POVERTY, FOOD CONSUMPTION, LABOUR, AND HOUSEHOLD INCOME AND EXPENDITURE IN THE MARSHALL ISLANDS

A COMPENDIUM OF ANALYSES OF THE 2019/20 HOUSEHOLD INCOME AND EXPENDITURE SURVEY

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Original text: English

MESSAGE FROM THE PRESIDENT

Yokwe kom aolep,

On behalf of the People and Government of the Republic of the Marshall Islands, I am pleased to present to you this series of analyses titled 'Poverty, food consumption, labour, and household income and expenditure in the Marshall Islands: a compendium of analyses of the 2019/20 Household Income and Expenditure Survey'.

This compendium is based on analysis of the data collected during the second Household Income and Expenditure Survey (2019/20 HIES) ever conducted in the Marshall Islands. The 2019/20 HIES was implemented by the Economic Policy, Planning and Statistics Office (EPPSO) which interviewed households and persons across the Republic over the period of June 2019 to May 2020. The HIES collects information on household income and expenditure, which is used for national accounting purposes, and also for other purposes, such as measuring welfare and hunger. The 2019/20 HIES dataset can be used to better understand the socioeconomic situation of all Marshall Islanders, including men, women, children, elderly, rural dwelling, with disability and other important populations.

The 2019/20 HIES is acknowledged as a valuable source of information to guide decision making to achieve the National Strategic Plan 2020–2030 (NSP). The 2019/20 HIES dataset contains information that is relevant to many of the Pillars and Strategic Areas of the NSP. The HIES is also a recognised source for reporting against many of the indicators of the Sustainable Development Goals.

The compendium presents information on poverty, food consumption, labour, and household income and expenditure. The compendium therefore identifies population groups in Marshall Islands who are, for example, in poverty or food insecure, which means they have insufficient resources at their disposal to secure food and other basic needs, such as shelter, education and healthcare. The compendium also presents information on the labour market of the Marshall Islands in order to identify those who do not have access to decent work, such as youth and women. These analyses were designed for numerous data users, including those in social protection, nutrition, labour, agriculture and fisheries, education and health, as well as across important themes, such as gender and social development.

I sincerely thank the Marshallese households who participated in the 2019/20 HIES and hope the information will be used widely to achieve the NSP. I'd also like to thank EPPSO, the Pacific Community (SPC) and other partners who supported the 2019/20 HIES.

Reducing poverty and achieving food security requires collective action and we can achieve more through sharing of knowledge and information and by increasing the use of statistics in national policy and planning processes.

Ilo Kautiej,

David Kabua

President

ACKNOWLEDGEMENTS

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ACRONYMS AND ABBREVIATIONS

AE	adult equivalent
BNPL	basic needs poverty line
COICOP	lassification of individual consumption according to purpose
CV	coefficient of variation
CPI	consumer price index
CAPI	Computer Assisted Personal Interview
DEC	dietary energy consumption
DES	Dietary Energy Supply
EPPSO	Economic Policy, Planning and Statistics Office of the Republic of the Marshall Islands
EAP	East Asia and Pacific
EPR	Employment to Population Ratio
FAO	Food and Agriculture Organization of the United Nations
FAFH	food away from home
FBS	food balance sheet
FIES	Food Insecurity Experience Scale
FPL	food poverty line
GIFT	Global Individual Food consumption data Tool
GDP	Gross domestic product
HH	Household
HIES	Household Income and Expenditure Survey
ICLS	International Conference of Labour Statisticians
ICSE-93	International Classification of Status in Employment, Revision 1993
ILO	International Labour Organization
ISCO-08	International Standard Classification of Occupations, Revision 2008
ISIC Rev.4	International Standard Industrial Classification of All Economic Activities, Revision 4
KILM	Key Indicators of the Labour Market
LFPR	Labour Force Participation Rate
MDER	minimum dietary energy requirement
NA	national accounts
NEC	not elsewhere classified
NGO	non-government rganisations
NSO	national statistical office
NCD	non-communicable disease
NFPL	non food poverty line
OA	own account
OO	owner occupied
PACCOI	Pacific classification of income
PAPI	paper-based personal interview
PICTs	Pacific Island countries and territories

PHC	population and housing census
PoU	prevalence of undernourishment
PPS	Probability proportional to size
PSS	Public School System
PSU	Primary sampling unit
PSMB	Pacific Statistics Methods Board
Q	quintile
RMI	Republic of Marshall Islands
RSE	relative sampling error
SDG	Sustainable Development Goal
SE	standard error
SPC	Pacific Community
SWP	Seasonal Worker Programme (Australia)
TA	technical assistance
UN	United Nations
UNU	United Nations University
US$	US dollar
WAP	Working-age Population
WB	The World Bank
WHO	World Health Organization

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INTRODUCTION (SDG 17)

Author: Michael K. Sharp, Pacific Community (SPC).

The Republic of the Marshall Islands 2019–2020 Household Income and Expenditure Survey (2019/20 HIES), implemented by the Economic Policy, Planning and Statistics Office, resulted in a dataset that can be used to better understand the economic and social situation of Marshallese households and people and their collective contribution to the macroeconomy of the Republic of the Marshall Islands (RMI).

In macroeconomic applications, the 2019/20 HIES dataset was produced to support the update of the household (HH) consumption and production components of gross domestic product, and to rebase the consumption basket used in computing consumer price indices. The dataset also provides information the national labour market for estimation of essential economic statistics, such as unemployment, and also those relating to Decent Work, such as equality and equity in access to work and social protection.

In microeconomic applications, the 2019/20 HIES dataset has been used to estimate HH consumption expenditure and dietary energy consumption, which is used to estimate the prevalence of basic-needs poverty and food insecurity.

More generally, the 2019/20 HIES dataset is rich with social and economic information about Marshallese HHs and people, and it can therefore be used as an information source to form policy and to plan and monitor progress towards achieving the RMI National Strategic Plan 2020–2030 (NSP).

In the context of the NSP, the HIES dataset provides information across many of its Pillars and Cross-Cutting Issues and it can therefore be used to establish a nationally representative baseline against indicators of the Plan. For example, Pillar 1 (Social and Culture) can be informed by information available in the HIES dataset on HH consumption, education, equality and equity and participation in cultural industry; Pillar 3 (Infrastructure) on water and sanitation; and Pillar 4 (Economic Development) on agriculture, fisheries, and HH income. The HIES dataset also provides essential information on NSP Cross Cutting Issues, including outer island and human development.

This compendium presents the results of analyses of the 2019/20 HIES across the thematic areas of poverty, food consumption, labour and HH income and expenditure. The compendium has been ordered respectively to the Sustainable Development Goals (SDGs) with Section 1 providing information to support the RMI achieve SDG Goal 1 of No Poverty, Section 2 to achieve SDG Goal 2 to End Hunger, and Section 3 to achieve SDG Goal 8 to ensure Decent Work and Economic Growth.

Section 4 presents more general information on the production and consumption activities of Marshallese people and HHs, which is relevant across numerous sectors and themes, such as education, health, communication, agriculture, and gender and disability. The aim is to provide context to the HH income and expenditure patterns of different population groups, including those who are socially and economically vulnerable, such as women, children and people with disabilities. Section 4 is therefore cross cutting in nature and it provides information to support the achievement of numerous SDGs, including SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 5 (Gender Equality) and SDG 6 (Clean Water and Sanitation).

Continuing the SDG theme, this compendium is an output of shared spirit for SDG 17 (Partnership for the Goals) where the Economic Policy, Planning and Statistics Office of the Marshall Islands, the Pacific Community (SPC), the World Bank, the Food and Agriculture Organization of the United Nations (FAO) and the International Labour Organization (ILO), collaborated throughout all phases of the 2019/20 HIES survey lifecycle and the partnership has resulted in the preparation of this joint output. The use of specialised technical resources of international organisations, such as those of World Bank, FAO and ILO, with SPC as technical lead to EPPSO in the implementation of the 2019/20 HIES as well as undertaking the partner coordination role throughout the survey, results in numerous benefits. One of these being that the analyses of poverty, food security and HH income and expenditure were based on the same consumption distribution, which should result in consistency among the various indicators of poverty and food security.

The remainder of this chapter provides some general information on the RMI 2019/20 HIES, such as the sample, survey method and population estimates. Following this introduction is Section 1 on Poverty, Section 2 on Food consumption, Section 3 on Labour and Section 4 on HH income and expenditure. It is noted that each Section was prepared independently by a different author and for a different purpose and it was at the request of EPPSO that the compendium be prepared, which is why there is some overlapping introductory information and different writing styles across each Section; there may also be some rounding discrepancy.

1.   The 2019/20 household income and expenditure survey

The 2019/20 HIES was implemented to collect information on Marshallese HHs, people, families, culture, consumption and livelihood. It is a multi-purpose survey that was designed to collect fundamental baseline data to report on many national and internationally recognised indicators, such as the SDGs.

The information produced from the HIES will be used in the following applications:

i.   Macroeconomic through the collection of information on income and expenditure of Marshallese HHs and the types of products they buy, produce and exchange. It also collects information on the productive activities of Marshallese women and men to understand their participation in the labour market.
ii. Microeconomic through the collection of detailed information of consumption and expenditure, which allow us to understand the welfare and food security status of HHs in RMI.
iii. Social development through the collection of information across a wide array of themes and sectors, such as gender, education, health, access to safe drinking and sanitary sources, natural disasters, participation in cultural activities and own-account production, and diets and nutrition.

2.   Survey method summary

Technical documentation is accessible for readers who need more detailed information on the survey method (refer link below). This section provides a brief overview of the survey method to assist with interpretation of the results presented herein.

2.1.   HIES method

The HIES was implemented over an 11-month period, from July 2019 to May 2020. The survey was implemented over a year to capture seasonal fluctuations in income, expenditure, consumption and production patterns. The survey scope was all occupied private HHs in RMI.

A total of 880 HHs were selected to participate in the HIES (Table 1). The sampling approach was two stage and the 2011 Population and Housing Census of the RMI served as the sampling frame with error estimates based on HH consumption expenditure reported in RMI 2002 HIES. Enumeration Areas (EAs) were the Primary Sampling Unit (PSU) and they were selected by probabilistic sampling. The sample was designed to provide robust estimates of total HH consumption by urban and rural locations (relative sampling error for total HH consumption of <10%). Following the 2002 HIES design, Strata were established and the sample was distributed among the strata to minimise sampling error, however results reported by strata should be treated with caution, particularly for the rural strata where sample size is extremely small.

Two urban and three rural strata were eastablished, consisting of Urban 1 (Majuro), Urban 2 (Kwajalein), Rural 1 (peri-urban; Arno, Aur atolls), Rural 2 (high infrastructure of schools and hospitals; Jaluit, Wotje atolls), Rural 3 (atolls that are beneficiaries of US Government benefits associated with the nuclear testing; Enewatak, Kili, Utirik) and Rural 4 (other atolls; Ailinglaplap, Ailuk, Ebon, Lib, Likiep, Maloelap, Mejit, Namdrik, Namu and Ujae).

Table 1. Sample information and population estimate

	HHs			Persons		
	Response (n)	Population (N)	%	Response (n)	Population (N)	%
Strata						
Majuro	395	8,694	5%	2,201	30,361	7%
Kwajalein	156	2,620	6%	868	10,416	8%
Rural 1	24	880	3%	119	2,625	5%
Rural 2	36	526	7%	185	1,909	10%
Rural 3	120	472	25%	620	1,787	35%
Rural 4	142	1,758	8%	776	7,289	11%
Sex						
Male	612	10,547	6%	2,369	27,045	9%
Female	261	4,402	6%	2,400	27,344	9%
Age group						
0–14 years				1,700	15,555	11%
15–17 years				275	2,739	10%
18–59 years	655	11,179	6%	2,495	30,955	8%
60+ years	218	3,771	6%	299	5,139	6%
Disability status						
With disability	133	1,625	8%	167	1,881	9%
Without disability	740	13,325	6%	4,127	48,166	9%
Aged less than 5 years			475	4,341	11%	
Per capita expenditure quintile						
Lowest	298	2,990	10%	1,587	10,910	15%
2	213	3,006	7%	1,147	10,928	10%
3	156	2,979	5%	812	10,824	8%
4	123	2,986	4%	750	10,880	7%
Highest	83	2,988	3%	473	10,846	4%
Urban–Rural						
Urban	551	11,314	5%	3,069	40,777	8%
Rural	322	3,636	9%	1,700	13,611	12%
Total	**873**	**14,950**	**6%**	**4,769**	**54,388**	**9%**

Fieldwork was carried out by three enumeration teams under the management of EPPSO. The questionnaire was administered via face to face interview with data entry via Computer Assisted Personal Interview (CAPI) using Survey Solutions software.

The questionnaire consisted of the following modules and sections.

Table 2. Contents of the 2019/20 HIES questionnaire

Person	i.	Module 1: Demographic characteristics
	ii.	Module 2: Education
	iii.	Module 3: Health
	iv.	Module 5: Communication
	v.	Module 6: Alcohol and tobacco
	vi.	Module 7: Other individual expenses
	vii.	Module 8: Labour force
	viii.	Module 9: Fisheries and hunting
	ix.	Module 10: Handicraft and processed food

Household	i.	Module 11: Dwelling characteristics
	ii.	Module 12: Asset details
	iii.	Module 13: Other household items and services
	iv.	Module 14: Ceremonies
	v.	Module 15: Remittances
	vi.	Module 16: Food insecurity
	vii.	Module 17: Copra production
	viii.	Module 18: Livestock and aquaculture
	ix.	Module 19: Agriculture
	x.	Module 20: Legal services
Food consumption	i.	Food consumption recall (household)
	ii.	Food consumption away from home (person)
	iii.	Meal partakers (household)
Other	i.	Non-food consumable expenditure (household)
	ii.	Deprivation (person and household)
	iii.	Financial inclusion (household)
	iv.	Migrant worker (person)

Household food and non-food consumption was collected consumption recall with varying recall periods (7-day for food) and the questionnaire included an individually administered module to collect data on food consumption away from home.

2.2. HIES characteristics

The final response of 873 HHs representing 9.8% of the total HHs in RMI. Sampling weights were generated and all results presented herein are weighted, unless otherwise specified. The sampling weights derived from the HIES were adjusted to match the 2020 projected population structure by age and sex.

Table 3. HIES sample characteristics and population estimates

	Sample characteristics					Population profile	
	N (2011 Census)	HIES sample	Final response	Response rate	Sample fraction	HHs	Persons
Strata							
Majuro	4,805	400	395	98.8%	8.2%	8,694	30,361
Kwajalein	1,423	150	156	104.0%	11.0%	2,620	10,416
Rural 1	440	24	24	100.0%	5.5%	880	2,625
Rural 2	482	36	36	100.0%	7.5%	526	1,909
Rural 3	399	120	120	100.0%	30.1%	472	1,787
Rural 4	1,349	150	142	94.7%	10.5%	1,758	7,289
Urban–Rural							
Urban	6,228	550	551	100.2%	8.8%	11,314	40,777
Rural	2,670	330	322	97.6%	12.1%	3,636	13,611
Total	**8,898**	**880**	**873**	**99.2%**	**9.8%**	**14,950**	**54,388**

As at the time of publication of this compendium, it is noted that the RMI 2021 Population and Housing Census was still underway and that the census count indicates higher than anticipated migration possibly rendering the actual population some magnitude less than the projected population.

Technical documentation

Survey metadata, including a technical note and the questionnaire, are accessible here: https://microdata. pacificdata.org/index.php/catalog/761.

POVERTY IN THE REPUBLIC OF THE MARSHALL ISLANDS

BASED ON ANALYSIS OF THE 2019/20 HOUSEHOLD INCOME AND EXPENDITURE SURVEY

SECTION 1: POVERTY (SDG 1)

*Author: Darian Naidoo, Economist, Poverty and Equity, World Bank Group. This Section was written for and originally publi-shed in the **Prosperity and Resilience in The Pacific**, Chapter 3: Republic of the Marshall Islands. It is reproduced here with the permission of the World Bank and EPPSO.*

1.   Executive Summary

The poverty headcount ratio for the Republic of the Marshall Islands (RMI) is estimated to be 7.2%. The poverty headcount rate is based on a cost of basic needs poverty line constructed using the RMI 2019/20 HIES data. This translates to approximately 3,900 individuals living in poverty nationwide. This measure is based on an annual per adult equivalent (AE)[1] poverty line of US$1,882, or approximately US$5.2 per AE per day. The Gini index, which measures inequality, is estimated at 35.5 for RMI in 2019–2020 based on per capita consumption and is comparable to other East Asia and Pacific (EAP) countries (Table 1).

Table 1. Key monetary measures of living standards in RMI

Annual GNI per capita (2018, US$ Atlas Method)	US$4,860
Mean (median) annual per capita consumption (US$)	US$4,132 (US$3,476)
Mean (median) annual adult equivalent consumption (US$)	US$4,963 (US$4,135)
Basic needs poverty rate (%)	7.2
Gini index (%)	35.5

Poverty varies by the geographic location, education level, and labor market characteristics of the household (HH). Controlling for other socio-demographic characteristics, people living in rural areas (who comprise 25% of the population) are much more likely to be poor than people in urban areas. The highest rate of poverty is for those in rural areas, at 21%, but is much lower in the urban areas of Majuro (2.3%) and Kwajalein (3.2%). There are strong returns to education in RMI, particularly in the association between HH consumption and the completion of grade 12 or tertiary education as the highest level of education within a HH. Conversely, HHs with lower levels of educational attainment are more likely to be poor.

Differences across the poor in Majuro, Kwajalein, and rural areas mean that poor HHs cannot be simplistically characterised. The rural poor and the poor in Kwajalein derive less of their income from employment than the poor in Majuro. While average HH size is 3.6 nationally, it is higher for the poor, at 5.8 for poor HHs in Kwajalein and over 6 for poor HHs in both rural areas and Majuro. The rate of poverty is higher for people living in female-headed HHs than male-headed HHs, but in contrast, incomes in female-headed HHs are generally higher, which is confirmed by regression results.

1.1.   Country context

The RMI is one of the world's smallest, most isolated, and most vulnerable nations. The country consists of 29 atolls and five isolated islands (24 of which are inhabited) and has a total land mass of just 181 km² set in an area of over 1.9 million km² in the Pacific Ocean. The population of the RMI was estimated at 54,388 in 2019, of which the two largest urban centers, Majuro (the nation's capital) and Ebeye, have populations of 30,361 and 10,416 respectively[2]. The RMI was consolidated into the Trust Territory of the Pacific Islands and governed by the United States during the Second World War. It became self-governing in 1979 and achieved formal independence in 1986.

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1   Adult equivalency measures are used to reflect the differing consumption needs for members of the HH, depending on their age. The Pacific Island Countries use a simple adult equivalency scale, where children aged 0–14 are considered as half an adult.

2   These are projections based on the 2011 census data as there is no recent and reliable source of population estimates available. The 2011 urban population estimate was 39,205 and the rural population estimate was 13,953, totaling 53,185.

Figure 1. Location and map of RMI in the Pacific
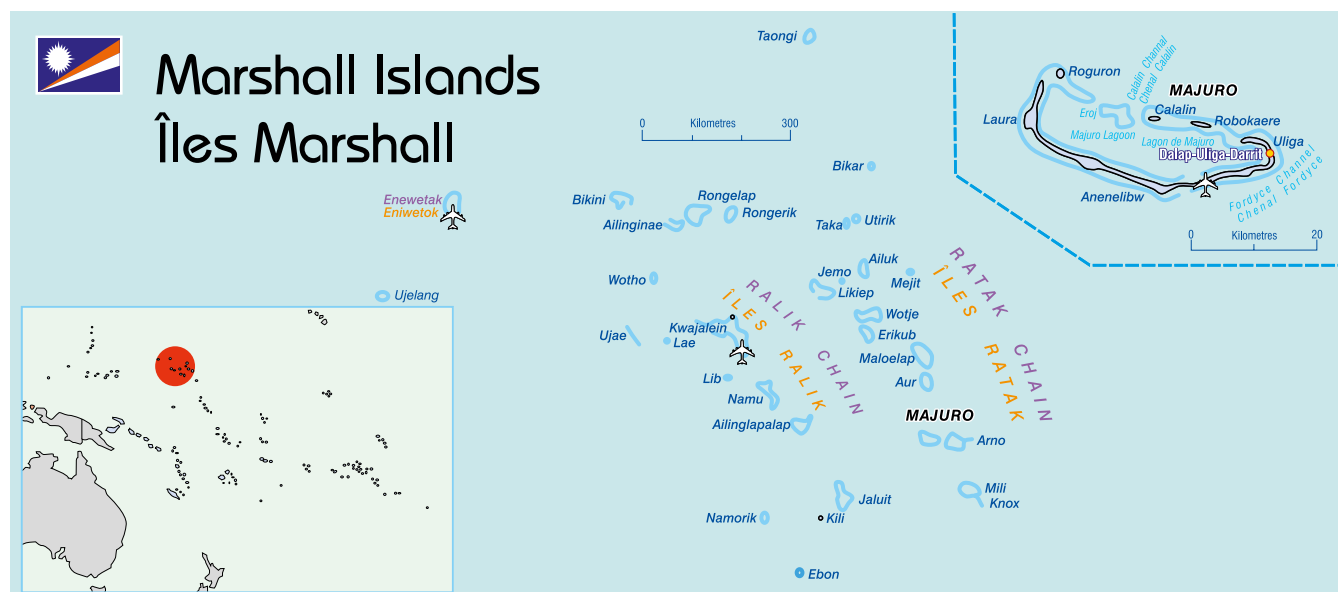
Source: SPC

The RMI faces many of the development challenges common to small, remote economies with dispersed populations. Small size and remoteness increase the costs of economic activity and make it difficult to achieve economies of scale. Remoteness also imposes transport costs that increase the costs of trade and fundamentally constrain the competitiveness of exports of goods and services in world markets. These same factors also increase the cost and complexity of providing public services. Moreover, geographical characteristics, including populations centered on small, low-lying atolls, make the country extremely vulnerable to natural disasters. The RMI is one of the most vulnerable countries to climate change and rising sea levels.

1.2. The 2019/20 HIES and structure of the RMI country

This chapter of the *Prosperity and Resilience in The Pacific*, reports on the results of the RMI HIES for 2019–2020. The survey is the RMI's first full HIES designed to provide the data required for fundamental welfare analysis such as poverty and inequality measurement and to track progress toward some of the United Nations Sustainable Development Goals (SDG)s. This Section focuses on a monetary measure of poverty and is not exhaustive of the broad range of indictors for which data was collected. The HIES was conducted between July 2019 and June 2020, with the latter months of the collection period coinciding with the onset of the COVID-19 pandemic (though no cases were recorded during the time of the HIES in RMI). While RMI has not had any local spread of COVID-19, like all countries in the region there has been an economic impact. The survey was conducted using computer-assisted personal interviewing (CAPI) technology. The final total sample was 873 HHs, representing an estimated population of 54,388 persons in 14,950 HHs.

2. *Poverty and inequality snapshot*

2.1. Monetary poverty – "cost of basic needs" method

The poverty rate for RMI is estimated to be 7.2% (Figure 2). This headcount rate is based on a cost of basic needs poverty line constructed using the RMI 2019/20 HIES baseline data. This translates to approximately 3,900 individuals living in poverty nationwide. This measure is based on an annual per adult equivalent (AE)[3] poverty line of US$1,828, or approximately US$5.0 per AE per day.

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3   Adult equivalency measures are used to reflect the differing consumption needs for members of the HH, depending on their age. The Pacific Island Countries use a simple adult equivalency scale, where children aged 0–14 are considered as half an adult.

Figure 2. Basic needs poverty rate
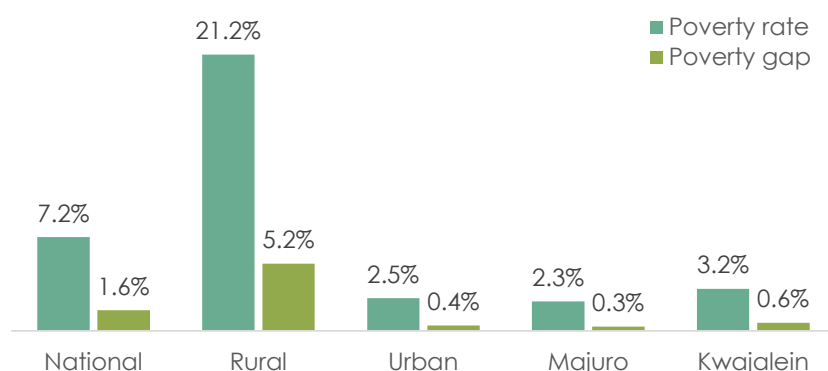
There are major geographic differences in the poverty rate. Poverty was disproportionately rural, with the poverty rate in urban areas being only 2.5%, compared to 21.2% in rural areas (Figure 2). There was also a difference in poverty rates between Majuro and Kwajalein (poverty rates of 2.3% and 3.2% respectively). The poverty gap measure, which captures the depth of poverty in addition to the incidence of poverty, follows a similar pattern, with the poverty gap being higher in rural areas (5.2%) than urban areas (0.4%).

Box 1. "Cost of basic needs" poverty line
A "cost of basic needs" poverty line is a way of measuring consumption poverty by calculating the threshold of consumption required to meet basic food and non-food needs. The main steps of the "cost of basic needs" method are: 1. Calculate the total value of goods and services consumed per HH, based on HIES data.   2. Estimate the minimum required consumption to meet food needs ("food poverty line" / FPL).   3. Estimate the minimum required consumption to meet non-food needs ("non-food poverty line" / NFPL)   4. Add the FPL and NFPL to produce the "basic needs poverty line" (BNPL)   5. Compare the value of HH consumption (the consumption aggregate) to the BNPL; individuals in HHs with consumption below the BNPL are considered poor.   Detailed notes about methodological decisions in calculating the consumption aggregates and poverty lines are presented in Annex 1.

Food poverty in RMI is low at the national level, while rural areas have a higher food poverty rate. The food poverty rate, which is estimated based on the food poverty line of US$1,264 per AE per year (US$3.5 per AE per day) is 1.6% for 2019–2020 (Figure 3). For rural areas the food poverty rate is 5.4%, higher than in both Majuro and Kwajalein, where it is below 1%. In contrast, average calorie consumption in rural areas is higher than in urban areas across the consumption distribution[4] (Figure 4). This could be due to the average person in rural areas doing more physically demanding work.

Figure 3. Food poverty rate

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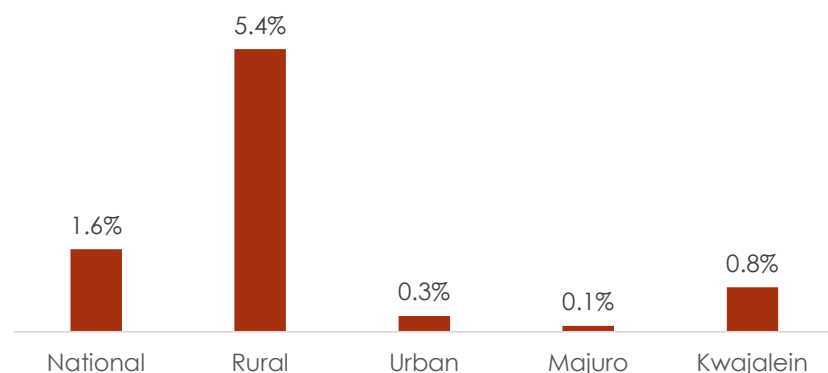
4   The 8,241 calories per AE in the top decile of rural areas may be due to measurement error or small sample size.

Figure 4. Daily calorie consumption per adult equivalent by decile, urban/rural
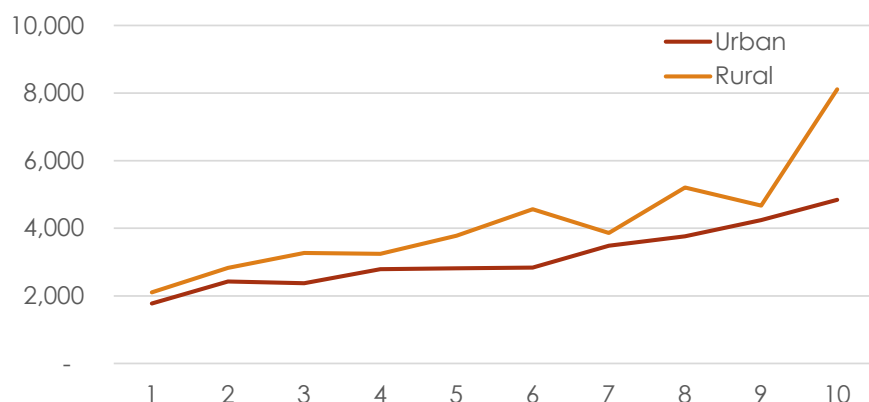
Across the welfare distribution, food consumption increases proportionately less than non-food consumption. Based on Engel's Law, it is expected that as the total value of consumption increases, people spend an increasing share of consumption on non-food items. The share of food consumption for the bottom decile is relatively high at 45.7%. For higher deciles the share of food consumption is generally lower, though this pattern is uneven (possibly due to the small sample size). The highest decile's food share is 34.4% (Table 2). While the food share generally drops, total food consumption per adult equivalent increases by decile. The higher value of food consumption is associated with higher calories consumed per adult equivalent.

Table 2. Annual food vs. nonfood consumption by decile

Decile	Per AE calories per day	Per AE food consumption	Per AE nonfood consumption	Consumption food share
1	1,967	718	854	45.7%
2	2,589	1,060	1,281	45.3%
3	2,588	1,203	1,640	42.3%
4	2,884	1,462	1,858	44.0%
5	3,132	1,615	2,153	42.9%
6	3,147	1,781	2,645	40.2%
7	3,548	1,971	3,118	38.7%
8	3,992	2,465	3,620	40.5%
9	4,307	3,088	4,464	40.9%
10	5,130	4,367	8,334	34.4%

2.2. Consumption inequality

Inequality in RMI is similar to many other EAP countries. The Gini index, a measure of inequality that scales from 0 (perfectly equal distribution of consumption across the population) to 100 (all food and nonfood items are consumed by one person), was estimated at 35.5 for RMI in 2019/20 based on per capita consumption. This level of inequality is similar to other Pacific Island Countries as well as other Lower Middle Income Countries in the EAP region (Figure 5).

Figure 5. Gini Index (consumption)
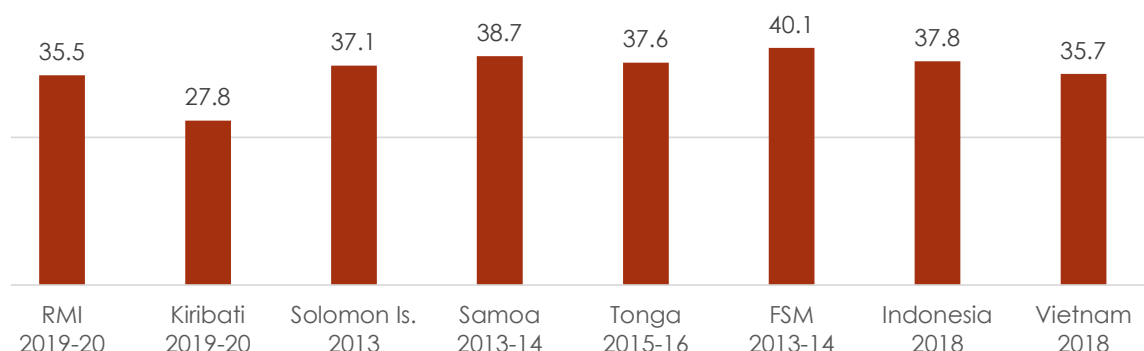
Other measures demonstrate a moderate level of inequality nationally, but with some variation across urban and rural areas. When examining the shares of consumption held by the different parts of the distribution, the most well off 10% of individuals have 8.1 times the consumption level that the poorest 10% have (Table 3). Across measures of inequality, there are differences across rural and urban areas, though the Gini index is higher nationally, than at the subnational level. The highest ratio of top decile consumption to bottom decile consumption is at the national level, while the ratio is lowest in Kwajalein at 5.6. Inequality is also lowest in Kwajalein as measured by the Gini index (29.9). While inequality within each urban/rural area is lower, inequality between these areas contributes to inequality measured at the national level. For example, mean per adult equivalent consumption in rural areas is US$3,269 compared to US$5,783 in Majuro (Figure 6)[5].

Table 3. National and sub-national measures of inequality

Area	Gini	Top 10 share	Bottom 10 share	T10/B10 ratio	Bottom 40 share	Palma Index (T10/B40)
National	35.5%	25.6%	3.2%	8.1	20.3%	1.26
Rural	32.1%	23.3%	3.5%	6.7	21.2%	1.10
Urban	33.6%	24.8%	3.7%	6.7	21.2%	1.17
Majuro	34.1%	24.6%	3.6%	6.8	20.6%	1.19
Kwajalein	29.9%	22.4%	4.0%	5.6	23.5%	0.95

Figure 6. Mean consumption by location (US$)
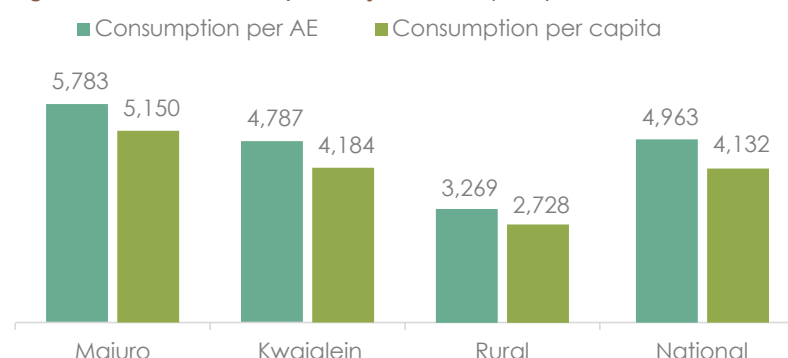
2.3. Non-monetary dimensions of poverty

Analysis on non-monetary deprivations is important to complement the monetary dimensions of poverty and present the full breadth of challenges faced by HHs. Though HH consumption is an important welfare metric, it does not provide a complete picture of HH well-being. There are several ways to present non-monetary deprivations, and several dimensions to choose from. This section presents indicators that are included in the

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5   These values are spatially and temporally deflated.

World Bank's Multidimensional Poverty Measure, which comprises the monitoring of deprivations in infrastructure (consisting of drinking water, sanitation, and electricity) and education (consisting of educational enrollment and educational attainment).

The poorest HHs by monetary measures in RMI are also more likely to be deprived in terms of non-monetary dimensions but the rate of these deprivations is not high nationally (Table 4). In terms of access to critical services, only 6.9% of those in the top 60% of the welfare distribution lack access to safely managed water, while 22.7% of those in the bottom 40% lack access. While only 4.7% of the population lack access to electricity, this is slightly higher for HHs in the bottom 40% of the consumption distribution.

Table 4. Non-monetary deprivations

Type of deprivation (% of population)	National (%)	Bottom 40 (%)	Top 60 (%)
Deprived of safely managed water	1.7%	2.0%	1.5%
Deprived of safely managed sanitation	13.2%	22.7%	6.9%
Without access to electricity	4.7%	5.7%	4.1%
In HHs where at least one child aged 7–14 is out of school	5.9%	12.2%	1.7%
In HHs where no adults (aged 15+) completed primary education	1.0%	0.4%	1.3%

Note: definitions of "safely managed water" and "safely managed sanitation" follow SDG indicators 6.1.1. and 6.2.1. respectively.

3. Poverty profile

3.1. Geographic distribution

RMI is a dispersed country with a small population spread unevenly across two urban centers and a series of outer islands (rural areas, Table 5). The majority of the population lives in Majuro with only a quarter of the population residing in rural areas.

Table 5. Population spread of RMI

Area	Total population	Share of total population
National	54,388	100.0%
Majuro	30,361	55.8%
Kwajalein	10,416	19.2%
Rural	13,611	25.0%

Most of RMI's poor are concentrated in rural areas. Majuro has the lowest rates of poverty in the country, though its distribution of poor is on par with Kwajalein. Rural people represent only 25% of the overall population, but 70% of those living below the poverty line (Table 6).

Table 6. Poverty rates by area and distribution of the poor

Area	Poverty rate	Total # of poor	Distribution of the poor
Majuro	2.3%	690	17.6%
Kwajalein	3.2%	337	8.6%
Rural	21.2%	2,892	73.8%

3.2. Age and gender

RMI has been and continues to be a young population, with nearly 40% of the population under the age of 20, and less than 5% of its population over the age of 65. The dependency ratio is moderate at 0.48, as about two-thirds of the population is of working age (15–65 years, Table 7). While the general distribution of the population is pyramid-shaped, irregularities in the profile for those aged 21–30 years could represent the migratory changes in the population (Figure 7).

At the time of the 2011 RMI Census of Population & Housing, considerable out-migration was presumed responsible for the minimal population growth rate. Reflecting this ongoing assumption, the HIES population estimate of 54,388 in 2019 is just a slight increase from the 2011 Census population of 53,158. The proportion of adults over 65 has consistently remained between 4 and 5% since 1988. Likewise, while the proportion of children 0–14 has dropped between the 2011 Census and 2019/20 HIES, from 40% to 27%, the population of RMI remains young.

Figure 7. RMI population distribution, 2019–2020
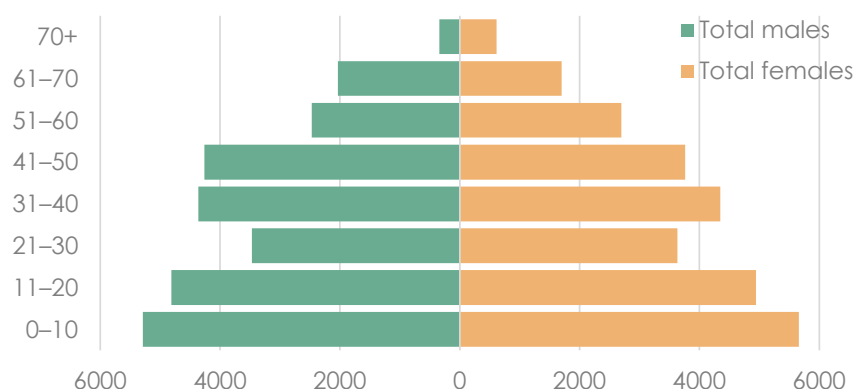
Table 7. Dependency ratios

Number of children 0–14	14,491
Number of adults 15–64	36,135
Number of elderly 65+	2,699
Child dependency ratio	0.40
Elderly dependency ratio	0.07
Total dependency ratio	0.48

Most of RMI's poor are children (0–10 years) and young people (11–20 years). However, this is primarily because children and youth make up a larger share of the population, rather than there being higher rates of poverty for these groups. Poverty rates are generally similar for the younger and older groups of the population, and expectedly the lowest among the working-age population (Figure 8).

Figure 8. Poverty rates and distribution of the poor, by age group
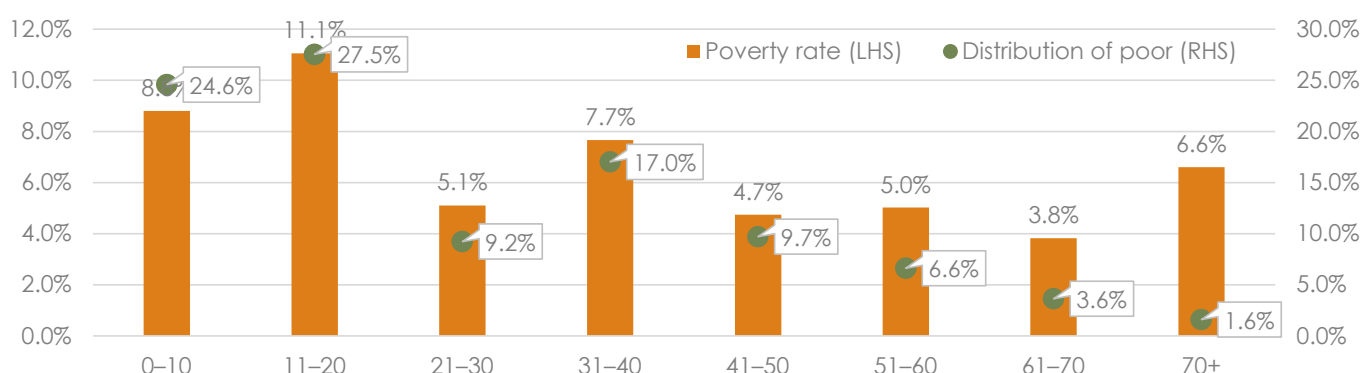
The rate of poverty is higher for people living in female-headed HHs than male-headed HHs, regardless of location. Approximately one-third of people in RMI live in female-headed HHs, and 9% of these HHs live in poverty compared to 7% in male-headed HHs (Figure 9). In Kwajalein, the rate of poverty in a female-headed HH is nearly twice as high as in a male-headed HH. Here, women are also more likely to be head of their HH in this region than anywhere else (44% of HHs in Kwajalein are female-headed).

Figure 9. Poverty rate by sex of household head and area

Legend: Male-headed, Female-headed

- Rural: 18.4%, 30.0%
- Kwajalein: 2.2%, 4.6%
- Majuro: 2.2%, 2.5%
- National: 6.6%, 8.7%
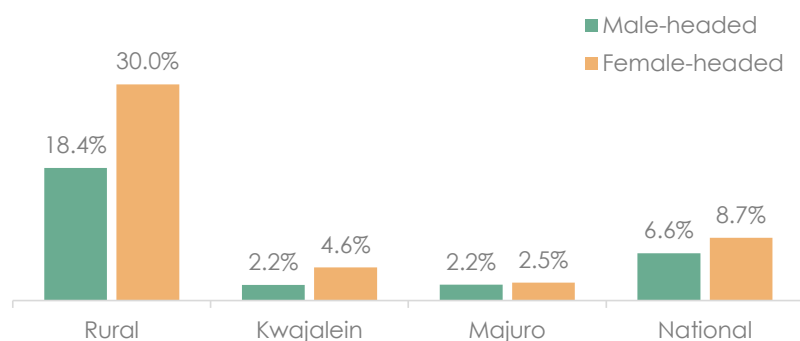
3.3. Education

Households in RMI generally have at least one adult member who completed primary school. Secondary school completion is much less common with about a quarter of HH heads never completing secondary school. These HHs will typically have other members with higher levels of education, as only 6% of all HHs do not have a member who attended school beyond Grade 8 (Figure 10). This is evident at all levels of education, as 18.4% of HHs are headed by people who have attended (but not necessarily completed) some post-secondary education, while 30% have at least one member with post-secondary education. Less than one percent of HHs were headed by someone who had never attended primary school.

Figure 10. Highest level of education in household vs. highest education of head of household

Legend: HH Head, Highest in HH

- 0–Kindi: 0.5%, 0.1%
- Grade 1–8: 22.2%, 6.0%
- Grade 9–11: 25.0%, 20.8%
- Grade 12/GED: 25.7%, 33.6%
- Some post-school, no: 18.4%, 29.6%
- Degree, university or professional: 8.2%, 10.0%
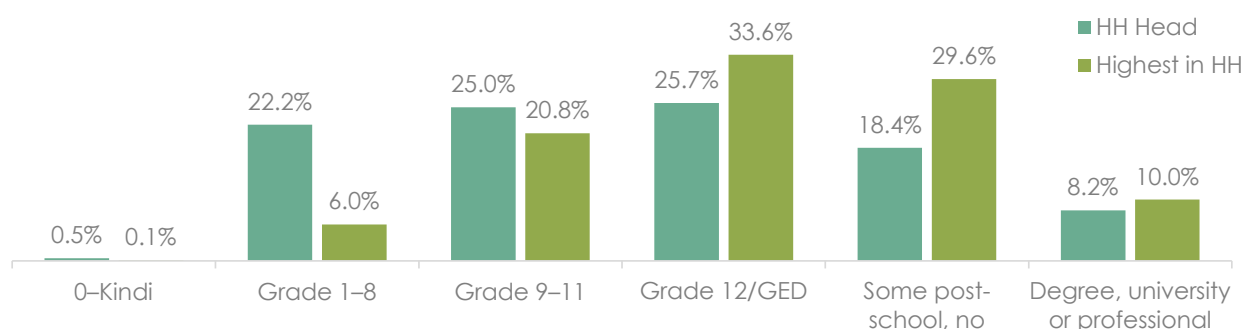
When considering poverty rates by the education completion, a clear pattern emerges of higher levels of education being associated with lower levels of poverty (Figure 11)[6]. However, the strength of each relationship suggests that increased education of the head of HH is more consequential for HHs avoiding poverty than the education of other HH members.

Figure 11. Poverty rates by education completion of household head and of highest educated member

Legend: HH Head, HH highest

- Grade 1–8: 8.0%, 10.0%
- Grade 9–11: 5.5%, 11.5%
- Grade 12/GED: 2.7%, 8.3%
- Some post-school, no degree: 1.4%, 4.2%

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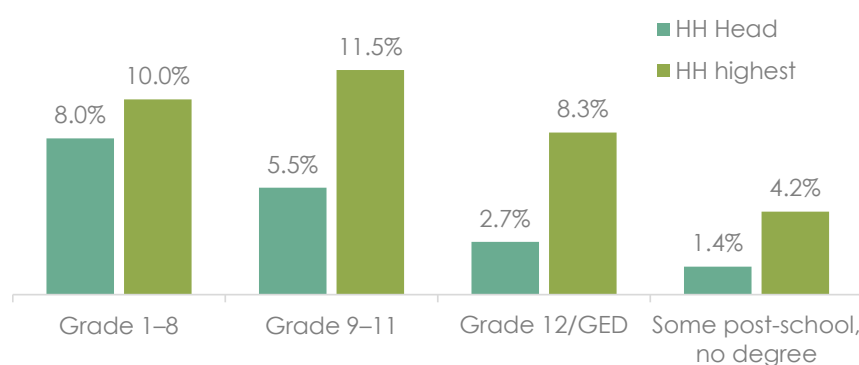
6   The categories of "0-Kindi" and "Degree, university or professional" are omitted from Figure 11 and Figure 12 due to a low number of observations

Poverty rates among adults (25 and older) also decline with increasing levels of education in both urban and rural areas. The most substantial difference is observed in rural areas with a 24% poverty rate for those with grade 1–8 versus a 15% poverty rate for those with grade 9–11 (Figure 12). It should be noted that the data on education exists only for present HH members, and remittance income of more educated ex-HH members that have migrated may be a channel for increasing consumption. While there isn't data to investigate this precisely, remittance income is considered in Section 3.5.

Figure 12. Poverty rates for adults (aged 25+), by education completion

Legend:
- Grade 1–8
- Grade 9–11
- Grade 12/GED
- Some post-school, no degree

National: 10.3%, 7.0%, 3.0%, 2.1%
Rural: 24.0%, 14.5%, 12.9%, 14.0%
Urban: 2.2%, 2.7%, 1.3%, 0.4%
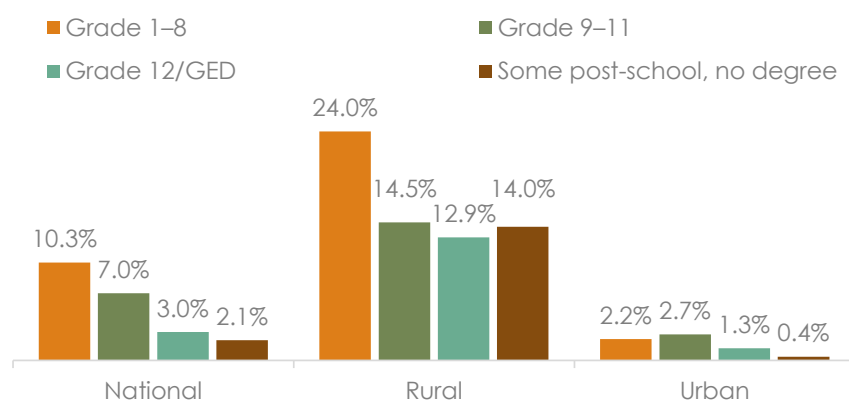
At the primary level, children in urban areas who are poor are least likely to be enrolled in school, while at the secondary level, children in rural areas who are poor are least likely to be enrolled in school (Figure 13). For children aged 4–5 in urban areas, 21.9% are enrolled in education, regardless of poverty status. For children aged 4–5 in rural areas, enrollment is 37.5%, with children from poor HHs least likely to be enrolled. The urban poor have relatively low enrollment rates at aged 6–13 (79%), while the rural poor in this age range have an enrollment rate of 89%. The rural non-poor at the primary level age have the highest enrollment rate of 96%, which is above the national average. For secondary school aged children, enrollments are higher in urban areas than rural areas. There is also a large gap between enrollment rates of the rural poor (19.3%) and the rural non-poor (47.8%). While the gross enrolment rates reported by the Public School System (PSS, 2019) can't be compared to the rates below, the age-specific rates for enrolment are comparable for 2019. These rates are as low as 74% for (children aged 7) and as high as 82% (children aged 12).

Figure 13. Enrollment in school, by age group and location
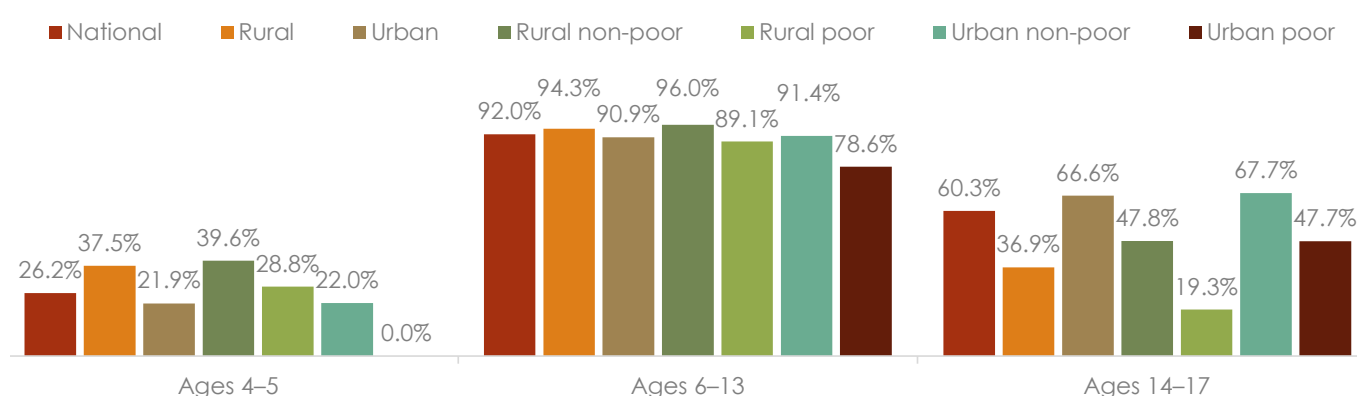
Enrollment rates are lowest for those in the bottom two quintiles of the consumption distribution. For primary school aged children in the bottom quintile, enrolment rates are 90% compared with 96.5% for the top quintile (Figure 14). For children aged 14–17, enrollment rates also generally increase as consumption increases, with those who belong to the wealthiest quintile having an enrollment rate of 73%, compared to those in the bottom decile who have an enrollment rate of just 47%. These findings indicates there is likely some degree of geographic as well as wealth inequality in children's access to education in RMI.

