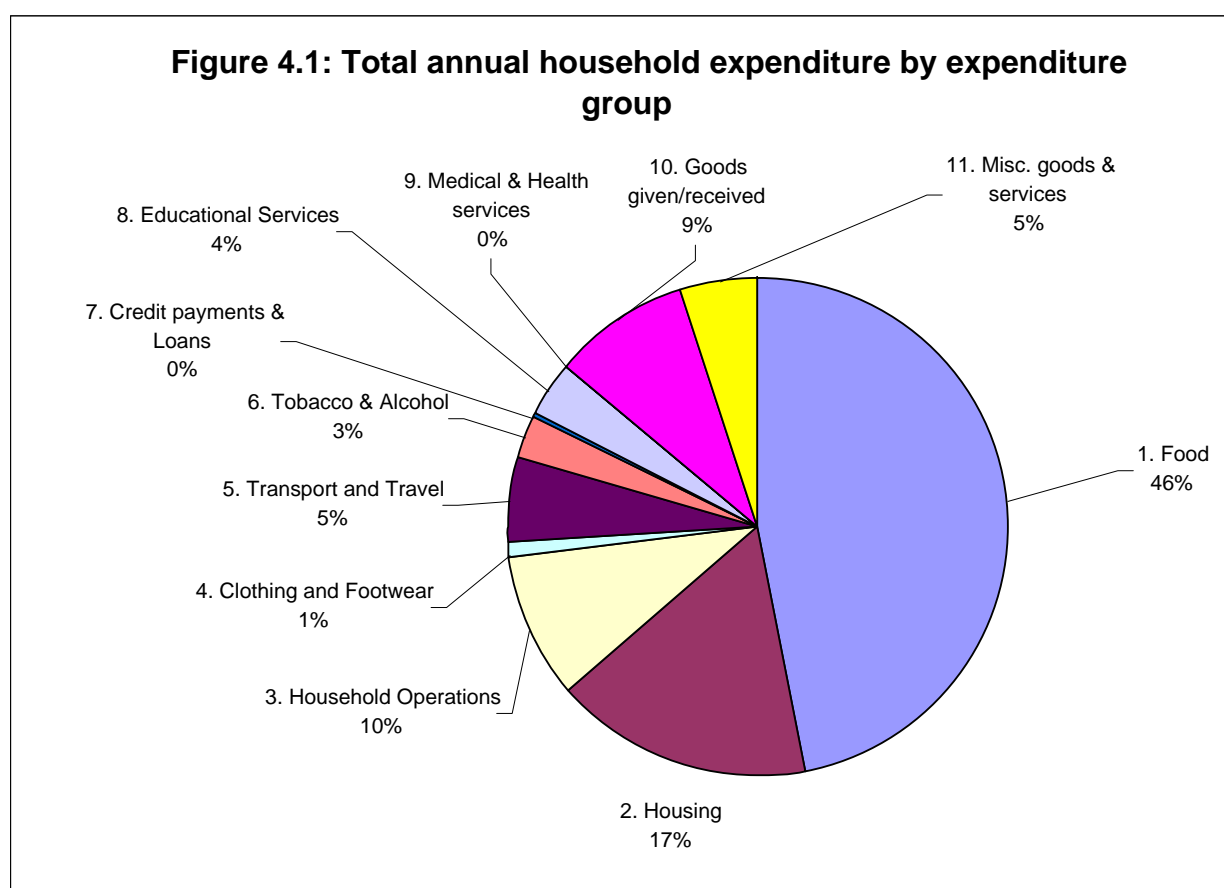
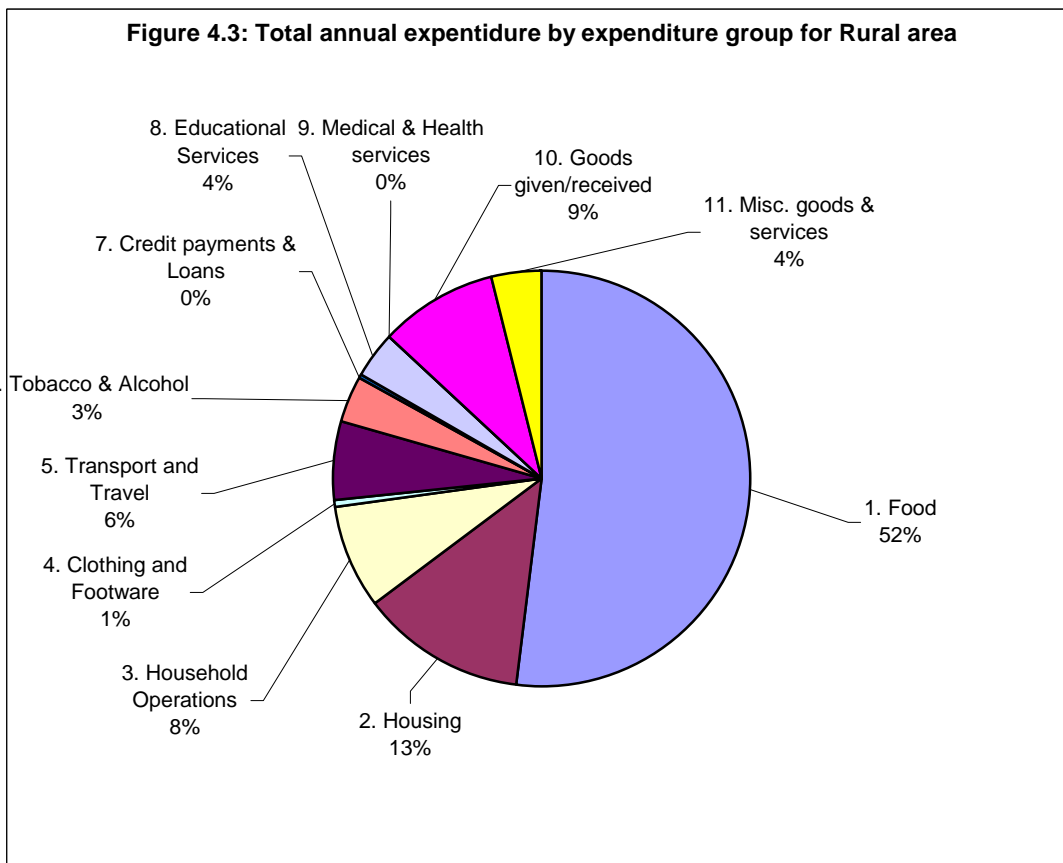