Figure 14. Enrollment in school, by age group and quintile
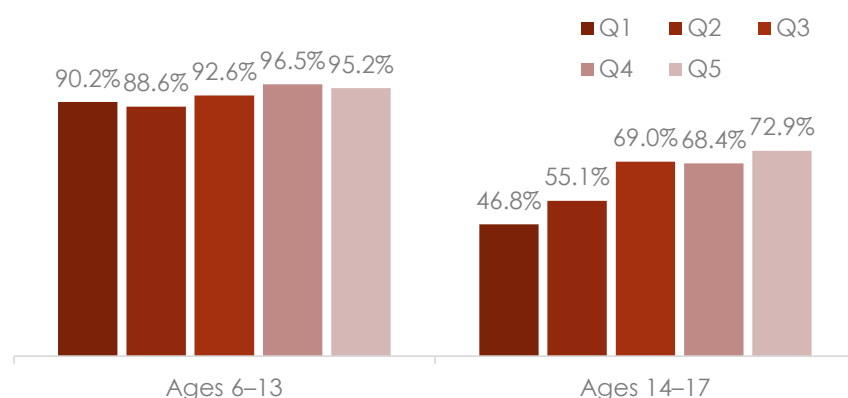
3.4. Income and remittances

Income sources vary considerably between urban and rural areas in RMI. Income from employment comprises the majority of income in urban areas, while HHs in rural areas get a much higher share of income from business, subsistence, and gifts (Figure 15). In Kwajalein, 57.4% of income is from employment, while in rural areas it is only 37.9%. As expected, the share of subsistence income is negligible in urban areas but 9.4% in rural areas. Rent is a significant share of gross income in all locations, and this is likely due to the high imputed rent values.

Figure 15. Gross share of income sources, by area
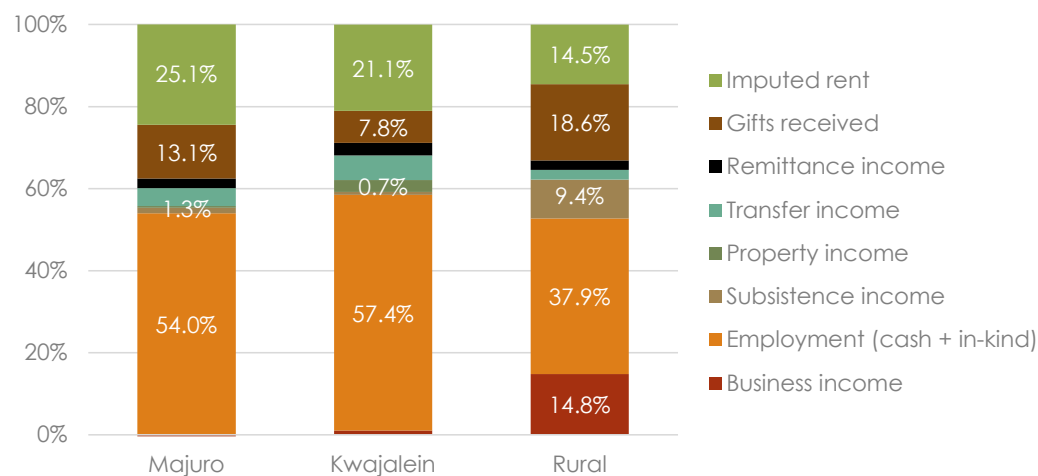
Income sources only change slightly as HHs move up the consumption distribution. Households in the poorest two consumption quintiles generate more income from subsistence than the wealthiest two quintiles (Figure 16). In contrast, HHs in the top quintile generate just 1.1% of their income from subsistence but 56.1% from employment. The share of gross income from imputed rent and gift income do not follow any clear pattern across the consumption distribution.

Figure 16. Gross income percentage shares by quintile (employment income reported in US$)
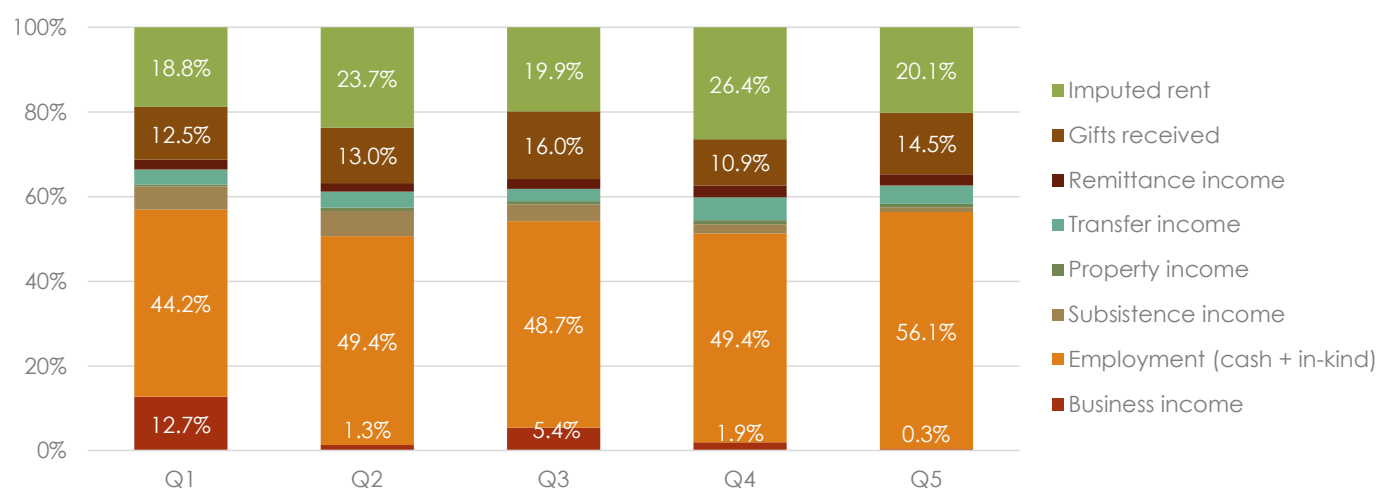
Remittances are a widespread source of income for HHs in RMI, with about half of rural HHs receiving remittances, one-third in Majuro, and two-thirds in Kwajalein. There are also differences in the amount of remittances across locations (Figure 17). In absolute terms, the median annual remittance income is highest in Kwajalein at US$530 and lowest in Majuro at US$434. Median remittance income in rural areas is US$452.

Figure 17. Share of HHs that receive remittances and mean annual amount by location
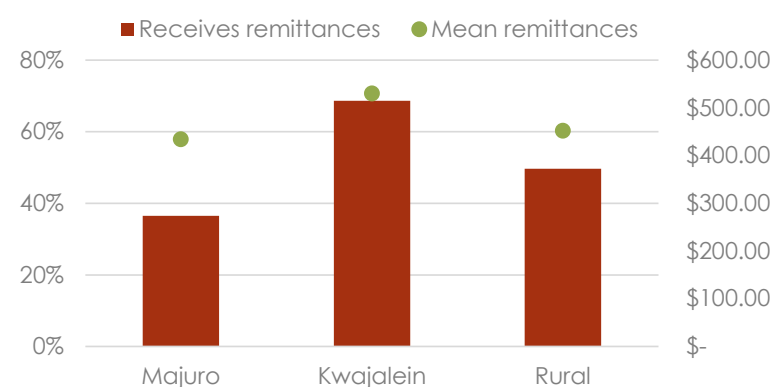
3.5. Access to public services

About 70% of HHs do not have access to a metered water connection, with a dramatic difference between urban and rural areas. Metered water connections are very common in Kwajalein (78.6%), less common in Majuro (25.8%) and non-existent in rural areas (Figure 18). Access to metered water also increases as people move up the consumption distribution. Households' source of drinking water is also correlated with poverty (Figure 19). Households that source drinking water from rainwater tanks have the highest poverty rates at nearly 10%. In contrast, for HHs that have access to piped water, a public tap, or can afford to used bottled water for drinking, the poverty rate is 4% or less.

Figure 18. Households connected to public water supply
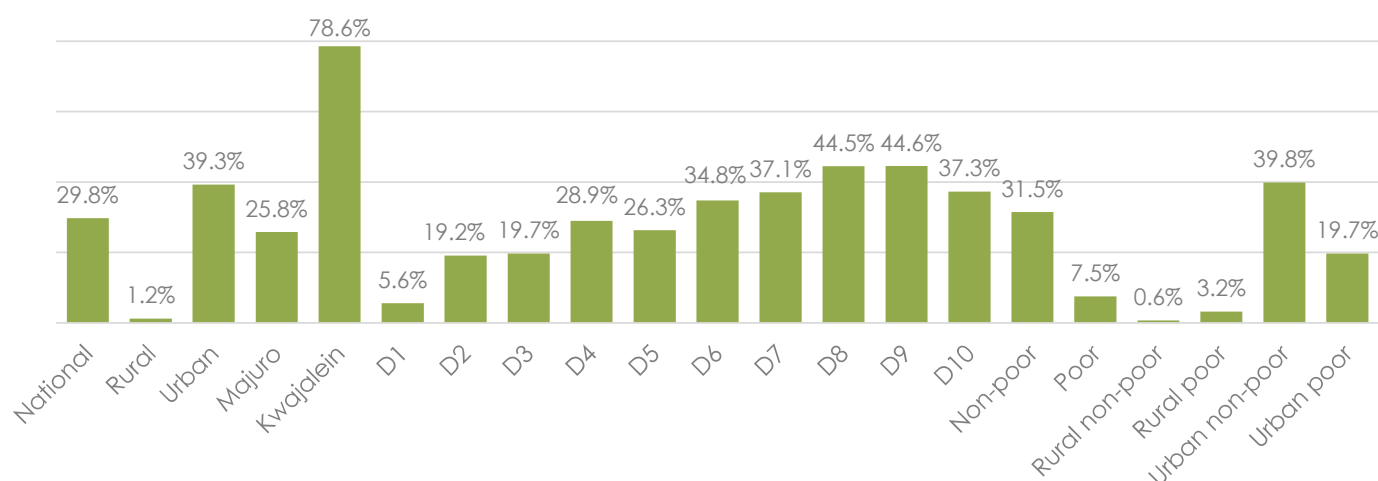
Figure 19. Drinking water source and poverty rate
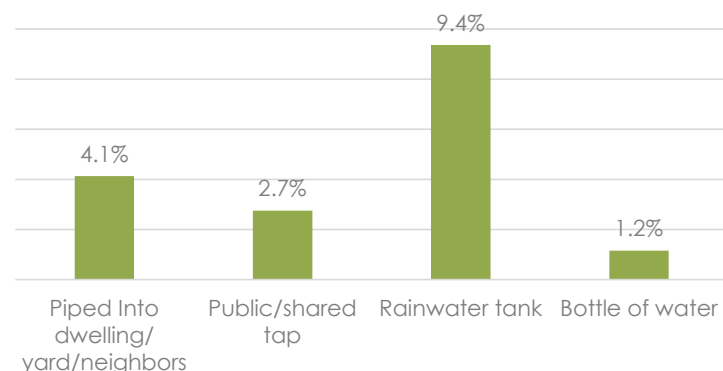
About 13% of HHs do not have access to flush toilets, with some differences across the consumption distribution and between urban and rural areas (Figure 20). In rural areas, 72.9% of the population have access to a personal or shared flush toilet, compared with 91.2% of HHs in urban areas. However, the largest differences are found across consumption groups, with only 60.1% of the poorest decile having access to flush toilets, compared to near universal access among the wealthiest decile (99.5%).

Figure 20. Access to flush toilets
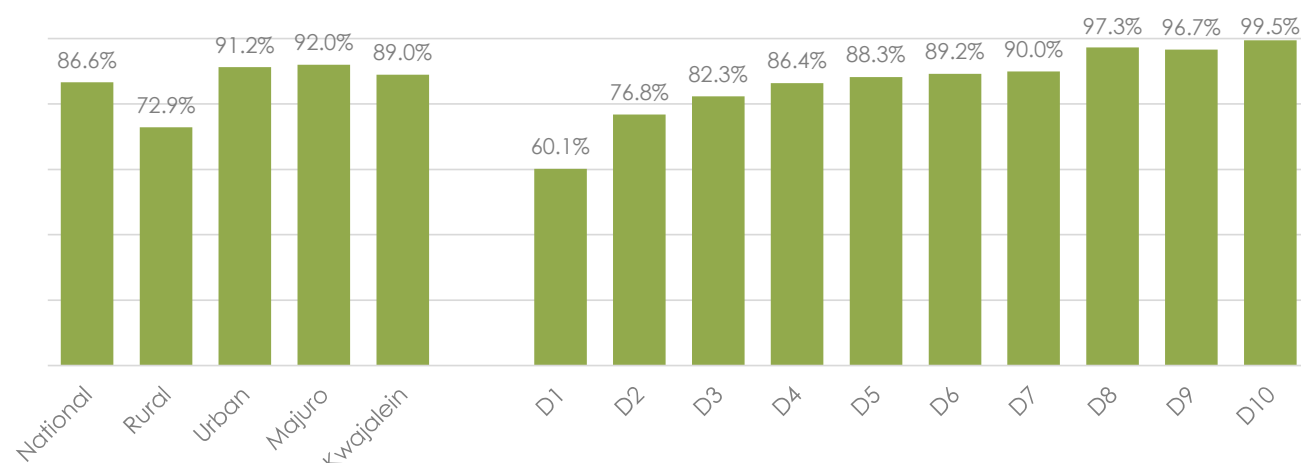
Nine out of ten people in urban areas of RMI are connected to the electrical grid for either lighting, cooking, and/or appliances, while only 13% of people in rural areas are connected to the grid. Nationally, 70.8% of people have a connection to an electrical grid (Figure 21). As consumption increases, the likelihood of connection to electricity increases as well. About three-quarters of the bottom decile of the consumption distribution lack connection, while less than 5% of the top decile lack electricity grid connection.

Figure 21. Electrical grid connection prevalence, by area and decile
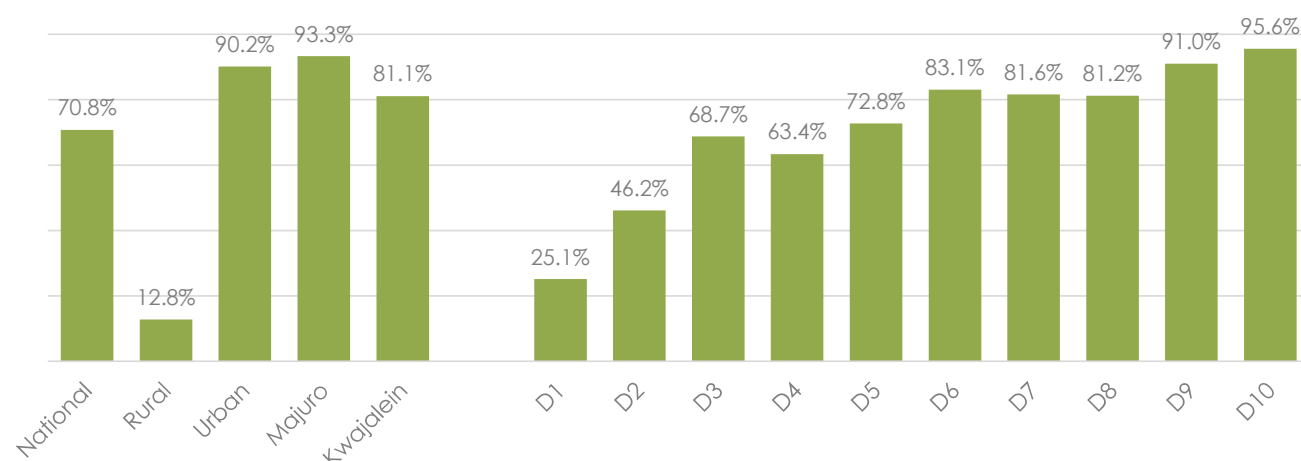
3.6. Correlates of poverty and identifying groups of the poor

Geographic factors are substantially related to consumption. Controlling for other socio-demographic characteristics[7], people living in rural areas are much more likely to be poor than people in urban areas. Among the urban population of RMI, those in Kwajalein are more likely to be poor than those in Majuro. This is consistent with the descriptive finding that rural areas have the highest rates of poverty, followed by Kwajalein. Table 9 reports descriptive statistics for three groups of the poor by geography (Majuro, Kwalajein and rural) against national averages.

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7   The OLS regression models used for the estimates in this section are presented in Annex 2. The dependent variable in first OLS is log of per adult equivalent consumption. The dependent variable of the second OLS estimation is a binary categorical variable for "poor."

Table 8. Characteristics of poor HHs, by location

	Majuro – poor	Kwajalein – poor	Rural – poor	National – all
Household size	6.1	4.7	6.5	3.6
Home prod. Inc. share	0.1%	0.6%	9.6%	3.2%
Employment Inc. share	56.1%	37.5%	38.2%	50.7%
# Emp.– own/HH business	-	0.1	0.7	0.1
# Emp.– employees	1.1	0.4	0.4	0.9
# Emp.– other	-	0.1	0.1	0.0
Has water connection	-	29.0%	2.2%	27.9%
Has flush toilet	69.8%	37.1%	49.8%	86.8%
Electricity grid connection	63.9%	37.9%	6.0%	70.8%
Max edu. is grade 1–8	0.0%	0.0%	0.0%	0.5%
Max edu. is grade 9–11	0.0%	8.9%	11.5%	8.3%
Max edu. is grade 12/GED	47.8%	0.8%	36.2%	22.4%
Max edu. is some post-secondary	49.6%	27.4%	29.0%	30.9%
Max edu. is a degree	2.6%	62.9%	17.2%	26.5%

Consumption is significantly correlated with HH composition. Every additional HH member increases the likelihood that the members of the HH will be in poverty by 4.2 percentage points. The higher the proportion of adults between the ages of 15–30 years old and 65 years+, the lower the level of adult equivalent HH consumption after controlling for other socio-demographic characteristics. Interestingly, while the proportion of male HH members is positively associated with consumption, it is also positively associated with poverty. This indicates that the relationship between income and the gender composition of the HH is not consistent across the consumption distribution.

There are high returns to education in RMI. At the national level, higher levels of educational attainment are positively related to HH consumption and negatively related to poverty. In addition, it is the increased education of the head of HH that appears more consequential for HHs avoiding poverty than the education of other HH members. For adults over 25 in rural areas, the completion of primary school is most critical for avoiding poverty, while adults in urban areas see the largest decrease in poverty when completing Grade 12.

The number of individuals earning an income in a HH is positively related to HH consumption, after controlling for other socio-demographic characteristics. Similarly, the main activity of the head of HH is significantly is associated with a significant increase in consumption versus if the head of HH is not working for an income. Curiously, the head of HH being employed is associated with an increased likelihood of the HH being poor.

Three distinct groups of the poor emerge in RMI with the largest group being the poor in rural areas. Differences across the poor in Majuro, Kwajalein, and rural areas mean that poor HHs cannot be simplistically characterised. In terms of sources of income, the poor in rural areas derive a larger share of their income from home production than the national average and urban areas. The rural poor derive 38.2% of their income from employment, which is much lower than Majuro but slightly higher than the other urban center, Kwajalein, in which 37.5% of income is derived from employment. Interestingly, poor HHs in Majuro derive a larger share of their income from employment than the national average for all HHs. Similarly, the poor in Majuro have an average of 1.1 HHs members in employment while the national average is 0.9. In contrast, the poor in Rural areas and Kwajalein have about half an adult in employment on average. Employment and income earning opportunities are likely very different in the two urban centers and the outer islands, meaning that differences between the poor and non-poor may be context specific.

In terms of HH demographics and education of the poor, there are substantial differences across Majuro, Kwajalein, and Rural areas. The average HH size is 3.6 nationally, though it is higher for the poor. In Kwajalein it is 5.8 for poor HHs while for poor HHs in Majuro and rural areas it is over 6. While significant proportions of poor HHs in Kwajalein and Rural areas have no one with an education level beyond Grade 11, there are none such households in Majuro. Interestingly, while the poor in rural areas have a similar educational achievement to the national average, in Majuro the poor tend to be more "moderately educated". This could indicate a problem with there being fewer high skilled employment opportunities for those who have post-secondary school qualifications in rural areas.

ANNEX A1. METHODOLOGY NOTES

A1.1 Introduction

The analytical methods applied to the RMI 2019/20 HIES data are in line with the latest international best practices and regional guidance from the Pacific Statistics Methods Board (PSMB), on consumption aggregate construction and poverty measurement. This annex details the approach to the key analytical choices that need to be made that impact poverty measurement. Prior to the poverty analysis, the consumption aggregate was finalised by the Statistics for Development Division of the Pacific Community, with input from the Food and Agricultural Organization, with guidance provided by the World Bank on non-food consumption, particularly asset use values and the imputation of rent.

A1.2 Background to poverty measurement

Measuring poverty in monetary terms is best achieved with detailed HH level consumption data, typically from a HIES or similar survey. The estimation of poverty requires three major steps:

a. Constructing a single dimensional, measurable welfare indicator that can be used to rank the population according to well-being (the "welfare aggregate"). Each HH has its own consumption aggregate that is constructed based on a range of food and non-food items consumed. It is typical to exclude some categories of consumption for which there is data, such as lumpy/once-off expenditures (e.g. purchase of expensive durables). In contrast, some consumption such as accommodation (e.g. imputed rent), may not be directly measurable but must be accounted for. The consumption distribution graphs the consumption aggregates of all HHs.

b. Constructing an appropriate threshold of welfare that can be used to classify individuals as poor or non-poor (the "poverty line")

   I. A food poverty line needs to be selected based on a local food basket (identified using the consumption patterns of a reference group of the population) and a minimum caloric intake for the country. There may be only one food basket and poverty line for a country (national poverty line), or there may be subnational poverty lines (e.g. for areas such as provinces).

   II. A non-food component needs to be constructed to calculate a basic needs poverty line (which includes both food and non-food consumption). The basic needs line (or national monetary poverty line) would be inclusive of and always higher than the food poverty line. This poverty line should be contextually appropriate and allows policymakers to understand relative poverty within the country. In contrast, while the international poverty line allows countries to understand their relative level of poverty compared to the rest of the world, it is not based on local patterns of consumption or local needs.

c. Combine the welfare indicator with the poverty line to describe the poverty status of the population (the "poverty rate"). The poverty line crosses the consumption distribution and all those living below the poverty line are considered poor. As such the poverty rate is the population proportion that exists, or lives, below the poverty line. The poverty rate is always relative to the line used, with the national poverty line often being different to the international poverty line. The poverty gap is the ratio by which the mean income of the poor falls below the poverty line.

A1.3 Consumption aggregates

Consumption aggregate construction for the RMI 2019/20 HIES was based on the latest recommendations of the PSMB. This section outlines 1) the construction of the food consumption component of the aggregate, 2) the non-food component, and 3) spatial and temporal deflation applied for the purposes of poverty measurement. The components of the consumption aggregate (food, imputed rent, use values of durables and other non-food consumption) for each decile are shown in Figure A1. There is a general pattern of food share decreasing by decile and other non-food share and use values increasing in by decile. Rent however, is proportionally greatest for the lowest decile.

Figure A1. Annual household consumption components by decile (mean percentage shares)
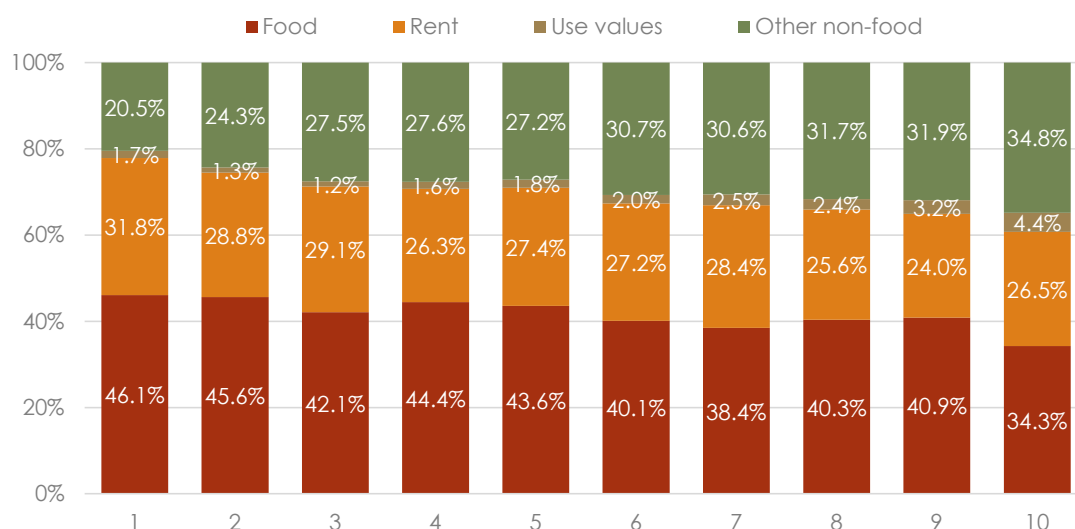
Food consumption

The total monetary value of food consumption for the past 7 days was recorded. Only food consumed by the HH was included, whether purchased in cash transactions, home-produced, or received as a gift. The consumption aggregate does not include food purchased or produced by the HH but given away as a gift to another HH, in order to prevent double counting of expenditures between HHs.

Non-food consumption

a. **Non-durables**

Like food consumption, the consumption of non-food non-durable items was calculated as the annualised value of reported transactions for individual and HH expenditures in the CAPI modules, with varying time periods reported for different types of consumption. For example, health expenses were asked to be recalled for the past three months, while expenses on cosmetics for each HH member were asked to be recalled for the past twelve months.

b. **Durables**

Durables[8] are defined as items that are infrequently purchased by the HH and have a lifetime that spans multiple years, e.g., motor vehicles or major HH appliances such as televisions, computers, and refrigerators. The PSMB guidance recommends the calculation of "annualised use values" for durable items owned by the HHs, regardless of whether the items were purchased in the past year. In order to obtain the use value of each individual durable, an estimated current value of the durable needs to be multiplied by an estimated depreciation rate applicable to that type of durable.

c. **Semi-durables**

Semi-durables are a sub-category of durable items that have utility for multiple years, but not as long as durables. Semi-durables tend to be purchased more frequently and are not as expensive as durables. There is no strict guidance on semi-durables in the PSMB recommendations. SPC opted to include semi-durables in the consumption aggregate for RMI. The exception being semi-durables such as fishing nets which were counted as intermediate expenditure.

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8   Use values for the following items were included in the consumption aggregate: Dining tables; Lounge furniture (couches and tables); Cabinet or dressers; Beds or mattresses; Other furniture; Water Dispenser; Refrigerator or freezer; Microwave oven; Cooking stove (gas/kerosene); Gas burner; Electric stove; Washing machine, clothes dryer; Air conditioner; Water heater; Sewing machine; Generator; Rooftop solar power; Other major appliances; Electric fan; Rice cooker; Toaster; Other small electric appliances; Chainsaw or brush cutter; Power drill, sander; Lawn mower; Water pump; Other motorised tools; car, mini-van, pick-up truck or suv; large truck, bus or passenger van; motorbike or scooter; bicycle Cart; wheel barrow; cell phones, Radio; DVD / Blu Ray player; Photo equipment (cameras - still/video); Stereo / home cinema; Tv set; tablet computers; computer desktop; laptops; printer, scanner; inboard motor boat; canoe; outboard motor; Game consoles.

d. **Imputed rents**

Like The imputed rent component of income was computed for owner-occupied housing using a predictive hedonic model which is based on a range of dwelling characteristic variables that should be directly related to the value of living in the dwelling. Variables to be included in the final model were selected using a stepwise regression. The variables included in the predicted model were strata, tenure, physical dwelling characteristics (number of rooms, building materials for walls, floor, roofing, landline connection, flush toilet, electricity grid connection, public water connection, kitchen location). The model was based on rental expectations from the non-renting HHs in the sample (includes house owner and those who live rent free). This was for two reasons. Firstly, only 2.3% of HHs were renting nationally, a sample that is too small for an imputation model in isolation. Secondly, expected rent of non-renters was systematically lower than the rent of renters meaning it would not be appropriate to pool the renter data with non-renter data. This was substantiated using an OLS model with a dependent variable of rent & rental expectations, controls for HH characteristics, and a dummy variable for renter/non-renter status (the later proved to be highly statistically significant meaning that actual rents and rental expectations should not be combined).

The final predictive model was a generalised linear model (GLM) which is a flexible generalisation of ordinary linear regression that allows for response variables that have other than a normal distribution. The final model used rental expectations data adjusted for outliers (the outlier correction involved replacing observations that were 2 standard deviations away from the mean by strata, with the median by strata). While there is no R-squared for the GLM model, the OLS equivalent of that model using the same variables has an adjusted R-squared score of ~0.43. That means close to half of the variation in rental expectations can be explained by the dwelling characteristics variables included in the model. That is not high but not far off imputed rent models used in other countries. For consistency across renter and non-renter HHs, the imputed rent from the model was used for all HHs, and actual rents were not used in the consumption aggregate.

Deductions were made from the imputed rent for maintenance costs (outlier corrected for 2 standard deviations). Renovations and expansion of the dwelling were categories under "maintenance costs" in the survey but could be more accurately described as lumpy expenditure for long term investment in dwelling structures, and so are best excluded from the net rent calculation, as well as being excluded from the consumption aggregate.

Table A1. Net Imputed rent (after deductions)

Strata	N	Mean	SD	Median
Majuro	395	418	151	427
Kwajalein	156	308	91	304
Rural 1	24	125	45	108
Rural 2	36	255	128	207
Rural 3	120	420	281	328
Rural 4	142	227	94	191

Spatial and temporal deflation

In order to account for regional and seasonal differences in costs of living and enable direct comparisons of HH welfare across regions, a "deflator" was applied to the nominal consumption aggregates. The spatial-temporal deflator is calculated by comparing regional and seasonal differences in the prices of food goods (assuming that these differences are consistent between food and non-food goods), weighted by the importance of those goods to the consumption basket of the reference group. The spatial disaggregation used was based on the two urban strata (Majuro and Kwajalein) and one grouping for all rural areas. Temporal deflation was based on the survey year, which corresponds to two six month periods of data collection. They survey collection period for some strata had to be condensed because of unforeseen travel restrictions, so it is not possible to look at seasonal differences at lower levels of spatial disaggregation.

Table A2. Observations by location and year

Location & Year	Year		Total
	2019	2020	
Majuro 2019	353	0	353
Ebeye 2019	156	0	156
Rural 2019	48	0	48
Majuro 2020	0	42	42
Rural 2020	0	274	274
Total	557	316	873

The reference population used for the consumption basket is individuals in the 11th to 30th percentiles, which is the same reference population used to estimate the poverty line. In order to capture the "real" reference population rather than the nominal one, the deflators were estimated using an iterative approach, where HHs are re-ranked after deflators are applied, and the deflation is repeated (on the nominal aggregates) using the consumption shares of the "new" 11th to 30th percentile. This iterative process is repeated until the HHs in the reference population stabilise. In the case of RMI, due to the relatively small deflator values, only two iterations were required to stabilise the reference population. Tornqvist deflators were used in order to better account for outlier prices and consumption shares, though in the case of RMI, the final choice of deflator would not have made a large difference (Table A3 below). The spatially deflated aggregates are rescaled in order to keep the same values for mean national per adult equivalent consumption (Table A4).

Table A3. Spatial & temporal deflators

A comparison of deflators for ref. pop. 11–30				
Location & Year	Lasp. Index	Pasch. Index	Torn. Index	Fish. Index
Majuro 2019	1.00	1.00	1.00	1.00
Ebeye 2019	1.01	1.02	1.00	1.01
Rural 2019	1.31	1.31	1.22	1.31
Majuro 2020	1.02	1.02	1.01	1.02
Rural 2020	1.30	1.26	1.15	1.28

Table A4. Per adult equivalent consumption

Strata	Nominal	Deflated	Diff.	% Diff.
Majuro	5,638	5,783	145	2.6%
Kwajalein	4,660	4,787	126	2.7%
Rural	3,689	3,269	(419)	-11.4%
National	4,963	4,963	-	0.0%

A1.4 Poverty line methodology

A new Basic Needs Poverty Line (BNPL) was constructed for the RMI 2019/20 HIES data. This new BNPL will be used for future rounds of poverty analysis, with the application of appropriate inflation adjustments. This section outlines, 1) the use of adult equivalency scales, 2) issues with the construction of the food poverty line and 3) Issues in non-food poverty line selection and 4) sensitivity analysis.

Adult equivalency scales

In order to compare welfare measures, which are often recorded at the HH level, it is necessary to account for differences in HH composition. Two alternative ways to do this are: 1) per capita measures, which divide the HH-level welfare aggregate by the number of HH members, and 2) adult equivalent measures, which

assign different weights to the HH members depending on their age or sex. In the Pacific, countries that apply adult equivalent measures typically utilise a simple scale, where HH members aged 0–14 (children) are given a weight of 0.5, with all other HH members given a weight of 1, with no differentiation by sex. The welfare aggregates and poverty lines in RMI 2019–2020 poverty analysis use this simple adult equivalency scale.

Issues in food poverty line construction

A single national food poverty line is constructed by computing the amount of monetary expenditure required to consume a daily calorie target using the real consumption patterns of a reference population. An expanded basket of 45 goods was used which covers 95% of food expenditure. The food items and shares in the basket are listed in table X[9]. The calorie target was set at 2,382 calories per adult equivalent per day which was derived from converting 2,100 calories per capita per day based on the ratio of mean HH size to mean HH adult equivalents. This is in line with the recommendation of the PSMB that for countries that do not have the data available on the weight and height distribution of the population, and do not have solid evidence on the level of activity of the poor and vulnerable, 2100 calories per day can be considered the default. The cost per calorie of food items was computed using nutritional values (calories per 100g) from the FAO food composition tables for the Pacific and unit values (AUD/100g) for each food item calculated based on the price/ unit value assumed in the consumption aggregate. The reference population chosen is HHs in the 11th to 30th percentile based on real (deflated) per adult equivalent consumption.

Table A5. Food basket used for food poverty line

Food item	Final expenditure share
Rice in all forms	8.8%
Lunch away from home	8.6%
Fresh, chilled or frozen fish	7.7%
Fresh, chilled or frozen meat of chicken	6.1%
Pasta products	4.9%
The sale of cooked dishes by restaurants for consumption off their premises	4.5%
Canned Corn beef	3.5%
Maize, wheat, barley, oats, rye and other cereals in the form of grain, flour or meal	3.5%
Fresh, chilled or frozen fruit (excludes vegetables cultivated for their fruit such as cucumbers and tomatoes)	3.3%
Other preserved or processed fish and seafood and fish and seafood-based products, e.g. canned fish, caviar...	3.3%
Other preserved or processed meat or meat-based products, e.g. canned meat and pies (excludes lard and other animal fat)	3.1%
Sauces	3.0%
Hot drinks away from home	2.8%
Coffee	2.7%
Breadfruit	2.6%
Snacks away from home	2.4%
Tinned Mackerel	2.0%
Fruit juices	2.0%
Other tinned meat	1.9%
Other bakery products, e.g. quiches, pizzas, pies (excluding meat pies, fish pies and sweet corn)	1.7%

9   While salt and drinking water are in the top 45 items by expenditure, as they do not have a calorie content, for purposes of calculating basket shares, the share for each is reallocated evenly across all other items in the basket.

Food item	Final expenditure share
Sugar, unrefined or refined, powdered, crystallised or in lumps	1.6%
Soft drinks	1.6%
Bread	1.6%
Catering services provided by restaurants, cafés, etc. in places providing recreational, cultural, sporting or entertainment services	1.6%
Ripe banana	1.5%
Edible oils (excludes cod or halibut liver oil)	1.5%
Breakfast Away From Home	1.5%
Dinner Away From Home	1.3%
Green coconut	1.2%
Cooking banana	1.1%
Eggs	1.0%
Salt	0.0%
Dried, salted or smoked meat and edible offal, e.g. sausages, salami, bacon, ham, pâté.	0.7%
Fresh, chilled or frozen meat of swine	0.6%
Orange	0.6%
Biscuits	0.6%
Dairy milk	0.6%
Syrups and concentrates for the preparation of beverages	0.5%
Brown coconut	0.5%
Cream	0.4%
Cereal preparations, e.g. cornflakes, oatflakes and other cereal products, e.g. tapioca, sago and other starches	0.4%
Mineral or spring waters; all drinking water sold in containers	0.0%
Tea	0.4%
Fresh, chilled or frozen seafood, e.g. crustaceans, mollusks and other shellfish, sea snails.	0.4%
Other food products, e.g. homogenised baby food	0.3%

Issues in non-food poverty line construction

The non-food poverty line is computed as a multiplier of the food poverty line. For comparison both a regression method and the non-parametric Ravallion lower bound and Ravallion upper bound lines were used to calculate the multiplier based on the food vs. non-food consumption patterns of the population as they move up and down from the food poverty line. The Ravallion lower bound method has the advantages of yielding robust results that are similar to those of other methods while being straightforward to explain to policymakers and other non-technical audiences. This is the method used based on the advice of the PSMB.

Sensitivity analysis: comparing reference populations and BNPLs

For sensitivity analysis, five reference populations were checked with each of the three non-food poverty line methods (regression, Ravallion upper and Ravallion lower). Table A6 reports the poverty lines by method and reference population, followed by Table A7 which reports the poverty rates with each combination of reference population and NFPL method. A standard practice when choosing reference populations is to exclude the bottom 10% because data quality may not be as good for these HHs some of whom may have unrealistically low reported consumption. However, ideally the reference population should include the poor as it is their consumption patterns that should determine the composition of the food basket. While the poverty rate is too low for the reference population to substantially include the poor, for sensitivity analysis, poverty lines are

calculated with a range of reference populations from the 6th percentile to the 35th percentile.

The poverty rates increase for higher reference groups, with the regression method and the Ravallion lower line yielding similar results, but neither consistently resulting in a higher or lower poverty rate. As expected, the poverty rates with the Ravallion upper line are much higher and yield a poverty rate consistently more than double that of the Ravallion lower line. In line with the PSMB recommendations, the Ravallion lower bound method is recommended for RMI. Given that the reference population p6–35 and the p11–p30 yield almost identical poverty rates, it seems pertinent to use the 11th percentile to the 30th percentile, as this avoids including outliers in the bottom 10%, and avoids including any of the population who are far away from the poor (i.e. above the 30th percentile).

Table A6. Daily food poverty line and basic needs poverty lines by ref. population and method (US$)

Ref. pop.	FPL	NFPL	BNPL	NFPL	BNPL	NFPL	BNPL
		Regress	Regress	Rav-Lower	Rav-Lower	Rav-Upper	Rav-Upper
p.06-25	3.1	1.6	4.7	1.6	4.7	5.4	8.5
p.06-30	3.2	1.6	4.9	1.7	4.9	5.6	8.8
p.06-35	3.4	1.7	5.0	1.7	5.0	5.8	9.1
p.11-30	3.4	1.7	5.1	1.7	5.0	5.9	9.2
p.11-35	3.4	1.8	5.2	1.7	5.1	6.0	9.4

Table A7. Poverty rate, by method and ref. population

NFPL Method	Ref. Pop.	Mean	([95% Conf. Int.)	
Rav. upper	06-25	30.7%	27.4%	34.0%
Rav. lower	06-25	6.0%	4.3%	7.8%
Reg. method	06-25	6.1%	4.4%	7.8%
Rav. upper	06-30	32.8%	29.4%	36.1%
Rav. lower	06-30	6.7%	4.9%	8.4%
Reg. method	06-30	6.7%	4.9%	8.4%
Rav. upper	06-35	34.9%	31.5%	38.3%
Rav. lower	06-35	7.1%	5.3%	8.9%
Reg. method	06-35	7.2%	5.4%	9.0%
Rav. upper	11-30	35.7%	32.3%	39.2%
Rav. lower	11-30	7.2%	5.4%	9.0%
Reg. method	11-30	7.5%	5.7%	9.4%
Rav. upper	11-35	38.0%	34.6%	41.5%
Rav. lower	11-35	7.9%	6.0%	9.8%
Reg. method	11-35	8.2%	6.3%	10.1%

ANNEX A2. REGRESSIONS TO ESTIMATE THE DETERMINANTS OF CONSUMPTION AND POVERTY

Table A8. Determinants by models

Variables	Model 1 (log of per AE exp.)	Model 2 (poor)
Kwajalein	-0.110**	-0.000792
	(0.0416)	(0.0128)
Rural	-0.379***	0.0902***
	(0.0536)	(0.0228)
household size	-0.155***	0.0419***
	(0.00948)	(0.00566)
Proportion adults aged 15–30	-0.340***	0.0992**
	(0.115)	(0.0444)
Proportion adults aged 31–64	-0.0886	0.131***
	(0.137)	(0.0433)
Proportion adults aged 65 and over	-0.290*	0.103**
	(0.155)	(0.0467)
Sex of household head	-0.0956**	-0.0461**
	(0.0417)	(0.0191)
Proportion male	0.222**	0.0380
	(0.110)	(0.0239)
Max. Edu is Grade 1–8	0.00398	-0.00261
	(0.0731)	(0.0309)
Max. Edu is Grade 9–11	0.0213	-0.0261
	(0.106)	(0.0229)
Max. Edu is Grade 12/GED	0.280***	-0.0338**
	(0.0723)	(0.0138)
Max. Edu is Some post-school (no degree)	0.357***	-0.0414***
	(0.0808)	(0.0152)
Max. Edu is Degree (uni. or professional)	0.595***	-0.0125
	(0.0963)	(0.0199)
Employment status: in own business	0.0374	0.0431*
	(0.0604)	(0.0243)
Employment status: family business	0.113***	0.0497**
	(0.0405)	(0.0188)
Employment status: as employee	-0.200	0.0940
	(0.198)	(0.120)
# Adults who are an employee	0.0609**	-0.0526***
	(0.0281)	(0.0118)
# Adults who are employed in "Other "/ apprentice	0.227	-0.0378
	(0.174)	(0.0823)
Constant	8.944***	-0.165***
	(0.137)	(0.0408)
Observations	872	872
R-squared	0.562	0.155

FOOD CONSUMPTION IN THE MARSHALL ISLANDS

BASED ON ANALYSIS OF THE 2019/20 HOUSEHOLD INCOME AND EXPENDITURE SURVEY

SECTION 2: FOOD CONSUMPTION (SDG 2)

Summary

The Marshall Islands is a small country in the Pacific composed of many atolls and islets. Contamination of the soil due to salination or as consequence of the US nuclear tests in the 1950s, water scarcity, limited infrastructure and difficulties in commuting from one islet/island to the other, and, among other factors, high population density are putting pressure on the agriculture sector and its capacity to ensure food for all. A high proportion of the food consumed is imported, with more and more consumers shifting from locally grown foods to ultra-processed imported foods rich in fats and sugars.

As a result, the Marshall Islands has shown limited progress towards achieving the diet-related non-communicable disease (NCD) targets.[1] With around one in two adults obese, the Marshall Islands ranks fourth in the world by prevalence of obesity.[2] Diabetes affects around one adult in five and more than one woman of reproductive age in four is affected by anaemia.[I] Access to safe and nutritious foods therefore remains a serious challenge for the Marshallese. The analysis of the food insecurity experience scale data collected in the 2019/20 Household Income and Expenditure Survey (HIES) of the Marshall Islands reveals that more than one household in three is experiencing moderate or severe levels of food insecurity, which means they are lacking money or other resources to access foods in enough quantity or of good quality. The further analysis of the food data collected in the same survey finds that for around 5 percent of Marshallese, their dietary intake is lower than their basic dietary needs to maintain a normal active and healthy life.

These results are reflected in the high level of dietary energy consumption (DEC) of 2 860 kcal/capita/day, evidencing a double burden of malnutrition with, on one hand, obesity through excess calorie consumption and, on the other hand, undernourishment through lack of access to enough calories. Income is the main factor of inequality in access to food, with the wealthiest households[II] consuming around twice as many calories as the least wealthy households.[III] But other characteristics such as the size of the household, the level of education of the head of the household, the severity of food insecurity, involvement or not of the household in fishing activities or whether the household receives remittances or not are also other important factors affecting access to dietary energy.

A Marshallese spends on average USD 5.2 daily on food, which represents around 45 percent of the overall budget. Even if food expenditures weigh more on the budget of the least wealthy households than on that of the wealthiest, food remains the major component of the overall budget of the Marshallese irrespective of their wealth status. Around two calories in three come from cash purchased food, and own production contributes only 9 percent. Foods received as gift are an important source of dietary energy, bringing on average around 250 kcal consumed per day per capita. But more than 400 kcal alone consumed on average per day per capita come from meals consumed away from home, mainly in the form of lunches.

To get 1 000 kcal, a Marshallese spends on average USD 2.0, but not all Marshallese enjoy the same quality of foods, and sources of energy differ among population groups. In fact, the least wealthy households spend on average USD 1.1 less to get 1 000 kcal than the wealthiest households, which points towards lower-wealth households having access to more affordable sources of energy. This trend can also be observed among households involved in fishing, livestock, handicraft or copra activities and among households experiencing moderate or severe levels of food insecurity, both of which spend on average 40 cents less to acquire 1 000 kcal than food secure households or households not involved in these activities. These households have access to more energy dense, but less nutritious or diversified foods.

The high level of dietary energy consumed on average by a Marshallese is the result of the high contribution of fats in the total diet, with 23 percent of dietary energy consumed coming from fats, which is more than 650 kcal per capita per day. The diet is also rich in proteins, contributing 16 percent of the average dietary energy consumed; 43 percent of these proteins are of animal origin. Therefore, the diet is rich in fats and animal proteins.

More than 40 percent of dietary energy comes from cereals, mainly in the form of rice, with an average consumption of 220 g/capita/day, followed by meat that contributes 9 percent of the dietary energy consumed (mainly through the consumption of around 80 g/capita/day of chicken). Fish contributes 8 percent of dietary energy consumed, with an average consumption of 180 g/capita/day of fish and fish products.

With an average daily consumption of around 150 grams per capita, fruit and vegetable consumption is very low in the Marshall Islands, and well below the World Health Organization (WHO) recommended

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[I] See Global Nutrition Report portal: https://globalnutritionreport.org/resources/nutrition-profiles/oceania/micronesia/marshall-islands/
[II] Households belonging to the last tercile of total household expenditure per capita
[III] Households belonging to the first tercile of total household expenditure per capita

level of 400 grams of fruit and vegetables per capita per day for a healthy diet. Locally grown fruits like pandanus, breadfruit and banana contribute only 3 percent of the dietary energy consumed, with respective edible quantities consumed of around 40, 30 and 20 g/capita/day. Of interest is the important consumption of bottled water, which, after rice, is the second most consumed product in terms of quantity, even if water does not bring energy.

The further breakdown of the diet in terms of healthy eating patterns, shows that energy-dense foods (like cereals, tubers, roots, sugar, oil and fats), protective foods (like fruit and vegetables) and body building foods (like protein rich foods such as meat, fish and dairy products) contribute respectively 60 percent, 3 percent and 18 percent to the average dietary energy consumed. But not all energy-dense or body building foods are healthy and when these foods are further categorized in terms of food to choose, to limit or avoid, it can be found that more than 60 percent of dietary energy comes from foods to limit or avoid such as white rice, sugar, canned meat, powdered drinking juice, sugar and tomato sauce, and only 20 percent from foods to choose such as locally grown starchy foods, low-fat meat and fish, low-fat dairy products and fruit and vegetables.

The low consumption of protective foods or dairy products translates into very low adequacy of vitamins A, B1, B2 and C. Conversely, the high consumption of fish translates into high adequacy in vitamin B12 at the national level. The relatively low consumption of dairy products and calcium rich foods translates into calcium inadequacy for all population groups.

In terms of which foods are most accessible, 97 percent of households consume rice. With an average consumption of 8 g/capita/day and 10 g/capita/day, salt and soy sauce are accessed by more than 75 percent of households, bringing the overall sodium consumption well above the WHO recommended limit of no more than 5 grams of salt per person per day. Such a high level of salt consumption further puts the population at risk of heart disease. Chicken is consumed by two households in three, while reef fish, the most

consumed fish product, is consumed by less than 50 percent of the households. Even if the average quantity consumed is marginal, eggs are consumed by more than one household in two. Finally, more than 40 percent of Marshallese consume tobacco, with an average quantity of one gram per day (one cigarette). Even if these products are not considered foods, their consumption represents an additional health threat.

Food insecure households consume, on average, more than 450 kcal/capita/day less than food secure households. The probability of being food insecure is higher for households living in urban areas, with low income, with a head who is less than 39 years old or is not married, or for households selling copra or involved in fishing or livestock activities. Receiving remittances or being involved in handicraft activities tend to reduce the probability for a household to be food insecure. Food insecure households spend on average 30 cents less to get 1 000 kcal than food secure households, and more than 26 products are consumed on average by food secure households compared to 20 products consumed by food insecure households.

Except for fish and tobacco, the overall quantities of food products consumed by food insecure households are lower than those consumed by food secure households. Adequacy in vitamins A, B1, B2, B12 and C is reached for food secure households while it is reached only for vitamins B12 and C for food insecure households. Consistent with the national trend, adequacy in calcium is not reached for food secure or food insecure households.

Finally, it is interesting to note the difference in food consumption patterns between the two main urban areas of Marshall Islands, Majuro and Kwajalein (Ebeye). While people living in Majuro consume on average 3 000 kcal/capita/day, people in Kwajalein consume on average 500 kcal/capita/day less. This difference in access to dietary energy can be explained by a combination of slight underreporting of quantities, higher cost of dietary energy, larger household size, and a higher proportion of the number of children less than 14 years old in Kwajalein compared to Majuro.

Introduction

The Republic of the Marshall Islands (referred to as the Marshall Islands hereafter) is a country located in the sub-region of Micronesia in the Pacific. It is composed of five islands and many islets organized around 29 atolls (of which only 19 are inhabited). The Marshall Islands is home to around 58 413 people.[I] The capital city of the Marshall Islands, Majuro, is located on the island of Majuro. Majuro and Ebeye islands are the two urban centres, concentrating more than 70 percent of the population. Ebeye Island in the atoll of Kwajalein is the most densely populated area in Marshall Islands, with an equivalent population density of 41 667 inhabitants per square kilometre. The population in the Marshall Islands is young, with a median age of 23.8 years.[II, 3]

The Marshall Islands is considered an upper middle-income country[4] and it is usually compared with Samoa and Philippines in terms of the Human Development Index, ranking 117th out of 189 countries and territories.[5] United States government assistance is the main support of the economy to compensate for the use of some of the atolls to conduct nuclear tests in the late 1940s and 50s. Despite the financial assistance from the US, 30 percent of the population in the island's two cities are living below the basic-needs poverty line[6] as a consequence of the scarce natural resources, high unemployment rates and wealth inequality.

In addition to its people experiencing poverty, the Marshall Islands is vulnerable to recurrent drought, sea-level rise, flooding, and the associated intrusion of saltwater into crucial freshwater supplies. These environmental constraints affect agricultural production, which is generally on a small scale. Agricultural products include coconuts, tomatoes, melons, taro, breadfruit, fruits, pigs and chickens. Industry is based on the production of copra and craft items, tuna processing and tourism. The most important commercial crop is copra, followed by coconut, breadfruit, pandanus, banana, taro and arrowroot. Livestock production consists primarily of pigs and chickens. Small-scale industry is limited to handicrafts, fish processing, and copra. Majuro is the world's busiest tuna trans-shipment port in the world.[7]

The lack of water, rising sea levels and the inability to produce food from four atolls contaminated with radioactive material has led to the importation of most of the food consumed in Marshall Islands, mostly in the form of ultra-processed foods that are rich in fats and sugar, making many Marshallese dependent on unhealthy food. Unhealthy diet, lack of exercise and consumption of tobacco (22.8 percent of adults older than 15 years of age were using tobacco daily in 2015)[8] are leading to major health problems such as diabetes and other forms of NCD associated with the high prevalence of obesity (53 percent of adults are obese). In addition to NCDs, child malnutrition is also a source of concern in the Marshall Islands with 11.5 percent of children less than 5 years old being underweight and 35.3 percent suffering from stunting.[9] All these indicators tend to indicate lack of access to foods in enough quantity and quality for most of the Marshallese. If this trend persists, Target 1 of Sustainable Development Goal (SDG) 2 aiming to end hunger and ensure sustainable access by all people to safe, nutritious and sufficient food will not be reached by 2030. Action is needed and to support the government and inform policies, it is essential to access good and timely data.

[I] 2018 UN estimate.
[II] Monaco being the first country with the oldest population and a median age of 55 years and Niger the 222nd country with the youngest population and a median age of 14.8 years.

In 2019/20 the Economic Policy, Planning and Statistics Office of the Republic of the Marshall Islands (EPPSO) conducted a large national household income and expenditure survey (2019/20 HIES) to provide information on the socioeconomic status of the Marshallese. This survey collects, among other data, information on food consumed by the household during the previous seven days and on their level of food insecurity through the introduction of the Food Insecurity Experience Scale (FIES) module. The analysis of this information provides a good basis to inform policies on nutrition and/or food security.

This report presents the main trends derived from the analysis of the food data collected in the 2019/20 HIES. The first section of this report briefly presents the two SDG Target 2.1 indicators and is followed by a lengthy discussion on the main features of the food consumption in the Marshall Islands in terms of DEC, food expenditure, cost of food and main sources of acquisition of the food consumed. The third section focuses further on composition of the diet in terms of products consumed. The fourth section presents the consumption of essential nutrients and finally the last section draws the profile of food insecure households and their related food consumption pattern.

The analysis was conducted using ADePT-FSM software[I] developed jointly by the World Bank and the Food and Agriculture Organization of the United

Nations (FAO) to derive food consumption indicators at national level and for representative groups of populations. ADePT-FSM produces more than 50 output tables[II] with disaggregation level going up to the tenth percentile of expenditure. As not all indicators or disaggregation levels are relevant, only the most meaningful trends and groups of population are analysed. Because of their size, most of the tables produced by ADePT-FSM and analysed in this report are joined as a companion document to this report (https://microdata.pacificdata.org/index.php/catalog/761/related-materials).

It is important to note that the survey started in July 2019 and stopped in May 2020 when the world was confronted by the COVID-19 global pandemic. At the time of the survey, the Marshall Islands was dealing with severe outbreaks of dengue fever and influenza-like illness, and to avoid adding pressure to the health system with even a single-case of COVID-19 entering the country, all travel to the Marshall Islands was suspended. To further prepare, prevent, and respond to the coronavirus pandemic, the Marshall Islands has received assistance from the United States,[10] but despite this assistance, it is believed that travel restrictions will further exacerbate inequality, poverty and food insecurity. However, apart from setting a pre-COVID-19 baseline, the impact of the epidemic on food security and the food system cannot be assessed through the data collected in the 2019/20 HIES.

[I] ADePT-FSM is a free downloadable software developed by World Bank and FAO to analyze food data collected in HIES and derive indicators of food consumption by population groups. The software can be downloaded at: http://www.fao.org/food-agriculture-statistics/statistical-domains/food-security-and-nutrition/methodology/en/

[II] For more information on output tables see "Analyzing food security using household survey data", FAO/WB. 2014 (https://openknowledge.worldbank.org/handle/10986/18091) and "Optimizing the use of ADePT-FSM for nutrient analysis" – ADePT-FSM V3. FAO. 2018. (http://www.fao.org/3/cb2465en/cb2465en.pdf)

CHAPTER 1
SDG Target 2.1 and the Marshall Islands

SDG Target 2.1 "by 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round". This target is measured by two indicators: the prevalence of undernourishment (SDG 2.1.1) and the prevalence of moderate or severe food insecurity based on the FIES (SDG 2.1.2). These two indicators have been adopted by the Marshall Islands to report on progress made in ending hunger and food insecurity. In collecting both FIES and food consumption data, the 2019/20 HIES provides a timely opportunity for the Marshall Islands to report on these two indicators during the 2021 Voluntary National Review, of which the Marshall Islands will be part.

1.1 SDG 2.1.1 – Prevalence of undernourishment

The prevalence of undernourishment (PoU), or percentage of the population whose dietary energy intake is lower than the amount of energy it needs to be in good health and have an active life, has been regularly monitored by FAO and reported yearly in the state of food security and nutrition in the world.[11] The PoU has been used to monitor and report on global hunger back to 2000 with the Millennium Development Goals and has been endorsed in September 2015 as SDG 2.1.1. In order to provide a comparable estimate over time and across countries for global monitoring, the PoU is based on the Dietary Energy Supply (DES) compiled by FAO in the Food Balance Sheets. Since the Marshall Islands does not produce a Food Balance Sheet, the PoU is not part of the data for which progress towards reducing hunger is monitored by FAO.

However, from the food data collected in the 2019/20 HIES, it is possible to derive all the parameters needed to estimate the PoU, which is the average amount of energy consumed in the Marshall Islands together with the indicator of dispersion of the DEC within the population and the dietary energy needed by a Marshallese to be in good health and perform a level of activity socially acceptable (see Methodological Annex 1.1).

Based on the food consumption and demographic data collected in the 2019/20 HIES, it was found that around one Marshallese in twenty is undernourished, with a margin of error in the prevalence of around 2.5 percentage points. This means that for more than 2 000 Marshallese, their everyday dietary energy intake is not enough to meet their basic dietary energy needs. These people are suffering from hunger.

The size of the sample is not enough to allow for a reliable estimate at a lower level of disaggregation.

1.2 SDG 2.1.2 – The prevalence of moderate or severe food insecurity based on the FIES

The FIES is composed of eight dichotomous questions asking respondents to report on their experience in accessing enough and/or nutritious food with respect to their resources. The scale has been adopted to monitor progress towards SDG 2.1 through the SDG 2.1.2 indicator of the prevalence of moderate or severe food insecurity based on the FIES. Food insecurity as measured by this indicator refers to limited *access to food*, at the level of individuals or households, due to lack of money or other resources. The FIES was introduced for the first time in the Marshall Islands through a survey experiment conducted in 2018. The analysis of the data found that overall, the scale performed well in the Marshall Islands, but the low size of the sample on which the experiment was conducted prevented conclusions on the robustness of the statistical validity test. Taking from these positive results, the scale was then introduced in the 2019/20 HIES. However, the SDG 2.1.2 indicator on the prevalence of moderate or severe food insecurity is not provided for the Marshall Islands because it was not representative of the national population due to the exclusion of 86 households from Kwajalein.[I] However, from the analysis of the raw score (number of affirmative answers) of the remaining households and after demonstrating that the raw score is an ordinal measure of the severity of food insecurity, it is still possible to draw the profile of the food insecure and their related pattern of food consumption. Such analysis is presented later in this report.

[I] These households were dropped from the analysis because the same response pattern was observed for all the households belonging to the same enumeration area. As it was not possible to determine if these were reflecting true respondent patterns or field data issue, it was preferred to drop these cases.

CHAPTER 2
Basic features of the food consumption by population groups

The ADePT-FSM software was developed to allow for in-depth analysis of the food data collected in the HIES at national level, and for groups of population or groups of products or individual products. ADePT-FSM can provide estimates up to the tenth percentile for each population group, and therefore, allowing for robust estimates, it is recommended to have population groups relatively balanced in terms of size with at least 250 households per group. In the case of the 2019/20 HIES, valid estimates on food consumption were obtained for 870 households,[I] which means that not all population groups can be considered for the analysis. The categories below were therefore selected based on their relevancy in the context of food security analysis and the possibility of being disaggregated at a level allowing for reliable estimates (see Annex 2 for basic information on the size of each group).

- Geographic characteristics
  - Marshall Islands
  - Urban/rural
  - Majuro/Kwajalein/rural

- Demographic characteristics of the household or the head of the household
  - Gender of the head of the household: Male or female
  - Age of the head of the household: Less than 39 years old, 40 to 49 years old, 50 to 59 years old, 60 years old and above
  - Number of dependent children in the household who are less than 14 years old: No child, one child, two children, three children and more than four children
  - Marital status of the head of the household: Married or not married (widowed/divorced/ separated/never married)

- Health and sanitation
  - Access to a safe source of drinking water: Yes or no[II]

- Socioeconomic characteristics of the household or head of the household
  - Tercile of household by per capita total expenditure
  - Education level of the head of the household: Pre- and primary school, lower secondary school, higher/post/tertiary education[III]
  - Household member was engaged in fishing, hunting or seafood collection during the last 7 days: Yes or no
  - Household member was engaged in handicraft or home processed food activities in the last 30 days: Yes or no
  - The household is involved in livestock activities: Yes or no[IV]

[I]   From the original sample of 873 households, two households presenting an average amount of dietary energy lower than 500 kcal/capita/day and one household presenting an average amount of dietary energy higher than 12 000 kcal/capita/day were dropped from the analysis.

[II] This group is created using information on the main water source used for drinking. A dichotomous variable was created taking the value of "Yes" when the source for drinking water is a public piped or protected well and "No" when the source for drinking water is an unprotected well, ground water or a rainwater tank.

[III] This population group is created using the information on the highest level of schooling attended.

[IV] The question analyzed refers to livestock (pigs, chicken, ducks or other livestock) or aquaculture stocks (prawn, clam, moi, tilapia, oyster or pearl, coral, other) possessed by any of the household members.

- The household is selling copra: Yes or no
- The household receives remittances from another household: Yes or no
- Level of severity of food insecurity based on the FIES:[I] Food secure or mildly food insecure and moderately or severely food insecure.

In addition to the above population groups, indicators are also provided for each of the 167 food products collected in the survey and for each of the 17 food groups of the FAO/WHO Global Individual Food consumption data Tool[II] (GIFT) classification. To these 17 food groups, the group of "Tobacco and kava" was added to further look at the consumption pattern of these products, even if they are not considered as food (see Annex 2.2, the list of the 18 groups and their composition).

Further to this grouping, products were also classified following the Pacific guidelines for healthy living, developed by SPC's experts in nutrition.[12] In page 5 of the guidelines, authors propose a categorization of food products by energetic foods, body building foods and protective foods, and they further disaggregate these groups by distinguishing between foods to choose, to limit or to avoid.

Household Income and Expenditure Surveys are designed to collect information at the level of the household and therefore only the total amount of food consumed by the household is reported, from which it is not possible to infer intra-household food allocation. For this reason all the indicators are expressed in per capita per day and do not consider the age and sex of the individuals. Further, due to measurement error around the food consumption estimate associated with survey design and processing (see Annex 3), the analysis is performed for representative groups of people and not on single households or individuals. The units of measurement are kcal, grams, USD and percentage.

Finally, as already mentioned, it is only through individual intake surveys that it is possible to infer the food consumption of individuals. Food data collected in the 2019/20 HIES for the Marshall Islands do not substitute for such surveys and they are – at best – an approximation of the amount of food that is available to the household to be consumed over a certain reference period. Therefore, results presented below reflect only a pattern and whenever the term consumption is used it does not refer to actual intake.

2.1 Dietary energy consumption

The analysis of the food data collected in the 2019/20 HIES shows that on average a Marshallese consumes 2 860 kcal per day (ADePT table 1.3). This average amount of DEC is not equally distributed among the population, as reflected by the relatively high dispersion ratio and coefficient of variation (CV) of the DEC distribution.[III] These statistics reveal the coexistence of overweight/obesity (people consuming an amount of dietary energy higher than that needed to be in good health) and undernourished people (people having access to less dietary energy than that needed to be in good health and perform a certain level of physical activity that is socially acceptable).

A deeper look at the distribution of the household average DEC confirms that in the Marshall Islands not all population groups have access to the same amount of dietary energy. The most important differences in the average DEC are mainly observed between the least and most wealthy households and between households whose head possesses a higher level of education and those who possess a lower level of education. Households that receive remittances also tend to present a lower amount of dietary energy consumed than households who do not receive remittances. The same is observed also for food insecure households, who consume on average 400 kcal/capita/day less than food secure households.

[I] This categorization is performed using the affirmative questions to the FIES module. Before associating a level of food insecurity to the number of affirmative questions (raw score), it is important to assess the statistical validity of the scale. After having demonstrated that the scale performs well in the Marshall Islands and after equating the Marshall Islands scale to the global scale (treating the item related to the question "did you spend the whole day without eating" as unique in the Marshall Islands), we looked at the value of the raw scores for which the probability of being moderately or severely food insecure is higher than 50 percent, which corresponds to a raw score higher than or equal to 4. Based on this finding, two classes were created: 1 for "Food secure or mildly food insecure", 2 for "Moderately or severely food insecure".

[II] The food products were grouped according to FAO nutrition experts who developed the GIFT platform http://www.fao.org/gift-individual-food-consumption/data-and-indicator/en/ adapted from FoodEx2 classification. FoodEx2 is a comprehensive food classification and description system aiming to cover the need to describe food in data collections across different food safety domains https://efsa.onlinelibrary.wiley.com/doi/pdf/10.2903/sp.efsa.2015.EN-804.

[III] The dispersion ratio (ratio of the average dietary energy consumed by the highest income group to the average DEC of the lowest income group) or the CV of the DEC are good indicators of the inequality in access to dietary energy. In the Marshall Islands the dispersion ratio of the DEC is higher than 2 and the CV of the DEC (without correcting for excess variability) is close to 50 percent.

FIGURE 1
Geographical differences in the average DEC

Average dietary energy consumption (kcal/capita/day)
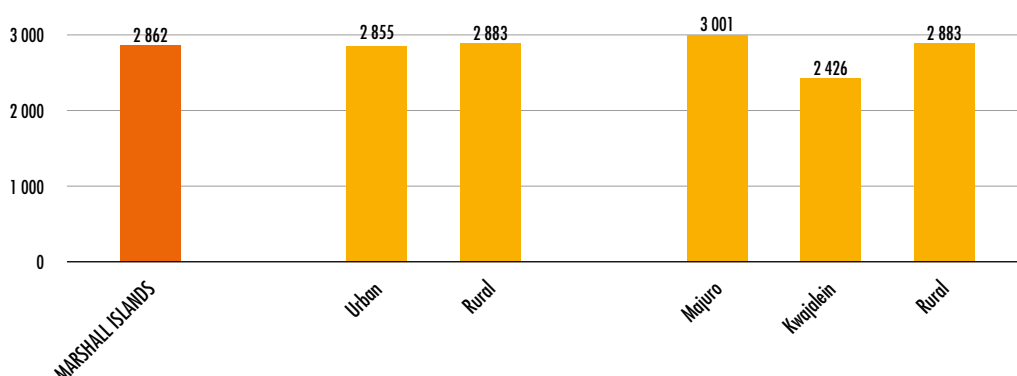
SOURCE: Marshall Islands 2019/20 HIES.

Households with no access to a safe source of drinking water consume around 300 kcal/capita/day less than households with access to a safe source of drinking water. There does not seem to be a significant difference in the average DEC between households involved in livestock activities and those not involved in these activities. In contrast, lower levels of consumption are observed among households involved in handicraft activities or households selling copra than among households not involved in these activities. These former households also present the lowest level of income, and these activities can be seen as a coping strategy to increase income and reduce level of vulnerability.

The average DEC seems to be lower in urban areas than in rural areas but this difference can be attributed to a slight underreporting of food consumption in Kwajalein atoll and a slight overreporting of food consumption in some rural areas.[I] But an important difference in the average DEC between the two main urban centres can be observed, with the average DEC in Kwajalein being around 550 kcal/capita/day less than in Majuro. This difference is further explained in Box 1.

The age, gender or marital status of the head of the household do not seem to significantly affect the amount of dietary energy consumed. As expected, the composition of the household also matters but in such cases the difference is better evaluated when the DEC is expressed in adult male equivalent[II] rather than when it is expressed on a per capita basis. The difference between the average consumption of a Marshallese belonging to a household without a child and that of a Marshallese belonging to a household with at least four children is more than 1 400 kcal extra when expressed on a per capita basis but it reduces to 900 kcal when expressed in adult male equivalent.

[I] The highest values of DEC observed in rural areas are associated with high consumption of coconut, sugar or flour. In rural areas, 75 percent of households are involved in handicraft or home processed foods activities and 91 percent are involved in copra activities. It is believed that some of these households might have reported some coconut they have used to exchange for food or some of the flour or sugar used to produce doughnuts or pancakes to be further sold or exchanged.

[II] The DEC expressed in adult male equivalent refers to the total dietary energy consumed divided by the size of the household in adult male equivalent. To obtain this denominator, the normative average dietary energy requirement of each household member is estimated and divided by the average normative requirements of a male adult. These ratios are then summed up for each household to obtain the size of the household in adult male equivalent. The higher the number of children in a household, the lower the denominator and the higher the value of the DEC expressed in adult male equivalent compared to the DEC expressed in per capita.

BOX 1

Focus on Kwajalein

Kwajalein atoll is composed of many islands and islets. The island of Kwajalein is a US Department of Defense missile research and testing site and home to around 1 800 Americans (not part of this sample). Ebeye Island is the most populous and polluted island of Kwajalein atoll and by far the most impoverished city and atoll in the Marshall Islands.

The survey finds that in Ebeye the average DEC is 500 kcal/capita/day lower than in Majuro, the capital city.

It is believed that the DEC reported in Ebeye is too low and that it might have suffered from underreporting due to the dengue fever outbreak that disrupted field work.[I]

However, it is also believed that we should expect a lower average DEC in Ebeye compared to Majuro for the reasons described below:

- A household in Ebeye is composed on average of 4 people compared to 3.5 people in Majuro.[II]
- Dietary energy requirements are expected to be lower in Ebeye than in Majuro as a household in Ebeye is composed of more children than a household in Majuro.[III]
- Households in Ebeye are subject to higher price of basic foods.[IV]

FIGURE 2

Differences in the DEC expressed in per capita and adult male equivalent by household composition

Differences in the average DEC in per capita or adult male equivalent (kcal/day) by household composition
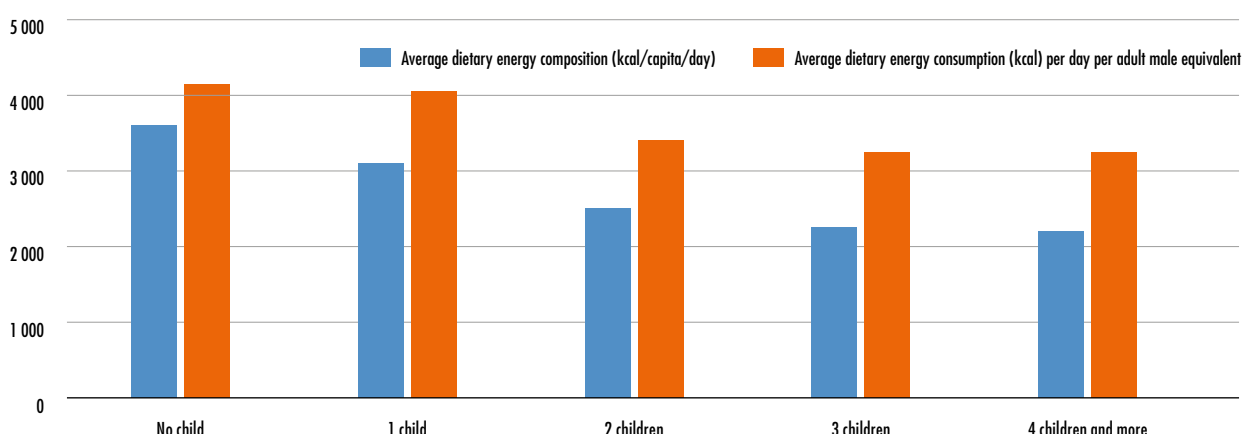
SOURCE: Marshall Islands 2019/20 HIES.

As seen in Figure 3, income (proxied by total consumption expenditure) is the main factor of inequality in access to dietary energy and many household characteristics are strongly linked to income; hence, to assess which characteristics affect the average DEC after controlling for income, a simple linear regression was performed linking the logarithm of the DEC distribution to the logarithm of the total expenditures and all the regional, demographic and socioeconomic characteristics of the households.[V]

The regression confirms all the results discussed above. The average DEC is significantly lower in Kwajalein than in Majuro and there is no significant difference between the average DEC observed in Majuro and that in rural areas. Except for households whose head is older than 60 years of age, the gender, the age and marital status of the head of the household do not significantly affect the DEC. The higher the level of education of the head of the household, the higher the DEC, but the level of

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[I] Data were collected in Ebeye from July 2019 to December 2019 and a big drop in the average DEC can be observed for the months of August, September, October and December, which also coincided with the dengue fever outbreak in Ebeye.

[II] The difference in the mean is significant at 1 percent level.

[III] The difference in the mean number of children less than 14 years old that belong to the household in Ebeye or Majuro is significant at 1 percent level.

[IV] The market survey that was conducted concurrently with the HIES finds that, on average, imported foods are more expensive in Ebeye than in Majuro.

[V] The regression is performed using the sampling weights, as we could see that weights affect the average DEC of some population groups.

FIGURE 3

Geographical differences in the average dietary energy consumption by demographic and socioeconomic characteristics of the household

Average dietary energy consumption (kcal/capita/day)

Category	Value
MARSHALL ISLANDS	2 862
Male headed household	2 854
Female headed household	2 879
Age 18 to 39	2 848
Age 40 to 49	2 863
Age 50 to 59	2 908
Age 60 and above	2 833
Not married	2 852
Married	2 865
No access to safe source of drinking water	2 778
Access to safe source of drinking water	3 067
First tercile of expenditure	2 199
Second tercile of expenditure	3 043
Third tercile of expenditure	4 191
Pre- and primary school	2 626
Lower secondary school	2 767
Higher/post/tertiary education	3 304
Household not involved in livestock activities	2 880
Household involved in livestock activities	2 816
No household member involved in fishing or hunting activities	2 859
Any household member involved in fishing or hunting activities	2 875
No household member involved in handicraft or home produced activities	2 880
Any household member involved in handicraft or home produced activities	2 758
Household involved in copra activity	2 795
Household not involved in copra activity	2 878
Household receives remittances	2 747
Household does not receive remittances	2 967
Food secure or mildly food insecure	3 019
Moderately or severely food insecure	2 574

SOURCE: Marshall Islands 2019/20 HIES.

education does not seem to significantly affect the DEC after controlling for income, and the same result is observed between households involved or not in handicraft, copra or livestock activities. Remittances represent an important source of income for many Marshallese and 45 percent of households receive remittances (and more than one household in three in Kwajalein atoll). A reduction or cutting back of this additional income would translate into increase difficult access to food in enough quantity and quality for many households. After controlling for income, access to a safe source of drinking water is not alone a factor of inequality in accessing DEC. Food insecure households or households receiving remittances also present a statistically significant lower DEC (*p*-values respectively of 0.02 and 0.08) (see Annex 4 for the results of the regression).

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2.2 Main sources of dietary energy consumption

Of the dietary energy consumed on average by a Marshallese, 85 percent is consumed in the house and the remainder is consumed outside the house mainly in the form of lunch, dinner, snacks or breakfast (respectively 57 percent, 13 percent, 12 percent and 10 percent of the calories consumed away from home). Of the total amount of dietary energy consumed, 67 percent of the dietary energy consumed is purchased and consumed in the house. Households depend strongly on in-kind foods, since own production and food received for free or through exchange contribute together 18 percent of the amount of dietary energy consumed (ADePT table 1.5), even if the contribution of own production remains a relatively marginal source of dietary energy.

These trends differ slightly by geographic, demographic or socioeconomic characteristics of the households. Around 75 percent of the dietary energy consumed in the house in urban households is purchased in cash, 17 percent is consumed away from home while around one calorie in two consumed in rural areas comes from own produced foods or is received for free or through exchange.

Differences within urban areas can also be observed, since 24 percent of the dietary energy consumed in Kwajalein (28 percent of the total amount spent on food) is consumed away from home compared to

15 percent in Majuro (22 percent of the total amount spent on food). Meals consumed away from home (mainly in the form of lunch and breakfast) therefore represent an important component of the diet of people living in Ebeye. These lunches may be consumed by people working in the US base in Kwajalein, as most of the Marshallese working in the US base are daily workers coming from Ebeye.

Households involved in fishing, livestock, handicraft or copra activities depend more on their own production, or on food received for free, than households not involved in these activities, since less than 50 percent of the dietary energy they consume comes from cash purchases. Contribution of own production to the dietary energy consumed by the wealthiest households is marginal, while 13 percent of dietary energy consumed by the least wealthy households comes from their own production. Conversely, one calorie in five consumed by wealthy households is consumed away from home. Interestingly is the higher contribution of food consumed away from home to the average dietary energy consumed by female headed households compared to male headed households (respectively 18 percent and 14 percent), and female headed households also tend to depend less on cash purchases and more on food received for free than male headed households (10 percent compared to 8 percent). Finally, the larger the household, the higher the contribution of own production and food received for free to the average DEC consumed.

FIGURE 4

Contribution of the main sources of acquisition to the average dietary energy consumed (percentage)

Distribution of the average dietary energy consumption by major sources of acquisition (percentage)

● Share of dietary energy consumed at home purchased in cash

● Share of dietary energy consumed from own production

● Share of dietary energy consumed away from home purchased in cash or received for free

● Share of dietary energy consumed at home and received for free or through exchange

SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 5
Contribution of main sources of acquisition of the dietary energy by household characteristics

Contribution to the average DEC of the major sources of acquisition by population groups (percentage)

Population group	Purchased in cash	Own production	Away from home	Free/exchange
MARSHALL ISLANDS	67	9	15	9
No child	69	7	16	8
1 child	70	7	14	8
2 children	65	10	15	9
3 children	64	11	15	10
4 children and more	60	14	15	10
Male headed household	68	10	14	8
Female headed household	65	7	18	10
Age 18 to 39	67	10	15	8
Age 40 to 49	67	10	14	10
Age 50 to 59	70	8	15	7
Age 60 and above	64	9	16	11
Not married	66	8	15	11
Married	67	10	15	8
No access to safe source of drinking water	66	12	13	10
Access to safe source of drinking water	70	2	21	6
First tercile of expenditure	65	13	13	9
Second tercile of expenditure	69	6	16	8
Third tercile of expenditure	68	4	19	9
Pre- and primary school	60	14	13	13
Lower secondary school	69	9	15	8
Higher/post/tertiary education	70	5	19	7
Household not involved in livestock activities	74	3	17	6
Household involved in livestock activities	49	25	11	15
No household member involved in fishing or hunting activities	71	5	16	8
Any household member involved in fishing or hunting activities	49	28	11	12
No household member involved in handicraft or home produced activities	69	6	16	8
Any household member involved in handicraft or home produced activities	52	25	11	12
Household involved in copra activity	44	31	9	15
Household not involved in copra activity	72	4	17	7
Household does not receive remittances	62	11	17	10
Household receives remittances	71	8	13	7
Food secure or mildly food insecure	66	8	16	10
Moderately or severely food insecure	67	11	14	7
Majuro	77	3	15	5
Kwajalein	69	1	24	7
Rural	43	28	10	20

■ Share of dietary energy consumed at home purchased in cash   ■ Share of dietary energy consumed from own production

■ Share of dietary energy consumed away from home purchased in cash or received for free   ■ Share of dietary energy consumed at home and received for free or through exchange

SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 6
National disparities in the cost of 1 000 kcal

Average dietary energy unit value (USD/1 000 kcal)

Category	Value
MARSHALL ISLANDS	1.9
No child	2.2
1 child	1.8
2 children	1.7
3 children	1.7
4 children and more	1.6
Male headed household	2.0
Female headed household	1.9
Age 18 to 39	2.0
Age 40 to 49	1.9
Age 50 to 59	2.0
Age 60 and above	1.9
Not married	2.0
Married	1.9
No access to safe source of drinking water	1.8
Access to safe source of drinking water	2.3
First tercile of expenditure	1.4
Second tercile of expenditure	1.8
Third tercile of expenditure	2.5
Pre- and primary school	1.6
Lower secondary school	1.9
Higher/post/tertiary education	2.3
Household not involved in livestock activities	2.0
Household involved in livestock activities	1.7
No household member involved in fishing or hunting activities	2.0
Any household member involved in fishing or hunting activities	1.6
No household member involved in handicraft or home produced activities	2.0
Any household member involved in handicraft or home produced activities	1.6
Household involved in copra activity	1.6
Household not involved in copra activity	2.0
Household does not receive remittances	1.9
Household receives remittances	2.0
Food secure or mildly food insecure	2.0
Moderately or severely food insecure	1.7
Majuro	1.9
Kwajalein	2.1
Rural	1.8

SOURCE: Marshall Islands 2019/20 HIES.

2.3 Cost of the dietary energy

To acquire the 2 860 kcal per day, a Marshallese spends around USD 5.2, which means that it costs a little less than USD 2.0 to obtain 1 000 kcal (ADePT table 1.3). Important disparities in the cost of calories can be observed within the population and not all households enjoy the same quality or variety of foods. The richer the household, the higher the amount spent to get 1 000 kcal. In fact, households belonging to the highest tercile of expenditure spends USD 1.1 more to get 1 000 kcal compared to households belonging to the first tercile of expenditure. Households with no child or with high education level also tend to acquire less energetic but more expensive foods. Interestingly, but as expected, households with no access to safe drinking water also tend to access more affordable sources of dietary energy than households with access to a safe source of drinking water. Food secure households spend on average 20 percent more than food insecure households to access 1 000 kcal. This finding is consistent with the 33 percent of households who are experiencing moderate or severe levels of food insecurity. What this means is that most food insecure households do not have access to safe and nutritious foods and they need to compromise on the quality and diversity of the foods they are accessing. In Majuro and Kwajalein, the food consumption patterns are very similar and the difference in the average cost of 1 000 kcal is mainly due to the fact that foods are on average more expensive in Kwajalein than in Majuro.

Expenditure on food accounts for around 45 percent of total household consumption expenditure (ADePT table 1.7). Food expenditures weigh more on the overall budget of rural households than that of urban households, with respective contributions of 58 percent and 41 percent. Households belonging to the first tercile of expenditure devote 48 percent of their total expenditures to food while the wealthiest households devote 41 percent. Interesting to note also is the most important contribution of food expenditures to the total expenditures of all households involved in fishing, livestock, handicraft or copra activities. This trend is also very consistent with the fact that there is a significant association between the total expenditure of the households and their involvement or not in these activities. The average total expenditures of the households involved in fishing, handicraft, livestock or copra activities are 30 to 40 percent lower than those of households not involved in these activities.

FIGURE 7
Differences in the average cost of 1 kg of products between Kwajalein and Majuro

Difference between the average cost of 1 kg in Kwajalein and the average cost of 1 kg in Majuro by food groups (USD/1 kg)

Food group	USD/1 kg
Savoury snacks	9.75
Beverages	0.04
Spices and condiments	-0.96
Sweets and sugars	1.19
Fats and oils	0.79
Fruits and their products	0.26
Vegetables and their products	-0.39
Meat and meat products	1.16
Fish, shellfish and their products	2.56
Eggs and their products	-0.08
Milk and milk products	-1.17
Pulses, seeds and nuts and their products	1.81
Roots, tubers, plantains and their products	0.80
Cereals and their products	0.10

SOURCE: Marshall Islands 2019/20 HIES.

CHAPTER 3
Composition of the diet of a Marshallese

3.1 Contribution of main food groups

To provide a broad overview of the main kinds of foods consumed, products were categorized according to food groups defined on the basis of their nutritional relevance following the classifications used in the FAO/WHO Global Individual Food consumption data Tool (GIFT). In the case of the Marshall Islands, out of the 19 food groups of the GIFT classification, 17 were covered by the food recall section of the 2019/20 HIES,[I] and the group of "tobacco/kava" was added because of the negative impact on health of excessive consumption of these products (see the mapping of the food products into GIFT groups in Annex 2.2). Around 158 food products were collected in the 7-day food recall section of the questionnaire, to which 7 "products" referring to meals consumed away from home[II] were added, as well as "smoking and smokeless tobacco" and "kava", giving a total of 167 products analysed in this report. With more than 20 food products, the groups of "beverages" and that of "fruits and their products"

are the most diversified, followed by the groups of "sweets and sugars", "vegetables and their products" and "fish, shellfish and their products" which comprised 14 to 18 products. The groups of "eggs" and "savoury snacks" are the least diversified, being represented by only one food product.

But not all households consume all the products reported in a group. Out of the 167 products reported, only 25 are consumed by at least one household in three. Only one type of vegetable, three types of fruits and three types of fish or fish products are consumed by at least one household in three. Conversely, the groups of meat and cereals that are less diversified are also those for which at least four products are consumed by 33 percent of the households. Less than one household in three consumes milk products, roots or tubers, but around 60 percent of the households consume eggs. Of note also is the importance of meals consumed away from home, since more than 33 percent of households have a lunch, a snack, a hot drink, a non-alcoholic drink or a bottle of water away from home.

FIGURE 8
Average dietary energy consumption by food groups

Contribution of food groups to the average dietary energy consumption (percentage)

Food group	Percentage
Cereals and their products	41%
Meals consumed away from home	16%
Meat and meat products	9%
Fish, shellfish and their products	8%
Sweets and sugars	7%
Fats and oils	5%
Fruits and their products	4%
Pulses, seeds and nuts and their products	3%
Beverages	3%
Composite dishes	2%
Spices and condiments	1%
Roots, tubers, plantains and their products	0%
Eggs and their products	0%
Milk and milk products	0%
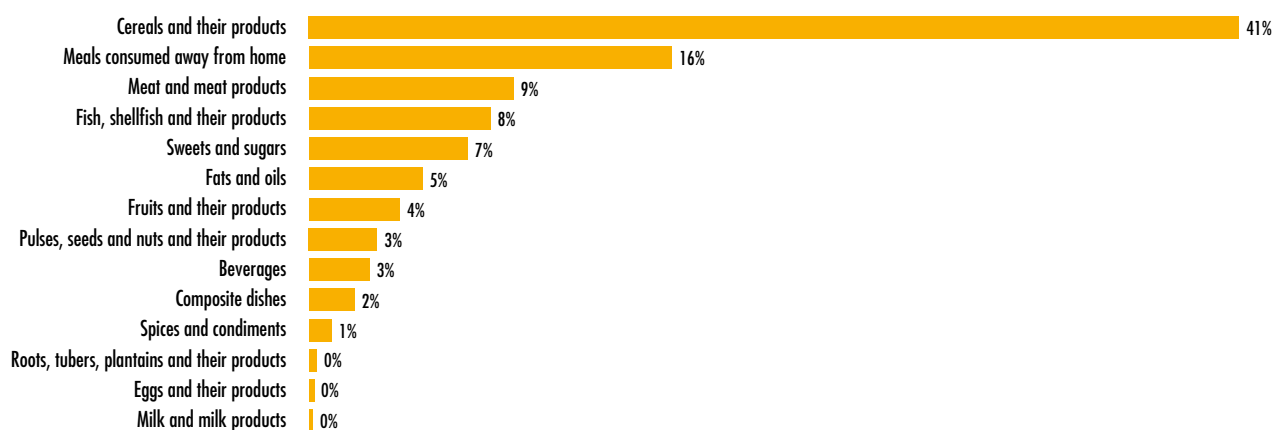
SOURCE: Marshall Islands 2019/20 HIES.

[I] None of the food products belonging to the groups of "insects, grubs and their products" and "food for particular nutritional uses" were collected in the food recall section of the questionnaire.

[II] Breakfast, lunch, dinner, snacks, hot drinks, non-alcoholic beverages and bottled water.

TABLE 1
Number of products reported by food group

Food group	Number of food products	Number of products accessed by at least one third of the households
Cereals and their products	9	4
Roots, tubers, plantains and their products	6	0
Pulses, seeds and nuts and their products	6	0
Milk and milk products	4	0
Eggs and their products	1	1
Fish, shellfish and their products	14	3
Meat and meat products	10	4
Vegetables and their products	17	1
Fruits and their products	21	3
Fats and oils	5	1
Sweets and sugars	18	1
Spices and condiments	9	3
Beverages	24	2
Food not classified (meals consumed away from home)*	8	5
Food additives	3	0
Composite dishes	9	0
Savoury snacks	1	0
Tobacco/kava**	2	1
Total	**167**	**29**

* In addition to meals consumed away from home, this group also contains one product corresponding to foods not well specified.
** Even if kava brings energy when consumed it is not considered food. Tobacco does not bring energy and is not considered food. These products are considered to be toxic.

SOURCE: Marshall Islands 2019/20 HIES.

Out of the 17 food groups, seven groups bring 90 percent of the dietary energy consumed and the group of "cereals and products" alone brings 41 percent of dietary energy, followed well behind by "meals consumed away from home" (16 percent). Meat, fish and sweets contribute 9, 8 and 7 percent respectively to the average dietary energy consumed. With an average of around 150 g/capita/day,[I] the consumption of fruits and vegetables is well below the 400 g/capita/day recommended by WHO as one of the 25 indicators of its Global Action Plan for the Prevention and Control of Noncommunicable Diseases.[13] The contribution of 3 percent to the average dietary energy consumed by the group "pulses, seeds and nuts" is mainly due to the consumption of brown coconut.

3.2 Main food products consumed in terms of quantities

Out of the 167 products collected in the food recall section of the 2019/20 HIES, 33 food products bring 90 percent of the average dietary energy consumed, but not all these products contribute the same. With an average daily quantity consumed of around 220 grams per capita, rice alone brings more than one calorie in four consumed, followed by flour with an average daily quantity consumed of 76 grams per capita and contributing to more than 9 percent of the dietary energy consumed. After lunch consumed away from home, chicken is the fourth main source of energy bringing 6 percent of the dietary energy consumed for an average quantity consumed of 83 g/capita each day.[II] Less dense in energy,[III] the quantity

[I] Edible quantity is after the non-edible portion of the food (peel, seeds, bones) has been removed. For instance, 35 percent of the banana or 20 percent of breadfruit is not edible, while 100 percent of rice or milk is edible.
[II] Edible quantity. Around 27 percent of chicken is not edible.
[III] 100 grams of edible reef fish brings 110 kcal compared to 207 kcal per 100 grams of edible chicken.

FIGURE 9
Average edible quantity consumed of the products contributing to 80 percent of the average DEC

Average edible quantity and contribution to the average DEC of the food products contributing 80 percent of the DEC
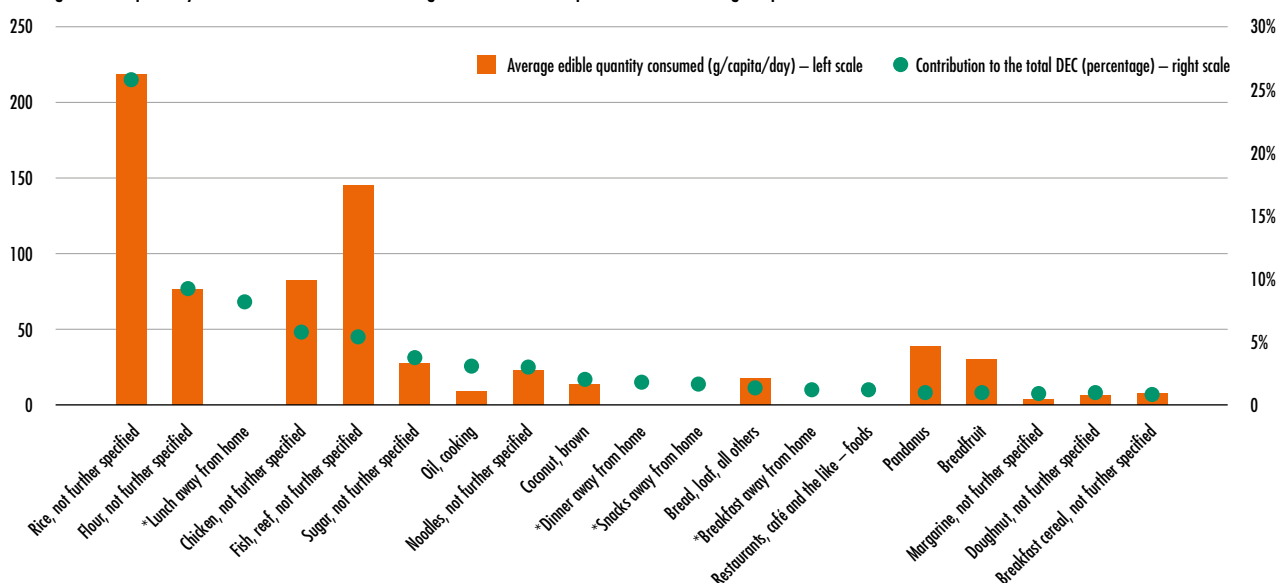
* Only number of meals consumed away from home were collected, with no quantity.
SOURCE: Marshall Islands 2019/20 HIES.

of reef fish consumed is also quite important with an average of 145 g/capita/day,[I] which makes reef fish the most consumed food in terms of edible quantity after rice and contributing to a bit more than 5 percent of the average dietary energy consumed (ADePT table 3.1). With an average energy of 240 kcal/capita/day, lunches consumed away from home also represent a significant source of dietary energy, contributing more than 8 percent of the average dietary energy consumed. Pandanus, breadfruit and banana (among of the rare locally grown products) together contribute no more than 3 percent of the average dietary energy consumed with an average edible quantity of respectively 39,[II] 30 and 22 g/capita/day. Of note also is the important quantity of bottled water consumed, with an average daily quantity of 200 grams per capita. The shortage of safe sources of drinking water in the Marshall Islands requires that many households consume bottled water. Daily salt consumption is at an average of around 9 grams per capita, well above the WHO recommendation of no more than 5 grams of salt per day per adult;[III] high sodium consumption contributes to high blood pressure and increases the risk of heart disease and stroke. This risk is further increased by the high consumption of other high salt content products like soy sauce (around 10 g/capita/day).

3.3 Main food products consumed in terms of percentage of households consuming the food

The percentage of households who reported having consumed the food in the previous 7 days is a good indicator not only of consumer preference but also of product availability and accessibility. As seen in table 1, only 3 of the 21 different kinds of fruit reported are consumed by at least one household in three. Conversely, if flour contributes 9 percent of the average dietary energy consumed, it is consumed by only 40 percent of the households, and despite the high quantity of reef fish consumed, only 43 percent of households consume reef fish, while 64 percent of households consume fish canned in oil, even though in small amounts (6 g/capita/day). Rice remains the most consumed and preferred food, since 97 percent of households in the Marshall Islands consume rice, followed by salt and soy sauce which are consumed by more than three households in four. Two households in three consume chicken. Conversely to what is observed in other PICTs, around 60 percent of households consume fresh eggs, with an average edible quantity of 8 grams consumed on average per day per capita.

[I]   Edible quantity. Around 29 percent of reef fish is not edible.
[II] Note however the important difference between pandanus as procured (194 g/capita/day) and pandanus as consumed (39 g/capita/day). The difference between both quantities lies in the 80 percent of the non-edible portion.
[III] See WHO. 2012. Guideline: sodium intake for adults and children https://www.who.int/publications/i/item/9789241504836

FIGURE 10
Main products consumed by at least one household in two (percentage)

Percentage of households who consumed the food product in the previous 7 days

Product	Percentage
Rice, not further specified	97%
Salt, iodised	79%
Sauce, soy/shoyu	76%
Noodles, not further specified	69%
Chicken, not further specified	66%
Fish, canned in oil, not further specified	64%
Oil, cooking	63%
Lunch away from home	60%
Egg, chicken, fresh	59%
Hot drinks away from home	58%
Sugar, not further specified	54%
Sauce, tomato, ketchup	54%
Snacks away from home	47%
Coffee, mix (e.g. 3 in 1)	47%
Mackerel, canned, not further specified	47%
Non-alcholic drinks away from home	45%
Luncheon meat, chicken	45%
Bottled water away from home	44%
Fish, reef, not further specified	43%
Smoking and smokeless tobacco	41%
Flour, not further specified	41%

SOURCE: Marshall Islands 2019/20 HIES.

Around 60 percent of the households have at least one of their members consuming a lunch away from home and 47 percent a snack away from home. Cola type drinks are consumed by 40 percent of households with an average daily consumption of 20 grams per capita. One household in three consumes imported foods like apples and oranges while only 28 percent of households consume locally produced breadfruit and 16 percent consume pandanus. Only one household in four consumes long-life milk (UHT) with an average quantity of 14 g/capita/day. Finally, but importantly, 41 percent of households consume tobacco, with an average consumption of 1 gram per day per capita (one standard cigarette). See Annex 5 for more detailed information on food consumption for each food product reported in the 2019/20 HIES.

3.4 Sources of acquisition of the food product

Around 90 percent of the dietary energy consumed from cereals, sweets and sugar, oil and fat products is purchased; the rest is mainly received for free or through exchange. This finding is not surprising, as these products cannot be own produced. But more surprising in turn, is that less than 4 percent of the dietary energy coming from meat products (that is around 10 kcal/capita/day out of 250 kcal/capita/day from meat products) is own produced,

even though around one household in four is involved in livestock activities. Conversely, fish consumed from own fishing or received in kind contribute together 36 percent of the total amount of energy coming from fish (around 80 kcal/capita/day out of the 220 kcal/capita/day consumed from fish and fish products). The same can be observed for fruits, for which the contribution of own produced fruits, or fruits received for free or through exchange, contribute 47 percent of the total amount of dietary energy coming from fruits (around 50 kcal/capita/day from the 107 kcal/capita/day of fruits consumed on average). In addition, fish and fruit products are also the two groups for which the contribution of dietary energy from foods received for free or through exchanges is the highest (16 percent). Finally, 95 percent of the almost insignificant dietary energy coming from vegetables (6 kcal/capita/day) comes from purchases, as a consequence of the difficulties in growing vegetables in the Marshall Islands due to recurrent drought and poor soil conditions (the soil is sandy, saline, contaminated with radioisotopes and its organic content is low).

The further analysis of the main sources of acquisition of each product, expressed in terms of percentage of households, shows that almost one household in three who has a lunch away from home was provided with it for free (maybe from church, from work or other households). Around 95 percent

FIGURE 11

Sources of acquisition of dietary energy by food group (percentage)

	Purchased in cash	Own produced	Received for free or through exchange
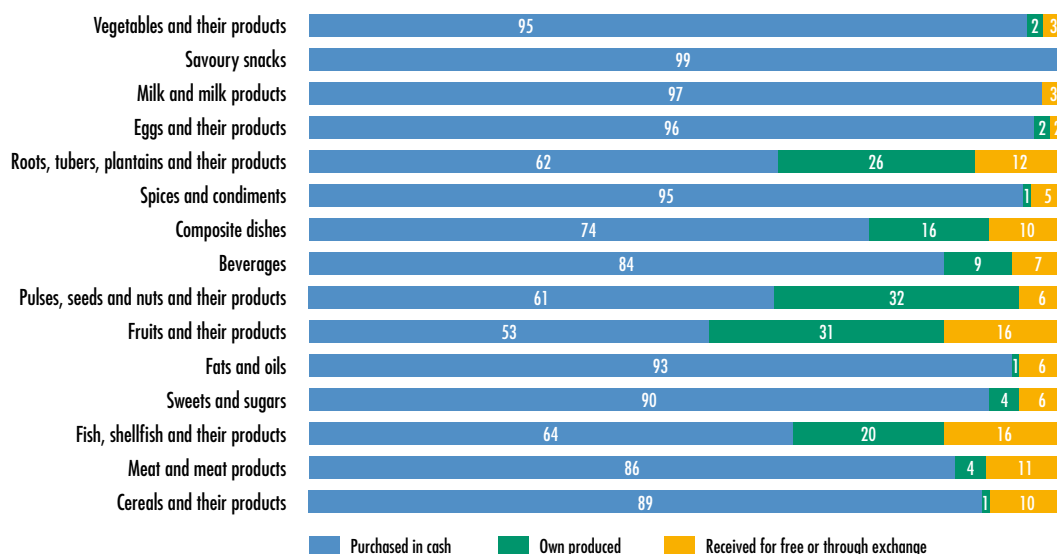
SOURCE: Marshall Islands 2019/20 HIES.

of households who consume eggs purchase them, which is somehow unexpected if we consider that one household in four is raising chickens. Of the 43 percent of the households who consume reef fish, more than 60 percent consume reef fish from their own fishing activities (40 percent) or are provided with it for free (21 percent). The 35 percent of households who consume bananas consume them from their own production or receive them for free. Breadfruit or pandanus are purchased by less than one household in four; the remaining households consume these fruits from their own production or receive it for free. Exchange remains a marginal way of procuring foods, since less than 3 percent of households procure some of their food through exchange of other foods or handicraft products.