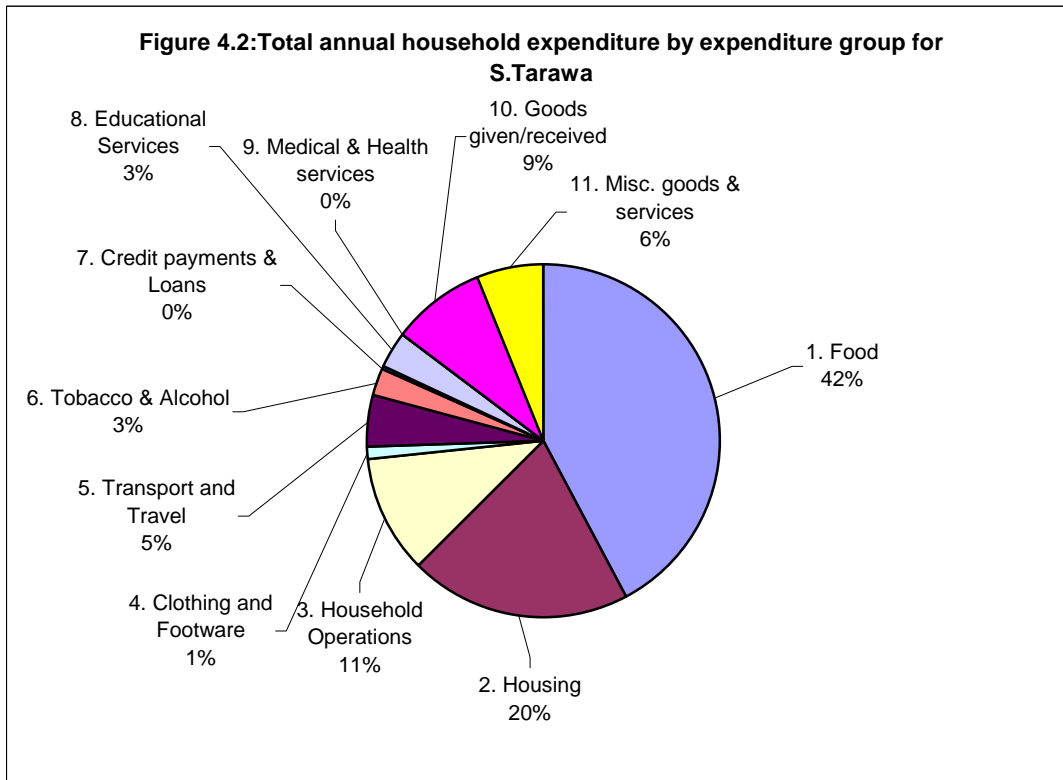