3.5 Cost of food[I]

Of the 42 food products consumed by at least one household in five, bottled water is the least expensive, with a cost lower than 10 cents per 100 grams. Following water, reef fish and rice are the two most affordable foods, as it costs less than 11 cents to get 100 grams of these products, but compared to reef fish, rice remains the cheapest source of dietary energy as it costs 31 cents to get 1 000 kcal from rice. Flour, banana, sugar and breadfruit also belong to the least expensive food products, as it costs less than 20 cents to get 100 grams of these products. Even though the dietary energy coming from reef fish or chicken has very

similar costs of around USD 1.3 per 1 000 kcal, with respective costs of 20 cents per 100 grams and 10 cents per 100 grams, chicken is a far more expensive product than reef fish. Conversely, tuna fish is five times more expensive than reef fish, and this is also why tuna consumption is relatively marginal in the Marshall Islands compared to reef fish; (only 19 percent of households consume tuna fish with an average daily edible quantity of around 12 grams per capita). Even if it costs less than 20 cents to get 100 grams of breadfruits, households tend to prefer imported fruits like apples or oranges that are twice as expensive as breadfruits but are consumed by at least one household in three, whereas breadfruits are consumed by only 28 percent of households. Coconut water, poor in energy but rich in nutrients, is consumed by less than 25 percent of the households and is also half the cost of soft drinks like cola, which is less healthy as it is rich in sugar but consumed by more than 40 percent of households. It is interesting to note that despite their relatively high price and dietary energy cost (of respectively 57 cents per 100 grams and USD 5.1 per 1 000 kcal), eggs are still consumed by around 60 percent of households.

A Marshallese spends on average USD 5.2 per day to get food. With an average expenditure of 45 cents per day per capita, lunches consumed away from home represent the main food expenditure contributing 9 percent to the average amount spent on food. Rice and chicken are the second main contributors to the food expenditures, with a

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I   To account for the small dispersion observed in the price of some products, the values presented in this section refer to the median unit value of 100 grams of product estimated from the survey.

TABLE 2

Percentage of households consuming the food product in the previous seven days by source of consumption

Food product	Percentage of households accessing the food				
	Total	Cash	Home production	Gift	Exchange
Rice, not further specified	97	88	2	9	2
Salt, iodised	79	93	1	4	1
Sauce, soy/shoyu	76	93	0	4	2
Noodles, not further specified	69	92	0	6	1
Chicken, not further specified	66	86	2	11	1
Fish, canned in oil, not further specified	64	90	0	9	1
Oil, cooking	63	93	1	5	1
Lunch away from home	60	66	0	34	0
Egg, chicken, fresh	59	95	1	4	0
Hot drinks away from home	58	80	0	20	0
Sugar, not further specified	54	92	1	4	3
Sauce, tomato, ketchup	54	97	0	2	1
Snacks away from home	47	86	0	14	0
Coffee, mix (e.g. 3 in 1)	47	92	1	5	2
Mackerel, canned, not further specified	47	87	0	9	3
Non-alcoholic drinks away from home	45	86	0	14	0
Luncheon meat, chicken	45	95	0	3	2
Bottled water away from home	44	83	0	17	0
Fish, reef, not further specified	43	37	40	21	1
Smoking and smokeless tobacco	41	94	0	5	1
Flour, not further specified	41	86	2	8	3
Cola flavour soft drink	40	95	0	4	1
Beef, canned, corned	39	93	0	5	2
Canned meat, not further specified	38	92	0	6	2
Banana, common e.g. Cavendish	35	43	34	23	0
Onion, brown	35	98	1	1	0
Apple, not further specified	34	94	2	4	0
Orange	33	98	1	1	0
Bread, loaf, all others	33	90	4	6	0

SOURCE: Marshall Islands 2019/20 HIES.

contribution of around 5 percent corresponding to an average expenditure of 25 cents. With an average expenditure of 19 cents per day, reef fish is the fourth main food expenditure item. An average amount of 16 cents per day is spent on both noodles and tobacco, contributing the same amount to the overall budget of a Marshallese. Overall, meals consumed away from home for breakfast, lunch, dinner, snacks, hot drinks or non-alcoholic beverages represent more than 20 percent of the budget devoted to food, with an average daily expenditure of USD 1.2. Finally, bottles of water represent 2.5 percent of food expenditure and one household in two consumes bottled water.

TABLE 3

Cost of 1 000 kcal and of 100 grams of the food products consumed by at least one household in five and contributing to 80 per cent of the average DEC

Food product	Average food consumption in monetary value (USD/capita/day)	Median dietary energy unit value (USD/1000 kcal)	Median price (USD/100g)	Contribution to total DEC (%)	Percentage of household that consumed the food in the last 7 days (%)
Bottled water away from home	0.096	NA	0.05	0	44
Bottled water/spring water	0.034	NA	0.10	0	25
Fish, reef, not further specified	0.193	1.32	0.10	6	43
Rice, not further specified	0.248	0.31	0.11	26	97
Banana, common e.g. Cavendish	0.060	1.79	0.11	1	35
Coconut, green	0.032	8.76	0.12	0	20
Flour, not further specified	0.098	0.38	0.13	9	41
Coconut, water only	0.039	7.70	0.14	0	23
Sugar, not further specified	0.045	0.38	0.15	4	54
Breadfruit	0.077	2.19	0.19	1	28
Salt	0.021	0.00	0.20	0	79
Chicken, not further specified	0.247	1.35	0.20	6	66
Milk, long life, shelf stable (UHT)	0.038	4.76	0.24	0	26
Cola flavour soft drink	0.060	8.82	0.27	0	40
Onion, brown	0.022	17.92	0.37	0	35
Orange	0.044	12.78	0.40	0	33
Sauce, tomato, ketchup	0.043	3.52	0.40	0	54
Apple, not further specified	0.051	9.38	0.47	0	34
Bread, loaf, all others	0.069	1.92	0.47	2	33
Mackerel, canned, not further specified	0.060	3.33	0.49	1	47
Hot drinks away from home	0.112	6.33	0.50	1	58
Oil, cooking	0.058	0.62	0.56	3	63
Sauce, soy/shoyu	0.058	17.55	0.56	0	76
Egg, chicken, fresh	0.057	5.1	0.57	0	59
Butter, not further specified	0.012	1.0	0.66	0	22
Bacon, not further specified	0.063	4.4	0.69	0	25
Noodles, not further specified	0.168	1.9	0.75	3	69
Luncheon meat, chicken	0.083	5.2	0.81	1	45
Canned meat, not further specified	0.083	4.4	0.82	1	38
Coffee, mix (e.g. 3 in 1)	0.050	1.9	0.83	1	47
Peanut butter, not further specified	0.022	1.3	0.85	1	21
Breakfast cereal, not further specified	0.063	2.3	0.85	1	23
Snacks away from home	0.142	3.0	1.00	2	47
Non-alcoholic drinks away from home	0.111	4.9	1.00	1	45
Fish, canned in oil, not further specified	0.090	7.0	1.06	0	64
Beef, canned, corned	0.101	6.1	1.38	1	39
Coffee, instant, powder	0.035	13.7	1.47	0	21
Lunch away from home	0.463	1.7	2.00	8	60
Smoking and smokeless tobacco	0.164	0.0	14.00	0	41

* Price per meal in case of breakfast, lunch and dinner consumed away from home.
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 12
Contribution of the food product consumed to the total food expenditures (percentage)

Contribution of the food to the total food expenditures (product consumed by around 30 percent of the households)

Food product	Percentage
Lunch away from home	9.0%
Rice, not further specified	4.8%
Chicken, not further specified	4.8%
Fish, reef, not further specified	3.7%
Noodles, not further specified	3.3%
Tobacco	3.2%
Snacks away from home	2.8%
Hot drinks away from home	2.2%
Non-alcoholic drinks away from home	2.2%
Beef, canned, corne	2.0%
Flour, not further specified	1.9%
Bottled water away from home	1.9%
Fish, canned in oil, not further specified	1.7%
Canned meat, not further specified	1.6%
Luncheon meat, chicken	1.6%
Bread, loaf, all others	1.3%
Cola flavour soft drin	1.2%
Banana, common e.g. Covendish	1.2%
Mackerel, canned, not further specified	1.2%
Oil, cooking	1.1%
Sauce, soy/shoyu	1.1%
Egg, chicken, fresh	1.1%
Apple, not further specified	1.0%
Coffee, mix (e.g. 3 in 1)	1.0%
Sugar, not further specified	0.9%
Orange	0.9%
Sauce, tomato, ketchup	0.8%
Onion, brown	0.4%
Salt, iodised	0.4%

SOURCE: Marshall Islands 2019/20 HIES.

CHAPTER 4
Consumption pattern of essential nutrients

Essential nutrients are composites that the body cannot produce or cannot produce in sufficient quantity to survive, grow and reproduce. While there are many essential nutrients, they can be broken down into two categories: macronutrients and micronutrients.

Macronutrients (protein, carbohydrates, fibre and fats) are eaten in large amounts and include the primary building blocks of the diet and provide the body with energy. Vitamins and minerals are micronutrients, and small doses are usually sufficient.

For a healthy diet it is important to eat a variety of foods rich in these essential nutrients and for a balanced diet it is important to eat quantities of each of these foods within acceptable limits.

4.1 Macronutrients contribution to the diet of a Marshallese

Proteins, fats and carbohydrates contribute respectively around 16, 23 and 60 percent to the average dietary energy consumed, and the Marshallese therefore have a diet rich in proteins and fats, exceeding or close to the upper limit of the WHO/FAO/United Nations University (UNU) norms for a balanced diet[14] (ADePT table 1.10).

BOX 2

Essential macronutrients

Carbohydrates are critical to the function of the body. They are broken down into glucose, which is the primary source of fuel for the body and brain. Not only do they provide energy for the body, but they also help stabilize blood sugar levels and preserve muscle mass by preventing the breakdown of proteins for energy. Whole grains, fruits and vegetables are considered as healthy carbohydrates.

Fibre is an indigestible form of carbohydrate. It is not an essential nutrient and therefore an inadequate amount does not result in biochemical or clinical symptoms of a deficiency. However, diets high in fibre have shown decreased risk for obesity, high cholesterol and heart disease. Fruits, vegetables and whole grain products all contain high amounts of fibre.

Proteins are critical to good health. From forming muscle to creating new enzymes and hormones, getting enough protein into the diet is key. Proteins are made up of building blocks called amino acids. There are 20 types of amino acids, all of which are important. While animal proteins provide adequate amounts of all essential amino acids, plant-based proteins are typically lacking in one or more. The best way to ensure adequate protein intake is to include a variety of protein foods in the diet, such as fish, meat, eggs, dairy, nuts and beans.

Fat is an essential nutrient that provides energy, boosts the absorption of certain vitamins and helps protect your organs from damage. Some types of fat are better than others, however. Saturated fats for example, are a type of fat found in red meat, whole milk and other whole-milk-based dairy foods, cheese, coconut oil, and many commercially prepared baked goods and other foods. A diet rich in saturated fats can increase the risk of heart disease and they should be limited to less than 10 calories a day. Unsaturated fats, on the other hand, can actually help protect the heart and aid in the prevention of heart disease. Healthy sources of fat include nuts, avocados, salmon, olive oil, flaxseed and nut butters.

To reach a balanced diet, WHO recommends that on average, proteins contribute 10 to 15 percent of total dietary energy consumed, fats contribute 15 to 30 percent and carbohydrates contribute 55 to 75 percent.

FIGURE 13
Overall diet is rich in saturated fats and proteins

Contribution of macronutrients to the total dietary energy consumption (percentage)

WHO – lower range   WHO – higher range

10 16.4 15	15 23.3 30	55 60.3 75
Proportion of energy consumed as protein (percentage)	Proportion of energy consumed as fats (percentage)	Proportion of energy consumed as carbohydrates (percentage)
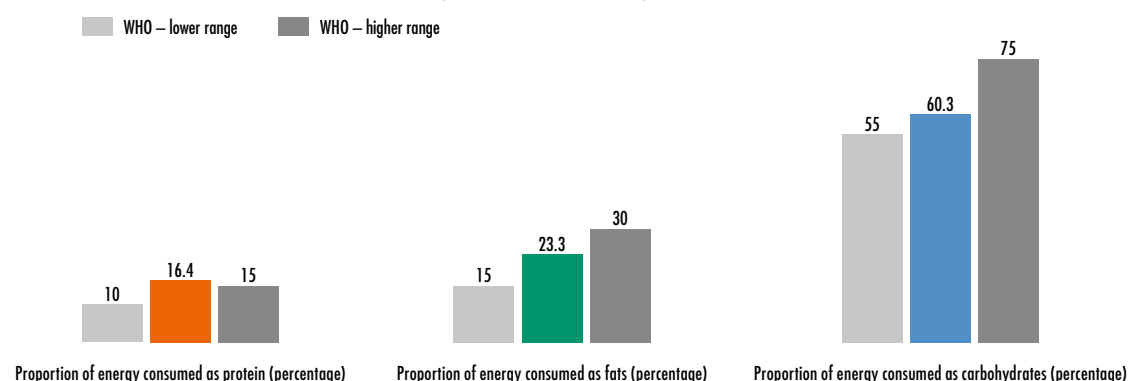
SOURCE: Marshall Islands 2019/20 HIES.

Only one individual in three in the Marshall Islands has access to a balanced diet. The contribution of fats and proteins to the average dietary energy is much higher for rural households than for urban households and the same trend is observed among the wealthiest households or households involved in fishing, livestock or copra activities. With respective contributions of 62 percent and 60 percent, the diet of food insecure households is richer in carbohydrates than that of food secure households. For the latter, the contribution of fats is much higher, at 24 percent compared to 21 percent. Food insecure households tend therefore to consume energy-dense foods that are richer in carbohydrates while food secure households tend to consume energy-dense foods richer in fats.

On average, a Marshallese consumes 119 grams of proteins per day, 77 grams of fats and 415 grams of carbohydrates, with higher quantities of macronutrients observed among the wealthiest households or households with no child. This is not surprising because macronutrients yield the energy consumed,[I] and these population groups are also those presenting the highest level of DEC.

Fish and meat products alone contribute more than 43 percent of the proteins consumed and cereal products bring more than 60 percent of the carbohydrates consumed. Even if on average the quantity of fish and fish products consumed is much higher than that of meat and meat products (180 edible grams/capita/day versus 123 edible grams/capita/day), 23 percent of the fat consumed comes from meat, while fish and fish products bring only 11 percent of the total amount of fats consumed.

It may be recommended to reduce the overall consumption of high-fat meat products and consume other sources of foods rich in protein with lower fat content (such as low-fat meat, fish or pulses). Of note also is the higher contribution of proteins consumed among households involved in fishing or livestock activities compared to those not involved in these activities. This finding is not suprising for households involved in fishing activities, but is surprising for households involved in livestock activities, for which less than 3 percent of the dietary energy consumed from meat comes from their own production. This could be because 42 percent of households involved in fishing activities are also involved in livestock activities.

Despite fibre not being an essential nutrient, consumption of foods rich in fibre decreases intestinal obstruction, lowers the risk of diabetes, heart disease and colon cancer. There is no determined average requirements for fibre, only population intake goals or adequate intake. And only when the mean consumption of fibre is higher than the adequate intake can it be said that the risk of fibre inadequacy is low. A Marshallese consumes on average 14 grams of fibre per day, which is far below the 25 grams of dietary fibre per day recommended by most authoritative institutions.[II] In the Marshall Islands all population groups present an average level of fibre consumption well below the recommended quantity, and the least wealthy households are the group most at risk. Increasing consumption of pulses, avocado, whole wheat cereals, brown rice or green leafy vegetables would substantially reduce fibre inadequacy in the Marshall Islands.

[I] One gram of protein, fats, carbohydrate, fibre and alcohol brings respectively 4, 9 4,2 and 7 kcal.
[II] Such as European Food Safety Authority (EFSA), United States Health and Medicine Division, and the World Cancer Research Fund (WCRF).

FIGURE 14

National disparities in the contribution of macronutrients to the average dietary energy consumption by population groups

Contribution of macronutrients to the average DEC (percentage)

Group	Carbohydrates	Protein	Fats
MARSHALL ISLANDS	60	16	23
Urban	62	16	23
Rural	56	19	25
No child	59	17	24
1 child	61	16	23
2 children	61	16	23
3 children	60	16	23
4 children and more	62	16	23
Male headed household	60	17	23
Female headed household	61	16	24
Age 18 to 39	61	16	23
Age 40 to 49	59	17	24
Age 50 to 59	61	16	23
Age 60 and above	60	16	24
Not married	60	16	24
Married	60	16	23
No access to safe source of drinking water	60	17	23
Access to safe source of drinking water	60	16	24
First tercile of expenditure	62	16	22
Second tercile of expenditure	60	16	24
Third tercile of expenditure	57	18	25
Pre- and primary school	60	17	23
Lower secondary school	61	16	23
Higher/post/tertiary education	59	17	24
Household not involved in livestock activities	61	16	23
Household involved in livestock activities	58	18	24
No household member involved in fishing or hunting activities	61	16	23
Any household member involved in fishing or hunting activities	56	20	25
No household member involved in handicraft or home produced activities	61	16	23
Any household member involved in handicraft or home produced activities	58	17	25
Household involved in copra activity	56	18	25
Household not involved in copra activity	61	16	23
Household does not receive remittances	59	16	24
Household receives remittances	61	16	22
Food secure or mildly food insecure	60	16	24
Moderately or severely food insecure	62	17	21
Majuro	62	16	22
Kwajalein	61	15	24
Rural	56	19	25

■ Proportion of energy consumed as carbohydrates (percentage) ■ Proportion of energy consumed as protein (percentage) ■ Proportion of energy consumed as fats (percentage)

SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 15
Average quantity of fibre consumption by population groups (g/capita/day)

Average fibre consumption (g/capita/day)

25

Group	Value
MARSHALL ISLANDS	14
Urban	13
Rural	16
No child	17
1 child	15
2 children	12
3 children	10
4 children and more	11
Male headed household	14
Female headed household	14
Age 18 to 39	13
Age 40 to 49	14
Age 50 to 59	15
Age 60 and above	14
Not married	14
Married	14
No access to safe source of drinking water	14
Access to safe source of drinking water	14
First tercile of expenditure	11
Second tercile of expenditure	14
Third tercile of expenditure	23
Pre- and primary school	12
Lower secondary school	13
Higher/post/tertiary education	17
Household not involved in livestock activities	13
Household involved in livestock activities	16
No household member involved in fishing or hunting activities	14
Any household member involved in fishing or hunting activities	15
No household member involved in handicraft or home produced activities	13
Any household member involved in handicraft or home produced activities	16
Household involved in copra activity	16
Household not involved in copra activity	13
Household does not receive remittances	14
Household receives remittances	14
Food secure or mildly food insecure	15
Moderately or severely food insecure	12
Majuro	14
Kwajalein	10
Rural	16

SOURCE: Marshall Islands 2019/20 HIES.

4.2 Apparent consumption of vitamins[I, II]

Vitamins help the body grow and function the way it should. They are five types of vitamins (A, B, C, D, E and K) and they have different jobs in the body, from helping resist infections to keeping the nerves healthy, helping the body get energy from food, or blood to clot properly. This report looks at vitamins A, B1, B2, B12 and C.

4.2.1 Vitamin A

BOX 3
Vitamin A
Vitamin A is essential for health, supporting cell growth, immune function, foetal development and vision. According to the WHO, vitamin A deficiency is the leading cause of preventable blindness in children worldwide; it also increases the severity and risk of dying from infections like measles and diarrhoea, raises the risk of anaemia and death in pregnant women and negatively affects the foetus by slowing growth and development.

There are two forms of vitamin A found in food: beta-carotene (found in certain plant foods, such as kale and cabbage and especially those that are orange, red and yellow, such as sweet potatoes) and retinol (found in certain animal foods like egg yolks, salmon and organ meats).

With an average quantity available for consumption of around 300 µg/capita/day (expressed in retinol equivalent), vitamin A adequacy (percentage corresponding to the ratio of vitamin available for consumption to average requirement[III] and 100 being the target) is partly reached for the Marshall Islands.[IV] However, this does not hold for all population groups, as adequacy is reached only in urban areas, or within the wealthiest households or households with no more than one child or with a high level of education. Adequacy is also reached for households with access to a safe source of drinking water and for food secure households, which tends to confirm the assumption that poor access to a safe source of drinking water limits access to diversified and nutritious foods.[V] Of note also are the disparities in vitamin A available for consumption between Majuro, Kwajalein and rural areas. With an average quantity of vitamin A available for consumption of 362 µg/capita/day, vitamin A adequacy is reached in Majuro, while it is far from being reached in Kwajalein and rural areas where vitamin A available for consumption represents respectively 75 percent and 80 percent of the requirements.

Despite their very low consumption (respectively 5 g/capita/day and less than 2 g/capita/day), margarine and butter contribute alone 21 percent of vitamin A available for consumption. Reef fish and chicken are the other main sources of vitamin A, together bringing 24 percent of the vitamin A available for consumption, but mainly because of their high consumption, as the vitamin A content of these products is very low.[VI] Therefore, to increase vitamin A consumption it is recommended that households eat more carrots or green leafy vegetables such as cabbages or taro leaves, both very rich in vitamin A and lower in fat than chicken.

[I]   Here we refer to the quantity of vitamins available for consumption by the household. Note that the content and quality of the vitamin is affected by the way the food is stored, prepared, processed, held warm or reheated and cooked and therefore there may be a considerable difference between the amount and quality of vitamins available for consumption and amount and quality of vitamins ingested.

[II] This analysis excludes the potential contribution of food consumed away from home to the total amount of vitamins available for consumption.

[III] The source for estimated average requirements of vitamin A is the FAO/WHO expert consultation on vitamin and mineral requirements in human nutrition. Second edition 2004.

[IV] It is important to note that the amount of vitamin available for consumption may be enough to cover the requirements of a population group but this does not automatically imply that all households (or household members) belonging to this population group have equal access to this amount of vitamin. This footnote holds for all the vitamins discussed in this report.

[V]   The quality of the water used to clean or cook the food also hampers the property of the nutrient absorbed, but the nutrient loss due to poor access to a safe source of drinking water cannot be assessed through food data collected in HIES.

[VI] 100 grams of reef fish or chicken meat bring respectively 31 µg and 33 µg of vitamin A (retinol equivalent) compared to 1 730 µg and 1 010 µg brought by carrot and margarine respectively.

FIGURE 16
National disparities in the vitamin A available for consumption

Vitamin A adequacy as measured by the ratio of the amount of vitamin A available for consumption as a percentage of the average requirements (percentage)
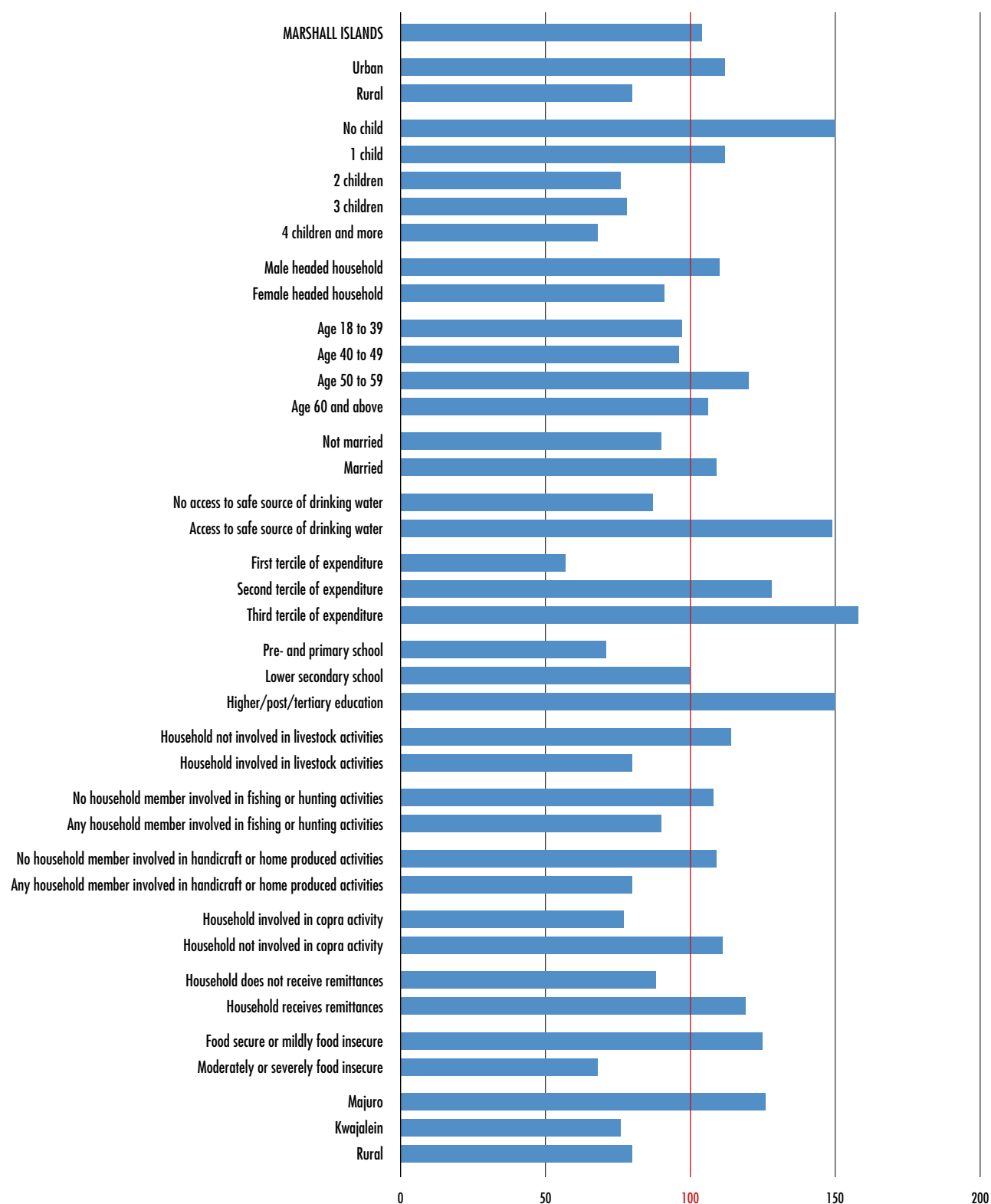
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 17
Main sources of vitamin A

Contribution of main food products to the vitamin A available for consumption (percentage)

Food product	Percentage
Margarine, not further specified	17%
Fish, reef, not further specified	15%
Carrot	9%
Chicken, not further specified	9%
Coffee, mix (e.g. 3 in 1)	5%
Butter, not further specified	4%
Pate, not further specified	4%
Egg, chicken, fresh	4%
Sauce, tomato, ketchup	3%
Tuna, not further specified	3%
Pumpkin	3%
Savoury snacks, chips	2%
Papaya	2%
Spices, not further specified	2%
Pandanus	1%
Milk, long life, shelf stable (UHT)	1%
Ice cream, vanilla	1%
Chicken, grilled/BBQ	1%

SOURCE: Marshall Islands 2019/20 HIES.

4.2.2 Vitamin B group

BOX 4
B Vitamins

B vitamins are water soluble and therefore do not stay long in the body. After the body uses these vitamins, amounts left over leave the body through the urine. B vitamins are important for the metabolism of proteins. They offer the following health benefits:

- Vitamin B1 (thiamine) helps to release energy from foods and is important in maintaining nervous system function.

- Vitamin B2 (riboflavin) helps to promote good vision and healthy skin and is also important in converting the amino acid tryptophan into niacin.

- Vitamin B12 helps in the formation of red blood cells and in the maintenance of the central nervous system.

Apart from B12, the body cannot store these vitamins for long periods, so they have to be replenished regularly through food. Foods rich in Vitamin B are meat, poultry, seafood, eggs, dairy products and fortified cereals.

With an average daily quantity available for consumption of vitamin B1 and B2 of around 1.1 mg/capita and vitamin B12 of 6.3 µg/capita, adequacy with respect to the average daily requirements[I] of 0.88 mg/capita, 0.91 mg/capita and 1.83 µg/capita is met at national level (100 percent or more being the target) (ADePT table 5.2). Adequacy in vitamin B12 is reached for all population groups, and for vitamin B1 it is almost reached for all population groups except for households belonging to the first tercile of expenditure. The picture is, however, different for vitamin B2, for which adequacy is not reached for some households belonging to the first tercile of expenditure, or households with at least two children, or households with the lowest level of education, or food insecure households or those involved in handicraft activities.

Fish being the main provider of vitamin B12, its consumption is much higher among households involved in fishing activities than among others.

[I] The source of the estimated average requirements used for vitamins B1, B2 and B12 is the FAO/WHO expert consultation on human vitamin and mineral requirements in human nutrition. Second Edition (2004).

FIGURE 18
National disparities in adequacy of vitamin B

Vitamin B1, B2 and B12 adequacy as measured by the ratio of the amounts of vitamin B1, B2 and B12 available for consumption as a percentage of the average requirements (percentage)

Vitamin B1, ratio consumed to required (percentage)   Vitamin B2, ratio consumed to required (percentage)   Vitamin B12, ratio consumed to required (percentage)
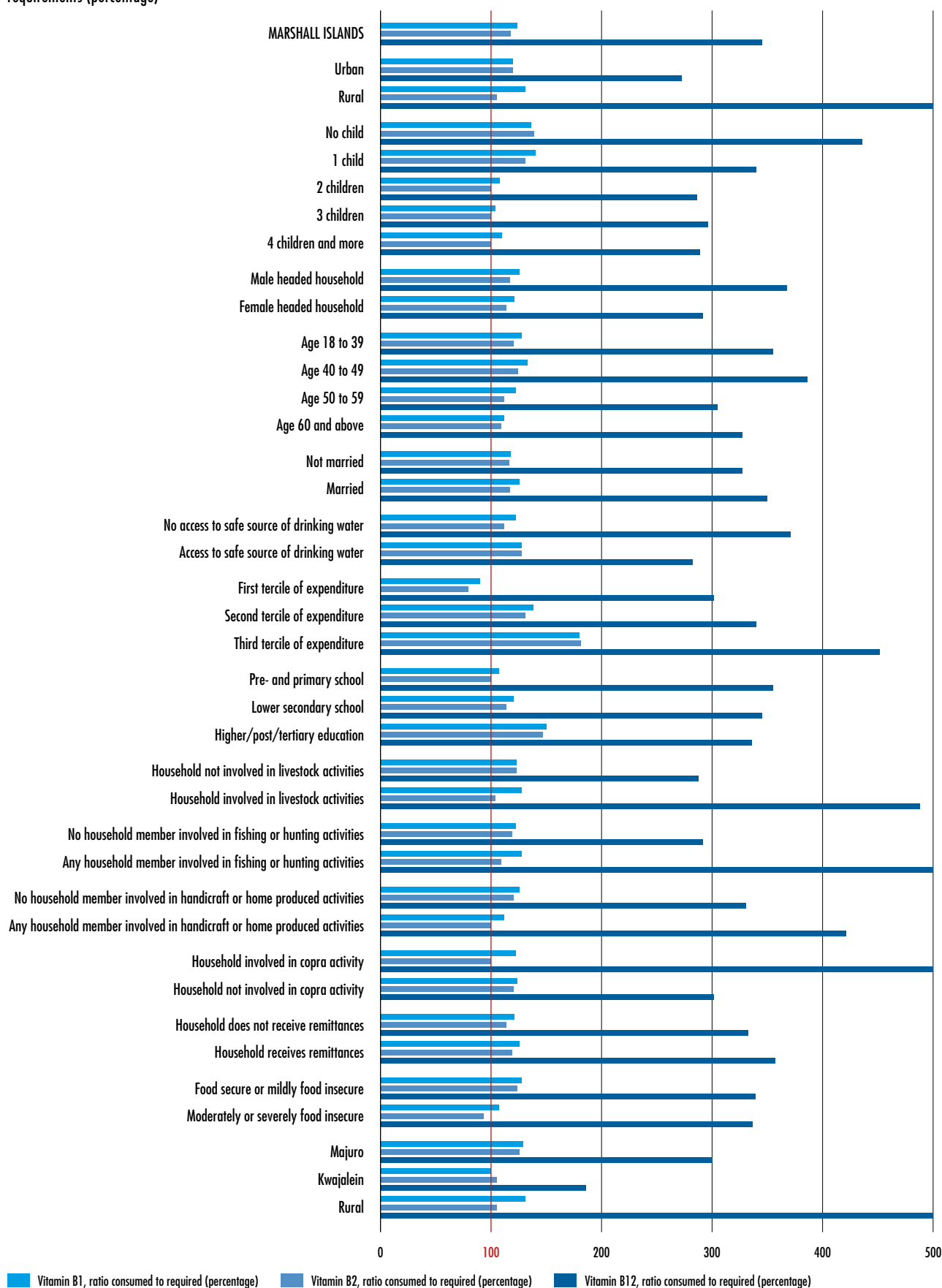
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 19
Main sources of vitamin B

Main sources of vitamin B1, B2 and B12 available for consumption (percentage)

■ Vitamin B1, ratio consumed to required (percentage)	■ Vitamin B2, ratio consumed to required (percentage)	■ Vitamin B12, ratio consumed to required (percentage)
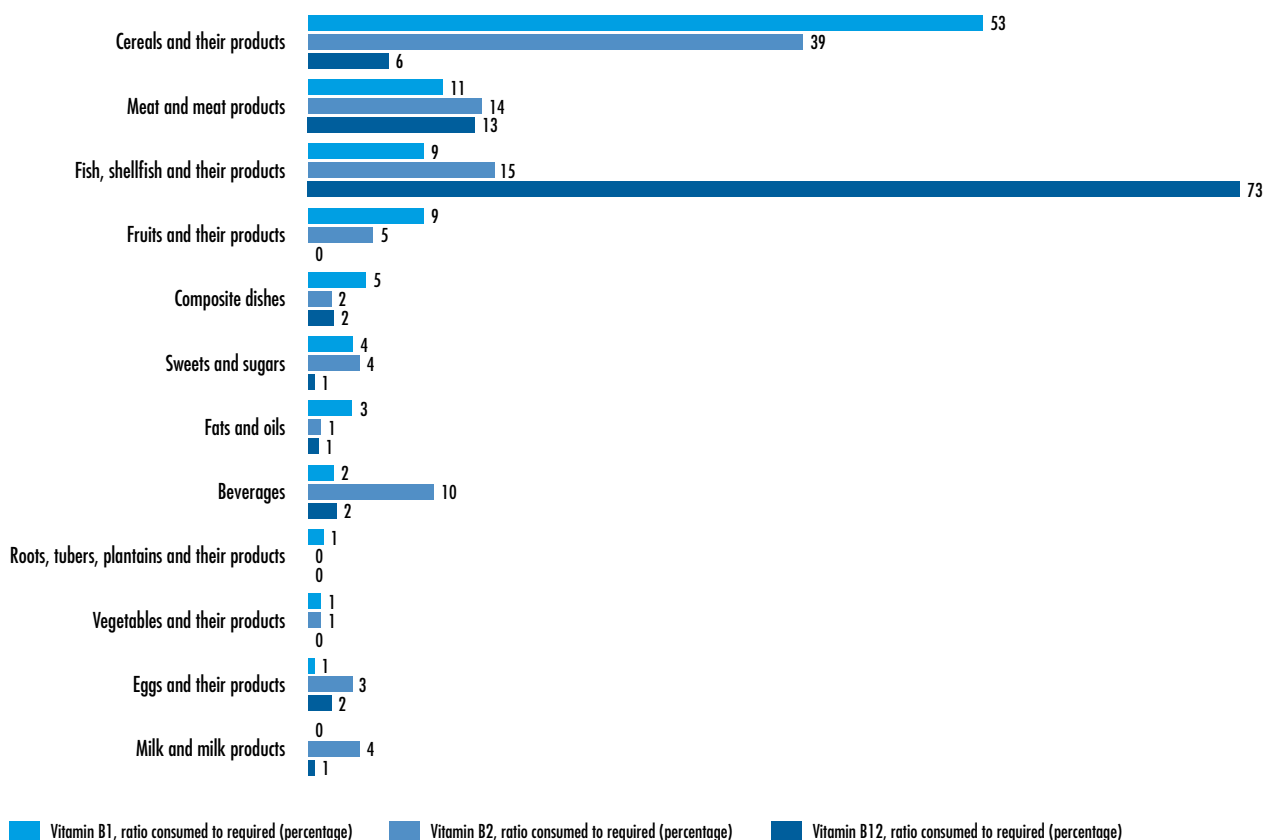
SOURCE: Marshall Islands 2019/20 HIES.

With respective contributions of 53 percent and 39 percent, cereals and cereal products are the main providers of vitamin B1 and B2. The main cereal products bringing most of the vitamin B1 available for consumption are flour (16 percent), rice (14 percent) and breakfast cereals (13 percent), and the main cereal products bringing most of the vitamin B2 are noodles (18 percent) and breakfast cereals (9 percent). Chicken and reef fish are also an important source of vitamin B2 in Marshall Islands, together bringing almost 19 percent of the vitamin B2 available

for consumption. Of note also is the important contribution of non-alcoholic beverages like coffee mix (6 percent) or tea (2 percent) to the total quantity of vitamin B2 available for consumption. To increase vitamin B1 and B2 consumption, and ensure adequacy for all, more breakfast cereals (provided their fat and sugar content are reduced) or skimmed milk powder are recommended. Fish and fish products alone bring 73 percent of the vitamin B12 available for consumption.

4.2.3 Vitamin C

BOX 5

Vitamin C
Vitamin C, or ascorbic acid, is a water-soluble vitamin. It is central to iron absorption and synthesis of collagen. It aids in wound healing and bone formation while improving overall immune function; for example, it is important for defence against infections such as common colds. Vitamin C stimulates system immunization, it is an anti-allergic and antioxidant, it helps in the formation of "cement" for connective tissues, it heals wounds, maintains teeth and gum health, facilitates iron absorption and is necessary for eye health.

The richest natural sources of vitamin C are fruits and vegetables.

FIGURE 20

Average consumption and average requirement of vitamin C by population groups

Vitamin C adequacy as measured by the amount of vitamin C available for consumption as a percentage of the average requirements (percentage)
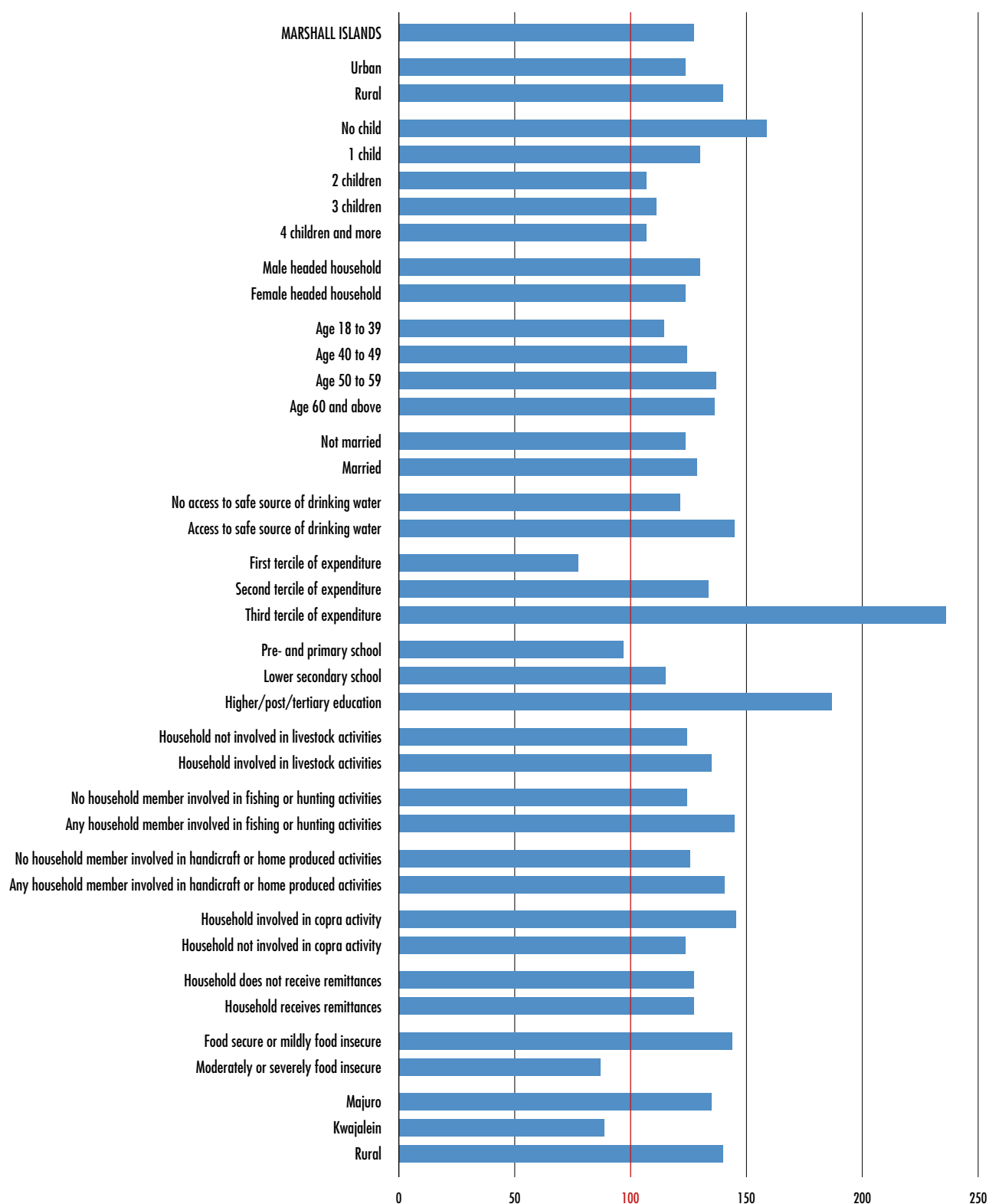
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 21
Main sources of vitamin C

Contribution of food products to the average of vitamin C available for consumption (percentage)

Powdered drink/flavouring, e.g. Kool Aid/Tang	21%
Breadfruit	13%
Orange	10%
Banana, common e.g. Covendish	8%
Papaya	5%
Pandanus	4%
Sauce, tomato, ketchup	3%
Juice, fruit, not further specified	3%
Fish, reef, not further specified	3%
Coconut, brown	2%
Broccoli	2%
Chicken, not further specified	2%
Capsicum, not further specified	2%
Potato, not further specified	1%
Apple, not further specified	1%
Beer, not further specified	1%
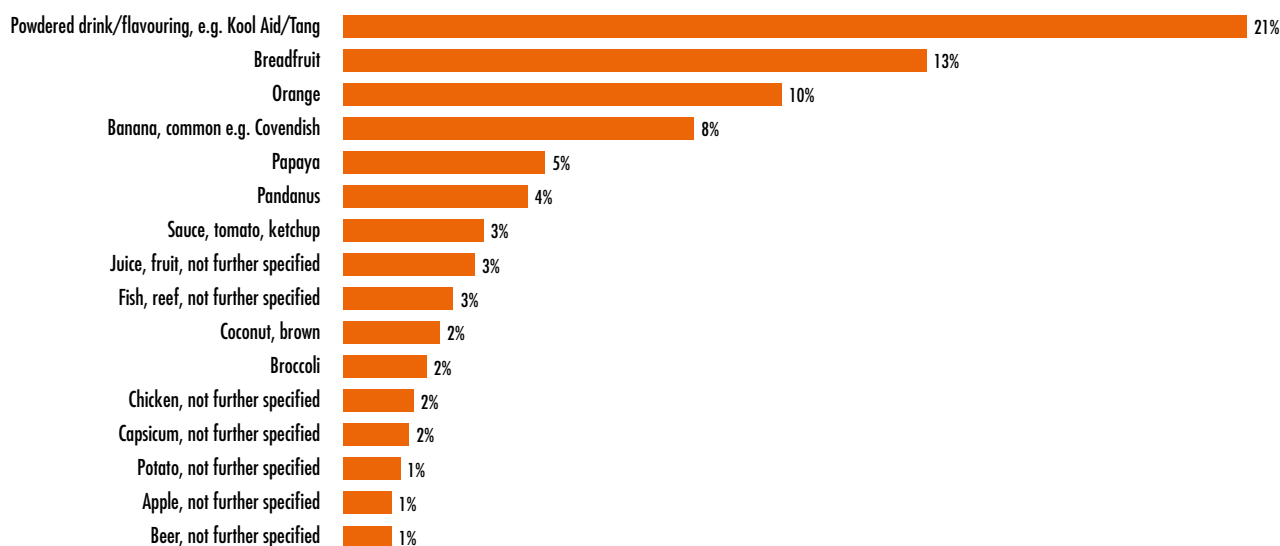
SOURCE: Marshall Islands 2019/20 HIES.

Despite the low quantities of fruits and vegetables consumed on average per day, vitamin C adequacy in the Marshall Islands is reached at national level with an average quantity available for consumption of around 44 mg/capita/day that is well above the national requirements of 35 mg/capita/day[I] (ADePT table 5.3).

Vitamin C adequacy is reached for almost all population groups except for households belonging to the first tercile of expenditure or households whose head has a pre- or primary school level of education or households who are experiencing moderate or severe levels of food insecurity. Households with at least two children are also at risk of inadequacy, as the quantity of vitamin C available for consumption is close to their requirements. Disparities among urban households can also be observed, since the amount of vitamin A available for consumption in Kwajalein is one third lower than that observed in Majuro so that adequacy in vitamin A is not reached in Kwajalein.

Rural households tend to have access to a higher quantity of vitamin C available for consumption than urban households, with respective quantities of 48 mg/capita/day and 43 mg/capita/day. Rural households have better access to locally grown fruits like breadfruit, banana, papaya or pandanus, which are important sources of vitamin C, together contributing 31 percent of the overall vitamin C available for consumption. But flavoured powdered drinks remain the main source of vitamin C in the Marshall Islands, contributing alone more than 21 percent of the vitamin C available for consumption. To increase the consumption of vitamin C it is recommended that households eat more locally grown fruits and substitute powdered drinks rich in sugar and energy with fresh fruit juice[II] when possible.

4.3 Apparent consumption of essential minerals

Minerals such as calcium and iron are essential nutrients found in many different types of plant- and animal-based foods. Calcium is a macro-mineral required in greater amounts than trace minerals such as iron. Both types of minerals support a wide variety of bodily functions, ranging from building and maintaining healthy bones and teeth to keeping muscles, heart and brain working properly.

[I] The source of the estimated average requirement used for vitamin C is the FAO/WHO expert consultation on human vitamin and mineral requirements in human nutrition. Second Edition (2004).

[II] A 100 gram drink made with 20 grams of powdered drink brings around 19 grams of carbohydrates and 76 kcal compared with 100 grams of orange juice that brings 8.4 grams of carbohydrates and 33.6 kcal.

FIGURE 22

Calcium adequacy is far from being reached for all population groups

Calcium adequacy as measured by the amount of calcium available for consumption as a percentage of the average requirements (percentage)
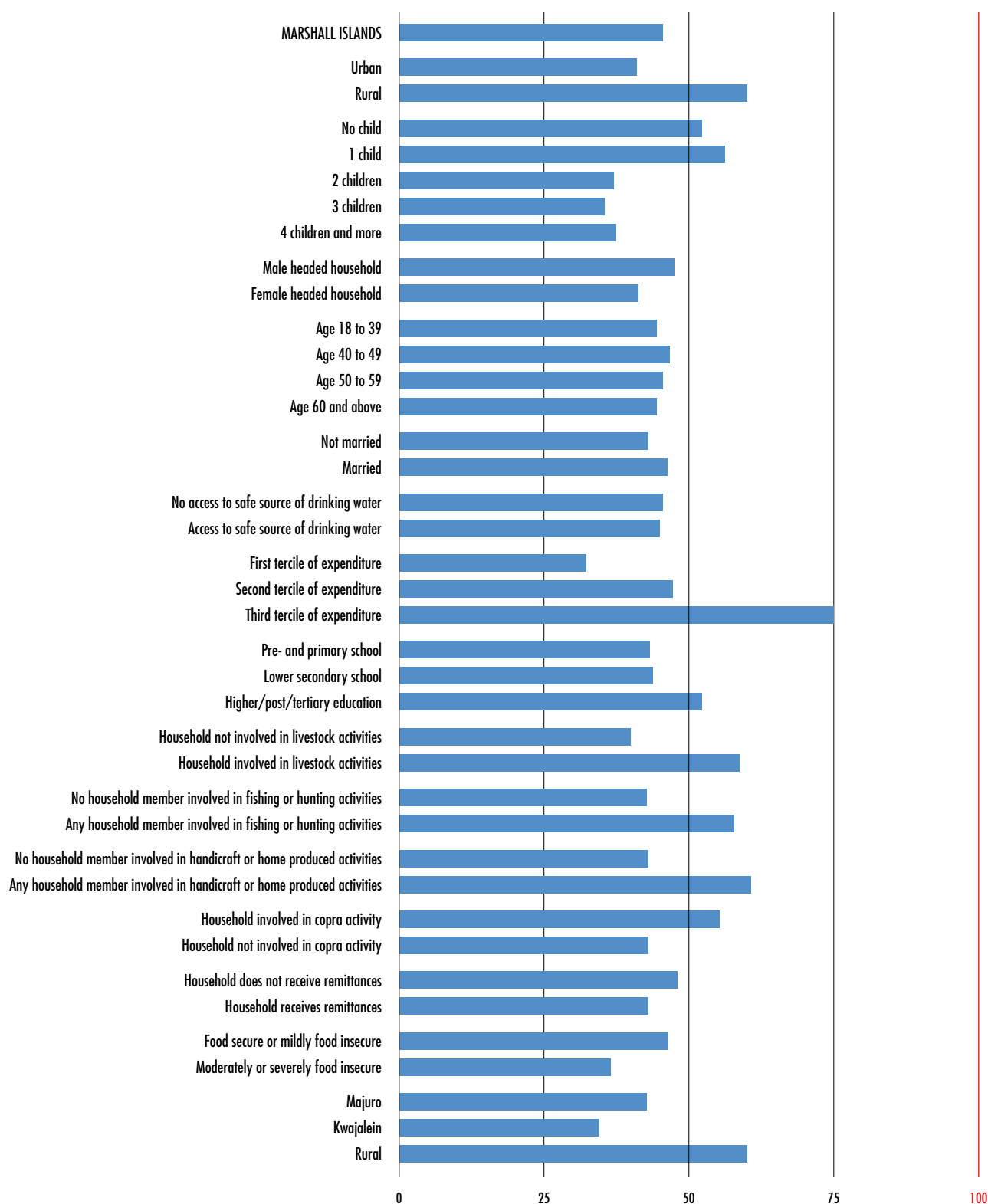
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 23
Main sources of calcium

Main products contributing to the amount of calcium available for consumption (percentage)

Product	Percentage
Coffee, mix (e.g. 3 in 1)	9%
Pandanus	9%
Fish, reef, not further specified	7%
Mackerel, canned, not further specified	7%
Sea hare, not further specified	6%
Sugar, not further specified	6%
Baking powder	5%
Rice, not further specified	4%
Milk, long life, self stable (UHT)	4%
Fish, canned in oil, not further specified	3%
Flour, not further specified	3%
Breakfast cereal, not further specified	3%
Breadfruit	2%
Pancake, without syrup	2%
Chicken, not further specified	2%
Tea, not further specified	2%

SOURCE: Marshall Islands 2019/20 HIES.

4.3.1 Calcium

BOX 6
Calcium

Most of the calcium in the body is found in the bones, and its primary role is to promote healthy bones and teeth. The main foods rich in calcium are dairy products like milk, cheese and yoghurt. However, many non-dairy sources such as seafood, leafy greens, legumes, dried fruit and tofu are also high in calcium. Foods such as cereal and flour can also be fortified in calcium.

With an average consumption of less than 400 mg/capita/day, calcium consumption in the Marshall Islands is well below the average requirements of 857 mg/capita/day[I] (ADePT table 5.3). Calcium supply adequacy is far from being reached for all population groups.

Despite its relatively low consumption of 34 edible g/capita/day, pandanus is the second main source of calcium, contributing 9 percent of the calcium available for consumption, after coffee mix, which is the first source of calcium because of the powdered milk contained in these coffee mix preparations. Because of their marginal consumption in the Marshall Islands (less than 15 g/capita/day), milk and

milk products contribute only 6 percent of the total quantity of calcium available for consumption. These products being very rich in calcium, a slight increase of their consumption would considerably affect the overall calcium consumption in the Marshall Islands. One spoon of skimmed milk powder alone (around 10 grams) dissolved in 250 ml of drinking water brings 125 mg of calcium. With an average contribution of 25 percent, the group of fish, shellfish and their products is the main source of calcium, and mainly through the consumption of canned fish (10 percent) (ADePT tables 6.1 and 6.7).

4.3.2 Iron

Iron is one of the essential nutrients for the proper growth and development of the human body. The body cannot prepare iron on its own, so to maintain the amount of iron in the body, iron-rich foods are consumed. Two different sources of iron are found: non-haem sources of iron mostly refer to vegetables like beans, turnips, leafy vegetables, pumpkins and so on, along with other products like legumes, lentils, dairy products and tofu; haem sources of iron include lean meat, chicken liver, lamb, oysters, and tuna fish. The main difference between the two is that haem iron is absorbed faster than plant iron but absorption of haem iron is not regulated.[II]

[I] The source of the estimated average requirement used for calcium was HMD (Health and Medicine Division of the USA National Academies of Sciences). Dietary Reference Intakes Tables and Application – Estimated Average Requirements and Adequate Intakes. (As of 30 March 2016)

[II] If your body needs iron, it absorbs more from plants. If you don't need more iron, it absorbs less plant iron, but it will keep on absorbing haem iron, even reaching dangerous levels.

FIGURE 24

National disparities in the amount of iron available for consumption

Iron consumption by population groups (mg/capita/day)

| | Iron, average consumption from animal sources (mg/capita/day) | Iron, average consumption from non-animal sources (mg/capita/day) |
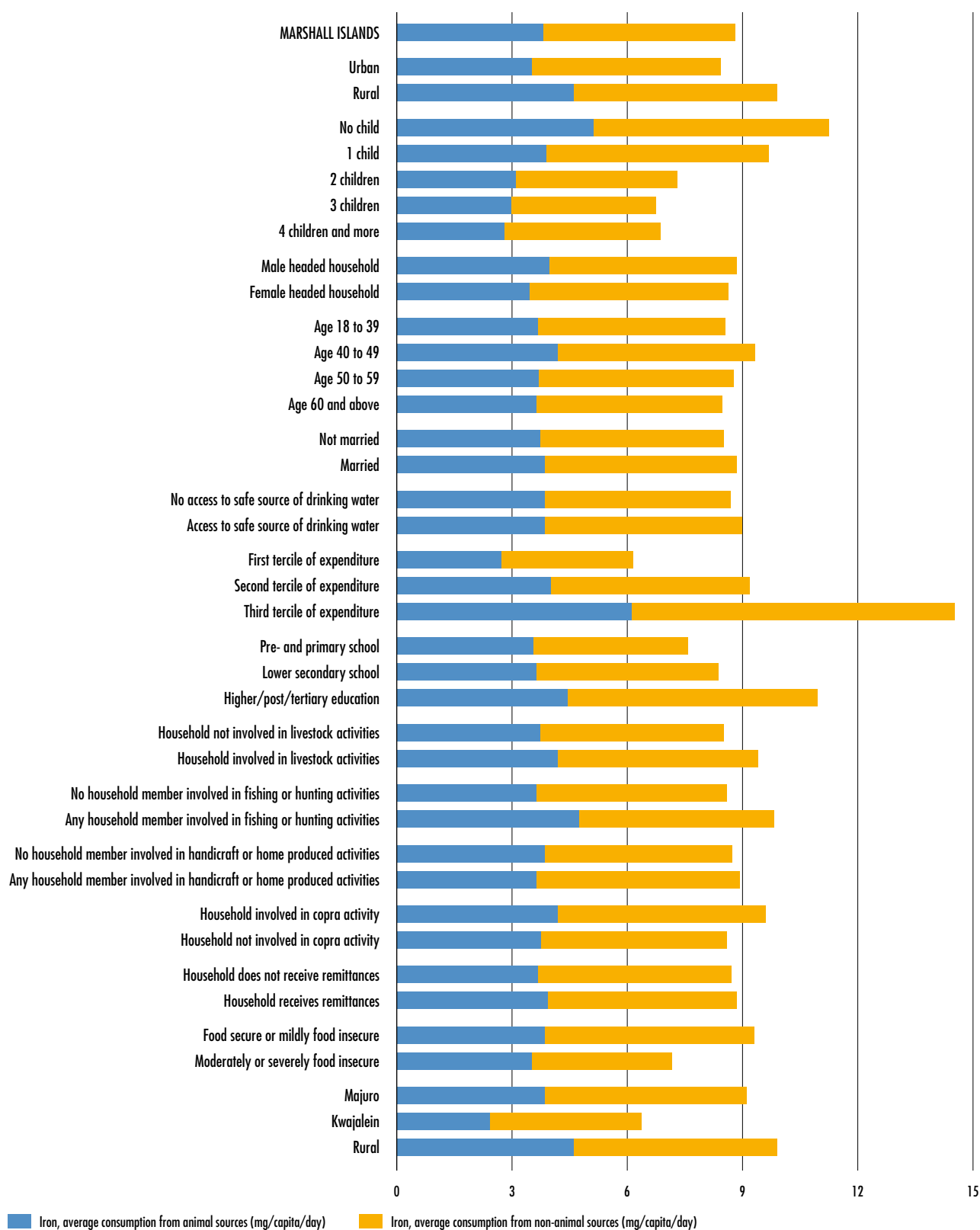
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 25
Main sources of iron

Main products contributing to the amount of iron available for consumption (percentage)

Fish, reef, not further specified	12%
Flour, not further specified	11%
Chicken, not further specified	9%
Breakfast cereal, not further specified	9%
Noodles, not further specified	5%
Coconut, brown	4%
Breadfruit	3%
Bread, loaf, all others	3%
Sauce, soy/shoyu	3%
Tea, not further specified	2%
Sugar, not further specified	2%
Canned meat, not further specified	2%
Tuna, not further specified	2%
Egg, chicken, fresh	2%
Pandanus	2%
Beef, canned, corned	2%
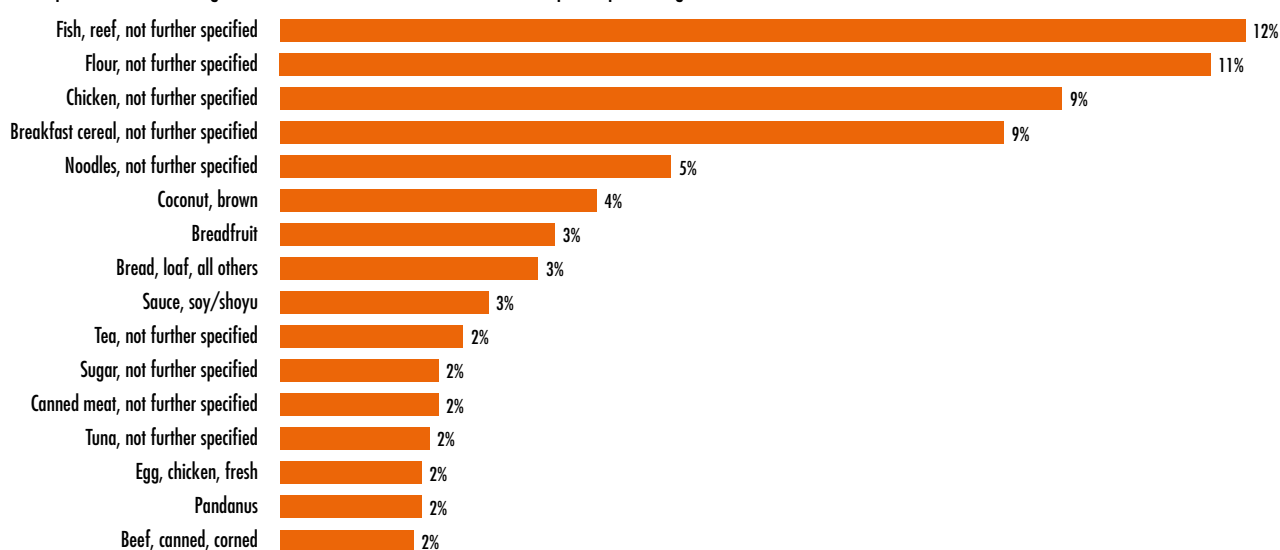
SOURCE: Marshall Islands 2019/20 HIES.

Quantities of iron needed vary greatly by age and gender and are higher for women than for men. Children need on average 7 mg to 10 mg of iron per day, a male aged from 19 to 99 years needs 8 mg of iron per day, while a woman aged from 19 to 50 years needs more than 18 mg of iron a day, and older women will need only 8 mg a day.[15]

At 9 mg/capita/day, the average quantity of iron available for consumption in the Marshall Islands is very low and 44 percent of iron is from animal origin (ADePT table 5.4). Important inequalities in accessing iron can be observed within the population. The largest differences are observed between the wealthiest and least wealthy households or between households with no child and households with at least two children. Food insecure households access on average 7 mg/capita/day of iron, which is 2 mg/capita/day less than the amount accessed by food secure households. An important gap can also be observed between households living in Majuro and those living in Kwajalein: the latter access

2.7 mg/capita/day of iron less than households living in Majuro. But in all population groups except that of the wealthiest households, average iron consumption is well below the recommended level.

Reef fish is the main source of iron, contributing 12 percent of the total iron available for consumption, followed by flour (11 percent) and chicken (9 percent). Breakfast cereals, with an average consumption of around 8 g/capita/day, constitute another important source of iron and contribute around 9 percent of the iron available for consumption. To decrease the prevalence of anaemia it may be recommended to further increase the consumption of iron-enriched foods such as cereal flours (the most common vehicles for iron fortification programmes), breakfast cereals (provided the added sugar and fat content is low), green leafy vegetables, seafood and dried fruits. Animal offal also presents a very rich source of iron, but should be consumed in limited amounts because of its very high cholesterol content.

4.4 Healthy living pattern

BOX 7

Group categories following the Pacific guidelines for healthy living

1. Energy-dense foods
   a. To choose: mainly local staple foods
   b. To limit: white rice or processed cereals with low fat or sugar content
   c. To avoid: sugar, fats, or processed foods from cereals with high fat or sugar content

2. Body building foods
   a. To choose: lean meat, fish, nuts, beans, low-fat dairy products
   b. To limit: medium-fat meat, medium fat dairy products, low-fat canned fish, etc.
   c. To avoid: high-fat meat, high-fat dairy products, processed meat

3. Protective foods
   a. To choose: fresh fruits and vegetables
   b. To limit: dried fruits or processed fruits and vegetables with low sugar or salt content
   c. To avoid: processed fruits or vegetables with high sugar content

4. Unclassified foods
   i.   Food consumed away from home
   ii. Spices/coffee/tea
   iii. Alcoholic beverages
   iv. Tobacco and kava*

* Not considered as food products

The earlier analysis of the nutrient consumption shows that it is important to eat diverse foods to access all the essential nutrients. It is not only important to have a diversified diet but also to eat these foods in proportions that lead to a healthy diet. In 2018 the Public Health Division of the Pacific Community (SPC) published guidelines for healthy living in the Pacific.[16] The main purpose of the guidelines is to provide background information and guidance for healthy living. Following the recommendations from the guidelines, the food products collected in the 2019/20 HIES were categorized into three groups recommended for consumption for a healthy diet. The groups were further disaggregated into three categories: foods to choose, foods to limit and foods to avoid. In addition to these groups, a fourth category was created to accommodate all the foods not classified according to the Pacific guidelines.

According to this food group classification, around 60 percent of the average dietary energy consumed comes from energy-dense imported foods like rice or flour or locally grown products like breadfruits or brown coconut. Body building foods rich in protein like fish, meat or dairy products contribute around 19 percent of the dietary energy consumed. Protective foods rich in vitamins like fruits and vegetables contribute less than 3 percent of the average dietary energy consumed.[l] Within the products to choose, limit or avoid, the foods to limit and foods to avoid contribute respectively 45 percent and 17 percent of the dietary energy consumed. Around 20 percent of the dietary energy consumed is composed of nutritious foods in the to choose category. Alcoholic beverages as well as spices and meals consumed away from home are classified within the "not classified foods", but if they were classified there is no doubt that these products would increase the contribution of foods to avoid or limit.

Among the foods to choose, breadfruit is the main energy-dense food, with an average daily edible quantity of 30 g per capita, followed by brown coconut with an average edible quantity of 15 g/capita/day. With average quantities of 39 g/capita/day and 22 g/capita/day respectively, locally grown fruits like pandanus and banana are the main protective foods among which to choose, followed by imported fruits like apple and orange, with a quantity close to 10 g/capita/day. Reef fish and chicken, with an average edible quantity of 145 and 83 g/capita/day respectively, are the main body building foods among which to choose. In terms of foods to limit or avoid, rice alone, with an average consumption of 220 g/capita/day, contributes 61 percent of the dietary energy coming from energy foods to limit, and processed meat contributes 60 percent of the dietary energy coming from body building foods to avoid.

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l Looking at the contribution of each group to the total dietary energy consumed obviously gives more weight to the group composed of energy-dense foods. Protective foods like fruits and vegetables that are less energy-dense obviously have a lower contribution to average DEC, but dietary energy is the only measure that allows comparison between heterogenous groups. The Pacific guidelines therefore recommend portion sizes for the different foods.

FIGURE 26

Disaggregation of the average DEC according to the Pacific guidelines for healthy living

Disaggregation of the average dietary energy consumption into the three main groups for healthy living

Disaggregation of the average dietary energy consumption in foods to choose, limit or avoid

- ● Energy foods
- ● Protective foods
- ● Body building foods
- ● Not classified*

- ● Foods to choose
- ● Foods to limit
- ● Foods to avoid
- ● Not classified*
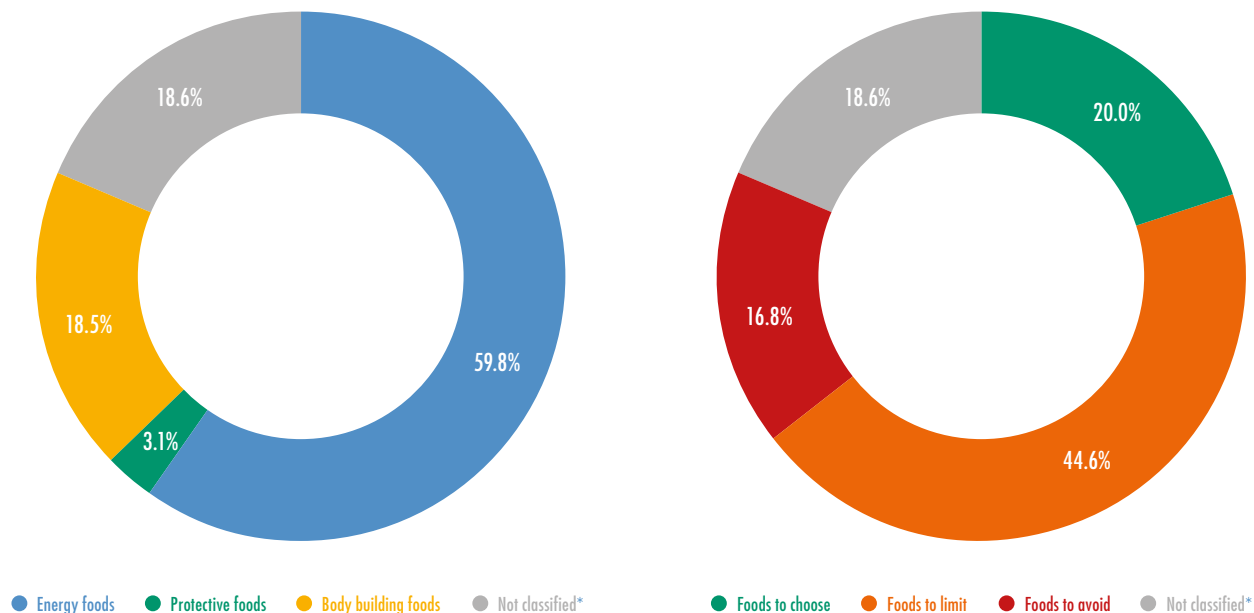
* Food not classified corresponds to food like spices, alcoholic beverages, lunch, breakfast, snacks and dinner consumed away from home.
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 27

Main products consumed categorized according to the Pacific guidelines

Edible quantities of food products (bar chart) according to healthy living guidelines classification (g/capita/day – left scale) and their contribution (black point) to the dietary energy coming from each category (percent – right scale)
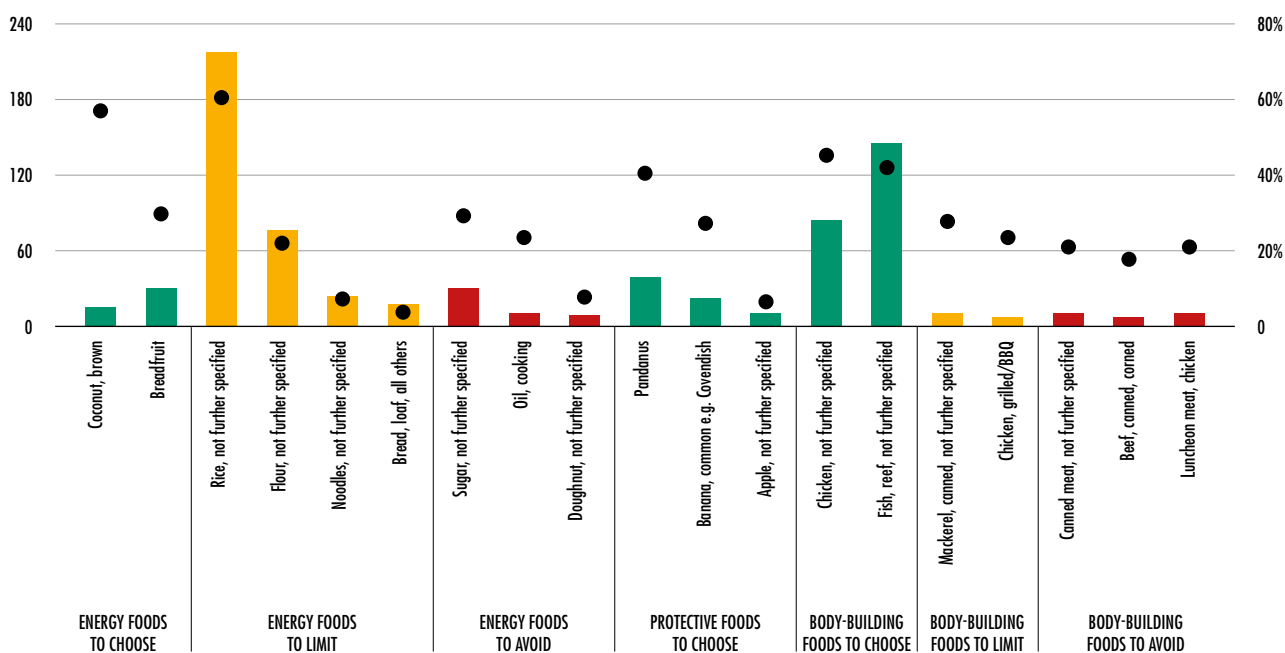
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 28

Percentage of households consuming the food products to choose, limit or avoid

Percentage of households consuming the foods classified according to the Pacific guidelines for healthy living (percentage)

ENERGY FOODS TO CHOOSE	ENERGY FOODS TO LIMIT	ENERGY FOODS TO AVOID	PROTECTIVE FOODS TO CHOOSE	BODY-BUILDING FOODS TO CHOOSE	BODY-BUILDING FOODS TO LIMIT	BODY-BUILDING FOODS TO AVOID	

Breadfruit 28; Coconut, brown 10; Rice, not further specified 97; Noodles, not further specified 69; Flour, not further specified 41; Bread, loaf, all others 33; Oil, cooking 63; Sugar, not further specified 54; Doughnut, not further specified 15; Banana, common e.g. Covendish 35; Apple, not further specified 34; Pandanus 16; Chicken, not further specified 66; Fish, reef, not further specified 43; Mackerel, canned, not further specified 47; Chicken, grilled/BBQ 17; Luncheon meat, chicken 45; Beef, canned, corned 39; Canned meat, not further specified 38

SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 29

Differences in the dietary pattern between rural and urban areas (as percentage of DEC in each group)
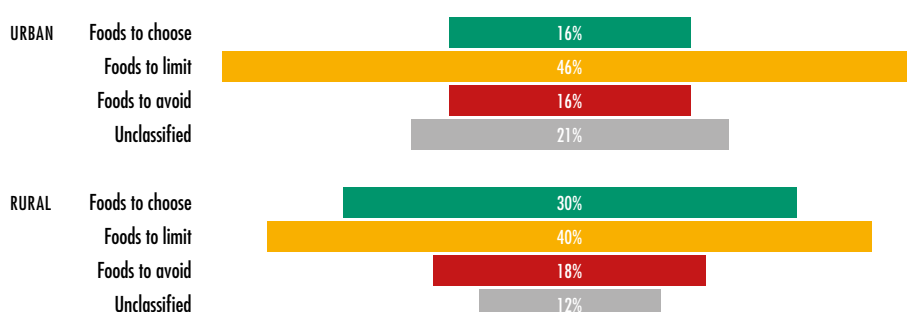
SOURCE: Marshall Islands 2019/20 HIES.

Of the foods contributing the most to the diet, foods to choose are consumed by less than 45 percent of households, except for chicken which is consumed by at least two households in three. When further zooming in on protective foods from which to choose, only 16 percent of households consume pandanus, which is a locally grown food, while 34 percent prefer consuming imported apples. Rice is a food to limit, and it is consumed by 97 percent of households.[I] More than 45 percent of households consume foods to avoid like oil, sugar or luncheon meat. These trends tend to point towards household preferences for imported foods rich in fats and sugar rather than more nutritious local products.

I   Most of the rice consumed in the Pacific is in the form of white rice, which is less nutritious than brown rice and therefore its consumption should be limited.

FIGURE 30

Distribution of main foods among which to choose in urban and rural areas

Distribution by areas of residence of the main foods among which to choose

Contribution to the average DEC (percentage) – left scale ● Percentage of household consuming the food – right scale
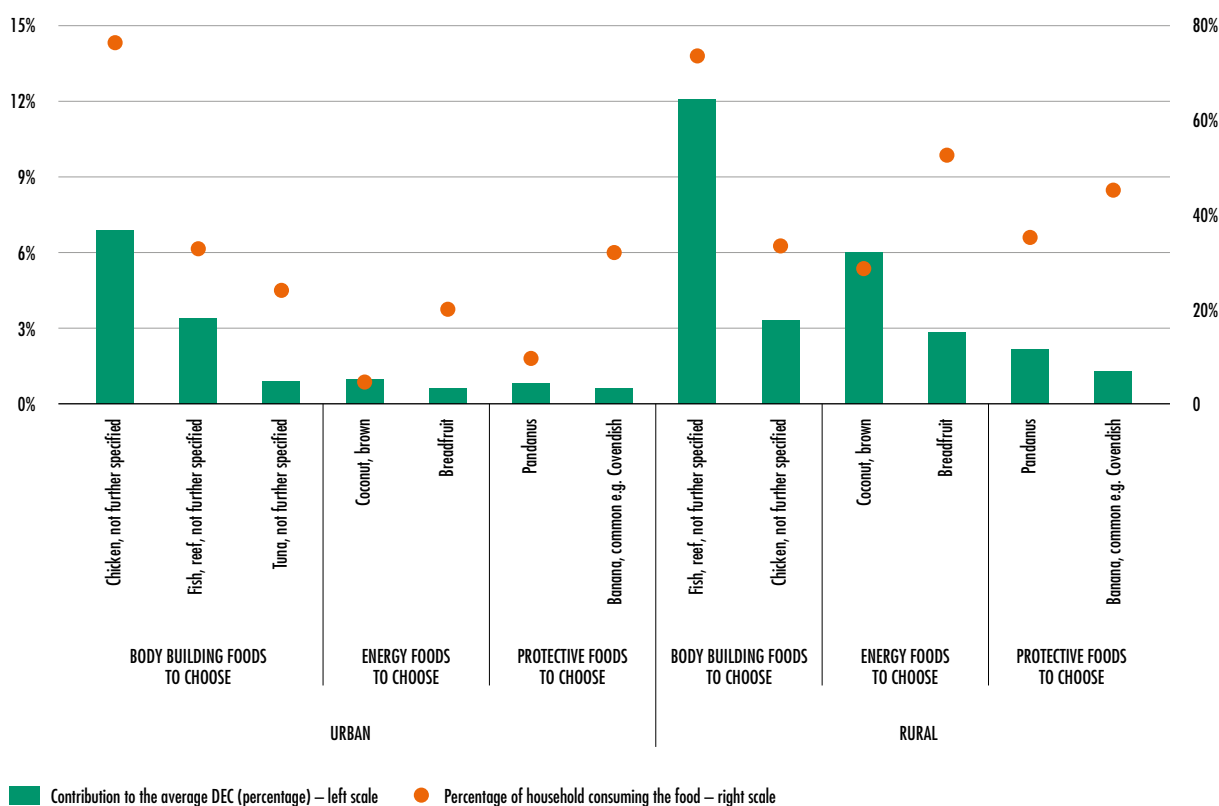
SOURCE: Marshall Islands 2019/20 HIES.

The contribution of foods to avoid to the average dietary energy consumed is higher in rural areas than in urban areas with respective contributions of 18 percent and 16 percent. But in turn, foods among which to choose or foods to limit contribute a larger portion of the dietary energy consumed in rural areas than in urban areas. Unclassified foods such as alcoholic beverages or meals consumed away from home constitute a more important source of dietary energy in urban areas than in rural areas, with respective shares of 21 percent and 12 percent.

A broader look at the distribution of body building foods among which to choose shows that in urban areas, chicken contributes the most to the average dietary energy of urban areas (7 percent) and is consumed by 77 percent of the urban households, while reef fish contributes only 3 percent to the

average dietary energy and is consumed by less than one urban household in three. Conversely, three rural households in four consume reef fish, bringing 13 percent of the average dietary energy consumed in rural areas, and chicken is consumed by 34 percent of rural households and contributes 3 percent of the rural DEC. It is interesting to note that whereas fresh tuna is consumed by around 24 percent of urban households, it is not consumed at all in rural areas where mainly reef fish is consumed. In terms of energy foods to choose, whereas consumption of brown coconut and breadfruits is almost insignificant in urban areas, these locally grown products dense in energy together contribute 10 percent of the average dietary energy in rural areas and they are consumed by more than one household in four. The same trend is observed for protective foods like pandanus and banana.

FIGURE 31

Distribution of main foods to limit in urban and rural areas

Contribution to the average DEC (percentage) – left scale   ● Percentage of household consuming the food – right scale
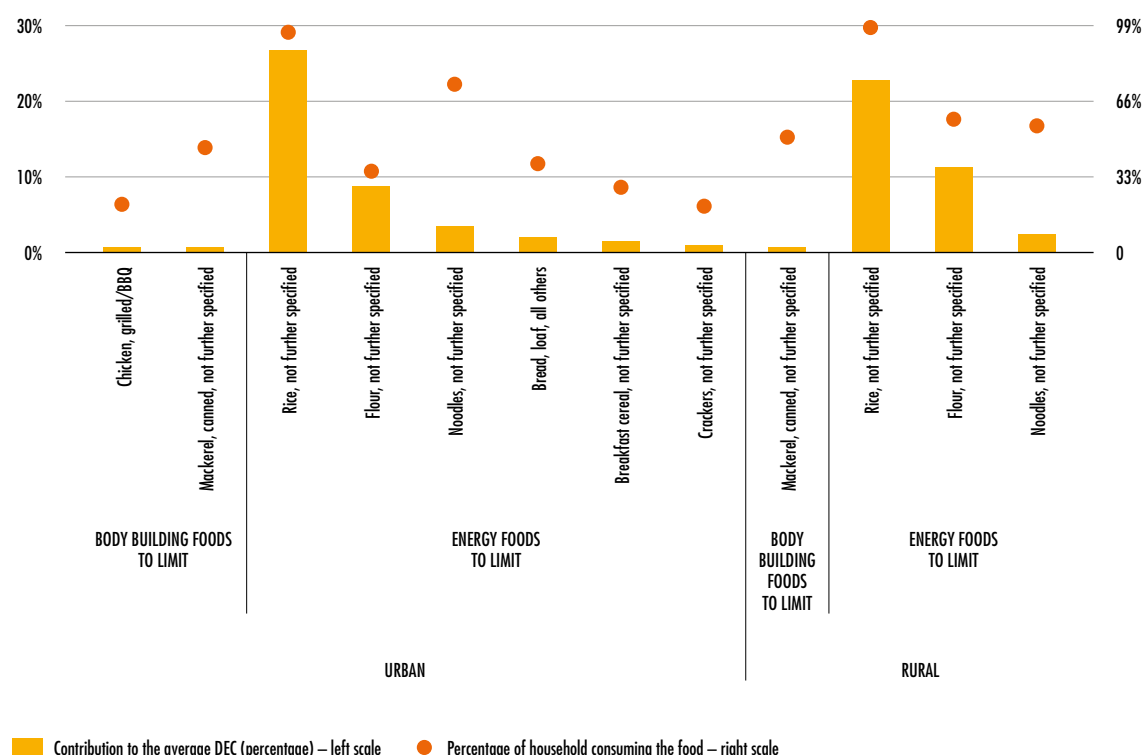
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 32

Distribution of main foods to avoid in urban and rural areas

Contribution to the average DEC (percentage) – left scale   ● Percentage of household consuming the food – right scale
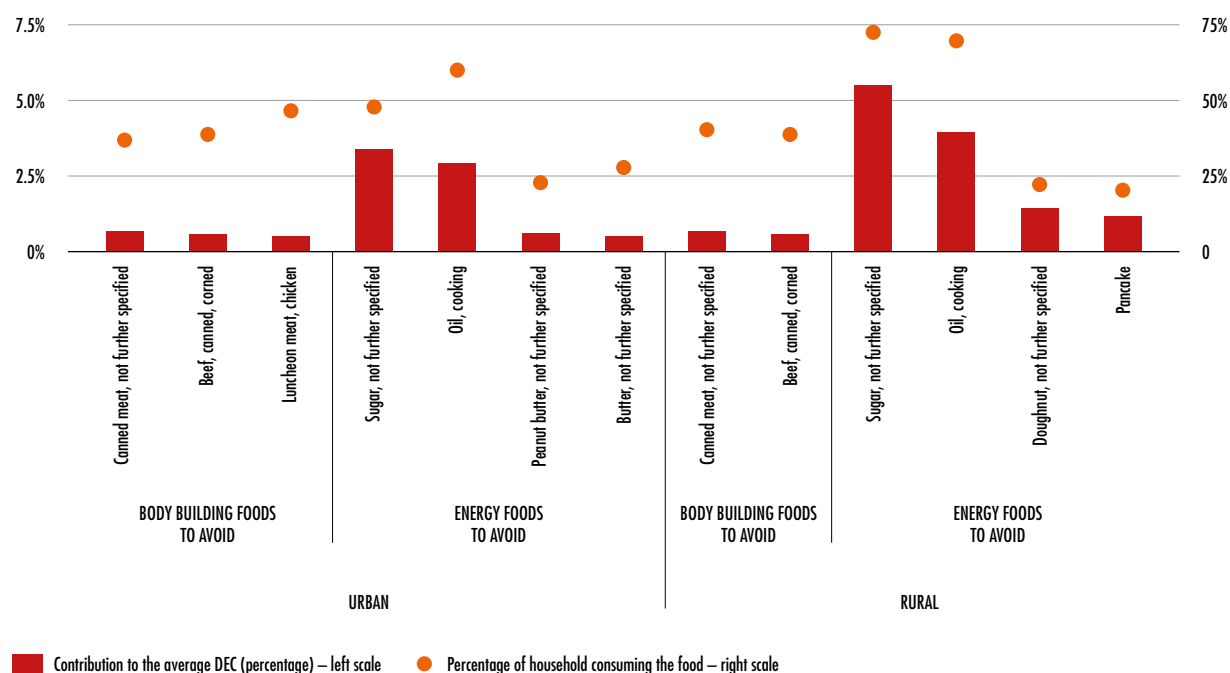
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 33

DEC split by main sources of acquisition and Pacific guidelines classification

Contribution of the source of acquisition to the DEC according to the Pacific guidelines classification

Legend:
- ■ (blue) Share of dietary energy consumed at home purchased in cash
- ■ (green) Share of dietary energy consumed from own production
- ■ (grey) Share of dietary energy consumed away from home purchased in cash or received for free
- ■ (yellow) Share of dietary energy consumed at home or received for free or through exchange
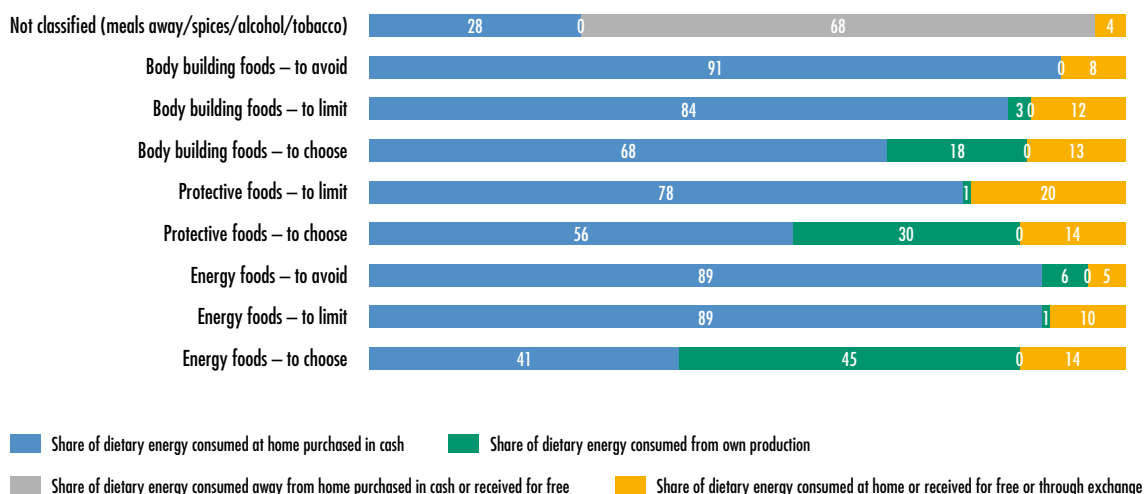
SOURCE: Marshall Islands 2019/20 HIES.

With an average contribution of around 35 percent, in both areas, rice and flour remain the main energy-dense foods to limit and rice is the most preferred, with more than 96 percent of households consuming it. Urban households also consume a wider variety of cereal products than rural households. The contribution of cooking oil and sugar to the average dietary energy is much higher in rural areas than in urban areas, and these products are accessed by at least 70 percent of rural households compared to less than 60 percent in urban areas. This trend further confirms the larger share of fat consumption in the average DEC in rural areas than in urban areas (respectively 26 percent versus 23 percent). Doughnuts and pancakes are also consumed more in rural areas than in urban areas where households prefer even more energy-dense products like butter or peanut butter. In both areas canned meat is consumed by more than 35 percent of the households.

Finally, more than 85 percent of dietary energy coming from foods to avoid or limit is purchased. This finding is not surprising as most of these foods are imported and in turn 45 percent of the energy foods from which to choose come from own production. An important share of dietary energy from protective foods to choose also comes from in kind sources like own production or is received for free. Protective foods to limit mainly come from baked vegetables and canned fruits but their consumption in the Marshall Islands is very marginal (less than 5 g/capita/day) and most of these products are purchased.

CHAPTER 5
Analysis of the dietary patterns of the food insecure

It is only through the inclusion of the Food Insecurity Experience Scale (FIES) module in the 2019/20 HIES that we can now better understand the food consumption pattern of the food insecure in the Marshall Islands. First, in combining information on the socioeconomic and demographic characteristics of the households it is possible to derive a profile for the food insecure; and second, in cross-analysing the food consumption and the FIES data collected in the 2019/20 HIES it is possible to derive food consumption indicators by severity levels of food insecurity.

As further described in the methodological note, the scale passed all the statistical validity tests, and the number of affirmative answers to the eight questions of the scale (raw score) can be considered an ordinal measure of the food insecurity.[II] Based on these findings, a level of food insecurity was associated to each household. A household is classified as "food secure or mildly food insecure" when the raw score is less than or equal to 3, a household is considered as "moderately or severely food insecure" when the raw score is higher than or equal to 4.[III] Following this categorization, it was found that 34 percent of households in the Marshall Islands are experiencing moderate or severe levels of food insecurity, which means that these households are having difficult access to safe and nutritious foods and some of them do not have access to enough foods, to the point of experiencing hunger.[IV]

5.1 Profile of the food insecure

This analysis is based on cross-tabulation of level of severity of the household with socioeconomic and demographic characteristics of the head of the household. The analysis finds that the probability of a household experiencing moderate or severe levels of food insecurity is higher for households belonging to the group of least wealthy households, or for households whose head has a primary or preschool level of education, or for households with more than two children, or households whose head is not married, or households without access to a safe source of drinking water, or households involved in copra, livestock or fishing activities and who do not receive remittances. Being food insecure or not does not depend on the gender of the head of the household but a higher proportion of food insecure households can be observed among households whose head is less than 39 years of age. More than 40 percent of rural households are food insecure compared to 32 percent of urban households, but as will be seen later, this finding is contradicted by the logit regression after we control for income.

[I] This analysis excludes 86 households (13 households from Ailing (38 percent of sampled households in Ailing), 8 households from Enewet (17 percent of households sampled in Enewet), 4 households from Jaluit (17 percent of households sampled in Jaluit), 53 households from Kwajalein (34 percent of households sampled in Kwajalein), 4 from Lib (33 percent of households sampled in Lib) and 4 in Namu (33 percent of households in Namu), and is therefore not fully representative of the households living in these atolls

[II] The higher the raw score, the higher the probability that the level of food insecurity is severe. For more detail, see the annex 1.2 and refer to the Voices of the Hungry website: http://www.fao.org/in-action/voices-of-the-hungry/en/

[III] At this threshold the probability of being moderately or severely food insecure is 71 percent.

[IV] The last question of the FIES asked the respondent if they or anyone from the household spent the whole day without eating. One respondent in five replied "yes" to this question. If we cross-tabulate with the 5 percent of Marshallese who are chronically hungry, this identifies those whose dietary energy intake is lower than their basic requirements: hunger remains an issue in the Marshall Islands.

FIGURE 34
Percentage of food insecure households versus food secure

Distribution of household by level of food insecurity

- 34%
- 66%
- Food secure or mildly food insecure
- Moderately or severely food insecure
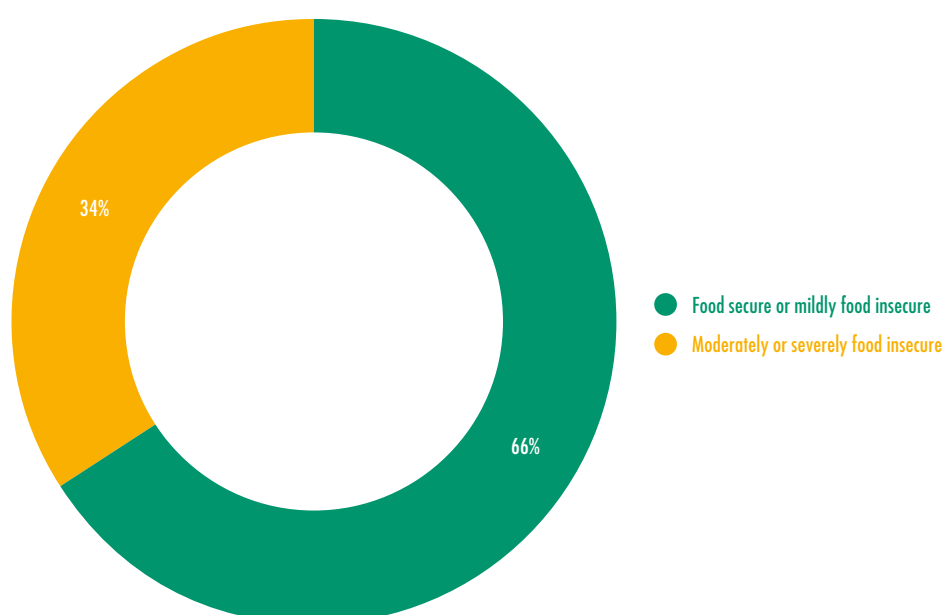
SOURCE: Marshall Islands 2019/20 HIES.

To confirm all the trends discussed above, a logistic regression was performed linking the status of food insecurity (food secure/food insecure) to all the demographic and socioeconomic characteristics of the households. The model as a whole is statistically significant with a p value = 0 as compared to the null model with no predictors. To facilitate the interpretation, only the direction of the change and the statistical significance of the variable in the regression are discussed. The log odds of all the socioeconomic or demographic characteristics and their respective significance levels are reported in Annex 6. The model confirms that total expenditure is an important determinant of food insecurity and for a one unit increase in total expenditure the probability of being food insecure (versus being food secure) significantly decreases. The probability of being food insecure also decreases when the level of education of the head of the household is higher. Households whose head is married or is older than 39 years of age also tend to have a lower probability of experiencing food insecurity than households whose head is not married or is younger than 39 years of age. Being involved in handicraft activities or receiving remittances also tends to reduce the probability of being food insecure. Households with access to a safe source of drinking water also have a

lower probability of experiencing moderate or severe food insecurity than households with no access to a safe source of drinking water, even if this result is significant only at a 15 percent level. Conversely, the number of children in the household is a significant determinant of food insecurity and the higher the number of children in the household, the higher the probability the household will experience severe levels of food insecurity. The model also confirms that food insecurity is higher among households involved in fishing, livestock or copra activities than among households not involved in those activities, and all the log odds are significant with a p value of 0. Note also that the model reveals no significant association between the food security status of the household (food secure or food insecure) and the gender of the head of the household. Finally, after controlling for income and other determinants, the probability for a household to be food insecure is higher in urban areas than in rural areas. This finding is mainly due to the larger proportion of urban households than rural households (10 468 versus 3 396). With an incidence of food insecurity of 32 percent in urban areas and 41 percent in rural areas, there is a higher probability of a Marshallese living in an urban area and therefore being food insecure than of living in a rural area and being food insecure.

FIGURE 35
Profile of the food insecure

Socioeconomic and demographic characteristics of the food secure and food insecure households (percentage)

Category	Food secure or mildly food insecure	Moderately or severely food insecure
Urban	68	32
Rural	59	41
First tercile of expenditure	48	52
Second tercile of expenditure	66	34
Third tercile of expenditure	84	16
Pre- and primary school	46	54
Lower secondary school	66	34
Higher/post/tertiary education	83	17
Male headed household	66	34
Female headed household	66	34
Head of the household is less than 39 years	60	40
Head of the household is between 40 to 49 years	68	32
Head of the household is between 50 to 59 years	69	31
Head of the household is more than 60 years	68	32
No child	68	32
1 child is less than 14 years	69	31
2 children are less than 14 years	62	38
3 children are less than 14 years	62	38
More than 4 children are less than 14 years	58	42
Head of the household is not married	61	39
Head of the household is married	68	32
Household has not access to safe source of drinking water	62	38
Household has access to safe source of drinking water	76	24
Household does not receive remittances	62	38
Household receives remittances	71	29
Household is not involved in copra activities	69	31
Household is involved in copra activities	54	46
Household is not involved in livestock activities	71	29
Household is involved in livestock activities	54	46
Household member is not involved in handicraft activities	66	34
Household member is involved in handicraft activities	64	36
Household member is not involved in fishing	68	32
Household member is involved in fishing	55	45

■ Food secure or mildly food insecure   ■ Moderately or severely food insecure

SOURCE: Marshall Islands 2019/20 HIES.

5.2 Overall pattern of food consumption of the food insecure and food secure

Households experiencing moderate or severe levels of food insecurity, that is households who have insufficient access to safe and nutritious foods or to enough quantity of foods, consume around 450 kcal/capita/day less than food secure households or mildly food insecure. The difference is slightly higher when we remove the effect of the composition of the household and convert the average amount of dietary energy consumed to adult male equivalent.

As discussed above and confirmed in the graph below, food insecure households are less wealthy than food secure households, with an average income (proxy by total expenditures) that is 35 percent lower than that of food secure households. Food insecure households spend on average USD 4 per capita per day to acquire food, which is 30 percent less than food secure households. They spend on average 34 cents less to get 1 000 kcal than food secure households. The lower cost of dietary energy points towards differences in the diversity and maybe quality of the foods accessed by moderately or severely food insecure households compared to food

FIGURE 36

Distribution of dietary energy consumption by level of food insecurity

Average dietary energy consumption by level of severity of food insecurity (kcal/day)

AVERAGE DIETARY ENERGY CONSUMPTION PER ADULT MALE EQUIVALENT	Moderately or severely food insecure	3344
	Food secure or mildly food insecure	3904
AVERAGE DIETARY ENERGY CONSUMPTION (KCAL/CAPITA/DAY)	Moderately or severely food insecure	2574
	Food secure or mildly food insecure	3019

SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 37

Distribution of the cost of food by level of food insecurity

Difference in the amount spent on food between food secure and food insecure households

■ Food secure or mildly food insecure   ■ Moderately or severely food insecure

Average food consumption in monetary value (USD/capita/day)	Average dietary energy unit value (USD/1 000 kcal)	Average total expenditures in monetary value (USD/capita/day)
5.7 / 4.0	2.0 / 1.7	13.9 / 9.0
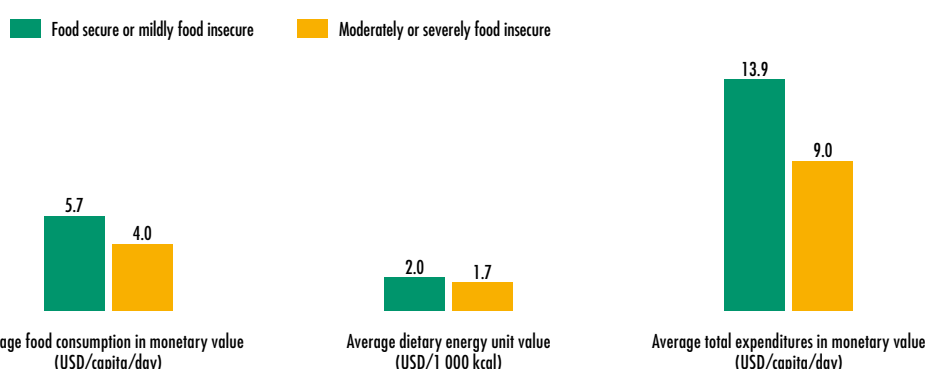
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 38

Main sources of acquisition of the DEC of the food secure

Contribution of the average DEC of the main source of consumption (percentage)

SHARE OF DIETARY ENERGY CONSUMED AT HOME AND RECEIVED FOR FREE OR THROUGH EXCHANGE	Moderately or severely food insecure	7
	Food secure or mildly food insecure	10
SHARE OF DIETARY ENERGY CONSUMED AWAY FROM HOME PURCHASED IN CASH OR RECEIVED FOR FREE	Moderately or severely food insecure	14
	Food secure or mildly food insecure	16
SHARE OF DIETARY ENERGY CONSUMED FROM OWN PRODUCTION	Moderately or severely food insecure	11
	Food secure or mildly food insecure	8
SHARE OF DIETARY ENERGY CONSUMED AT HOME PURCHASED IN CASH	Moderately or severely food insecure	67
	Food secure or mildly food insecure	66

SOURCE: Marshall Islands 2019/20 HIES.

secure or mildly food insecure households, and the difference in the amount of dietary energy points towards access by food insecure households to lower quantities of foods than food secure households.

Both food secure and food insecure households purchase in cash more than two thirds of the dietary energy consumed in the house. But food insecure households tend to consume more from their own production, since 11 percent of the dietary energy consumed by food insecure households comes from home produced foods compared to 8 percent for

food secure households. This trend confirms that more food insecure households are found among households involved in fishing or livestock activities than among households not involved in these activities. Strangely, the contribution to the average dietary energy consumed of food received for free or through exchange is lower for food insecure households than for food secure households. Food insecure households might be surrounded by other food insecure households between which offerings become difficult.

FIGURE 39

Number of products reported by level of severity of food insecurity and percentage of households who consumed the food

Number of products consumed by food secure and food insecure households

NUMBER OF PRODUCTS CONSUMED BY AT LEAST 1 HOUSEHOLD IN 5	Moderately or severely food insecure	32
	Food secure or mildly food insecure	47
NUMBER OF PRODUCTS CONSUMED BY AT LEAST 1 HOUSEHOLD IN 3	Moderately or severely food insecure	24
	Food secure or mildly food insecure	29
NUMBER OF PRODUCTS CONSUMED BY AT LEAST 1 HOUSEHOLD IN 2	Moderately or severely food insecure	3
	Food secure or mildly food insecure	5
NUMBER OF PRODUCTS CONSUMED ON AVERAGE PER HOUSEHOLD	Moderately or severely food insecure	21
	Food secure or mildly food insecure	26
TOTAL NUMBER OF FOOD PRODUCTS	Moderately or severely food insecure	138
	Food secure or mildly food insecure	161

SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 40

Differences in quantities of the main products consumed by food secure and food insecure households

Difference between the quantity of food products consumed by food insecure versus food secure households (g/capita/day)*

Beverages	-61
Meat and meat products	-16
Cereals and their products	-15
Milk and milk products	-13
Fats and oils	-12
Vegetables and their products	-12
Sweets and sugars	-11
Pulses, seeds and nuts and their products	-9
Roots, tubers, plantains and their products	-9
Spices and condiments	-8
Fruits and their products	-8
Composite dishes	-4
Eggs and their products	-3
Food additives	-2
Savoury snacks	-1
Tobacco/kava	1
Fish, shellfish and their products	14

SOURCE: Marshall Islands 2019/20 HIES.