Figure 4.2 and 4.3 showed the breakdown of the total expenditure for major spending group for urban and rural areas. For South Tarawa 42 percent of the total expenditure goes to food while in the rural area a bigger proportion of their expenditure (52%) goes to food. Housing expenses contributed to 20 percent in the urban area compared to 13 percent in the rural area. The third major expenditure group for the urban area was household operational costs which contributed to about 11 percent. In the rural area, however, the third largest expenditure group was goods given away or received which contributed to 9 percent of the total expenditure.



### 3.3.2 Average Household Expenditure

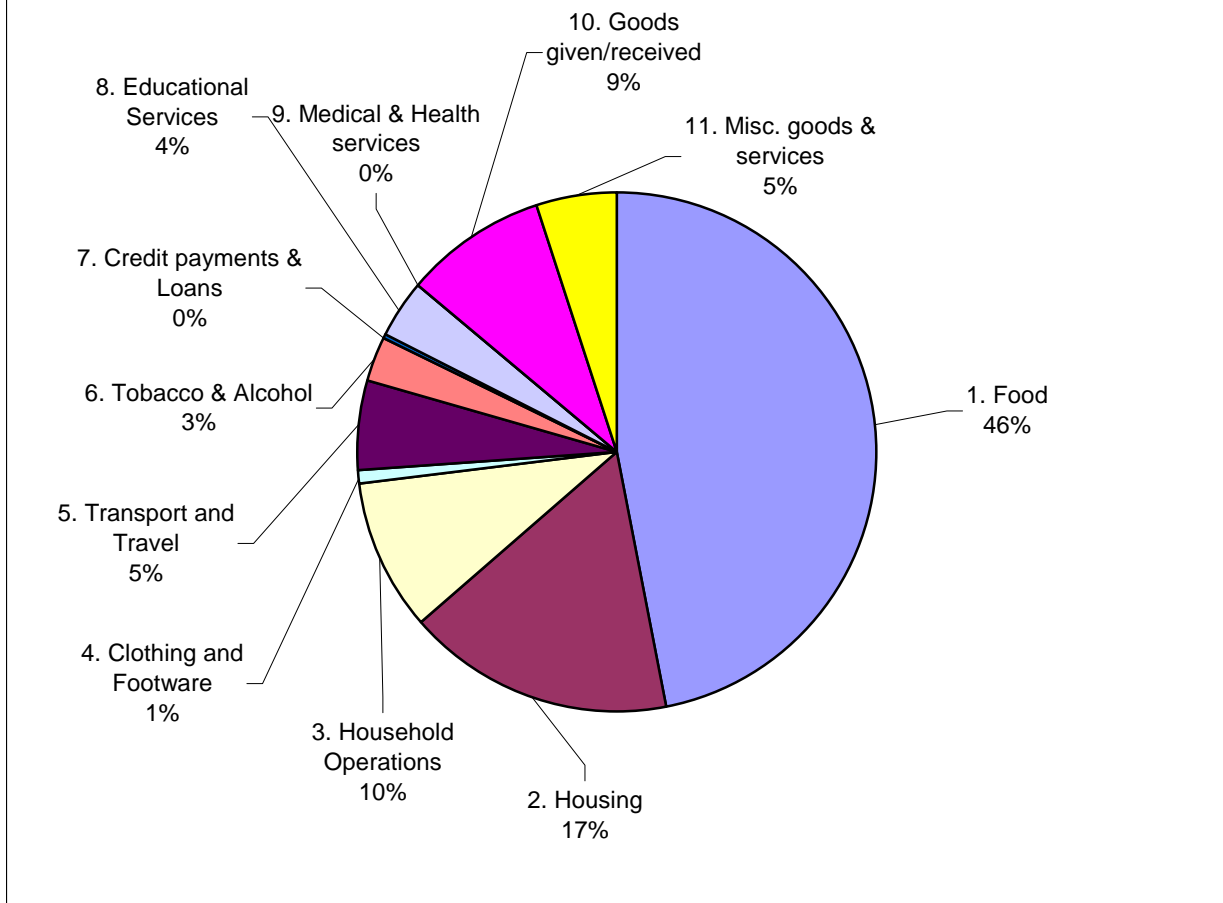
The average annual household expenditure for Kiribati as a whole was \$9,400. In other words each household in Kiribati spent a total of approximately \$9,400 every year. Households on South Tarawa spent an average of about \$13,000 each year while the rest of Kiribati spent about \$7,000.