* A positive value refers to higher quantity consumed by food insecure households compared to the quantity consumed by food secure households and a negative value refers to a lower quantity consumed by food insecure households compared to the quantity consumed by food secure households.

5.3 Main food products consumed by food insecure and food secure households

As discussed earlier, food insecure households spend on average 35 cents less to get 1 000 kcal than food secure households, pointing towards a diet that might be less diversified and bringing therefore lower amounts of essential nutrients.

When comparing the total number of food products reported by at least one food secure or food insecure household, 161 different types of food were reported

by food secure households compared to 138 reported by food insecure. This shows that the choice of foods available for consumption is much lower among food insecure households than among food secure households. This finding is further confirmed by the number of food products consumed on average by food insecure compared to that consumed by food secure households (21 percent versus 26 percent). If we consider the food products consumed by at least 66 percent of the households as being essential, 5 food products are consumed by at least 66 percent of food secure households compared to only 3 products in food insecure households. And if we

consider as non-essential the food products consumed by at least 20 percent of the households, the difference is even more striking with 47 food products consumed by at least 20 percent of food secure households compared to 32 food products consumed by at least 20 percent of food insecure households. These findings point towards important differences in the number of foods accessed by food secure or food insecure households.

If the number of products consumed differs by level of food insecurity, the quantity of the main products consumed by food groups is also different. Except for fish and tobacco products, the average quantities of food products consumed by food group is lower for food insecure households than for food secure households. The main differences in the quantities are observed for groups of beverages, with the quantity consumed being 60 g/capita/day lower, followed by meat, cereals, milk, vegetables, sweets and sugar, with an average quantity consumed by the food insecure being lower by more than 10 g/capita/day. Conversely, the food insecure consume on

average 8 grams more of fish per capita per day than food secure households.

5.4 Nutrient consumption of food insecure versus food secure

The contribution of carbohydrates to the average dietary energy consumed is slightly higher for food insecure households than for food secure households, with respective contributions of 62 percent and 60 percent. The reverse is observed with fats, which contribute 24 percent of the dietary energy of the food secure compared to 21 percent of the diet of the food insecure. Proteins contribute the same amount for both groups to the average dietary energy and is slightly above the upper limit of the WHO norms for a balanced diet.[I] This translates into an average consumption of protein, fats and carbohydrates for food secure or mildy food insecure of respectively 56 , 180 and 206 kcal/capita/day more compared to modertaley or severely food insecure. So the percentage of overweight and obesity could be

FIGURE 41
Contribution of macronutrients to the average DEC (percentage)

Contribution of macronutrients to the average dietary energy consumed by level of food insecurity (percentage)
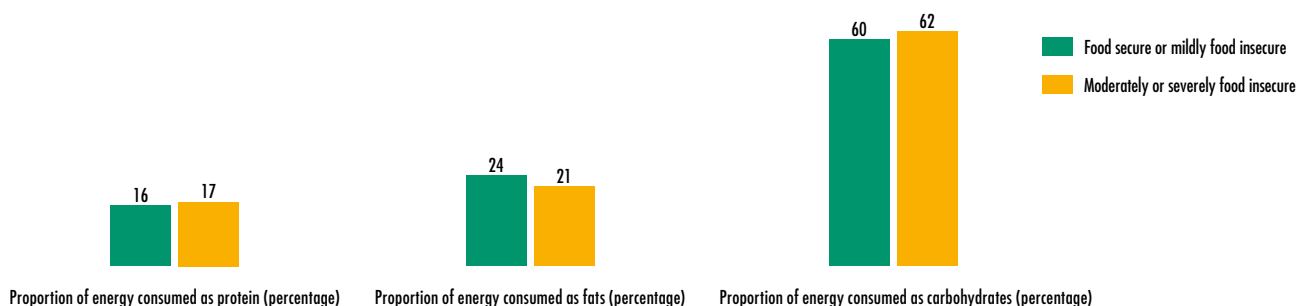
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 42
Nutrient adequacy of the food secure versus food insecure (percentage)

Nutrient adequacy of food secure and food insecure households (as measured by the amount of nutrient available for consumption as percentage of the average requirements)
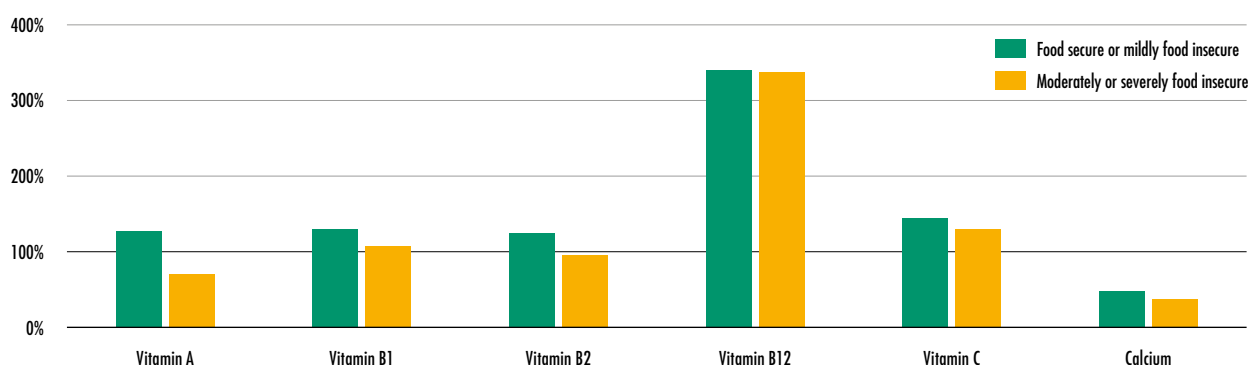
SOURCE: Marshall Islands 2019/20 HIES.

[I] A balanced diet refers to respective contributions of 10–15 percent, 15–30 percent and 55–75 percent of proteins, fats and carbohydrates to the average dietary energy intake.

FIGURE 43

Contribution of energy, protective and body building foods to the average DEC by level of severity of food insecurity

Contribution of energy, protective and body building foods to the average DEC of the food secure and food insecure households

Food secure or mildly food insecure

20%	Not classified
18%	Body bulding foods
3%	Protective foods
59%	Energy foods

Moderately or severely food insecure

17%	
19%	
3%	
61%	
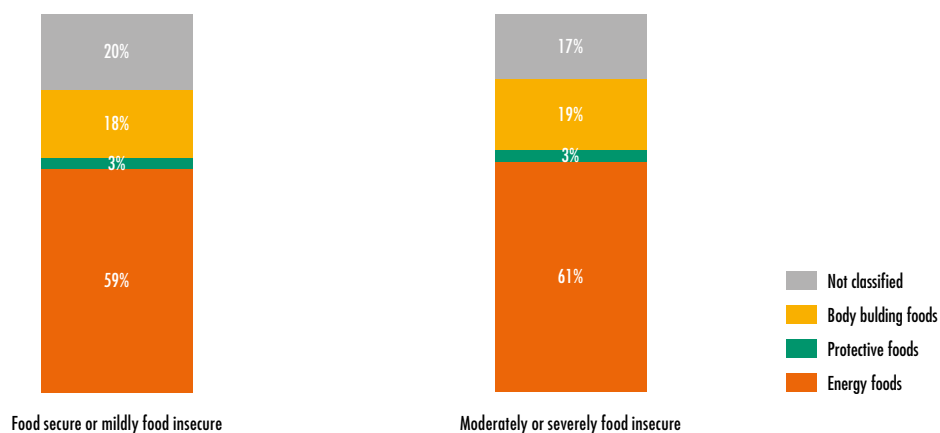
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 44

Contribution of foods to choose, limit or avoid to the average DEC by level of severity of food insecurity

Contribution of foods to choose, limit or avoid to the average DEC of the food secure and food insecure (percentage)

Food secure or mildly food insecure

20%	Not classified
17%	Foods to avoid
43%	Foods to limit
19%	Foods to choose

Moderately or severely food insecure

17%	
16%	
47%	
21%	
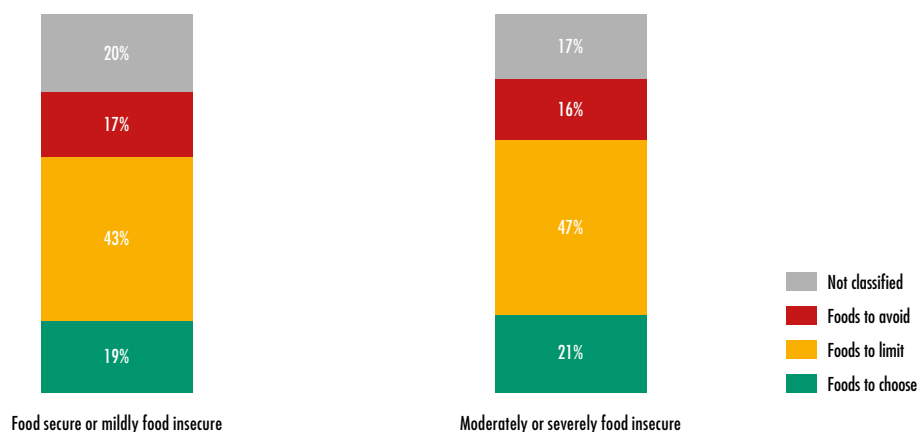
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 45

Diet of food insecure is less expensive and less diversified

Average dietary energy cost of food secure and food insecure (USD/1 000 kcal)
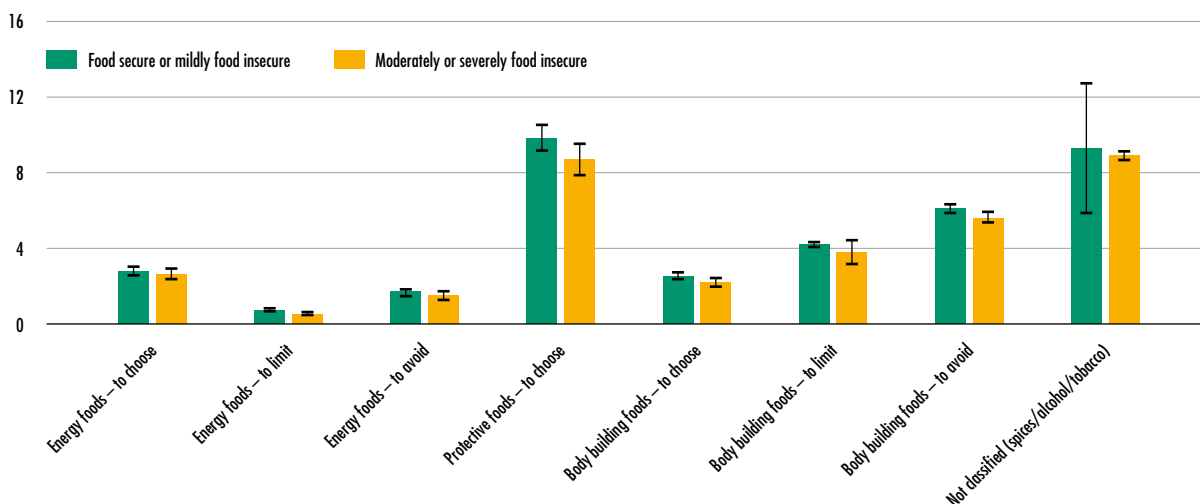
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 46
Distribution of the number of foods consumed by at least one household

Distribution of the number of foods consumed by at least one household according to the Pacific guidelines and by class of food insecurity
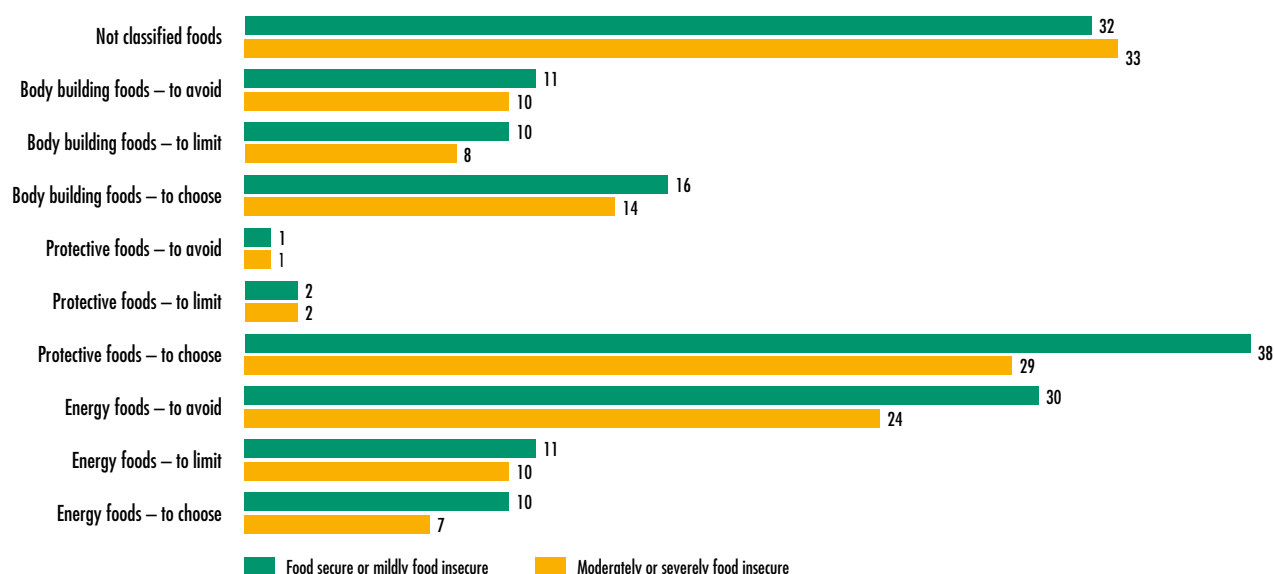
SOURCE: Marshall Islands 2019/20 HIES.

important among wealthier and food secure households and food secure households might be characterized by access to a more diversified diet but of low nutritious quality.[I] The percentage of households for which the contributions of proteins, fats and carbohydrates is within the WHO norms for a balanced diet is very similar within food secure or food insecure households and is around 28–30 percent of households. Therefore, for both population groups the diet remains relatively unbalanced and is too rich in proteins and fats and too poor in carbohydrates.

On average the quantity available for consumption of all essential micronutrients and minerals is lower for food insecure households than for food secure households. Vitamin B12 and vitamin C adequacy is reached for food secure and food insecure households due to the high consumption of fish rich in vitamin B12 and the consumption of powdered drink, breadfruit and oranges rich in vitamin C. Adequacy of vitamin B1 is also reached for both food secure and food insecure households, but the amount of vitamin B1 available for consumption is only slightly above the average requirements for the food insecure. Vitamin A and vitamin B2 adequacy is reached only for food secure households mainly due to their higher consumption of foods rich in vitamin A like carrot (2.3 g/capita/day versus 0.5 g/capita/day) and margarine (7.7 g/capita/ day versus 1.6 g/capita/day), and products rich in vitamin B2 like breakfast cereals or noodles.

5.5 Healthy living pattern

When the foods consumed are categorized according to the Pacific guidelines for a healthy diet, it can be seen that the contribution of energy-dense foods to the average dietary energy consumed is higher for food insecure households than for the food secure, with respective contributions of 61 percent and 59 percent, and no significant difference can be observed in the contribution of body building or protective foods to the overall diets of the food secure or food insecure. But 47 percent of the dietary energy consumed by the food insecure comes from foods to limit compared to 43 percent for food secure households. However, if we bring this in terms of total dietary energy consumed, food secure or mildy food insecure households consume more energy from foods to limit than moderately or severely food insecure households.

This difference in the quality of the diet is further reflected in the difference in the cost of the dietary energy consumed. Except for energy-dense foods to choose, for which the difference in the cost of 1 000 kcal is marginal, food insecure households tend to spend less to acquire 1 000 kcal than food secure households for all other foods, which means that food insecure households in general have access to less expensive sources of dietary energy. The higher difference is observed for protective foods, for which food insecure households spend on average USD 1.2 less than food secure households to get 1 000 kcal.

[I] In Marshall Islands, the level of severity associated to the questions related to accessing few kind or healhty foods are the lowest. Which means many food secure or mildly food insecure households consider they are eating healhty foods (even if too rich in fats and sugar) based on their own opinion of what is considered a "healthy" food.

TABLE 4
Products consumed by at least 33 percent of food secure and food insecure households in the previous seven days (percentage)

Food type	Description of food	Percentage of households who acquired the food in the previous seven days (%)	
		Food secure or mildly food insecure	Moderately or severely food insecure
Energy foods – to choose	Breadfruit	27	31
Energy foods – to limit	Rice, not further specified	98	97
	Noodles, not further specified	72	60
	Flour, not further specified	42	38
	Bread, loaf, all others	37	25
Energy foods – to avoid	Oil, cooking	65	55
	Sugar, not further specified	57	55
	Cola flavour soft drink	43	36
Body building foods – to choose	Chicken, not further specified	70	58
	Egg, chicken, fresh	65	45
	Fish, reef, not further specified	43	42
Body building foods – to limit	Mackerel, canned, not further specified	44	53
Body building foods – to avoid	Fish, canned in oil, not further specified	64	62
	Luncheon meat, chicken	45	50
	Beef, canned, corned	40	36
	Canned meat, not further specified	37	38
Protective foods – to choose	Onion, brown	41	24
	Banana, common e.g. Cavendish	39	30
	Apple, not further specified	39	26
	Orange	38	23
Not classified (spices/alcohol/tobacco)	Salt, iodised	84	74
	Sauce, soy/shoyu	80	69
	Lunch away from home	64	54
	Sauce, tomato, ketchup	60	39
	Hot drinks away from home	58	50
	Snacks away from home	50	34
	Bottled water away from home	50	41
	Non-alcoholic drinks away from home	46	38
	Coffee, mix (e.g. 3 in 1)	45	49
	Tobacco	37	47

SOURCE: Marshall Islands 2019/20 HIES.

The number of protective foods consumed by at least one food insecure household is 32 compared to 41 foods consumed by at least one food secure household. This finding confirms that the number of protective foods available for consumption is lower for food insecure households than for food secure households. The same is also observed among energy foods to limit.

Apart from breadfruits, canned mackerel, chicken luncheon meat and canned meat, which are accessed by a slightly higher percentage of food insecure households than that of food secure households, all the other foods consumed by at least one household in three are consumed by a lower percentage of food insecure households than food secure households.

Again, protective food is the category for which the percentage of food insecure households consuming the food is much lower than the percentage of food secure households (around 40 percent of food secure households consume banana, apple, orange or onion compared to less than 30 percent of food insecure households consuming these foods). It is important to note that the percentage of households consuming tobacco is higher for food insecure households than for food secure households (47 percent versus 37 percent). However, this finding disadvantages the food insecure, since higher tobacco consumption (1.19 g/capita/day versus 1.07 g/capita/day) increases the risk factor for heart attacks, strokes, chronic obstructive pulmonary disease (COPD) and several cancers.

Conclusions

Target 2.1 of the SDGs aims to end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round by 2030.

The analysis of the food and the food insecurity experience scale data collected in the 2019/20 HIES confirms that in the Marshall Islands, access to varied and nutritious food is a real struggle. More than 60 percent of the dietary energy consumed comes from foods that should be limited or avoided for a healthy diet. Consumption of locally produced energy-dense foods such as breadfruits or pandanus remains marginal and is surpassed by that of rice or other cereal products. However, fish remains an important source of energy and the main source of protein but around 8 percent of the dietary energy consumed comes from chicken and canned meat. The meals consumed away from home in the form of snacks, lunch and beverages represent an important component of the diet of a Marshallese, bringing more than 400 kcal per capita per day and contributing one fifth of the amount spent on food. Of note also, in Marshall islands, 36 percent of food insecure households and 46 percent of food secure households received remittances at the time of this survey and, as seen in this report, remittances are an important determinant of access to dietary energy. Any external shock (such as COVID-19) cutting back this source of extra income could further increase the magnitude and severity of food insecurity in Marshall Islands.

Achieving SDG Target 2.1 by 2030 remains for the Marshall Islands an outstanding challenge that needs to be addressed by appropriate policies. It is hoped that this report will help in designing such policies.

Further uses of this report

This report is the first of its kind in Marshall Islands. The information assembled in the report should be a catalyst for the further development and implementation of food and food system policies and interventions. The report may be used, for example, to:

- communicate to all stakeholders the status of food security and nutrition in the Marshall Islands;

- assess the data gap and needs in terms of food consumption and nutrition information and develop further nutrition assessment tools and surveys;

- form recommendations aiming to improve the overall diet of the Marshallese and reduce risks associated with bad eating habits and/or access to an unhealthy diet;

- develop policies aiming to increase access to more traditional, healthy local foods;

- identify pockets of food insecurity and further develop policies targeting the most vulnerable populations;

- report on SDG Target 2.1 indicators;

- further assess the impact of COVID-19 on food security and food systems in providing a baseline for future evaluations;

- serve as a baseline to assess the changes over time in food security and food consumption patterns in the Marshall Islands; and

- complement further analysis such as that on poverty.

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ANNEX 1
Methodological annex related to SDG 2.1 estimates

ANNEX 1.1 SDG 2.1.1 – The prevalence of undernourishment

Definition: Undernourishment is defined as the condition of an individual whose habitual food consumption is insufficient to provide, on average, the amount of dietary energy required to maintain a normal, active, healthy life.

How it is reported: The SDG 2.1.1 indicator is reported as a prevalence and is denominated as "prevalence of undernourishment" (PoU), which is an estimate of the percentage of individuals in the total population that are in a condition of undernourishment.

Methodology: To compute an estimate of the PoU in a population, the probability distribution of habitual dietary energy intake levels (expressed in kcal per person per day) for the average individual is modelled as a parametric probability density function (pdf), f(x). The indicator is obtained as the cumulative probability that the habitual dietary energy intake (x) is below the minimum dietary energy requirements (MDER) (i.e. the lowest limit of the range of energy requirements for the population's representative average individual) as in the formula below:

$$PoU = \int x < MDER \; f(x|\theta)dx$$

where θ is a vector of parameters that characterizes the pdf. The distribution is assumed to be lognormal, and thus fully characterized by only two parameters: the mean dietary energy consumption (DEC), and its coefficient of variation (CV).

	PoU (%)	Average DEC (kcal/capita/day)	Minimum dietary energy requirement (kcal/capita/day)	CV (%)
Marshall Islands	4	2 862	1 742	27

Data sources: main source used to estimate the three parameters for the Marshall Islands.

- Minimum dietary energy requirement (MDER): Human energy requirements for an individual in a given sex/age class are determined on the basis of normative requirements for basic metabolic rate (BMR) per kilogram of body mass, multiplied by the ideal masses that a healthy person of that class may have, given his or her height, and then multiplied by a coefficient of physical activity level (PAL) to take into account physical activity. Given that both healthy BMIs and PALs vary among active and healthy individuals of the same sex and age, a range of energy requirements applies to each sex and age group of the population. The MDER for the average individual in the population, that is the threshold used in the PoU formula, is obtained as the weighted average of the lower bounds of the energy requirement ranges for each sex and age group, using the shares of the population in each sex and age group as weights.

- Information on the median height and on the population structure by sex and age is extracted from the anthropometric and demographic information on height, age and gender collected in the 2019/20 HIES.

- DEC and CV were extracted from the food data collected in the 2019/20 HIES, which collects the quantities of products consumed by the household and the number of meals consumed outside the house during the previous seven days. The quantities were converted into grams using conversion factors provided by the market survey and ad hoc conversions from EPPSO and further converted into nutrient values using the Pacific Nutrient Database developed jointly by SPC, FAO and Wollongong University and based on the Food Composition Table of the PICTs. The dietary energy provided by the food consumed away from home is estimated by applying an adjustment factor of 10 percent to the median cost of one calorie consumed in the house to the amount spent on meals consumed away from home. From the distribution of average daily DEC

in the population it is possible then to estimate the average DEC and the CV that describe the distribution. However, because of excess variability[I] observed in the distribution of daily energy, additional data treatment[II] was needed to get a reliable estimate of the CV. The treatment of excess variability leads to a reduction of the total CV from 50 percent to around 27 percent.

Challenges and limitations: While formally the state of being undernourished or not is a condition that applies to individuals, given that the data is usually available on a large scale it is impossible to reliably identify which individuals in a certain group are actually undernourished. Through the statistical model described above, the indicator can only be computed with reference to a population or a group of individuals for which a representative sample is available. In the case of the Marshall Islands, the sample does not allow for a valid estimate of the minimum requirement at a low level of disaggregation and therefore only the prevalence at national level is provided. Finally, due to the probabilistic nature of the inference and the margins of uncertainty associated with estimates of each of the parameters in the model, the precision of the PoU estimates is generally low with margins of error that can be expected to probably exceed 2.5 percentage points in most cases. As can be seen from the table below, which shows the values of PoU associated with different values of DEC and CV or MDER, PoU is very sensitive to a change in any of these parameters, which is why it is important to frequently update the parameters used to report on SDG 2.1.1. An increase in the DEC of 100 kcal decreases PoU from 4 percent to 3 percent and conversely a 2 percentage point increase in inequality, keeping all other parameters constant, increases PoU from less than 4 percent to around 6 percent.

	Average dietary energy consumption (kcal/capita/day)	Full CV of DEC	Minimum dietary energy requirements (kcal/capita/day)	Prevalence of undernourishment in Marshall Islands (%)	Number of people undernourished
Using information from the survey	2 867	0.27	1 742	**3.9**	**2 112**
Using a higher DEC, keeping inequality unchanged	3 000	0.27	1 742	**2.7**	**1 486**
Using a lower DEC, keeping inequality constant	2 700	0.27	1 742	**6.4**	**3 468**
Decreasing inequality, keeping DEC constant	2 867	0.24	1 742	**2.3**	**1 229**
Increasing inequality, keeping DEC constant	2 867	0.29	1 742	**5.7**	**3 081**

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[I] Excess variability is due to survey design (the 2019/20 HIES of the Marshall Islands was not designed to measure individual food consumption), field work, data entry or other measurement errors.

[II] The CV that measures inequality in accessing dietary energy is estimated as the sum of inequality in accessing energy due to socioeconomic differences (CV of income) and inequality in accessing energy due to differences in energy requirements (CV of requirements). See http://www.fao.org/3/a-i4046e.pdf for more details about the estimation of the CV and treatment for excess variability. In the case of the Marshall Islands, we used expenditure distribution as a welfare indicator to measure inequality in access to food.

ANNEX 1.2 SDG 2.1.2 – The prevalence of moderate or severe food insecurity based on the FIES

Definition: Food insecurity as measured by this indicator refers to limited *access to food*, at the level of individuals or households, due to lack of money or other resources. The severity of food insecurity is measured using data collected with the *Food Insecurity Experience Scale survey module* (FIES-SM), a set of eight questions asking individuals or households to self-report conditions and experiences typically associated with limited access to food because of a lack of money or other resources. In the case of the Marshall Islands one household member older than 15 years was asked questions to report on behalf of the household. Referring to a period of the previous twelve months, the eight questions of the scale are:

Q1.	Were you worried you would run out of food because of a lack of money or other resources?
Q2.	Were you unable to eat healthy and nutritious food because of a lack of money or other resources?
Q3.	Did you eat only a few kinds of food because of a lack of money or other resources?
Q4.	Did you have to skip a meal because there was not enough money or other resources to get food?
Q5.	Did you eat less than you thought you should because of a lack of money or other resources?
Q6.	Did your household run out of food because of a lack of money or other resources?
Q7.	Were you hungry but did not eat because there was not enough money or other resources?
Q8.	Did you go without eating for a whole day because of a lack of money or other resources?

This indicator is particularly relevant for countries where severe food deprivation may no longer be of concern, but where sizeable pockets of food insecurity still remain. In this sense, it is an indicator that is fully aligned with the universality principles of the 2030 Agenda. Of note also is the reference to the 12-month period so that the indicator reflects chronic food insecurity. To that extent the SDG 2.1.2 is also aligned to SDG 2.1.1, since both are a measure of chronic food insecurity.

How the indicator is reported: The estimates correspond to the prevalence (%) of individuals in the population living in households where *at least one adult was found to be food insecure*.

Data source: The eight questions of the FIES-FM were introduced for the first time in the Marshall Islands in the 2018 survey experiment. The performance of the scale could not be assessed because of the high number of missing cases (more than 11 percent) and the small number of non-extreme cases (160). The scale was introduced again in the 2019/20 HIES.

Methodology: The data were validated and used to construct a scale of food-insecurity severity using the Rasch model, which postulates that the probability of observing an affirmative answer by respondent *I* to question *j* is a logistic function of the distance, on an underlying scale of severity, between the position of the respondent, a_i, and that of the item, b_j.

$$Prob\ (X_{i,j} = Yes) = exp\ (a_i - b_j) / (1 + exp\ (a_i - b_j))$$

By applying the Rasch model to the FIES data, it is possible to estimate the probability of being food insecure (p_i, L) at each level of severity of food insecurity L (moderate or severe, or severe), for each respondent *I*, with $0 < p_i$, L < 1.

The prevalence of food insecurity at each level of severity (*FIL*) in the population is computed as the weighted sum of the probability of being severely food insecure for all respondents (*i*) in a sample:

$$FIL = \Sigma p_i, Lw_i$$

where w_i are post-stratification weights that indicate the proportion of individuals or households in the national population represented by each record in the sample.

Challenges: to produce comparable measures over time and across different populations, a common scale was established as a reference (exactly as converting measures of temperature across different measuring scales – such as Celsius and Fahrenheit)). The national scale of severity of food insecurity is then equated to the global standard to obtain an SDG 2.1.2 estimate that can be further compared to global, regional or country levels of severe food insecurity based on the FIES.

In the case of the Marshall Islands, the scale performs relatively well except in some specific islets of the atoll of Kwajalein due to some issues during field work. Around 86 households were dropped from the analysis. Because of that, the prevalence is not representative of the Marshall Islands and SDG 2.1.2 cannot be reported. However, and given the results of the statistical validation performed on the 780 remaining households, the raw score can be considered a reliable, ordinal indicator of food security severity. The global FIES scales are calibrated on the scale produced by the FIES application in the Marshall Islands and the results reveal that, after appropriate scaling of the severity values, the items WHLDAY corresponding to the question "*Did you go without eating for a whole day because of a lack of money or other resources?*" was unique and the correlation between the remaining seven items of the Marshall Islands with the global standard is 97.4 percent.

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ANNEX 2
Description of the groups

ANNEX 2.1 Population groups

Population group	Number of sampled households	Percentage	Representative households	Percentage
Geographic characteristics				
Area of residence				
Urban	551	63.1	11 214	75.3
Rural	322	36.9	3 675	24.7
Demographic characteristics of the household				
Gender of the head of the household				
Male	612	70.1	10 507	70.6
Female	261	29.9	4 382	29.4
Class of age for the head of the household (in years)				
Age 18 to 39	220	25.2	3 818	25.6
Age 40 to 49	241	27.6	3 838	25.8
Age 50 to 59	194	22.2	3 488	23.4
Age 60 and above	218	25.0	3 745	25.2
Categories for the number of children less than 14 years old				
No child	203	23.3	6 995	47.0
1 child	195	22.3	3 343	22.5
2 children	211	24.2	2 576	17.3
3 children	132	15.1	1 271	8.5
4 children and more	132	15.1	704	4.7
Marital status of the head of the household				
Married	648	74.2	10 473	70.3
Not married	225	25.8	4 416	29.7
Health and sanitation				
Access to a safe source of drinking water				
Yes	256	29.3	4 559	30.6
No	617	70.7	10 330	69.4

SOURCE: Marshall Islands 2019/20 HIES.

Population group	Number of sampled households	Percentage	Representative households	Percentage
Socioeconomic characteristics of the head of the household				
Education level of the head of the household				
Pre- and primary school	212	24.3	3 412	22.9
Lower secondary school	467	53.5	7 587	51.0
Higher/post/tertiary education	194	22.2	3 890	26.1
Any household member involved in fishing activities				
Yes	192	22.0	2 267	15.2
No	681	78.0	12 622	84.8
Any household member involved in handicraft or home food processing				
Yes	148	17.0	1 831	12.3
No	725	83.1	13 058	87.7
Head of the household involved in livestock activities				
Yes	304	34.8	4 009	26.9
No	569	65.2	10 880	73.1
Household receives remittances				
Yes	437	50.1	6 766	45.4
No	436	49.9	8 123	54.6
Household involved in copra activities				
Yes	188	21.5	2 544	17.1
No	685	78.5	12 345	82.9
Level of severity of food insecurity*				
Food secure or mildly food insecure	503	63.9	9 168	66.1
Moderate or severe food insecure	284	36.1	4 696	33.9
Total	**873**	**100.0**	**14 889**	**100.0**

* Excluding 86 households from Kwajalein atoll.

SOURCE: Marshall Islands 2019/20 HIES.

ANNEX 2.2 Classification of the food products collected in the 2019/20 HIES according to GIFT and Pacific guidelines

Food product reported in the 2019/20 KHIES	GIFT classification	Pacific guidelines classification	Percentage of households that consumed the food
Rice, brown, uncooked	Cereals and their products	Energy foods – to choose	0
Rice, not further specified	Cereals and their products	Energy foods – to limit	97
Flour, not further specified	Cereals and their products	Energy foods – to limit	41
Bread, loaf, all others	Cereals and their products	Energy foods – to limit	33
Bread, loaf, not further specified	Cereals and their products	Energy foods – to limit	12
Breakfast cereal, flakes of corn, added vitamin	Cereals and their products	Energy foods – to limit	0
Oats, porridge, dry	Cereals and their products	Energy foods – to limit	2
Breakfast cereal, not further specified	Cereals and their products	Energy foods – to limit	23
Noodles, not further specified	Cereals and their products	Energy foods – to limit	69
Potato, not further specified	Roots, tubers, plantains	Energy foods – to choose	20
Kumara/sweet potato	Roots, tubers, plantains	Energy foods – to choose	2
Cassava/tapioca/manioc	Roots, tubers, plantains	Energy foods – to choose	0
Taro, common	Roots, tubers, plantains	Energy foods – to choose	2
Banana, cooking, raw	Roots, tubers, plantains	Energy foods – to choose	17
Flour, cassava	Roots, tubers, plantains	Energy foods – to choose	1
Cream, coconut, canned/UHT	Pulses, seeds and nuts	Energy foods – to avoid	8
Coconut, brown	Pulses, seeds and nuts	Energy foods – to choose	10
Mixed dried fruit, not further specified	Pulses, seeds and nuts	Body building foods – to choose	0
Beans, legumes canned, e.g. red kidney, lima	Pulses, seeds and nuts	Protective foods – to choose	1
Baked beans, canned, not further specified	Pulses, seeds and nuts	Protective foods – to limit	8
Peanut butter, not further specified	Pulses, seeds and nuts	Energy foods – to avoid	21
Milk, long life, shelf stable (UHT), not specified	Milk and milk products	Body building foods – to choose	26
Milk, powdered, not further specified	Milk and milk products	Body building foods – to limit	2
Cheese, block, e.g. Cheddar, Edam, Swiss	Milk and milk products	Body building foods – to limit	4
Yoghurt, not further specified	Milk and milk products	Body building foods – to limit	2
Egg, chicken, fresh	Eggs and their products	Body building foods – to choose	59
Tuna, not further specified	Fish, shellfish and products	Body building foods – to avoid	19
Fish, pelagic/ocean, not further specified	Fish, shellfish and products	Body building foods – to choose	1
Shark	Fish, shellfish and products	Body building foods – to choose	0
Fish, reef, not further specified	Fish, shellfish and products	Body building foods – to choose	43
Fish, not further specified	Fish, shellfish and products	Body building foods – to choose	2
Mackerel, canned, not further specified	Fish, shellfish and products	Body building foods – to limit	47
Fish, canned in oil, not further specified	Fish, shellfish and products	Body building foods – to limit	64
Fish, canned, not further specified	Fish, shellfish and products	Body building foods – to limit	3
Crab, land	Fish, shellfish and products	Body building foods – to choose	2
Crayfish/lobster, not further specified	Fish, shellfish and products	Body building foods – to choose	2
Scallop	Fish, shellfish and products	Body building foods – to choose	0
Oyster	Fish, shellfish and products	Body building foods – to choose	2
Sea snail	Fish, shellfish and products	Body building foods – to choose	0
Sea-hare, not further specified	Fish, shellfish and products	Body building foods – to choose	1

SOURCE: Marshall Islands 2019/20 HIES.

Food product reported in the 2019/20 KHIES	GIFT classification	Pacific guidelines classification	Percentage of households that consumed the food
Beef, regular, cut not specified	Meat and meat products	Body building foods – to choose	20
Pork, regular, cuts not specified	Meat and meat products	Body building foods – to choose	12
Lamb and mutton, regular, cuts not specified	Meat and meat products	Body building foods – to choose	2
Chicken, not further specified	Meat and meat products	Body building foods – to choose	66
Bird, all others, e.g. pigeon, noddy bird	Meat and meat products	Body building foods – to choose	1
Beef, canned, corned	Meat and meat products	Body building foods – to avoid	39
Canned meat, not further specified	Meat and meat products	Body building foods – to avoid	38
Paté, not further specified	Meat and meat products	Body building foods – to avoid	0
Devon/fritz, processed meat, beef and pork	Meat and meat products	Body building foods – to avoid	2
Luncheon meat, chicken	Meat and meat products	Body building foods – to avoid	45
Cabbage, Chinese	Vegetables and products	Protective foods – to choose	4
Cabbage, European, white	Vegetables and products	Protective foods – to choose	5
Broccoli	Vegetables and products	Protective foods – to choose	8
Lettuce, not further specified	Vegetables and products	Protective foods – to choose	4
Leaves, watercress	Vegetables and products	Protective foods – to choose	0
Cucumber, unpeeled	Vegetables and products	Protective foods – to choose	2
Eggplant	Vegetables and products	Protective foods – to choose	0
Tomato, common	Vegetables and products	Protective foods – to choose	5
Pumpkin	Vegetables and products	Protective foods – to choose	2
Capsicum, not further specified	Vegetables and products	Protective foods – to choose	6
Beans, green	Vegetables and products	Protective foods – to choose	3
Beans, long	Vegetables and products	Protective foods – to choose	1
Carrot	Vegetables and products	Protective foods – to choose	9
Garlic, peeled	Vegetables and products	Protective foods – to choose	14
Onion, brown	Vegetables and products	Protective foods – to choose	35
Corn, cob, not further specified	Vegetables and products	Protective foods – to choose	7
Mushrooms, canned	Vegetables and products	Protective foods – to choose	1
Avocado	Fruits and their products	Protective foods – to choose	0
Banana, common, e.g. Cavendish	Fruits and their products	Protective foods – to choose	35
Mango	Fruits and their products	Protective foods – to choose	4
Papaya	Fruits and their products	Protective foods – to choose	10
Pineapple	Fruits and their products	Protective foods – to choose	2
Coconut, green	Fruits and their products	Protective foods – to choose	20
Breadfruit	Fruits and their products	Energy foods – to choose	28
Pandanus	Fruits and their products	Protective foods – to choose	16
Lime	Fruits and their products	Protective foods – to choose	9
Orange	Fruits and their products	Protective foods – to choose	33
Mandarin	Fruits and their products	Protective foods – to choose	0
Apple, not further specified	Fruits and their products	Protective foods – to choose	34
Pear, Packham's	Fruits and their products	Protective foods – to choose	1
Peach	Fruits and their products	Protective foods – to choose	1
Strawberry	Fruits and their products	Protective foods – to choose	1
Grapes	Fruits and their products	Protective foods – to choose	3
Kiwi fruit, with skin	Fruits and their products	Protective foods – to choose	1
Melon, not further specified	Fruits and their products	Protective foods – to choose	2
Watermelon	Fruits and their products	Protective foods – to choose	3
Fruit, not further specified	Fruits and their products	Protective foods – to choose	0
Fruit, canned, not further specified	Fruits and their products	Protective foods – to limit	6

SOURCE: Marshall Islands 2019/20 HIES.

Food product reported in the 2019/20 KHIES	GIFT classification	Pacific guidelines classification	Percentage of households that consumed the food
Bacon, not further specified	Fats and oils	Body building foods – to avoid	25
Oil, cooking	Fats and oils	Energy foods – to avoid	63
Oil, not further specified	Fats and oils	Energy foods – to avoid	1
Butter, not further specified	Fats and oils	Energy foods – to avoid	22
Margarine, not further specified	Fats and oils	Energy foods – to avoid	8
Crackers, not further specified	Sweets and sugars	Energy foods – to limit	18
Biscuits, sweet, all others	Sweets and sugars	Energy foods – to avoid	5
Cake, not further specified	Sweets and sugars	Energy foods – to avoid	9
Pastry, not further specified	Sweets and sugars	Energy foods – to avoid	9
Doughnut, not further specified	Sweets and sugars	Energy foods – to avoid	15
Cake mix	Sweets and sugars	Energy foods – to limit	10
Milk, condensed, whole, sweetened	Sweets and sugars	Body building foods – to avoid	8
Pudding (dairy based)	Sweets and sugars	Energy foods – to avoid	0
Sugar, not further specified	Sweets and sugars	Energy foods – to avoid	54
Jam	Sweets and sugars	Energy foods – to avoid	2
Chocolate, not further specified	Sweets and sugars	Energy foods – to avoid	10
Nutella, or other chocolate spread	Sweets and sugars	Energy foods – to avoid	1
Ice blocks, flavoured ice, popsicles	Sweets and sugars	Energy foods – to avoid	8
Ice cream, cone or bar	Sweets and sugars	Energy foods – to avoid	9
Ice cream, vanilla	Sweets and sugars	Energy foods – to limit	6
Sorbet, not further specified	Sweets and sugars	Energy foods – to avoid	0
Chewing gum, bubble gum	Sweets and sugars	Energy foods – to avoid	5
Sweets, jelly lollies	Sweets and sugars	Energy foods – to avoid	0
Salt, iodised	Spices and condiments	Not classified	79
Sauce, chilli, Asian, commercial	Spices and condiments	Not classified	5
Sauce, soy/shoyu	Spices and condiments	Not classified	76
Sauce, tomato, for pasta	Spices and condiments	Not classified	2
Sauce, tomato, ketchup	Spices and condiments	Not classified	54
Sauce, tabasco	Spices and condiments	Not classified	19
Vinegar, not further specified	Spices and condiments	Not classified	5
Ginger root, fresh	Spices and condiments	Not classified	5
Spices, not further specified	Spices and condiments	Not classified	17
Milk, soy	Beverages	Body building foods – to choose	4
Coconut toddy, fresh	Beverages	Not classified	5
Coconut, water only	Beverages	Protective foods – to choose	23
Juice, vegetable	Beverages	Protective foods – to choose	0
Juice, fruit, not further specified	Beverages	Protective foods – to avoid	7
Coffee, ground	Beverages	Not classified	4
Coffee, instant, powder (e.g. Nescafé)	Beverages	Not classified	21
Coffee, mix (e.g. 3 in 1)	Beverages	Not classified	47
Tea, black, bag	Beverages	Not classified	11
Tea, not further specified	Beverages	Not classified	13
Iced chocolate, commercial	Beverages	Not classified	2
Beverage, chocolate flavour, from base (Milo)	Beverages	Energy foods – to avoid	1
Bottled water/spring water	Beverages	Not classified	25
Cola flavour, soft drink, e.g. Coco cola/Pepsi	Beverages	Energy foods – to avoid	40
Lemonade, soft drink, e.g. Sprite, 7 Up	Beverages	Energy foods – to avoid	13

SOURCE: Marshall Islands 2019/20 HIES.

Food product reported in the 2019/20 KHIES	GIFT classification	Pacific guidelines classification	Percentage of households that consumed the food
Soft drink, not further specified	Beverages	Energy foods – to avoid	0
Coconut toddy, boiled	Beverages	Energy foods – to avoid	3
Powdered drink/flavouring	Beverages	Energy foods – to avoid	19
Cordial, not further specified	Beverages	Energy foods – to avoid	0
Vodka	Beverages	Not classified	0
Whiskey	Beverages	Not classified	2
Wine, not further specified	Beverages	Not classified	5
Beer, homebrew	Beverages	Not classified	1
Beer, not further specified	Beverages	Not classified	20
Restaurants, cafés and the like – foods	Food not classified	Not classified	17
Breakfast away from home	Food not classified	Not classified	15
Lunch away from home	Food not classified	Not classified	60
Dinner away from home	Food not classified	Not classified	15
Non-alcoholic drinks away from home	Food not classified	Not classified	45
Bottled water away from home	Food not classified	Not classified	44
Hot drinks away from home	Food not classified	Not classified	58
Snacks away from home	Food not classified	Not classified	47
Baking powder	Food additives	Not classified	1
Baking soda	Food additives	Not classified	0
Yeast/baker's yeast	Food additives	Not classified	0
Beef, grilled/bbq	Composite dishes	Body building foods – to limit	3
Chicken, grilled/bbq	Composite dishes	Body building foods – to limit	17
Banana, cooking, boiled	Composite dishes	Energy foods – to choose	2
Pancake, without syrup from café or restaurant	Composite dishes	Energy foods – to avoid	11
Pasta, with cream sauce	Composite dishes	Energy foods – to avoid	0
Takeaway, Chinese, noodle dish	Composite dishes	Energy foods – to avoid	2
Takeaway, fish, fried, bbq	Composite dishes	Body building foods – to avoid	6
Takeaway, hamburger, bread roll, beef patty	Composite dishes	Body building foods – to avoid	5
Takeaway, pizza, not further specified	Composite dishes	Body building foods – to avoid	4
Savoury snacks, chips e.g. Twisties, Pringles	Savoury snacks	Energy foods – to avoid	17
Tobacco	Tobacco/kava	Not classified	41
Kava	Tobacco/kava	Not classified	6

SOURCE: Marshall Islands 2019/20 HIES.

ANNEX 3
Processing of the food data collected in the 2019/20 HIES

In the food consumption module of the 2019/20 Household Income Expenditure Survey of the Marshall Islands, households were given a list of some specific foods and they were asked if they consumed any of these foods in the previous seven days in their house. In the case of an affirmative answer, they were then further asked to report the total quantity they consumed of this food, the quantity they purchased in cash, or they took from their own production or they received for free or in exchange for some specific foods like coconut, copra, fish or handicrafts. Together with the quantity consumed, households were also asked to report the unit of measurement in which the quantity was procured, and the amount spent or the amount they would spend to acquire the quantity consumed. In addition to their in-house consumption, households were also asked to report on the number of meals (breakfast, lunch and dinner), snacks, hot drinks or non-alcoholic beverages they consumed away from home and the amount spent to get these meals.

Food quantities collected in the in-house food consumption module were converted into grams and nutrient values were allocated to the quantities using the nutrient values from the Pacific Nutrient Database (PNDB) developed by SPC in collaboration with FAO and University of Wollongong.[I]

Households were asked to report the quantities consumed in the unit of measurement in which the product was acquired (bundle, bag, kg, cup etc). To convert all the quantities into grams,[II] a regional market survey collecting information on the weight in grams of one unit of product or on the price of one gram was also conducted in parallel to the HIES. The information was collected for 19 atolls/islands. The market survey collected information for around 420 combinations of products/unit of measurement while from the food files we had 758 combinations of products/units (of which less than 25 percent corresponded to combinations of product/standard units such as kg, g, litre, ml, ounce or pound). For the uncovered combinations (around 4 300 transactions), we used ad hoc conversions provided by EPPSO or the median price of one gram.

To correct for some improbable/implausible quantities, we used a two steps outlier procedure. We looked first at the quantities reported for each combination product/unit of measurement together with the respective amount spent and the unit value. Outliers were detected using the Tukey method based on the interquartile range (IQR) approach with a multiplier of 2 to determine the outlier fence, and respective quantities or values were corrected using the median quantity or amount corresponding to the combination of product/unit. At the end of this first outlier detection, 0.48 percent of the amounts were corrected and 1.33 percent of the original quantities were corrected. After all the quantities were converted into grams, we further looked at the outstanding quantities consumed per capita. The Tukey approach was used again, and whenever the quantity was out of the range (25th percentile- 1.5*IQR, 75th percentile + 1.5*IQR) the quantity in grams was replaced by the median quantity reported of that product in that area. Around 1.74 percent of the quantities in grams were corrected. Note that we also corrected the corresponding amount using the corrected quantity and the median price of one gram of product.

- All the quantities in grams were then further converted to kcal using nutrient factors from the PNDB database after applying a refuse factor to obtain the edible portion of the food.

- To convert the food consumed away from home to kcal, the approach was different because only the number of meals consumed away from home was collected. The dietary energy content of breakfast, lunch and dinner was estimated using the median cost of one kcal consumed in the house by expenditure quintile and area and applying a cost adjustment factor of 1.1.[III] For snacks and non-alcoholic beverages we used the median cost of

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[I] SPC, UOW and FAO (2020). The Pacific Nutrient Database User Guide: A tool to facilitate the analysis of poverty, nutrition and food security in the Pacific region. Pacific Community, University of Wollongong and the Food and Agriculture Organization of the United Nations. 15 pp.

[II] The gram is the reference unit used in all the Food Composition Tables that allocate the nutrient value for 100 grams of the edible portion of the products. Therefore, to convert the quantities into nutrient values it is important to first convert all quantities collected in the local unit of measurement into grams.

[III] The Pacific Statistics Method Board recommends using a cost adjustment of 1.25 to account for the difference in the cost of one kcal consumed in house and outside the house, due to the margin applied by the food seller, the recovery for the rent and salaries required to run a business. However, this multiplier is too high when we further account for the difference that exists in the cost of one kcal consumed in the house by the least versus the most wealthy households.

one snack or non-alcoholic beverages consumed in the house, aggregating only among products corresponding to a snack or non-alcoholic beverage. For bottled water we applied a conversion of 0 as water does not yield energy, and for hot drinks consumed away from home we used the average of the nutrient content of different kinds of hot drinks and we assumed that one hot drink consumed away from home has an average weight of 250 grams (corresponding to one cup without applying a density factor).

- To account for the exact number of people who consumed the food, information on visitors and number of meals they consumed with the household members was also collected in a special module of the survey. This information was added to the household members who were present in the household in the seven days before the interview.

- To account for seasonal consumption the survey was conducted from July 2019 to June 2020. We looked at the distribution of the total and average number of transactions per household for each month to evidence potential issues during data collection due to fatigue of the enumerator or other causes. As seen from the graphs below, data collection was not homogenous over time, and after November 2019 there is a drop in the overall number of transactions and number of households mainly due to the dengue outbreak that complicated field work. The further analysis of the distribution of the number of transactions per household shows that the average number of transactions was the lowest in February 2020. All this will affect the overall distribution of dietary energy consumed on average per household, and true consumption may be underreported for some households. For this reason it is recommended that single household consumption is not studied but rather the average consumption of groups of households.

FIGURE 47

Distribution of number of transactions per household by survey round over the previous seven days

Distribution of the sample over time and total number of transactions reported
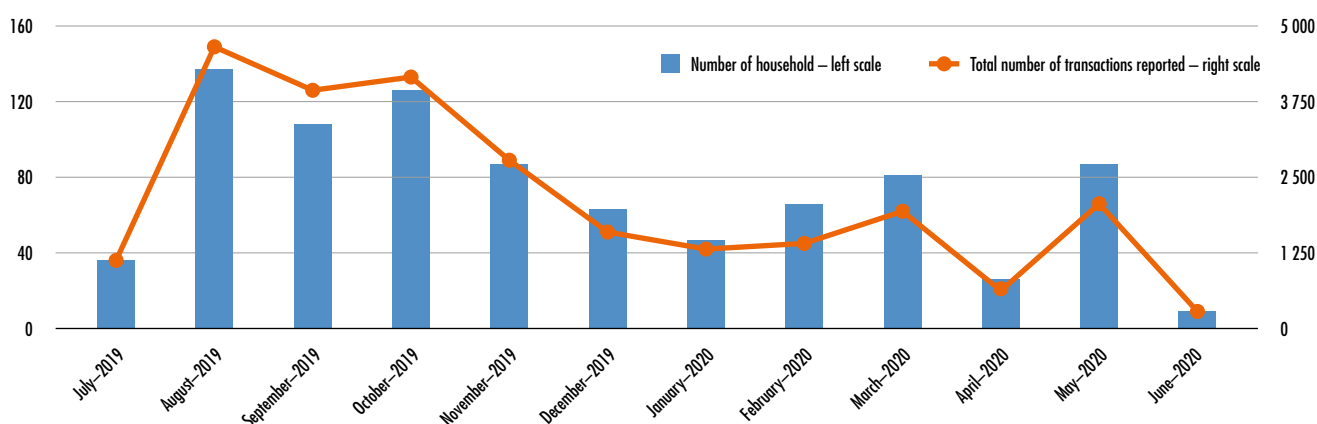
SOURCE: Marshall Islands 2019/20 HIES.

FIGURE 48

Distribution of number of transactions per household by survey round
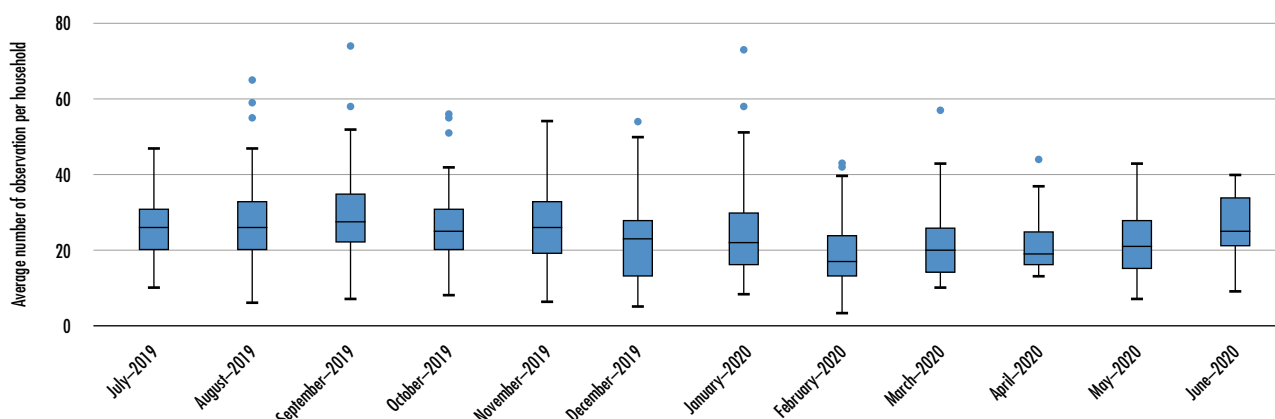
SOURCE: Marshall Islands 2019/20 HIES.

ANNEX 4
Regression analysis of the impact of characteristics of the household on the average dietary energy consumption

To assess the impact of the socioeconomic, demographic and regional characteristics of the household on the DEC, a simple linear regression was performed linking the average DEC to household characteristics:

$$ln(DEC_i) = \beta_0 + \beta_1 \, ln(inc_i) + \sum_{j}^{n} \beta_j \, HHchar_{ij}$$

where

DEC_i is the dietary energy consumption of household i

inc_i is the total expenditures of household I (proxied by household total expenditures)

$HHchar_{ij}$ is the socioeconomic or demographic characteristic j of the household i.

	Coefficient	Std. Err.	t	p > t
Logarithm household total expenditures	0.24***	0.03	7.09	0.000
Strata[1]				
Kwajalein	−0.20*	0.08	−2.55	0.013
Rural	0.02	0.06	0.35	0.725
Gender of the head of the household[2]				
Female	0.07	0.05	1.57	0.122
Total number of children less than 14 years in the household[3]				
1 child	−0.21***	0.04	−4.80	0.000
2 children	−0.41***	0.05	−7.49	0.000
3 children	−0.54***	0.05	−11.77	0.000
4 children and more	−0.62***	0.05	−13.15	0.000
Age class of the head of the household[4]				
Age 40 to 49	−0.05	0.04	−1.25	0.216
Age 50 to 59	−0.08	0.05	−1.69	0.096
Age 60 and above	−0.10*	0.05	−2.08	0.042
Marital status of the head of the household[5]				
Married	−0.03	0.06	−0.50	0.621
Education level of the head of the household[6]				
Lower secondary school	0.00	0.05	0.09	0.932
Higher/post/tertiary education	0.07	0.06	1.25	0.215
Household member involved in fishing activities[7]	0.13**	0.05	2.88	0.005
Household involved in handicraft activities[7]	−0.01	0.04	−0.32	0.749
Household involved in livestock activities[7]	0.02	0.06	0.43	0.669
Household is selling copra[7]	0.09	0.06	1.42	0.160
Household receives remittances[8]	−0.06	0.03	−1.78	0.080
Household has access to a safe source of drinking water[9]	0.04	0.04	1.07	0.287
Classes of severity level of food insecurity[10]				
Moderate or severely food insecure	−0.09*	0.04	−2.40	0.019
Constant	7.30	0.14	50.40	0.000

[1] Majuro is the reference,

[2] Male headed household is reference,

[3] No child is used as reference category,

[4] Head of the household less than 39 years is used as reference category,

[5] Head of the household not married is used as reference category,

[6] Preschool or primary school is used as reference category

[7] Household not involved in these activities is used as reference,

[8] Household does not receive remittances is used as reference,

[9] Household with lack of access to a safe source of drinking water is used as reference,

[10] Food secure or mildly food insecure household is the reference category.

Number of observations = 785, Population size = 49 793.

*** p value < 0.001, * p value < 0.05.

SOURCE: Marshall Islands 2019/20 HIES.

ANNEX 5
Food consumption statistics by products

Food product	Average edible quantity (g/capita/day)	Average food consumption in monetary value (USD/capita/day)	Average dietary energy consumption (kcal/capita/day)	Median dietary energy unit value (USD/1 000 kcal)	Median price (USD/100 g)	Contribution to total DEC (%)	Contribution to total food expenditure (%)	Percentage of households that consume the food
Rice, brown, uncooked	0.32	0.00	1.05	0.06	0.021	0	0.0	0
Rice, not further specified	218.07	0.25	737.73	0.31	0.106	26	4.8	97
Flour, not further specified	75.93	0.10	267.88	0.38	0.132	9	1.9	41
Bread, loaf, all others	17.58	0.07	43.01	1.92	0.472	2	1.3	33
Bread, loaf, not further specified	3.35	0.02	7.89	2.23	0.524	0	0.3	12
Crackers, not further specified	4.77	0.04	20.64	2.58	1.120	1	0.7	18
Biscuits, sweet, all others	0.54	0.01	2.51	3.11	1.371	0	0.2	5
Cake, not further specified	2.02	0.01	7.18	1.62	0.579	0	0.2	9
Pastry, not further specified	2.10	0.02	9.30	4.55	2.667	0	0.4	9
Doughnut, not further specified	7.52	0.02	30.19	0.95	0.385	1	0.4	15
Breakfast cereal, flakes of corn, added nuts and/or sugar coated added vitamin	0.05	0.00	0.19	1.67	0.640	0	0.0	0
Oats, porridge, dry	0.67	0.00	2.45	2.17	0.800	0	0.1	2
Breakfast cereal, not further specified	7.77	0.06	28.60	2.33	0.852	1	1.2	23
Noodles, not further specified	23.00	0.17	90.63	1.89	0.750	3	3.3	69
Cake mix	3.45	0.02	13.06	1.52	0.579	0	0.4	10
Beef, regular, cut not specified	5.81	0.06	9.97	6.30	1.034	0	1.2	20
Pork, regular, cuts not specified	6.00	0.03	10.60	3.13	0.481	0	0.7	12
Lamb and mutton, regular, cuts not specified	0.39	0.00	0.82	5.54	1.057	0	0.1	2
Chicken, not further specified	82.71	0.25	170.96	1.35	0.200	6	4.8	66
Bird, all others, e.g. pigeon, noddy bird	0.70	0.01	1.40	7.85	2.000	0	0.2	1
Bacon, not further specified	6.77	0.06	11.29	4.42	0.687	0	1.2	25
Beef, canned, corned	7.28	0.10	16.73	6.09	1.380	1	2.0	39
Canned meat, not further specified	9.98	0.08	19.82	4.41	0.824	1	1.6	38
Paté, not further specified	0.11	0.00	0.36	1.90	0.643	0	0.0	0
Devon/fritz, processed luncheon meat, beef and pork	0.93	0.01	2.25	2.43	0.580	0	0.1	2
Luncheon meat, chicken	9.54	0.08	14.97	5.22	0.809	1	1.6	45
Tuna, not further specified	12.27	0.07	21.04	4.94	0.500	1	1.3	19
Fish, pelagic/ocean, not further specified	2.29	0.01	3.43	1.61	0.117	0	0.1	1
Shark	0.38	0.00	0.36	0.53	0.025	0	0.0	0
Fish, reef, not further specified	145.49	0.19	158.44	1.32	0.104	6	3.7	43
Fish, not further specified	0.72	0.01	0.94	15.24	1.311	0	0.2	2
Mackerel, canned, not further specified	8.85	0.06	16.09	3.33	0.486	1	1.2	47
Fish, canned in oil, not further specified	5.74	0.09	11.70	6.96	1.058	0	1.7	64
Fish, canned, not further specified	1.45	0.01	2.62	2.16	0.278	0	0.1	3
Crab, land	0.47	0.01	0.34	21.84	0.042	0	0.1	2
Crayfish/lobster, not further specified	0.94	0.02	0.83	16.65	0.500	0	0.3	2
Scallop	0.02	0.00	0.02	12.69	2.778	0	0.0	0
Oyster	0.22	0.01	0.14	68.30	1.101	0	0.2	2
Sea snail	0.05	0.00	0.05	12.57	0.500	0	0.0	0

SOURCE: Marshall Islands 2019/20 HIES.

Food product	Average edible quantity (g/capita/day)	Average food consumption in monetary value (USD/capita/day)	Average dietary energy consumption (kcal/capita/day)	Median dietary energy unit value (USD/1 000 kcal)	Median price (USD/100 g)	Contribution to total DEC (%)	Contribution to total food expenditure (%)	Percentage of households that consume the food
Sea-hare, not further specified	1.95	0.01	1.48	4.33	0.331	0	0.1	1
Milk, long life, shelf stable (UHT), not further specified	14.32	0.04	7.26	4.76	0.243	0	0.7	26
Milk, condensed, whole, sweetened	1.91	0.01	6.46	1.45	0.495	0	0.2	8
Milk, powdered, not further specified	0.35	0.00	1.39	2.93	1.148	0	0.1	2
Cream, coconut, canned/UHT	6.39	0.01	10.51	0.85	0.211	0	0.2	8
Milk, soy	1.45	0.01	0.90	7.47	0.464	0	0.1	4
Cheese, block, e.g. Cheddar, Edam, Swiss	0.31	0.00	1.15	4.08	1.453	0	0.1	4
Yoghurt, not further specified	0.43	0.00	0.42	8.06	0.833	0	0.1	2
Pudding (dairy based)	0.04	0.00	0.10	4.19	0.954	0	0.0	0
Egg, chicken, fresh	8.29	0.06	10.62	5.11	0.568	0	1.1	59
Oil, cooking	10.19	0.06	91.72	0.62	0.561	3	1.1	63
Oil, not further specified	0.12	0.00	1.04	1.03	0.928	0	0.0	1
Butter, not further specified	1.56	0.01	11.48	1.05	0.661	0	0.2	22
Margarine, not further specified	5.09	0.00	30.76	0.13	0.079	1	0.1	8
Avocado	0.07	0.00	0.16	8.68	1.355	0	0.0	0
Banana, common, e.g. Cavendish	21.61	0.06	22.65	1.79	0.111	1	1.2	35
Mango	1.05	0.01	0.68	10.29	0.438	0	0.1	4
Papaya	3.48	0.02	1.21	12.44	0.294	0	0.3	10
Pineapple	0.47	0.00	0.19	15.26	0.459	0	0.1	2
Coconut, green	9.22	0.03	3.16	8.76	0.117	0	0.6	20
Coconut, brown	15.42	0.01	62.39	0.19	0.036	2	0.2	10
Breadfruit	29.96	0.08	32.65	2.19	0.187	1	1.5	28
Pandanus	38.84	0.05	33.91	4.26	0.073	1	0.9	16
Lime	1.03	0.01	0.19	25.58	0.324	0	0.1	9
Orange	8.76	0.04	3.55	12.78	0.400	0	0.9	33
Mandarin	0.00	0.00	0.00	18.21	0.617	0	0.0	0
Apple, not further specified	10.10	0.05	5.43	9.38	0.465	0	1.0	34
Pear, Packham's	0.10	0.00	0.06	19.38	1.406	0	0.0	1
Peach	0.56	0.00	0.18	20.27	0.592	0	0.1	1
Strawberry	0.02	0.00	0.00	130.65	0.958	0	0.0	1
Grapes	0.73	0.01	0.50	13.71	0.879	0	0.1	3
Kiwi fruit, with skin	0.08	0.00	0.04	26.59	1.049	0	0.0	1
Melon, not further specified	0.77	0.00	0.22	35.40	0.650	0	0.1	2
Watermelon	1.14	0.01	0.28	34.55	0.439	0	0.1	3
Fruit, not further specified	0.04	0.00	0.03	8.69	0.636	0	0.0	0
Mixed dried fruit, not further specified	0.08	0.00	0.24	2.30	0.833	0	0.0	0
Fruit, canned, not further specified	2.18	0.01	1.25	7.46	0.412	0	0.2	6
Cabbage, Chinese	0.84	0.00	0.16	26.39	0.450	0	0.1	4
Cabbage, European, white	1.11	0.01	0.25	29.62	0.522	0	0.1	5
Broccoli	0.94	0.01	0.32	32.54	0.661	0	0.2	8
Lettuce, not further specified	0.67	0.01	0.08	86.13	0.665	0	0.1	4
Leaves, watercress	0.04	0.00	0.01	15.12	0.110	0	0.0	0
Cucumber, unpeeled	0.36	0.00	0.04	65.66	0.750	0	0.1	2
Eggplant	0.06	0.00	0.02	18.06	0.385	0	0.0	0

SOURCE: Marshall Islands 2019/20 HIES.

Food product	Average edible quantity (g/capita/day)	Average food consumption in monetary value (USD/capita/day)	Average dietary energy consumption (kcal/capita/day)	Median dietary energy unit value (USD/1 000 kcal)	Median price (USD/100 g)	Contribution to total DEC (%)	Contribution to total food expenditure (%)	Percentage of households that consume the food
Tomato, common	0.83	0.01	0.14	45.40	0.751	0	0.1	5
Pumpkin	1.83	0.00	0.73	3.49	0.110	0	0.0	2
Capsicum, not further specified	0.56	0.01	0.22	38.68	1.172	0	0.2	6
Beans, green	0.34	0.00	0.09	22.25	0.426	0	0.0	3
Beans, long	0.22	0.00	0.06	18.38	0.330	0	0.0	1
Carrot	1.61	0.01	0.53	21.85	0.551	0	0.2	9
Garlic, peeled	0.52	0.01	0.64	21.23	2.203	0	0.2	14
Onion, brown	4.74	0.02	1.25	17.92	0.373	0	0.4	35
Corn, cob, not further specified	0.99	0.01	1.02	8.35	0.521	0	0.2	7
Potato, not further specified	5.51	0.02	4.09	5.08	0.316	0	0.4	20
Kumara/sweet potato	0.69	0.00	0.69	3.37	0.310	0	0.1	2
Cassava/tapioca/manioc	0.61	0.00	0.90	1.17	0.200	0	0.0	0
Taro, common	0.70	0.01	0.77	10.23	1.002	0	0.2	2
Banana, cooking, raw	3.73	0.02	4.70	5.10	0.420	0	0.5	17
Flour, cassava	0.32	0.00	1.15	1.34	0.465	0	0.0	1
Mushrooms, canned	0.32	0.00	0.07	14.02	0.176	0	0.0	1
Beans, legumes canned, e.g. red kidney, chickpea, butter, lima	0.12	0.00	0.11	9.85	0.006	0	0.0	1
Savoury snacks, chips, e.g. twisties, Pringles, cheezeballs	1.80	0.02	9.07	2.21	1.124	0	0.4	17
Baked beans, canned, not further specified	2.71	0.01	2.23	4.75	0.385	0	0.2	8
Sugar, not further specified	28.66	0.05	112.92	0.38	0.150	4	0.9	54
Jam	0.17	0.00	0.47	4.32	1.162	0	0.0	2
Peanut butter, not further specified	2.76	0.02	17.17	1.32	0.851	1	0.4	21
Chocolate, not further specified	0.52	0.01	2.74	4.03	2.151	0	0.2	10
Nutella, or other chocolate spread	0.08	0.00	0.40	2.81	1.423	0	0.0	1
Ice blocks, flavoured ice, popsicles	2.31	0.01	1.60	3.44	0.227	0	0.1	8
Ice cream, cone or bar	0.38	0.01	0.84	12.96	2.872	0	0.2	9
Ice cream, vanilla	1.53	0.01	2.94	4.78	0.917	0	0.3	6
Sorbet, not further specified	0.01	0.00	0.02	13.61	1.543	0	0.0	0
Chewing gum, bubble gum	0.09	0.00	0.36	9.70	3.704	0	0.1	5
Sweets, jelly lollies	0.00	0.00	0.02	10.28	3.328	0	0.0	0
Beef, grilled/BBQ	0.66	0.01	1.35	5.81	1.087	0	0.2	3
Chicken, grilled/BBQ	6.06	0.05	13.77	2.98	0.416	0	0.9	17
Banana, cooking, boiled	0.89	0.00	1.00	2.30	0.130	0	0.0	2
Salt, iodised	8.86	0.02	0.00	0.00	0.197	0	0.4	79
Sauce, chilli, Asian, commercial	0.47	0.00	0.53	8.02	0.726	0	0.1	5
Sauce, soy/shoyu	10.50	0.06	3.40	17.55	0.564	0	1.1	76
Sauce, tomato, for pasta	0.23	0.00	0.12	8.81	0.461	0	0.0	2
Sauce, tomato, ketchup	10.13	0.04	11.70	3.52	0.404	0	0.8	54
Sauce, tabasco	0.67	0.01	0.13	98.90	2.033	0	0.3	19
Vinegar, not further specified	0.41	0.00	0.12	15.62	0.450	0	0.0	5
Ginger root, fresh	0.32	0.00	0.15	25.20	1.101	0	0.1	5
Spices, not further specified	0.42	0.01	1.47	7.65	2.689	0	0.2	17
Baking powder	1.86	0.00	2.99	0.25	0.028	0	0.0	1

SOURCE: Marshall Islands 2019/20 HIES.

Food product	Average edible quantity (g/capita/day)	Average food consumption in monetary value (USD/capita/day)	Average dietary energy consumption (kcal/capita/day)	Median dietary energy unit value (USD/1 000 kcal)	Median price (USD/100 g)	Contribution to total DEC (%)	Contribution to total food expenditure (%)	Percentage of households that consuming the food
Baking soda	0.14	0.00	0.00	0.00	0.022	0	0.0	0
Yeast/baker's yeast	0.02	0.00	0.02	2.22	0.200	0	0.0	0
Coconut toddy, fresh	2.35	0.02	1.01	21.54	0.909	0	0.4	5
Coconut, water only	22.53	0.04	4.35	7.70	0.143	0	0.8	23
Juice, vegetable	0.05	0.00	0.01	15.11	0.811	0	0.0	0
Juice, fruit, not further specified	3.18	0.01	1.24	7.26	0.286	0	0.2	7
Coffee, ground	0.04	0.01	0.13	75.76	1.456	0	0.2	4
Coffee, instant, powder (e.g. Nescafé)	1.75	0.04	2.32	13.70	1.471	0	0.7	21
Coffee, mix (e.g. 3 in 1)	4.99	0.05	23.47	1.89	0.833	1	1.0	47
Tea, black, bag	0.01	0.01	0.03	291.47	4.167	0	0.2	11
Tea, not further specified	2.80	0.01	8.23	1.02	0.200	0	0.2	13
Iced chocolate, commercial	0.53	0.00	0.42	5.68	0.441	0	0.1	2
Beverage, chocolate flavour, from base (Milo)	0.10	0.00	0.45	3.28	1.248	0	0.0	1
Bottled water/spring water	30.64	0.03	0.00	0.00	0.097	0	0.7	25
Cola flavour, soft drink, e.g. Coca-Cola/Pepsi	20.47	0.06	6.47	8.82	0.273	0	1.2	40
Lemonade, soft drink, e.g. Sprite, 7 Up	6.92	0.02	2.74	7.00	0.273	0	0.4	13
Soft drink, not further specified	0.00	0.00	0.00	18.53	0.423	0	0.0	0
Coconut toddy, boiled	0.55	0.01	1.22	…	0.971	0	0.1	3
Powdered drink/flavouring, e.g. Kool Aid/Tang	3.60	0.02	14.07	2.14	0.918	0	0.5	19
Cordial, not further specified	0.03	0.00	0.05	2.43	0.462	0	0.0	0
Vodka	0.16	0.00	0.38	3.79	0.853	0	0.0	0
Whiskey	1.41	0.01	2.90	3.10	0.800	0	0.3	2
Wine, not further specified	2.49	0.03	1.85	16.78	1.300	0	0.6	5
Beer, homebrew	3.14	0.01	0.81	10.70	0.262	0	0.2	1
Beer, not further specified	30.15	0.18	7.60	22.98	0.582	0	3.4	20
Smoking and smokeless tobacco	1.18	0.16	0.00	0.00	14.000	0	3.2	41
Kava	0.94	0.08	0.00	0.00	10.400	0	1.5	6
Restaurants, cafés and the like – foods	40.13	0.08	40.13	1.76	NA	1	1.5	17
Pancake, without syrup from café or restaurant	8.89	0.02	19.50	1.33	0.222	1	0.5	11
Pasta, with cream sauce	0.36	0.00	0.77	4.07	0.867	0	0.1	0
Takeaway, Chinese, noodle dish	0.47	0.01	0.39	21.44	1.739	0	0.2	2
Takeaway, fish, fried, bbq	2.04	0.01	3.76	3.59	0.978	0	0.3	6
Takeaway, hamburger, bread roll, beef patty	0.31	0.01	0.72	22.64	3.103	0	0.2	5
Takeaway, pizza, not further specified	2.59	0.02	5.96	5.29	1.197	0	0.5	4
Breakfast away from home	40.36	0.08	40.36	1.72	2.000	1	1.6	15
Lunch away from home	239.61	0.46	239.61	1.71	2.000	8	9.0	60
Dinner away from home	55.86	0.11	55.86	1.76	5.000	2	2.2	15
Non-alcoholic drinks away from home	21.60	0.11	21.60	4.91	1.000	1	2.2	45
Bottled water away from home	170.72	0.10	0.00	0.00	0.050	0	1.9	44
Hot drinks away from home	46.04	0.11	14.96	6.33	0.500	1	2.2	58
Snacks away from home	50.99	0.14	50.99	3.01	1.000	2	2.8	47

SOURCE: Marshall Islands 2019/20 HIES.

ANNEX 6
Profile of the food insecure

To analyse the main factors that characterize the food insecure, a simple logistic regression is performed linking the categorical variable on the level of severity of food insecurity (classes for severity level of food insecurity, which takes the value of 0 for "food secure or mildly food insecure" and 1 for "moderately or severely food insecure") to the characteristics of the household:

$$logit\ (P) = In\ [P/(1-P)] = \beta_0 + \beta_1\ ln(inc_i) + \sum_{j}^{n} \beta_j\ HHchar_{ij}$$

where

P is the probability of belonging to class k of food insecurity

$P/(1-P)$ are the odds of belonging to class k of food insecurity versus the probability of belonging to lowest classes of food insecurity

inc_i is the total expenditures of household i

$HHchar_{ij}$ is the socioeconomic or demographic characteristic j of the household i.

In the output table below the coefficients represent the log odds (logit).

	Coefficient	Std. Err.	z	P>z
Logarithm of the total expenditure	-1.40***	0.048	-28.920	0.000
Urban[1]	1.15***	0.079	14.550	0.000
Gender of the head of the household[2]				
Female	0.03	0.049	0.650	0.514
Marital status of the head of the household[3]				
Married	-0.23***	0.052	-4.410	0.000
Class of age for the head of the household[4]				
age 40 to 49	-0.37***	0.056	-6.660	0.000
age 50 to 59	-0.44***	0.058	-7.510	0.000
age 60 and above	-0.45***	0.059	-7.600	0.000
Total number of kids less than 14 years old in the household[5]				
1 child	0.23***	0.055	4.150	0.000
2 children	0.35***	0.059	6.020	0.000
3 children	0.51***	0.078	6.540	0.000
4 children and more	0.88***	0.098	9.010	0.000
Access to a safe source of drinking water[6]	-0.07*	0.151	−0.17	0.03
Level of education of the head of the household[7]				
Lower secondary school	-0.63***	0.048	-13.150	0.000
Higher/post/tertiary school	-1.13***	0.063	-17.980	0.000
Household is selling copra[8]	0.38***	0.079	4.810	0.000
Household involved in livestock activity[8]	0.74***	0.065	11.340	0.000
Any household member involves in fishing or hunting[8]	0.24***	0.066	3.550	0.000
Any household member involves in handicraft[8]	-0.43***	0.069	-6.230	0.000
Household receives remittances[8]	-0.37***	0.042	-8.780	0.000
Constant	4.17***	0.167	24.940	0.000

[1] Rural households are the reference

[2] Households whose head is a male are the reference

[3] Households whose head is not married are the reference

[4] Households whose head is younger than 39 years are the reference

[5] Households with no child are the reference

[6] Households with no access to a safe source of drinking water are the reference

[7] Households with a primary level of education are the reference

[8] All households not involved in these activities are the reference

Number of weighted households=13,864.

*** p-value<0.001; ** p-value<0.01; * p-value<0.05.

SOURCE: Marshall Islands 2019/20 HIES.

LABOUR AND LABOUR MARKETS IN THE REPUBLIC OF THE MARSHALL ISLANDS

BASED ON ANALYSIS OF THE 2019/20 HOUSEHOLD INCOME AND EXPENDITURE SURVEY

EPPSO
Economic Policy, Planning and Statistics Office

SDD
Statistics for Development Division

SECTION 3: LABOUR (SDG 8)

Authors: Yamei Du and Tite Habiyakare, International Labour Organization.

1. Executive summary

In 2019 the ILO and SPC Statistics for Development Division (SPC/SDD) developed a standard labour force module for inclusion in all Household Income and Expenditure Survey (HIES) implemented in the Pacific Island countries and territorries (PICTs). The module was approved by the Pacific Statistics Methods Board (PSMB) in May 2019. The Republic of the Marshall Islands (RMI) was among the first countries to implement the labour force module, which was in line with the latest international standards on labour force statistics and provided core data on the labour force.

The RMI 2019–2020 Household Income and Expenditure Survey (2019/20 HIES) was only the second such survey, with the previous one in 2002. However, RMI implemented a labour force survey (LFS) in 2012 and has just completed a national population and housing census (PHC) in 2021, which could also provide some data on its labour market. The RMI 2019/20 HIES was implemented during a 12-month period from July 2019 to June 2020.

This labour force module reports key characteristics on the country's employment-related statistics, with an aim to present a comprehensive labour market and socio-economic background.

1.1. Summary of key labour market indicators

The total household (HH) population in RMI was estimated to be 54,388 persons, of whom 27,045 were male and 27,343 were female. The working-age population (aged 15+) made up 71.4% of the total population, totalling 38,833 persons. In addition, 17,273 persons of working-age were in the labour force, marking an overall national labour force participating rate (LFPR) of 44.5%. There were 11,889 men and 5,385 women in the labour force, resulting in an average LFPR rate 61% for men and 27.9% for women.

In the labour force, 16,162 were in employment, of which, 68.1% (or 11,009 persons) were male workers and 31.9% (or 5,153 persons) were female workers. Youth (aged 15–24) accounted for 5.8% of all employed persons. Meanwhile, 22.6% of employed persons were informally employed.

With regard to unemployment, the average unemployment rate is 6.4%, totalling 1,111 persons. Additionally, 332 persons between ages 15–24 years were unemployed, marking the youth unemployment rate at 26%. Some 41.2% of young men and women were not in employment, education or training (NEET).

Table 1. Selected labour market indicators by sex

	Male	Female	Total
Working-age population (aged 15+)	19,505	19,329	38,833
Labour force	11,889	5,383	17,273
Employment	11,009	5,153	16,162
Labour force participation rate (%)	61.0	27.9	44.5
Unemployment rate by age (%)	7.4	4.3	6.4
15–24	31.0	14.2	26.0
25+	5.5	3.5	4.9
25–64	5.3	3.7	4.8
65+	9.8	0.0	7.0
Composite rate of labour underutilization (%)	19.2	25.3	21.2
Youth not in employment, education or training (NEET), aged 15–24 (%)	37.1	45.2	41.2
Informal employment rate (%)	20.5	27.2	22.6

Source: RMI 2019/20 HIES.

Table 2. Selected indicators of the labour force by sex

	Male	Female	Total
Population, aged 15+	19,505	19,329	38,833
Labour force	11,889	5,383	17,273
By educational attainment (% distribution)			
Less than primary or none	0.9	1.1 (*)	1.0
Completed primary	28.7	21.3	26.4
Completed secondary	44.0	45.6	44.5
Tertiary (first stage or completed)	25.2	31.9	27.3
Level not stated	1.3 (*)	0.1 (*)	0.9 (*)
Labour force participation rate (%)	61.0	27.9	44.5
Employment	11,009	5,153	16,162
By economic industry (% distribution)			
Agriculture, forestry and fishery	6.9	1.3	5.1
Industry	20.4	5.9	15.8
Services	72.7	92.8	79.1
By status in employment (% distribution)			
Employees	86.5	79.5	84.3
Employers	0.7 (*)	1.5 (*)	1.0 (*)
Own-account workers	7.8	15.1	10.1
Contributing family workers	3.0	1.7	2.6
Workers not classifiable by status	2.0	2.2	2.0
Share of informal employment (%)	20.5	27.2	22.6
Average monthly wages, employees, main job (US$)	766	872	798
Labour underutilization	2,458	1,653	4,111
Time-related underemployment	634	280	913
Unemployment	880	231	1,111
Potential labour force	944	1,143	2,087
Labour underutilization rate (%)	19.2	25.3	21.2
Time-related underemployment rate	5.8	5.4	5.7
Unemployment rate	7.4	4.3	6.4
Potential labour force rate	7.4	17.5	10.8

Source: RMI 2019/20 HIES.
Notes: 1. Percentagse might not add up to 100% due to rounding. This applies to all tables throughout this report.
*   2. (*) Denotes small sample cases of less than 10.*

Table 3. Selected indicators of the labour force by geographic location

	Urban areas	Rural areas	Total
Population, aged 15+	30,047	8,787	38,833
Labour force	13,696	3,577	17,273
By educational attainment (% distribution)			
Less than primary or none	1.0	0.7 (*)	1.0
Completed primary	19.6	52.5	26.4
Completed secondary	47.0	34.9	44.5
Tertiary (first stage or completed)	31.4	11.2	27.3
Level not stated	1.0 (*)	0.6 (*)	0.9 (*)
Labour force participation rate (%)	45.6	40.7	44.5
Employment	12,792	3,370	16,162

	Urban areas	Rural areas	Total
By economic industry (% distribution)			
Agriculture, forestry and fishery	2.6	14.5	5.1
Industry	18.2	6.7	15.8
Services	79.2	78.7	79.1
By status in employment (% distribution)			
Employees	92.9	51.4	84.3
Employers	1.2 (*)	0.1 (*)	1.0 (*)
Own-account workers	3.2	36.2	10.1
Contributing family workers	1.2 (*)	7.9	2.6
Workers not classifiable by status	1.4	4.4	2.0
Share of informal employment (%)	13.4	57.8	22.6
Average monthly wages, employees, main job (US$)	838	510	798
Labour underutilization	2,668	1,443	4,111
Time-related underemployment	292	621	913
Unemployment	904	207	1,111
Potential labour force	1,471	616	2,087
Labour underutilization rate (%)	17.6	34.4	21.2
Time-related underemployment rate (%)	2.3	18.4	5.7
Unemployment rate	6.6	5.8	6.4
Potential labour force rate	9.7	14.7	10.8

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

2. Demographic characteristics

This chapter presents the demographic characteristics of the population in RMI. It includes the statistics of the total population in the country, population disaggregated by age groups, educational attainment and by sex (Table 4) and by regions (Table 5).

2.1. Demographic characteristics of the population

In 2019, the total HH population in RMI was estimated to be 54,388, amongst whom, 27,045 (or 49.7%) were men and 27,343 (or 50.3%) were women.

The vast majority (85.4%) of the population completed at least primary education. On average, 11.2% of the population received tertiary education, with men (13.2%) at a higher tertiary attainment than women (at 9.3%).

Table 4. Population by sex, age and education status

	Male	Female	Total
Total population	27,045	27,343	54,388
By 5-year age group			
0–4	1,952	2,389	4,341
5–9	2,606	2,777	5,383
10–14	2,982	2,849	5,831
15–19	2,212	2,083	4,296
20–24	1,765	1,901	3,666
25–29	1,639	1,684	3,323

	Male	Female	Total
30–34	1,816	2,092	3,908
35–39	2,535	2,477	5,012
40–44	2,335	1,966	4,301
45-49	1,860	1,742	3,602
50–54	1,517	1,537	3,054
55–59	1,284	1,249	2,533
60–64	1,242	1,198	2,440
65+	1,300	1,399	2,699
By educational attainment			
Less than primary or none	2,357	2,447	4,803
Completed primary	11,193	11,450	22,643
Completed secondary	8,376	9,355	17,731
Tertiary (first stage or completed)	3,566	2,530	6,096
Level not stated	1,552	1,561	3,114

Source: RMI 2019/20 HIES.

By geographic location, 75% of the population lived in urban areas, accounting for 40,777 persons, and 25% (or 13,611 persons) lived in rural areas.

Overall, persons in urban areas had higher educational attainment than those in rural areas, especially for tertiary education. On average, 13.8% of persons in urban areas received tertiary education, while only 3.6% in rural areas reached the same level.

Table 5. Population by geographic location, age and education status

	Urban areas	Rural areas	Total
Total population	40,777	13,611	54,388
By 5-year age group			
0–4	3,190	1,151	4,341
5–9	3,749	1,634	5,383
10–14	3,791	2,039	5,831
15–19	3,590	705	4,296
20–24	2,993	673	3,666
25–29	2,497	826	3,323
30–34	2,912	996	3,908
35–39	3,579	1,433	5,012
40–44	3,470	832	4,301
45-49	2,789	814	3,602
50–54	2,369	685	3,054
55–59	1,877	656	2,533
60–64	2,017	423	2,440
65+	1,956	743	2,699
By educational attainment			
Less than primary or none	3,452	1,351	4,803
Completed primary	14,898	7,746	22,643
Completed secondary	14,427	3,304	17,731
Tertiary (first stage or completed)	5,608	489	6,096
Level not stated	2,392	722	3,114

Source: RMI 2019/20 HIES.

The distribution of the total population by 5-year age band was based on the actual data collected in the HIES. Figure 1 indicates the size distribution of the age categories by males and females, respectively.

Figure 1. Population pyramid by age
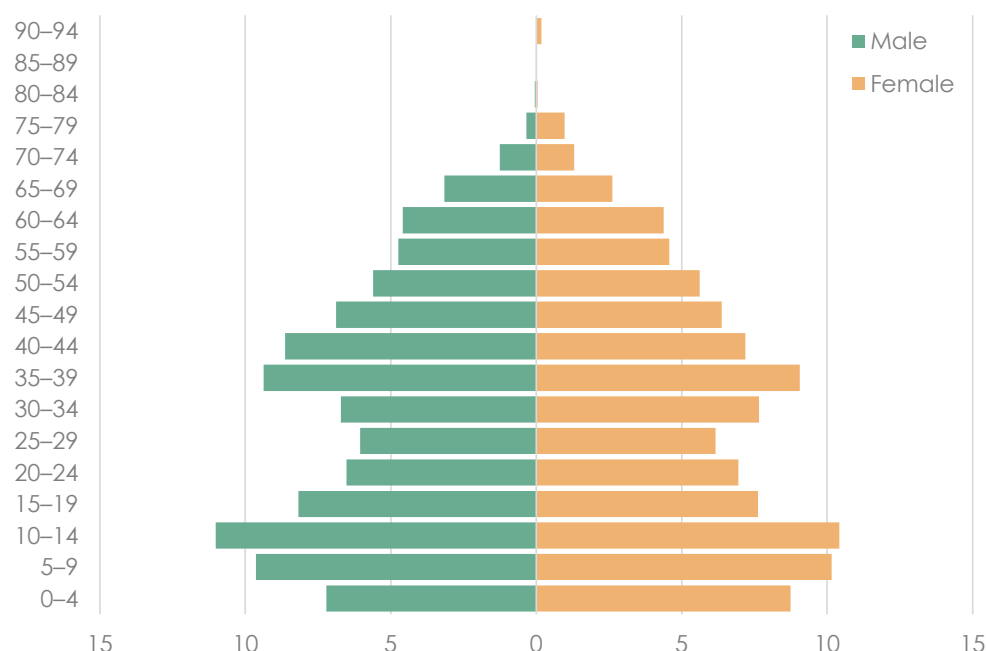
Source: RMI 2019/20 HIES.

The age pyramid of RMI population indicates lower figures at four of the working age groups, i.e. aged 15–34 years. While half (49.3%) of the population was under the age of 25 in 2019, the age pyramid also shows declining numbers at younger age groups of 0–9, a potential risk for shrinking further a labour force that is already at low levels.

3. Labour force and labour force participation rate

This chapter presents statistics of the working-age population, labour force, and population outside of the labour force by sex (Table 6) and by geographic location (Table 7). It includes information on the labour force disaggregated by age and by educational attainment.

3.1. Labour force participation rate

The working-age population refers to persons who are aged 15+. The total working-age population in RMI was estimated to be 38,833 persons, representing 71.4% of the total population. Among those persons of working-age, 17,273 were in the labour force (previously known as the economically active population).

The overall labour force participation rate (LFPR) in RMI was 44.5%, and was lower than the average Pacific regional labour force participation (62.7%[1]). Men had a considerably higher participation rate than women across all age groups. On average, there were 11,889 male workers in the labour force, representing 61% of men of working-age, while only 27.9% of women of working-age (or 5,383) were in the labour force.

Table 6. Working-age population and labour force by sex

	Male	Female	Total
Working-age population, aged 15+	19,505	19,329	38,833
Labour force	11,889	5,383	17,273
By age group			
15–24	899	377	1,276
25+	10,991	5,006	15,997
25–64	10,508	4,808	15,316
65+	482	198	681
By educational attainment			
Less than primary or none	103	62 (*)	165
Completed primary	3,415	1,146	4,561
Completed secondary	5,228	2,455	7,683
Tertiary (first stage or completed)	2,995	1,715	4,709
Level not stated	150 (*)	5 (*)	155
Outside labour force	7,615	13,945	21,561
Labour force participation rate (%)	61.0	27.9	44.5
By age group			
15–24	22.6	9.5	16.0
25+	70.8	32.6	51.8
25–64	73.9	34.5	54.4
65+	37.1	14.2	25.2
By educational attainment			
Less than primary or none	25.7	27.0 (*)	26.2
Completed primary	49.8	16.2	32.8
Completed secondary	62.4	26.3	43.4
Tertiary (first stage or completed)	84.0	67.8	77.3
Level not stated	48.1 (*)	3.4 (*)	33.1 (*)

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

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1   See ILO. (2020). Pacific Labour Market Review 2020 – Pre-COVID-19 Baseline Labour Market Information for Post-disaster Recovery. Avalable at: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-suva/documents/publication/wcms_754824.pdf

The LFPR in RMI presented an inverse-U shape (Figure 2), and the labour force is concentrated among persons between age 25 and 55, and peaked in the 45–54 age group. Men had higher LFPR than women in all age groups.

Figure 2. Labour force participation rate (%) by sex and age group
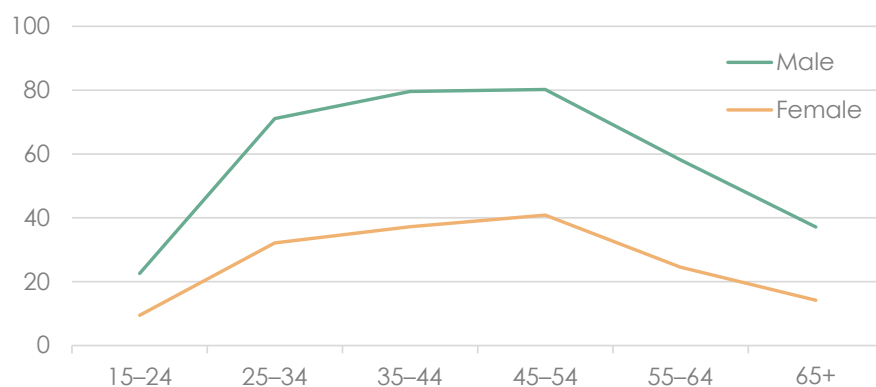
Source: RMI 2019/20 HIES.

About four-fifth (79.3%) of the labour force in RMI were concentrated in urban areas, representing 45.6% of urban population of working-age, while one-fifth of the labour force was in rural areas, representing 40.7% of rural population of working-age (Table 7).

Table 7. Working-age population and labour force by geographic location

	Urban areas	Rural areas	Total
Working-age population, aged 15+	30,047	8,787	38,833
Labour force	13,696	3,577	17,273
By age group			
15–24	1,018	257	1,276
25+	12,678	3,319	15,997
25–64	12,151	3,166	15,316
65+	527	154	681
By educational attainment			
Less than primary or none	138	27 (*)	165
Completed primary	2,684	1,877	4,561
Completed secondary	6,433	1,250	7,683
Tertiary (first stage or completed)	4,307	402	4,709
Level not stated	134 (*)	21 (*)	155 (*)
Outside labour force	16,351	5,210	21,561
Labour force participation rate (%)	45.6	40.7	44.5
By age group			
15–24	15.5	18.7	16.0
25+	54.0	44.8	51.8
25–64	56.5	47.5	54.4
65+	27.0	20.7	25.2
By educational attainment			
Less than primary or none	28.1	19.4	26.2
Completed primary	29.6	38.8	32.8
Completed secondary	44.6	37.9	43.4
Tertiary (first stage or completed)	76.8	82.3	77.3
Level not stated	30.1 (*)	88.6 (*)	33.1 (*)

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Urban areas had a higher LFPR than rural areas, for both men and women. There were 9,369 men in urban areas that were in the labour market, which accounted for more than half (54.2%) of total labour force, marking a 62.4% of LFPR for working-age men in urban areas. On the other hand, only 1,056 women in rural areas were in the labour force, marking the lowest LFPR of 24.6% among these four groups (Figure 3).

Figure 3. Labour force participation rate (%) by sex and geographic location
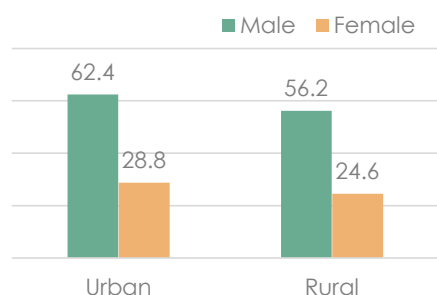
Source: RMI 2019/20 HIES.

3.2. Labour force by educational attainment

In terms of labour force distribution by highest educational attainment, it was estimated that more than one fourth (26.4%) of the RMI labour force completed primary education, 44.5% completed secondary education, and 27.3% reached tertiary education (Figure 4).

Figure 4. Distribution of labour force by highest educational attainment (%)
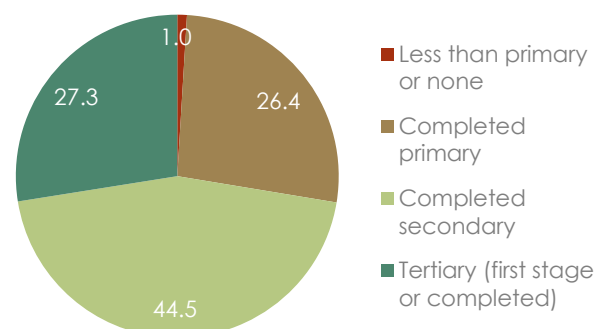
Source: RMI 2019/20 HIES.

The proportion of women in the labour force who completed secondary or higher education was greater than their male counterparts. Specifically, 77.5% of women in the labour force completed secondary or higher education, while the share of those among men in the labour force was 69.2%. The gender gap becomes larger when it came to the tertiary education, where one third of women in the labour force received tertiary study, compared to one fourth of men in the labour force who reached this level of education (Figure 5).

Figure 5. Labour force by sex and educational attainment (%)
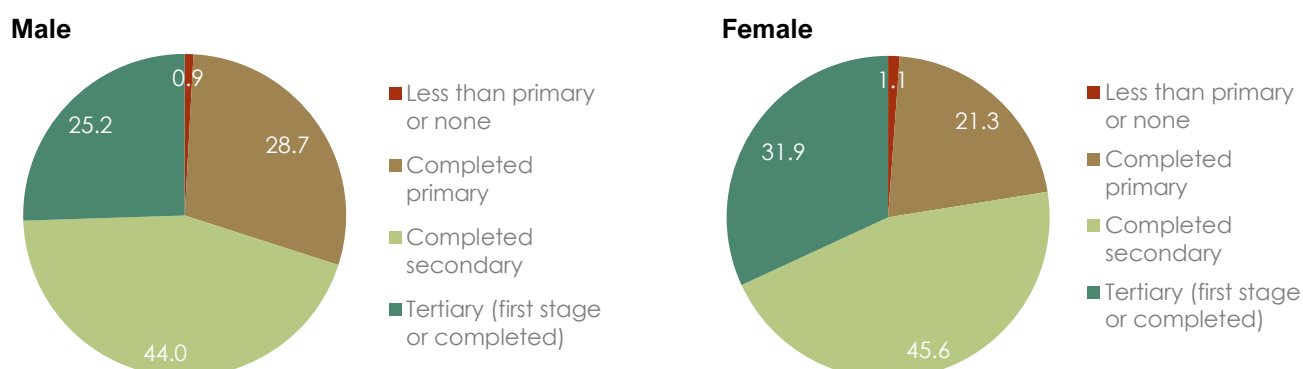
Source: RMI 2019/20 HIES.

The LFPR increased as the level of educational attainment raised. The LFPR at tertiary, secondary, primary, and less than primary level was 77.3%, 43.4%, 32.8%, and 26.2%, respectively. Men had higher LFPR than women among all educational attainment expect for those who had less than primary education or none (Figure 6).

Figure 6. Labour force participation rate (%) by educational attainment and sex
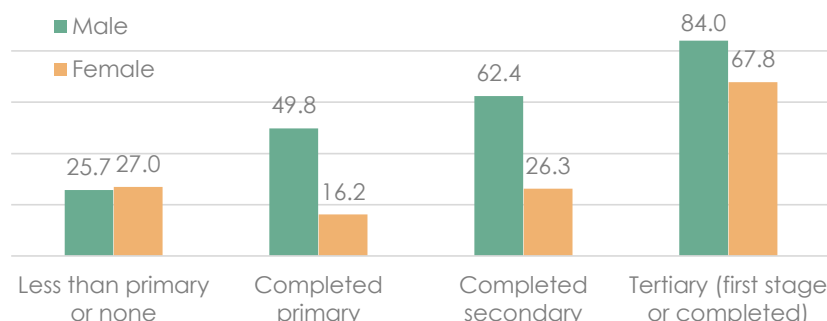
Source: RMI 2019/20 HIES.

3.3.   The population outside the labour force

The population outside the labour force is defined as people who are neither in employment nor in unemployment, including students, old age, and those engaged in unpaid HH or family duties. There were 21,561 (or 55.5%) persons of working-age in RMI who were outside the labour force. Women were more likely to be outside the labour force. Specifically, it is estimated that there were 13,945 (or 72.1%) women and 7,615 (or 39%) men of working-age who were outside the labour force.

By educational attainment, persons with lower education were more likely to be outside the labour force. On average, 73.8% of working-age population with less than primary education was outside the labour force, compared to 22.7% of working-age population with tertiary education who was outside the labour force.