<b>Expenditure group</b>	<b>S Tarawa</b>	<b>Outer Islands</b>	<b>Total</b>
1. Food	\$5,537	\$3,749	\$4,419
2. Housing	\$2,681	\$910	\$1,574
3. Household Operations	\$1,429	\$591	\$905
4. Clothing and Footwear	\$138	\$38	\$76
5. Transport and Travel	\$624	\$449	\$514
6. Tobacco & Alcohol	\$339	\$248	\$282
7. Credit payments & Loans	\$13	\$15	\$14
8. Educational Services	\$443	\$273	\$337
9. Medical & Health services	\$0	\$2	\$1
10. Goods given/received	\$1,158	\$652	\$842
11. Misc. goods & services	\$787	\$283	\$472
<b>Total Expenditure</b>	<b>\$13,149</b>	<b>\$7,211</b>	<b>\$9,436</b>

Note: The total may not add up right due to rounding errors

The average annual expenditure on food alone is about \$4,400 which is equivalent to about 46 percent of the average total expenditure. Housing expenses, which includes expenses on renovation, construction of new homes, rents and other expenses related to housing, constitute about 17 percent. Households spent very little on medical and health services. The average household expenditure on such services was about a dollar a year. This could be explained by the fact that medical and health services in Kiribati is provided by the government free of charge. An average of \$280 was spent on alcohol and tobacco. This is higher on South Tarawa than the rest of the islands. Another big expenditure was attributed to goods given away or received by households which accounted for 840 dollars or 9 percent of the average total expenditure.

**Figure 4.4: Average household expenditure by major group**



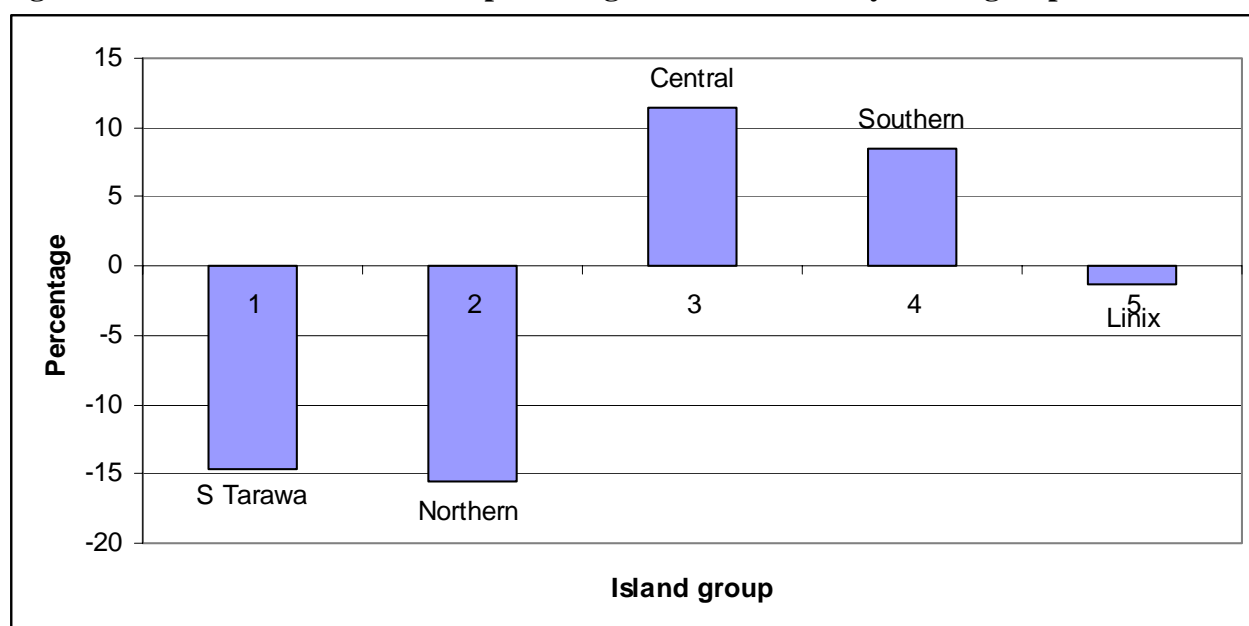
## 4. Summary

Total annual expenditure exceeded the total annual income by approximately \$10 million dollars. Total annual expenditure on South Tarawa is about \$9 million more than total annual income. There is a tendency for people on South Tarawa to spend more than what they earn. This could be explained by the number of big functions (involving large sums of money) held on South Tarawa every now then and most of these functions are funded through loans and credits. A similar pattern of behaviour can be observed in the northern group which resulted in an annual over expenditure of more than \$3 million dollars. The central and southern group had savings of over \$1 million each year. The Line and Phoenix group spend more than they earn by just over \$200,000 a year. Table 5.1 and chart 5.1 gives a picture of the annual net income for each group of islands. When comparing the urban and rural areas, the urban area had an annual income deficit of about 9 million dollars whereas the rural area had an annual income deficit of just over \$800,000.

**Table 5.1: Annual net income by island group**

	S.Tarawa	Northern	Central	Southern	Linix	Grand Total
Total Income	60,127,768	20,068,657	11,097,368	14,500,491	16,629,053	122,423,338
Total Expenditure	68,967,626	23,177,364	9,834,318	13,267,464	16,845,984	132,092,756
Net Income	-8,839,858	-3,108,707	1,263,050	1,233,028	-216,931	-9,669,418

**Figure 5.1: Annual net income as a percentage of total income by island group**

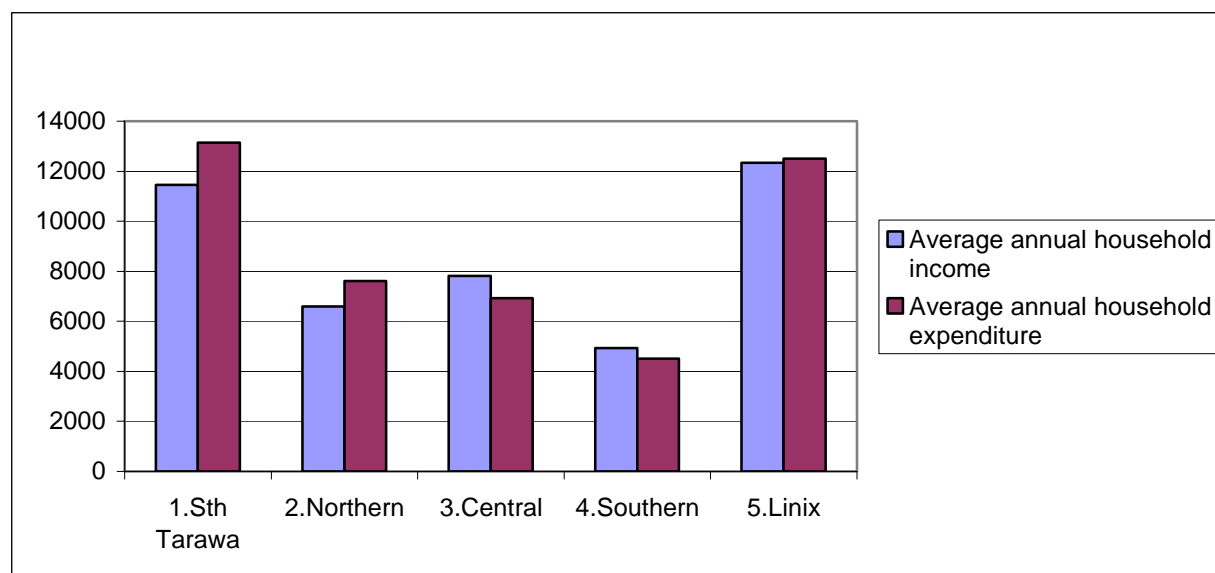


On average every household in Kiribati spend at least \$1,600 more than what they earn every year. This is equivalent to around \$60 per fortnight. In South Tarawa alone, each household had an income deficit of about \$1,700 a year, on average, which is about \$65 a fortnight. The northern group had an income deficit of about \$1000 per year (\$40 a fortnight) and the Line and Phoenix group had an annual income deficit of around \$160 dollars (\$6 a fortnight). Households in the central and the southern group, on the other hand, had an annual saving of about \$900 (\$34 a fortnight) and \$400 (\$16 a fortnight) respectively. Table 5.2 and Chart 5.2 below show details of average annual household income and expenditure for each island group.

**Table 5.2: Average household income and expenditure by island group**

	S.Tarawa	Northern	Central	Southern	Linix
Average annual household income	\$11,464	\$6,589	\$7,815	\$4,930	\$12,345
Average annual household expenditure	\$13,149	\$7,609	\$6,926	\$4,511	\$12,506
Net Income	-1,685	-1,021	889	419	-161
Net income per fortnight	-65	-39	34	16	-6

**Figure 5.2: Average annual household income and expenditure by island group**



While people are spending a lot more than they earn in South Tarawa, the Northern group and in the Line and Phoenix group, people in the central and southern group saved some income. In the central group, for example, they saved about \$200 a year (approx \$4 a week) and in the southern group they saved about \$90 a year which is approximately 2 dollars a week.

People on South Tarawa spent over \$200 (\$4 a week) above their income every year, the northern group spent about \$170 (\$3 a week) more and the line and phoenix group spent about

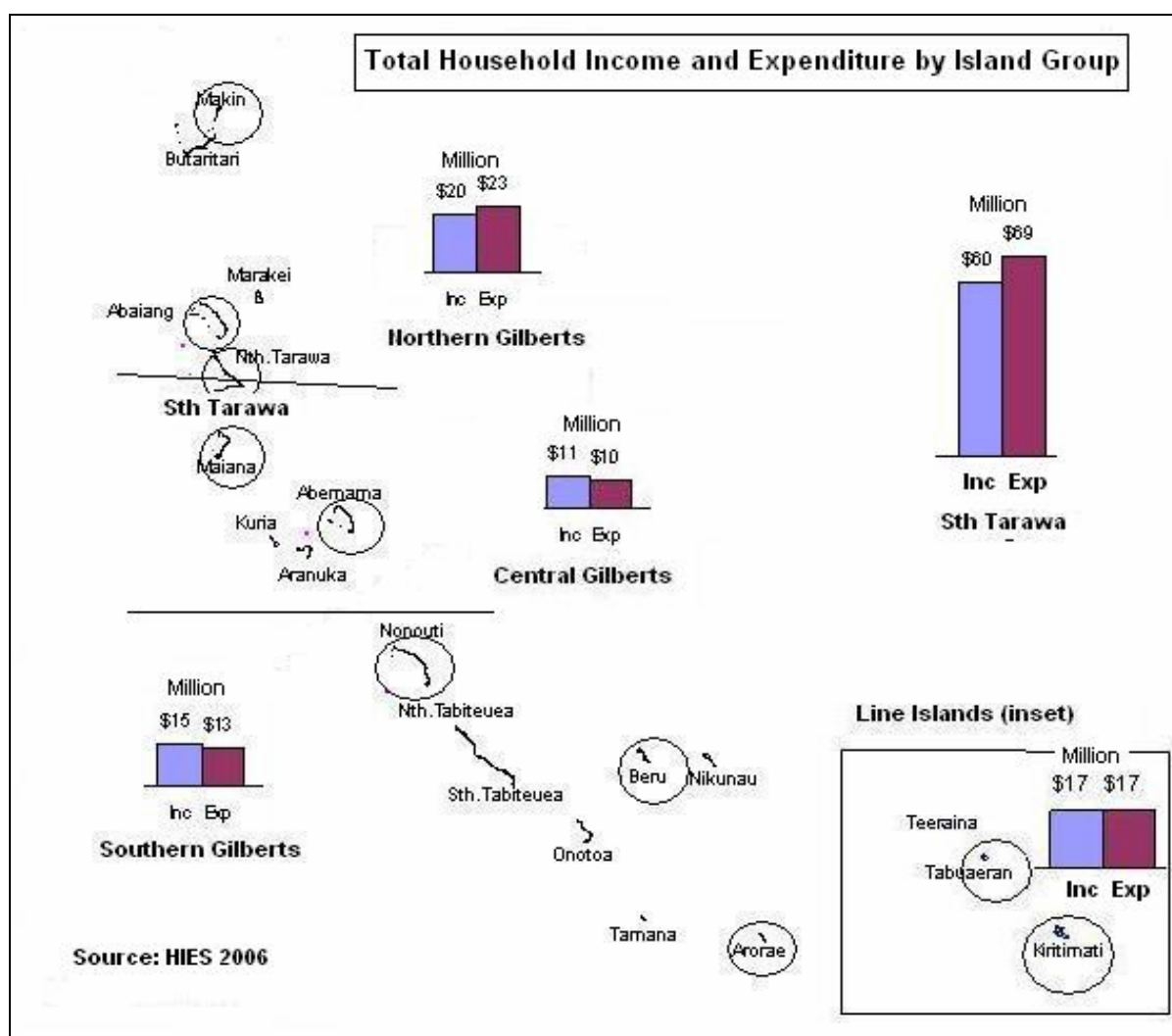
\$26 (\$0.50 a week) more. Table 5.3 shows the annual per capita income and expenditure for the island groups.

**Table 5.3: Annual per capita income and expenditure by island groups**

	S Tarawa	Northern	Central	Southern	Linix	Total
Annual per capita income	\$1,531	\$1,114	\$1,616	\$1,053	\$1,981	\$1,418
Annual per capita expenditure	\$1,756	\$1,287	\$1,432	\$964	\$2,007	\$1,530
Net per capita income	-225	-173	184	90	-26	-\$112

Figure 5.3 shows the geographical distribution total household income and expenditure by island group in relation to the selected island on a map of Kiribati.

**Figure 5.3 Total Household Income and Expenditure by Island Group**



## **5. Appendices**

**5.1: Household Income and Expenditure Survey Concepts and definitions**

**5.2: Household Income and Expenditure Survey Statistical Tables**



*Appendix 1***Household Income and Expenditure Survey****Concepts and definitions*****Household Income***

Household income is defined as any cash payment received, or the value of goods received as payment in kind, reported by a household or member of a household. Household income is compiled from both personal income and income received by the household.

The sources of income from the HIES were:

1. Net earnings from personal wages and salaries (annually) of current job, including payments in kind<sup>1</sup> for rent, food, utilities and other payments. Net earnings are the sum total of gross pay, commissions and bonuses, and payments in kind, less income tax and superannuation deductions.
2. Net sale of agricultural produce (monthly), including sale of cash or root crops, fruit and vegetables, livestock and seafood. Net sales are the total amount sold less expenses in the production of the produce.
3. Net sale of homemade produce (monthly), including sale of processed food, local beverages, and traditional handicrafts. Net sales are the total amount sold less expenses in the production of the produce.
4. Net income from commercial activities (annually), including income from wholesale and retail businesses, transport operations, and trade businesses. Net income is the total sales or gross earnings less expenses in operating the business, plus the value of drawings (cash or in-kind) from the business<sup>1</sup>.
5. Gross earnings from personal wages and salaries (annually) of previous jobs, including commissions and bonuses. Gross earnings are the total gross pay before deductions for income tax or superannuation. Irregular payments, such as redundancy or leave payments, are not included.
6. Gross earnings from casual services provided to other households (annually), including total cash payments and payments in kind<sup>1</sup>.
7. Gross income from welfare benefits and allowances (annually), including payment of regular and lump-sum benefits and allowances (including pension and social security) paid by government and non-government agencies both in-country and overseas.
8. Gross income from other sources (annually), including interest, rent (net) and rental subsidy, remittances, honoraria (sitting allowances), insurance and asset sales.
9. Food and non-food items produced and consumed by the household<sup>1</sup> (fortnightly), including produce from the garden or plantation, livestock, fishing, and handicrafts.
10. Cash and goods received as gifts<sup>1</sup> (fortnightly), including cash gifts from relatives/friends within country or overseas, produce from the garden or plantation, livestock, fishing, and handicrafts.
11. Winnings from gambling (fortnightly), including card playing, bingo, betting and lotteries. Winnings include total amount received before expenses are deducted.
12. Imputed rent for owner-occupied and rent-free housing (annually), estimated from market rents of rental housing<sup>1</sup>.

<sup>1</sup> Note that this is considered both as an income (the value of the goods produced) and an expenditure (the value of the consumption).

### **Household Expenditure**

Household expenditure is defined as any cash or credit payment made, or the value of goods given as payment in kind, reported by a household or member of a household. Household expenditure was collected and calculated at the household level.

The sources of expenditure from the HIES were:

1. Rental payments (monthly), including rent for other dwellings rented by the household, land lease payments, and utility connection fees. Rental values were imputed for owner-occupied and rent-free housing, estimated from market rents of rental housing<sup>1</sup>.
2. Expenditure on household operations (annually), including household furniture and fittings, household appliances, household utility bills (electricity, water, gas, telephone, cable TV, etc), repairs to household appliances, hire of home-operation equipment, and hire of domestic help.
3. Expenditure on housing construction and major home improvements (annually), including costs of site preparation, building materials, equipment hire, contractor payments and fees for construction.
4. Expenditure on insurance of dwelling (last payment), including house, contents and fire insurance. Expenditure amount is net of claims made against the policy.
5. Expenditure on loans (annually), including annual interest payments for housing, vehicle and other loans and mortgages, but excluding repayment of principal amount.
6. Expenditure on transport (annually), including purchase of vehicles and boats, vehicle parts, accessories and repairs, vehicle and boat hire, vehicle and boat registration and insurance.
7. Expenditure on travel (annually), including expenses for domestic and overseas travel (airfare, sea fare, accommodation and meals, and other expenses during travel).
8. Expenditure on education (annually), including formal education fees, examination fees, boarding costs, school uniforms, stationery and book supplies, private tuition fees, and other educational expenses.
9. Expenditure on recreational activities (annually), including fees charged for hobby classes, subscriptions levied by clubs or leisure groups, private child care fees, regular contributions to religious and other organizations, raffle/bingo expenses, and other recreational, sports or cultural payments.
10. Expenditure on medical and health services (annually), including payments for doctor/dentist visits, hospital or clinic charges, prescribed medicine, traditional medical practitioner, prenatal and maternal care, and other medical and health services.
11. Contributions to benefit schemes (last payment), including contributions to credit unions, medical insurance, life insurance, social security, pension plans, and other benefit schemes.
12. Expenditure on miscellaneous goods and services (annually), including payments for personal goods or services, contributions to church and community, donations and cash gifts, and other miscellaneous expenditure.
13. Food and non-food items produced and consumed by the household<sup>1</sup> (fortnightly), including produce from the garden or plantation, livestock, fishing, and handicrafts.
14. Cash and goods given as gifts (fortnightly), including purchased goods and household produced items (food grown, fish caught, livestock raised, handicrafts, etc) given to other households in-country or overseas.
15. Goods received as gifts<sup>1</sup> (fortnightly), including purchased goods and household produced items (food grown, fish caught, livestock raised, handicrafts, etc) from other households in-country or overseas.
16. Goods and services received as payment in kind<sup>1</sup> (annually), including payments in kind (e.g. rent, food, utilities) from current wage and salary jobs and casual jobs.
17. Goods and services received from own business<sup>1</sup> (annually), including the value of drawings (cash or in-kind) from the business.

<sup>1</sup> Note that this is considered both as an income (the value of the goods produced) and an expenditure (the value of the consumption).

# Household Income and Expenditure Survey

## Statistical Tables

### Demographic Tables

- Number of persons by age, sex, and location (urban/rural)
- Number of persons by marital status, age, sex and ethnicity
- Number of persons by educational attainment, sex and age
- Number of persons by type of health problem by age, sex and ethnicity
- Number of persons by age, sex, ethnicity, and economic activity
- Number of economically active persons by occupation, sex and by ethnicity
- Number of economically active persons by industry, sex and by ethnicity
- Number of economically active persons by occupation, age and sex
- Number of not economically active persons by reason for non-activity, by age and sex

### Dwelling Tables

- Number of households by tenure and ownership of dwelling by location (urban/rural)
- Number of households by tenure & ownership of dwelling by income quintiles
- Number of households by housing tenure by sex and ethnicity of head of household
- Number of households by ownership of dwelling by sex and ethnicity of head of household
- Number of households by household size and number of rooms by income quintiles
- Number of households by type of dwelling and income quintiles
- Number of households by source of water supply and income quintiles
- Number of households by source of electricity supply and income quintiles
- Number of households by source of lighting and income quintiles
- Number of households by source of cooking fuel and income quintiles
- Number of households by type of toilet facilities and income quintiles

### Income Tables

- Average annual household income by income sources by location (urban/rural)
- Average annual household income by income sources by size of household
- Average annual household income by income sources by sex & ethnicity of head of household
- Average annual household income by industry by income sources by sex of head of household
- Average annual household income by industry by number of working persons and sex
- Total annual household income by income sources by sex and ethnicity of head of household
- Average annual personal income by income source and sex and ethnicity
- Per capita annual household income by income source by location (urban/rural)

### Expenditure Tables

- Average weekly cash expenditure by income quintiles by location (urban/rural)
- Average weekly consumption expenditure by income quintiles by location (urban/rural)
- Average weekly total expenditure by expenditure sub-groups by location (urban/rural)
- Average weekly cash expenditure by sex and ethnicity of head of household
- Average weekly cash expenditure by household size by location (urban/rural)
- Average weekly cash and non-cash expenditure by expenditure groups and sub-groups
- Total annual expenditure by expenditure sub-groups and items purchased
- Per capita weekly expenditure by income quintiles by location (urban/rural)