Table 8. Working-age population outside the labour force by age group and educational attainment

	# of persons			% of total working-age population		
	Male	Female	Total	Male	Female	Total
Outside labour force	7,615	13,945	21,561	39.0	72.1	55.5
By age group						
15–24	3,079	3,607	6,686	77.4	90.5	84.0
25+	4,537	10,338	14,875	29.2	67.4	48.2
25–64	3,719	9,138	12,857	26.1	65.5	45.6
65+	817	1,201	2,018	62.9	85.8	74.8
By educational attainment						
Less than primary or none	297	167	464	74.3	73.0	73.8
Completed primary	3,437	5,919	9,357	50.2	83.8	67.2
Completed secondary	3,147	6,892	10,039	37.6	73.7	56.6
Tertiary (first stage or completed)	572	815	1,387	16.0	32.2	22.7
Level not stated	162	152	314	51.9	96.6	66.9

Source: RMI 2019/20 HIES.

4. Employment

This chapter presents the statistics of the employed population. The employed population is defined as all persons of working-age (15 years+) who, during a specified reference period (seven days prior to the survey), were engaged in any activity to produce goods or provide services for pay or profit (at least for 1 hour if the last 7-day reference period is used).

4.1. Employment and its main classifications

In RMI, the total employed population was estimated to be 16,162 persons, representing 41.6% of working-age population. Among those employed persons, 68.1% were men (11,009 persons) and 31.9% were women (or 5,153 persons). Disaggregated by age group, 5.8% or 944 persons were young persons aged 15–24, 94.2% or 15,218 persons were aged 25+.

Table 9. Employment by sex

	Male	Female	Total
Employment, aged 15+	11,009	5,153	16,162
By age group (% distribution)			
15–24	5.6	6.3 (*)	5.8
25+	94.4	93.7	94.2
25–64	90.4	89.9	90.2
65+	4.0 (*)	3.8 (*)	3.9
By economic industry (% distribution)			
Agriculture, forestry and fishery	6.9	1.3 (*)	5.1
Industry	20.4	5.9	15.8
Manufacturing	3.0	3.7	3.2
Construction	10.3	0.2 (*)	7.1
Mining and quarrying; Electricity, gas and water supply	7.1	2.0 (*)	5.5
Services	72.7	92.8	79.1
Wholesale and retail trade	8.7	15.1	10.7
Hotels and accommodations	1.4 (*)	0.7 (*)	1.2
Restaurants, food and beverage services	2.0	5.7	3.2
Administrative and support services	6.8	7.4	7.0
Public administration and defence	15.4	10.9	14.0
Education	10.1	17.7	12.5
Activities of households as employers of domestic services	7.7	16.3	10.4
Other services	20.6	19.1	20.2
By status in employment (% distribution)			
Employees	86.5	79.5	84.3
Employers	0.7 (*)	1.5 (*)	1.0 (*)
Own-account workers	7.8	15.1	10.1
Contributing family workers	3.0	1.7 (*)	2.6
Workers not classifiable by status	2.0	2.2 (*)	2.0
By occupation (% distribution)			
Managers	9.2	9.7	9.3
Professionals	12.1	21.4	15.1
Technicians and associate professionals	9.0	12.3	10.0
Clerical support workers	6.8	6.3	6.7

	Male	Female	Total
Service and sales workers	17.3	17.6	17.4
Skilled agricultural, forestry & fishery workers	5.2	0.0	3.5
Craft and related trades workers	15.0	19.6	16.4
Plant and machine operators, and assemblers	7.0	2.6	5.6
Elementary occupations	17.2	10.3	15.0
Armed forces occupations	1.3	0.2 (*)	0.9
Employment-to-population ratio (EPR), aged 15+ (%)	56.4	26.7	41.6
By age group			
15–24	15.6	8.1	11.9
25+	66.9	31.5	49.3
25–64	70.0	33.2	51.8
65+	33.5	14.2	23.5

Source: RMI 2019/20 HIES.
Notes: 1. (*) Denotes small sample cases of less than 10.
          2. Hotels and accommodations include ISIC Rev. 4 Division 55. Restaurants, food and beverage services include ISIC
          Rev. 4 Division 56.

The employment was concentrated in urban areas. Among all employed persons in RMI, 12,792 were in urban areas, representing 79.1% of total employment, while only 3,370 persons in rural areas were employed, counting for 20.9% of total employment.

Table 10. Employment by geographic location

	Urban areas	Rural areas	Total
Employment, aged 15+	12,792	3,370	16,162
By age group (% distribution)			
15–24	5.6	6.7	5.8
25+	94.4	93.3	94.2
25–64	90.4	89.8	90.2
65+	4.0	3.5	3.9
By economic industry (% distribution)			
Agriculture, forestry and fishery	2.6	14.5	5.1
Industry	18.2	6.7	15.8
Manufacturing	3.4	2.4	3.2
Construction	8.9	0.5 (*)	7.1
Mining and quarrying; Electricity, gas and water supply	5.9	3.9	5.5
Services	79.2	78.7	79.1
Wholesale and retail trade	12.1	5.6	10.7
Hotels and accommodations	1.2 (*)	1.1 (*)	1.2
Restaurants, food and beverage services	4.0	0.0	3.2
Administrative and support services	7.4	5.3	7.0
Public administration and defence	14.6	11.6	14.0
Education	12.4	12.7	12.5
Activities of households as employers of domestic services	3.5	36.8	10.4
Other services	23.9	5.7	20.1
By status of employment (% distribution)			
Employees	92.9	51.4	84.3

	Urban areas	Rural areas	Total
Employers	1.2 (*)	0.1 (*)	1.0 (*)
Own-account workers	3.2	36.2	10.1
Contributing family workers	1.2 (*)	7.9	2.6
Workers not classifiable by status	1.4	4.4	2.0
By occupation (% distribution)			
Managers	9.4	8.9	9.3
Professionals	15.2	14.7	15.1
Technicians and associate professionals	11.8	3.4	10.0
Clerical support workers	7.2	4.6	6.7
Service and sales workers	20.0	7.6	17.4
Skilled agricultural, forestry & fishery workers	1.9	9.7	3.5
Craft and related trades workers	15.0	22.0	16.4
Plant and machine operators, and assemblers	7.0	0.4 (*)	5.6
Elementary occupations	11.7	27.6	15.0
Armed forces occupations	0.9 (*)	1.1 (*)	0.9
Employment-to-population ratio (EPR), aged 15+ (%)	42.6	38.4	41.6
By age group			
15–24	10.9	16.3	11.9
25+	51.5	42.5	49.3
25–64	53.7	45.4	51.8
65+	26.3	16.1	23.5

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

4.2. Employment-to-population ratio

The average employment-to-population ratio in RMI was 41.6%. The employment-to-population ratio was higher in the urban areas (42.6%) than it in the rural areas (38.4%), and was higher among men (56.4%) than it among women (26.7%). In both urban and rural areas, women were more likely to be outside the labour force than men.

Table 11. Population in employment, unemployment or outside the labour force, by sex and geographic location

		Labour force status		
		Employed	Unemployed	Outside the labour force
Marshall Islands	Male	11,009	880	7,615
	Female	5,153	231	13,945
Urban	Male	8,646	723	5,651
	Female	4,146	181	10,700
Rural	Male	2,364	157	1,965
	Female	1,006	50	3,245

Source: RMI 2019/20 HIES.

More than half (56.4%) of men of working-age were in employment, in both urban areas and rural areas. Meanwhile, only 26.7% of women of working-age were in the employment, with less than one-quarter of women in rural areas who were employed (Figure 7).

Figure 7. Share of population in employment, unemployment or outside the labour force (%) as of working-age population, by sex and geographic location
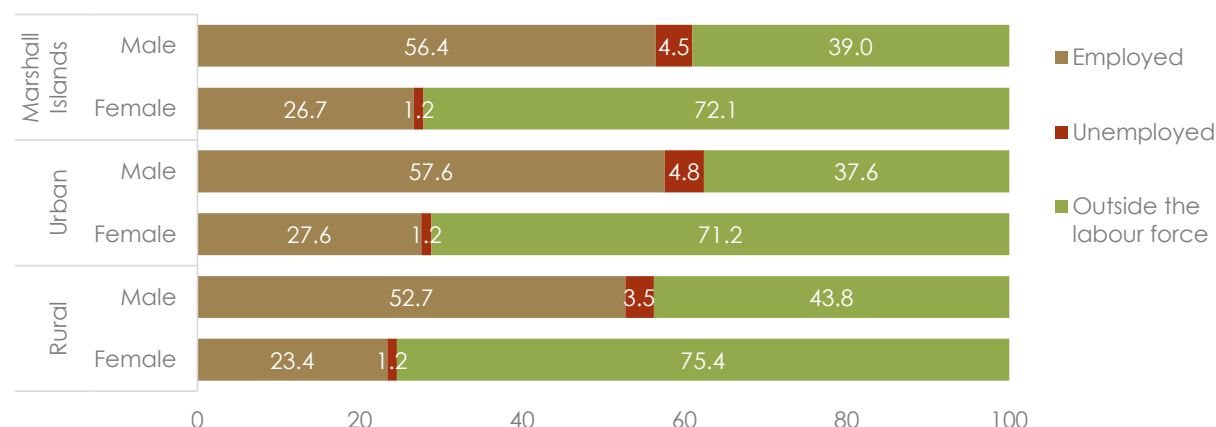
Source: RMI 2019/20 HIES.

4.3. Employment by economic activities

In RMI, the majority (79.1%) of the employment were concentrated in Services, which employs 12,783 workers. Industry was the second largest sector that employed 2,554 persons, representing 15.8% of total employment. Agriculture, forestry, and fishing employed 826 persons, adding up to 5.1% of employed population.

Figure 8. Employment by economic sector (% distribution)
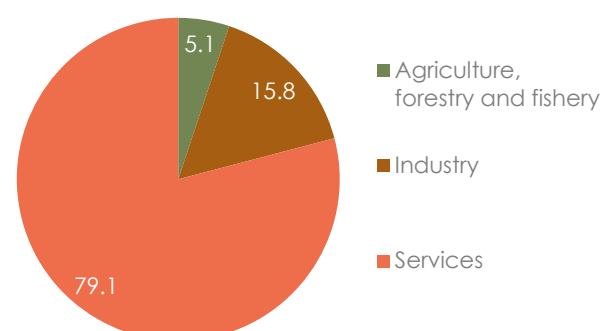
Source: RMI 2019/20 HIES.

In all sectors, there were more male workers than female workers (Figure 9). The share of female workers in agriculture, forestry and fishery, industry, and services sectors were 7.9%, 12%, and 37.4% respectively. However, women were more likely to be employed in the service sector than men - 92.8% of female workers were in the services sector, while 72.7% of male workers were in the same sector.

Figure 9. Employment by economic sector and sex

Source: RMI 2019/20 HIES.

4.4. Employment by status in employment

The majority (84.3%) of employed persons in RMI worked as employees, followed by own-account workers (10.1%), contributing family workers (2.6%), and employers (1%). Women were more like to be self-employed (18.3%) than men (11.5%).

Figure 10. Status in employment by sex (% distribution)
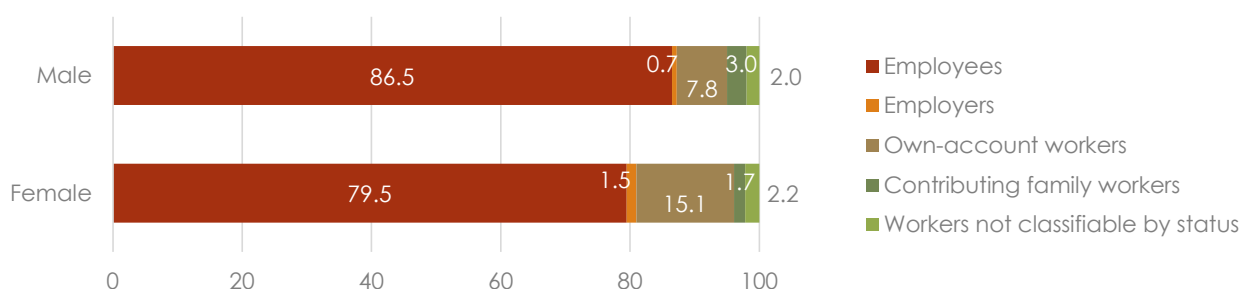
Source: RMI 2019/20 HIES.

The labour market varied greatly between urban and rural areas (Figure 11). In urban areas, 92.9% of employed persons were employees, while in rural areas only half workers were employees (51.4%).

Figure 11. Status in employment by sex and geographic location (% distribution)

Urban

Rural
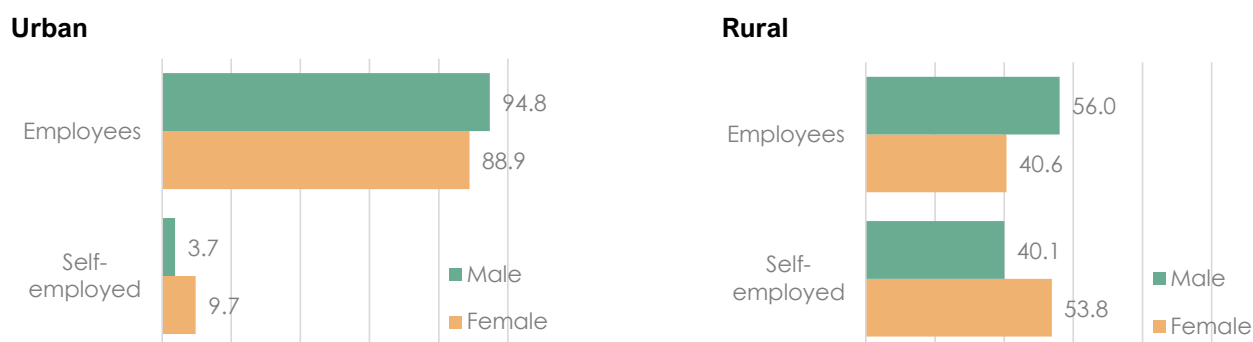
Source: RMI 2019/20 HIES.

5.   Unemployment and labour underutilization

This chapter presents statistics of the unemployed population, labour underutilization, and youth not in employment, education, or training (NEET).

5.1.   Unemployment rate

Unemployed persons refer to those of working age who are: a) without work during the reference period (seven days prior to the survey); b) currently available for work (for either paid wage employment or self-employment); and c) seeking work[2].

It was estimated that 1,111 persons of working-age are unemployed in RMI, resulting to an overall unemployment rate of 6.4% (Table 12). Young persons aged 15–24 had an unemployment rate of 26%, which was higher than the unemployment rate of persons aged 25+ (4.9%).

Table 12. Unemployment by sex

	Male	Female	Total
Unemployment, aged 15+	880	231	1,111
By age group			
15–24	279	53	332
25+	601	177	779
25–64	554 (*)	177 (*)	731
65+	47 (*)	0.0	47
Unemployment rate, aged 15+ (%)	7.4	4.3	6.4
By age group			
15–24	31.0	14.2	26.0
25+	5.5	3.5	4.9
25–64	5.3 (*)	3.7 (*)	4.8 (*)
65+	9.8 (*)	0.0	7.0 (*)

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Women had a lower unemployment rate than men. By age groups, young men aged 15–24 had the highest unemployment rate of all, at 31% (Figure 12).

Figure 12. Unemployed persons (aged 15+) and unemployment rate (%), by age group and sex

Source: RMI 2019/20 HIES.

The unemployment rate was higher in urban areas (6.6%) than in rural areas (5.8%). Young persons aged 15–24 in urban areas had a higher unemployment rate (29.4%) than their rural counterparts (12.8%), while persons aged 25 and above in urban areas had a lower unemployment rate (4.8%) than their rural counterparts (5.2%).

2   International Conference of Labour Statisticians (ICLS). (2013). Resolution Concerning Statistics of Work, Employment, and Labor Underutilization. In 19th International Conference of Labour Statisticians. Geneva: ILO.

Table 13. Unemployment by geographic location

	Urban areas	Rural areas	Total
Unemployment, aged 15+	904	207	1,111
By age group			
15–24	299	33	332
25+	605	174	779
25–64	592	140	731
65+	13	34	47
Unemployment rate, aged 15+ (%)	6.6	5.8	6.4
By age group			
15–24	29.4	12.8	26.0
25+	4.8	5.2	4.9
25–64	4.9 (*)	4.4 (*)	4.8 (*)
65+	2.5 (*)	22.2 (*)	7.0 (*)

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

By educational attainment, overall persons whose educational attainment was less than primary or none had highest unemployment rate of 23.7%, while persons with tertiary education had the lowest unemployment rate of 4.9%. However, the unemployment rate trends differ by gender and by geographic location (Figure 13).

Figure 13. Unemployment rate (%) by sex, geographic location and educational attainment
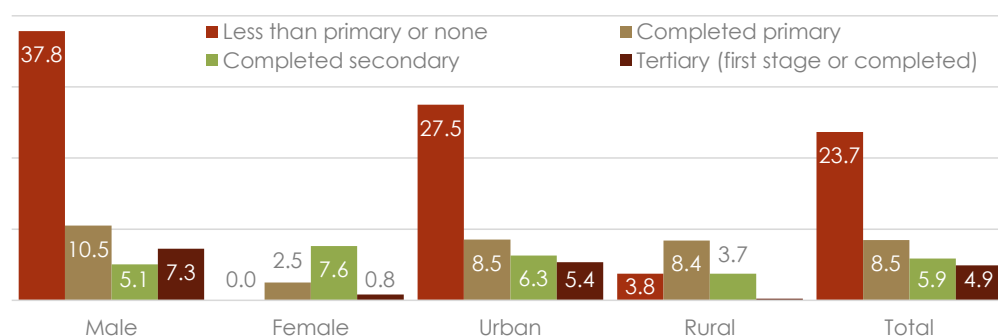
Source: RMI 2019/20 HIES.

5.2. Labour underutilization

Unemployment, time-related underemployment, and potential labour force are three main components of labour underutilization. The broad concept of labour underutilization reveals the total number of persons in labour force who are not being fully utilised, as well as those who are outside of the labour force but can be considered as potential labour supply. It measures the extent to which all available labour resources are not being used in their full capacity in the economy and signifies the mismatches between labour supply and demand.

Table 14 and Table 15 present the numbers of labour underutilization in unemployment, time-related underemployment, and potential labour force by sex and by regions, respectively.

Overall, 5.7% of the employed persons experienced time-related underemployment. The time-related underemployment is a key area of concern in rural areas, where 18.4% of the employed persons were considered as time-related under-employed. Meanwhile, in urban areas, only 2.3% of the employed persons experienced time-related underemployment.

Potentially, the labour force in Marshall Islands could be expanded by 2,087 persons, with 1,143 women and 944 men (Table 14). The potential labour force of women comprised the largest share of women labour underutilization, signaling that discouragement and/or other commitments such as caring for other HH members or studying are keeping women out of the labour market (see chapter 9 of this section for further details).

Table 14. Labour underutilization by sex

	Male	Female	Total
Labour underutilization	2,458	1,653	4,111
Unemployment	880	231	1,111
Time-related underemployment	634	279	913
Potential labour force	944	1,143	2,087
LU1: Unemployment rate (%)	7.4	4.3	6.4
LU2: Combined rate of time-related underemployment and unemployment (%)	12.7	9.5	11.7
LU3: Combined rate of unemployment and potential labour force (%)	14.2	21.0	16.5
LU4: Composite measure of labour underutilization (%)	19.2	25.3	21.2

Source: RMI 2019/20 HIES.

Table 15. Labour underutilization by geographic location

	Urban areas	Rural areas	Total
Labour underutilization	2,668	1,443	4,111
Unemployment	904	207	1,111
Time-related underemployment	292	621	913
Potential labour force	1,471	616	2,087
LU1: Unemployment rate (%)	6.6	5.8	6.4
LU2: Combined rate of time-related underemployment and unemployment (%)	8.7	23.1	11.7
LU3: Combined rate of unemployment and potential labour force (%)	15.7	19.6	16.5
LU4: Composite measure of labour underutilization (%)	17.6	34.4	21.2

Source: RMI 2019/20 HIES.

5.3.   Youth not in employment, education or training (NEET)

It was estimated that 3,227 youth, who were aged 15–24, were not in employment, education, or training (NEET), representing 41.2% of youth in RMI. Young women were more likely to be NEETs than young men (45.2% against 37.1%; Table 16), while youth in rural areas were more likely to be NEETs than youth in urban areas (45.0% against 40.4%; Table 17).

Table 16. Youth not in employment, education or training (NEET) by sex

	Male	Female	Total
NEET, aged 15–24	1,477	1,800	3,277
NEET rate, aged 15–24 (%)	37.1%	45.2%	41.2%

Source: RMI 2019/20 HIES.

Table 17. Youth not in employment, education or training (NEET) by geographic location

	Urban areas	Rural areas	Total
NEET, aged 15–24	2,657	621	3,277
NEET rate, aged 15–24 (%)	40.4%	45.0%	41.2%

Source: RMI 2019/20 HIES.

6. Informal sector and informal employment

This chapter presents statistics of persons employed in the informal sector and persons with informal employment.

Employment in the informal sector contains all jobs in informal sector enterprises, or all persons who, during a given reference period (seven days prior to the survey), were employed in at least one informal sector enterprises, irrespective of their status in employment and whether it was their main or a secondary job. A formal sector enterprise is defined in this report as either a public enterprise, or a private enterprise that is registered or has full bookkeeping for national reporting. In this report employment in the informal sector refers to main job only.

Informal employment is a job-based concept. Employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits such as sick leaves and paid annual leaves. In this report, employees are considered as having a formal job if the employer contributes to a national pension or social protection system on their behalf, or if they received both paid sick leave and paid annual leave. Informal employment can be carried out in formal sector enterprises, informal sector enterprises, or HHs.

The informal employment rate is a key indicator highlighting the quality of employment in an economy.

6.1. Employment in the informal sector

Overall, the employment was concentrated in the formal sector in RMI, with an estimation of only 742 employed persons in the informal sector, representing only 4.6% of total employment (Table 18). Men were more likely to be employed in the informal sector than women.

The share of employment in the informal sector decreased as workers' educational attainment increased. On average, 8.2% of workers with primary or lower education were employed in the informal sector, whereas only 1.9% of those who reached tertiary education are in the informal sector.

By economic activities, about one in three (32.4%) employed persons in Agriculture, forestry and fishery were in the informal sector, making it the sector with the highest share of employment in the informal sector, followed by Industry (9.6%) and Services (1.8%).

Employed persons in rural areas were more likely to be in the informal sector than those in urban areas, especially among men. More than 12% of male workers in rural areas were employed in the informal sector, compared to only 3% of their counterpart in urban areas.

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It is also noteworthy that 11.9% of workers were employed in HHs, totalling 1,929 persons. Much like workers in the informal sector, workers who worked in HHs also had high incidence of informal employment (Table 18).

Table 18. Profile of employment in the informal sector

	Persons			Share of total employment (%)		
	Male	Female	Total	Male	Female	Total
Employment in the informal sector, aged 15+	544	197	742	4.9	3.8	4.6
By age group						
15–24	26	17	43	4.2	5.3	4.5
25+	519	180	699	5.0	3.7	4.6
By educational attainment						
Primary or less	259	95 (*)	354	8.3	8.0 (*)	8.2
Completed secondary	193	86	279	3.9	3.8	3.9
Tertiary (first stage or completed)	70 (*)	17 (*)	87 (*)	2.5 (*)	1.0 (*)	1.9 (*)
Level not stated	22 (*)	0	22(*)	14.5 (*)	0.0	14.0 (*)
By economic industry						
Agriculture, forestry and fishery	268	0	268	35.2	0.0	32.4
Industry	191	53 (*)	244	8.5	17.4 (*)	9.6
Services	86 (*)	144	230	1.1 (*)	3.0	1.8
By status of employment						
Employees	274	103 (*)	377	2.9	2.5 (*)	2.8
Self-employed	270	95 (*)	365	18.9	9.0 (*)	4.4
By geographic location						
Urban areas	256	134	390	3.0	3.2	3.0
Rural areas	289	64	352	12.2	6.3	10.4

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Figure 14. Numbers and shares of employment in the informal sector by sex, age group, educational attainment, and economic sector

Sex
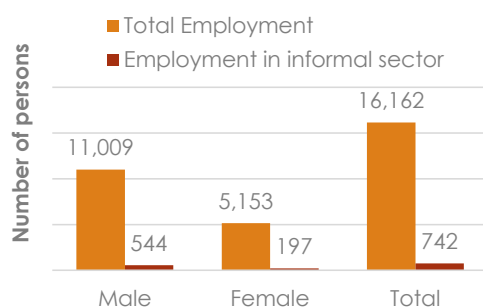
Age group
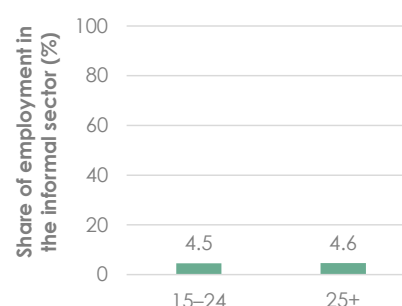
Educational attainment

Economic sector

Source: RMI 2019/20 HIES.

135
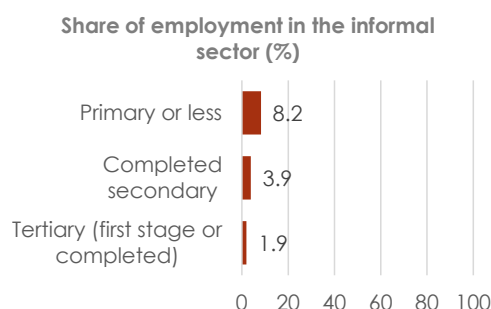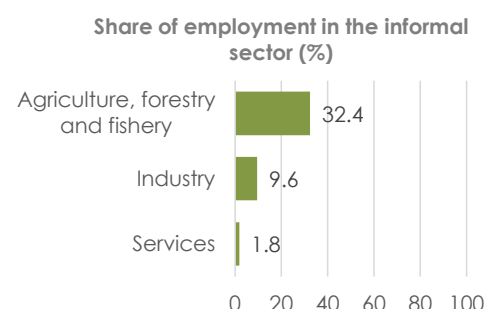
6.2. Informal employment

Less than one quarter (22.6%) of employed persons had informal jobs in RMI, totaling 3,660 persons. Women were more likely to be informally employed than men (Table 19). Young persons aged 15–24 had a higher rate (29.9%) of informal employment than persons aged 25 and above (22.2%).

There was a negative relation between educational attainment and informal employment rate. Employed persons with tertiary education had an average informal employment rate of 7.3%, whereas those with primary education or less had an average rate of 45%. Except for those with tertiary education, women were more likely to be in informal employment than men across all educational attainment.

By economic activities, about 43.4% of employed persons in Agriculture, forestry and fishery had informal jobs, followed by 23.0% in Services, and 14.3% in Industry. By status of employment, the vast majority (88%) of self-employed persons had informal jobs, while only 10.2% of employees had informal jobs.

Table 19. Profile of informal employment

	Persons			Share of total employment (%)		
	Male	Female	Total	Male	Female	Total
Informal employment, aged 15+	2,260	1,400	3,660	20.5	27.2	22.6
By age group						
15–24	169	113	282	27.3	35.0	29.9
25+	2,091	1,287	3,378	20.1	26.7	22.2
25–64	2,019	1,217	3,236	20.3	26.3	22.2
65+	72 (*)	70 (*)	141 (*)	16.4 (*)	35.1 (*)	22.3 (*)
By nature of production unit						
Informal sectors	522	196	718	95.9	99.5	96.8
Formal sectors	795	294	1,089	8.4	7.3	8.1
Households	943	910	1,853	93.3	99.0	96.0
By educational attainment						
Primary or less	1,134	802	1,936	36.4	68.0	45.0
Completed secondary	873	471	1,344	17.6	20.8	18.6
Tertiary (first stage or completed)	203	122 (*)	325	7.3	7.2 (*)	7.3
Level not stated	50 (*)	5 (*)	55 (*)	33.2 (*)	100.0 (*)	35.5 (*)
By economic industry						
Agriculture, forestry and fishery	358	0	358	47.1	0.0	43.4
Industry	245	121	366	10.9	39.8	14.3
Services	1,657	1,279	2,936	20.7	26.7	23.0
By status of employment						
Employees	973	421	1,395	10.2	10.3	10.2
Employers	0	0	0	0.0	0.0	0.0
Own-account workers	748	776	1,524	87.4	99.7	93.3
Contributing family workers	335	90 (*)	424	100.0	100.0 (*)	100.0
Workers not classifiable by status	204	113 (*)	317	93.9	100.0 (*)	96.0
By geographic location						
Urban areas	975	736	1,711	11.3	17.7	13.4
Rural areas	1,284	664	1,949	54.3	66.0	57.8

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Figure 15. Numbers and shares of informal employment by sex, age group, educational attainment, and economic sector
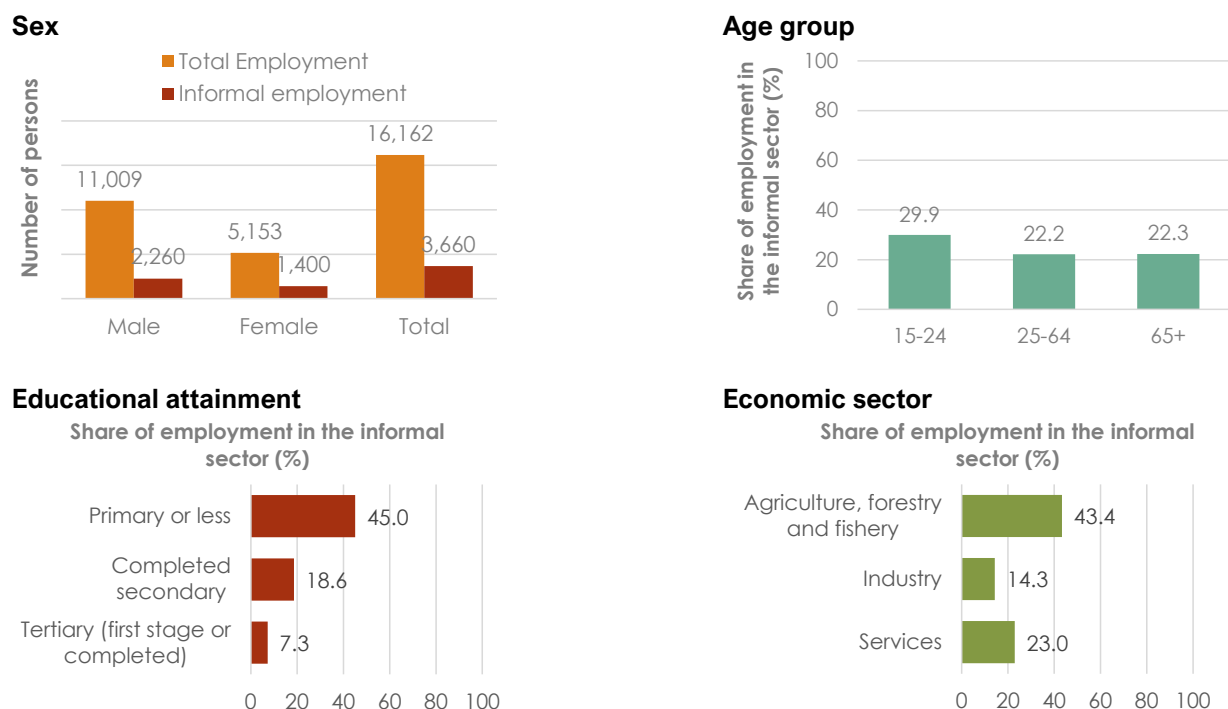
Source: RMI 2019/20 HIES.

Table 20 presents the joint distribution of the informal sector and informal employment. 8% of employed persons in the formal sector had informal jobs, totalling 1,089 persons. Essentially, these were workers employed in paid jobs in the formal sector, but on an informal basis, such as, temporary employment without social protection coverage.

Table 20. Joint distribution of employment in the informal sector and informal employment

		Nature of Jobs	
		Informal jobs	Formal jobs
Unit of Production	Informal sector enterprises	718	23
	Formal sector enterprises	1,089	12,402
	Households	1,853	76

Source: RMI 2019/20 HIES.

7.   Hours of work

This chapter presents statistics of working hours of employed persons. It reveals the actuals hours of work per week and the distribution of hours of work per week. Hours actually worked are the time spent in a job for the performance of activities that contribute to the production of goods and services during the week preceding the interview.

The international standard definition of employment includes persons who conducted at least one hour of work during a week. Data on hours of work is therefore useful to calculate time-related underemployment as well as average wages per hour so that the resulting wage data are comparable across different categories of workers.

7.1.   Actual hours

On average, hours actually worked of the employed population for all economic activities was 38.3 hours a week. Men (39 hours) worked slightly longer hours than women (36.8 hours). In the main job, the average hours actually worked per week was 37.8 hours, with men at 38.3 hours and women at 36.6 hours.

Table 21. Average actual hours of work per week by sex

	Male	Female	Total
Actual hours			
All economic activities	39.0	36.8	38.3
Main economic activity	38.3	36.6	37.8
Secondary economic activity	19.7	20.1 (*)	19.7

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

The average hours actually worked varied greatly by geographic location. In urban areas, the employed population worked on average 40.9 hours a week for all economic activities, while in rural areas only 28.5 hours (Figure 16). The shorter hours of work in rural areas may explain the higher labour underutilization seen in these areas.

Table 22. Average actual hours of work per week by geographic location

	Male	Female	Total
Actual hours			
All economic activities	40.9	28.5	38.3
Main economic activity	40.6	27.0	37.8
Secondary economic activity	17.9 (*)	21.2	19.7

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Figure 16. Actual hours of work per week by sex and geographic location
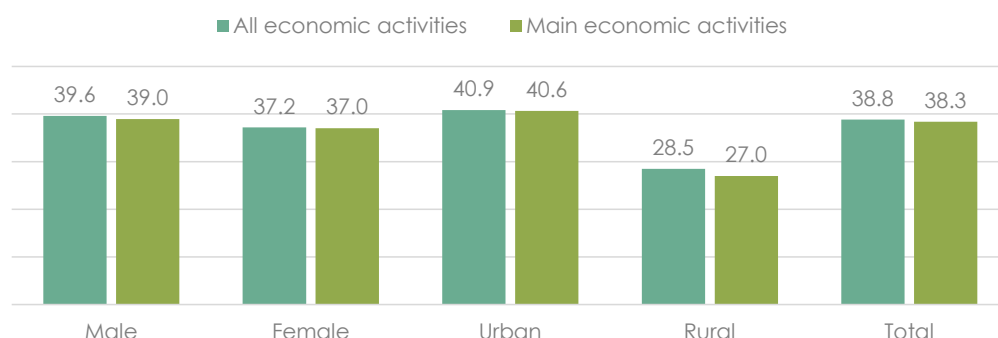
Source: RMI 2019/20 HIES.

7.2. Distribution of hours of work

The distribution of employed persons by hours actually worked per week at all jobs offers information on persons who are working excessive hours and persons who are time-related under-employed. Excessive hours of work (working more than 48 hours per week) are considered as a deficit to decent work as it undermines physical and mental health, while time-related underemployment means reduced productivity therefore indicating a possible inadequate income from employment.

Among 16,162 employed persons who reported actual work hours per week, 74.5% (or 12,047 persons) actually worked between 40 and 48 hours per week. Another 3,027 persons or 18.7% in employment actually worked less than 40 hours, while 1,088 persons or 6.7% actually worked more than 48 hours (Table 23). Most (55.4%) employed persons in rural areas actually worked less than 40 hours.

Table 23. Distribution of actual hours worked per week by sex

	Male	Female	Total
Actual hours in all economic activities			
Less than 40 hours	17.2	22.0	18.7
40–48 hours	74.4	74.9	74.5
More than 48 hours	8.4	3.1	6.7

Source: RMI 2019/20 HIES.

Table 24. Distribution of actual hours worked per week by geographic location

	Male	Female	Total
Actual hours in all economic activities			
Less than 40 hours	9.1	55.4	18.7
40–48 hours	84.0	38.6	74.5
More than 48 hours	6.9	6.0	6.7

Source: RMI 2019/20 HIES.

8.   Wages

This chapter presents information on wages from the main job of employees by sex (Table 25) and by region (Table 26).

In this report, information on income (wages and salaries) was analysed from employees in their main job, in cash and in kind. Where information on earnings in the main job was not paid on a monthly basis, it was converted into a monthly basis. All amounts were recorded in local currency (which is the US dollar).

8.1.   Average monthly wages in the main job of employees

The average monthly wage of paid employees in RMI was estimated at US$798. Female employees earned at US$872, and was higher than what male employees earned, at US$766. The gender pay gap was -13.8% and was in favor of women. Adults, who are aged 25 and above, had an average monthly wage of US$810, compared to youth's (aged 15–24) monthly wage of US$599.

Employees in Agriculture, forestry and fishery earned an average monthly wage of US$559, which was lower than those in Industry (US$799) and Services (US$809). Women employees earned more than men on a monthly average in Industry and Services. The monthly average wage of women employees in agriculture, forestry and fishery was estimated with very small sample sizes therefore should be used with cautious.

Table 25. Average monthly wage and earnings (in US$), main job, by sex

	Male	Female	Total
Average monthly wages in main job of employees	766	872	798
By age group			
15–24	538	728	599
25+	779	881	810
By economic sector			
Agriculture, forestry and fishery	505	901 (*)	559
Industry	798	815	799
Services	772	875	809
By occupation			
Managers	1,292	2,014	1,529
Professionals	929	1,016	968
Technicians and associate professionals	911	858	890
Clerical support workers	552	583	561
Service and sales workers	647	512	606
Skilled agricultural, forestry and fishery workers	409	-	409
Craft and related trades workers	712	446	683
Plant and machine operators and assemblers	549	1,124 (*)	649
Elementary occupations	699	463	620
Armed forces occupations	448	530 (*)	454
Average monthly income in main job of self-employed	607	346	489

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

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By occupation, managers had the highest average monthly wage at US$1,529. On average, women employees had a higher monthly wage than their male counterpart working as managers, professionals, and clerical support workers (Figure 17).

Figure 17. Average monthly wage (in US$), by sex and occupation
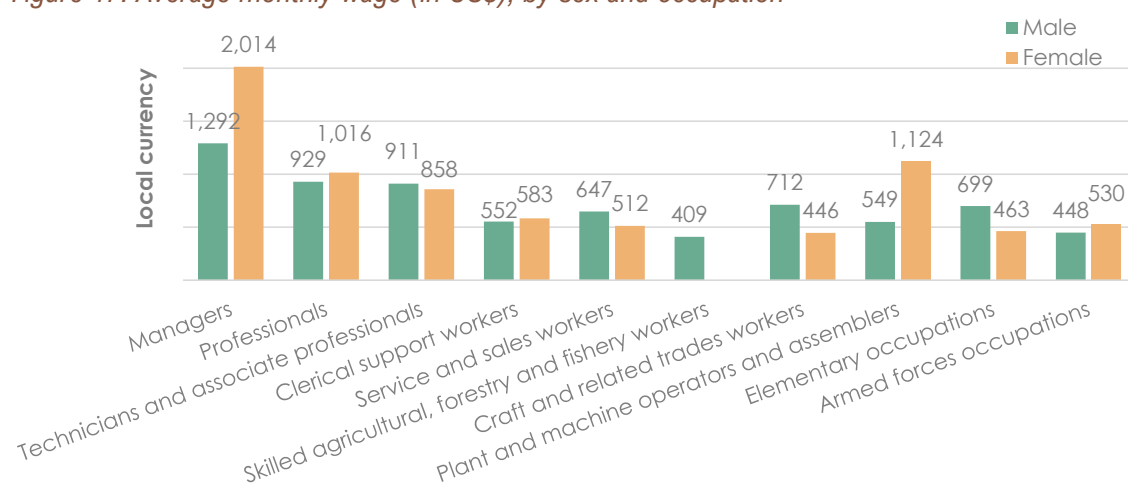
Source: RMI 2019/20 HIES.
Note: Light red colour refers to small sample data, to be analysed with caution.

Table 26. Average monthly wage and earnings (in US$), main job, by geographic location

	Urban areas	Rural areas	Total
Average monthly wages in main job of employees	838	510	798
By age group			
15–24	611	403 (*)	599
25+	853	513	810
25–64	835	513	794
65+	1,263	505 (*)	1,192
By economic sector			
Agriculture, forestry and fishery	670	340	559
Industry	832	349	799
Services	846	550	809

	Urban areas	Rural areas	Total
By occupation			
Managers	1,798	450	1,529
Professionals	1,105	444	968
Technicians and associate professionals	920	435	890
Clerical support workers	619	197	561
Service and sales workers	577	926	606
Skilled agricultural, forestry and fishery workers	531	137 (*)	409
Craft and related trades workers	671	789	683
Plant and machine operators and assemblers	650	581 (*)	649
Elementary occupations	631	490	620
Armed forces occupations	532 (*)	226 (*)	454
Average monthly income in main job of self-employed	443	510	489

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Employees in urban areas earned on average more than employees in rural areas, with a monthly average wage at US$838 in urban areas and at US$510 in rural areas. It is also noticeable that in urban areas, women employees had a higher average monthly wage than their male counterpart, while in rural areas, men employees earned more than women (Figure 18).

Figure 18. Average monthly wage (in US$), main job, by sex and geographic location
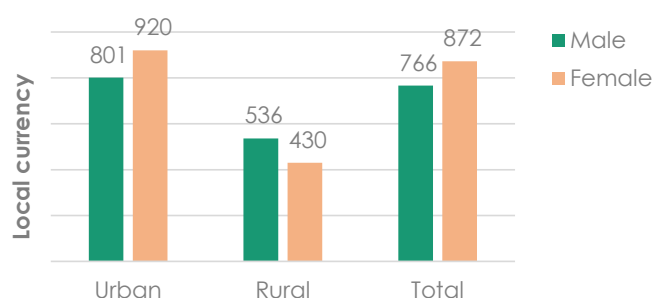
Source: RMI 2019/20 HIES.

9. Main activity status and subsistence work

This chapter presents the statistics of the main activity status of the working-age population, as well as an estimation of persons involved in subsistence work. The results on the main activity question reflect a self-assessment of the working age population, i.e. a more social assessment of what people recognise as their main activity status at present. Data on subsistence production are therefore an estimation, not necessarily as it should be measured as per the 19th ICLS resolution.

9.1. Main activity status

Providing household or family care and conducting other forms of work (including working in farming, raising animals or handicraft, working in fishing and gleaning seafood, or working in government, NGO or private sector, and volunteer work) are main activities of most working-age population in RMI.

Among 38,833 working-age population in RMI, 14,928 persons declared themselves mainly engaged in farming, fishing, or working in non-farm sectors, representing 38.5% of the working-age population (Table 27). Among these people, 70.4% were men and 29.6% were women (Figure 19).

Another one-third (36.2%) of working-age population declared themselves mainly engaged in household or family care work, totalling 14,049 persons. Not surprisingly there were more women self-declared as mainly engaged in family or household care than men. Specifically, 77% of those who self-declared as mainly engaged in family or household care were women, representing more than half (55.6%) of women of working-age.

Table 27. Main activity status by sex (% in the working-age population)

	Male	Female	Total
Total working age population	19,505	19,329	38,833
By Main activity status (%)			
Studying or training	9.9	10.4	10.1
Working in farming, raising animals or handicraft	3.7	2.3	3.0
Working in fishing or gleaning seafood	2.2	0.0	1.1
Working in another sector (e.g. government, NGO, store, hotels, etc.)	48.0	20.6	34.4
Looking for work	6.8	2.3	4.6
Taking care of the household or family	16.9	55.6	36.2
Voluntary work (community, village, church, etc.)	3.1	1.7	2.4
Long-term illness, injury or disability	2.3	2.2	2.3
Retired or pensioner	4.7	4.3	4.5
Other activity	2.6	0.6	1.6
Not stated	0.1 (*)	0.0	0.0

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Figure 19. Main activity status by sex
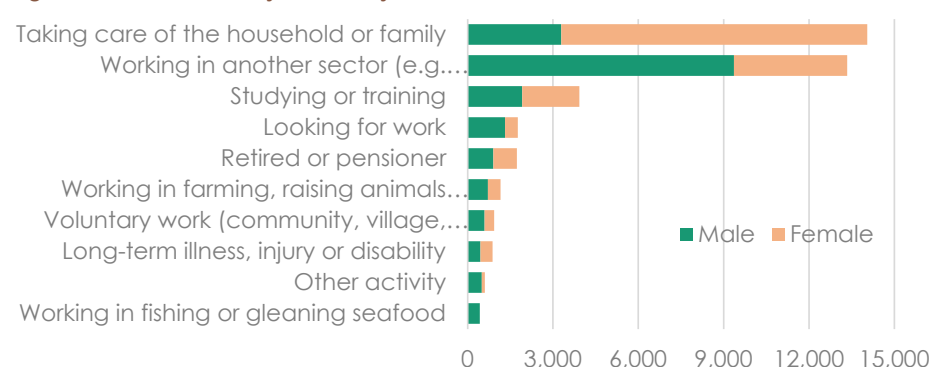
Source: RMI 2019/20 HIES.

Of 7,962 young persons aged 15–24, 46% were mainly in studying or training, while 45.7% of adults (aged 25 and above) were engaged in in farming, fishing, or working in other non-farm sectors. On average, around one-third of persons in each age group (except for those older than 65) were mainly engaged in household or family care, making this the second largest activity across all age groups (Table 28).

Table 28. Main activity status by age groups (% in the working-age population)

	15–24	25+	25–64	65+	Total
Total working age population	7,962	30,872	28,173	2,699	38,833
Main activity status (%)					
Studying or training	46.0	0.9	0.9	0.0	10.1
Working in farming, raising animals or handicraft	1.5	3.4	3.5	1.7	3.0
Working in fishing or gleaning seafood	0.0	1.4	1.5	0.0	1.1
Working in another sector (e.g. government, NGO, store, hotels, etc.)	8.8	41.0	43.1	18.5	34.4
Looking for work	6.0	4.2	4.6	0.0	4.6
Taking care of the household or family	32.7	37.1	38.3	24.1	36.2

	15–24	25+	25–64	65+	Total
Voluntary work (community, village, church, etc.)	1.9	2.5	2.5	2.6	2.4
Long-term illness, injury or disability	1.9	2.3	1.9	7.1	2.3
Retired or pensioner	0.0	5.6	1.9	44.8	4.5
Other activity	1.2	1.7	1.7	1.3	1.6
Not stated	0.0	<0.1 (*)	<0.1 (*)	0.0	<0.1 (*)

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

By geographic location, the share of working-age population who declared taking care of the household or family as their main activity was higher in rural areas (47.4%) than that of those in urban areas at 32.9% (Table 29).

People who declared to be mainly involved in farming, fishing, or working in non-farm sectors were primarily in urban areas. 81.0% of working-age population engaged in these forms of work were in urban areas, totalling 12,178 persons, while only 2,750 persons (or 18%) of those were in rural areas (Figure 20). What's more, 40.5% of working-age population from urban areas were in farming, fishing, or working in non-farm sectors. This share was higher than their counterpart in rural areas of 31.3%.

Table 29. Main activity status by geographic location (% in the working-age population)

	Urban areas	Rural areas	Total
Total working age population	30,047	8,787	38,833
Main activity status			
Studying or training	11.5	5.5	10.1
Working in farming, raising animals or handicraft	0.6	11.1	3.0
Working in fishing or gleaning seafood	0.8	2.1	1.1
Working in another sector (e.g. government, NGO, store, hotels, etc.)	39.1	18.0	34.4
Looking for work	5.1	2.7	4.6
Taking care of the household or family	32.9	47.4	36.2
Voluntary work (community, village, church, etc.)	2.2	3.0	2.4
Long-term illness, injury or disability	2.1	2.8	2.3
Retired or pensioner	4.6	4.1	4.5
Other activity	1.1	3.1	1.6
Not stated	0.0	0.1 (*)	0.0

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

Figure 20. Main activity status by geographic location
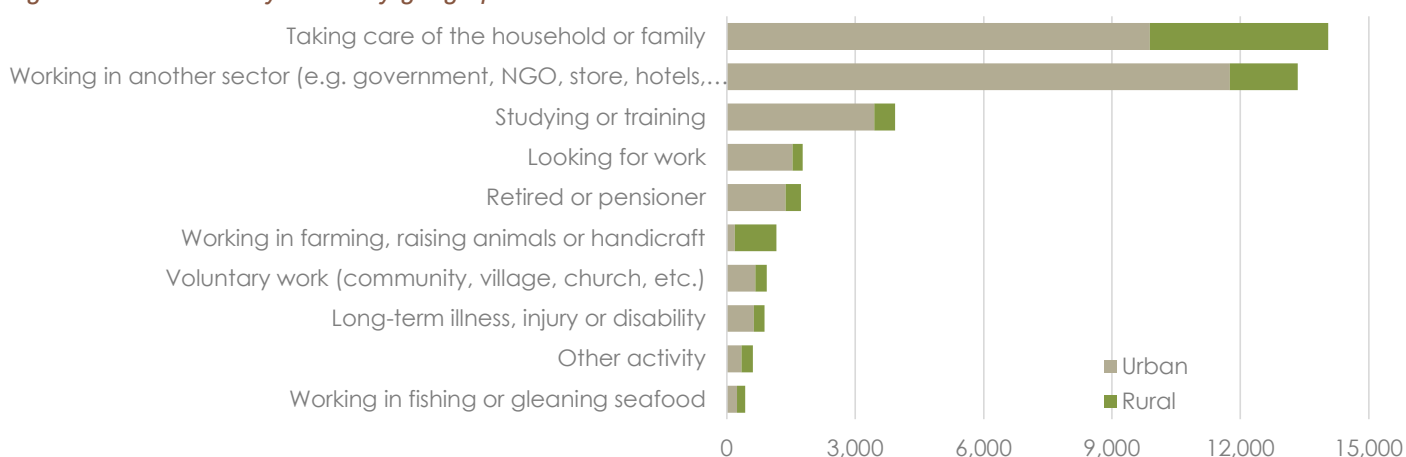
Source: RMI 2019/20 HIES.

9.2. Main activity status and labour force status

Table 9.4 indicates persons that with a self-reported main activity status are found in all the three categories of the labour force status classification, with the exception of those working in another activity than agriculture and fishing, who are considered as employed by definition. The vast majority (85.7%) of those who self-declared working in agriculture and fishing as their main activity were employed. Only 6.4% of those who self-declared household care as their main activity were employed.

Table 30. Main activity status by labour force status classification

Labour force status	Employed			Unemployed			Outside the labour force			TOTAL
Sex	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Total	11,009	5,153	16,162	880	231	1,111	7,615	13,945	21,561	38,833
Main activity status										
Studying or training	46 (*)	56 (*)	102	13 (*)	0	13 (*)	1,862	1,952	3,814	3,929
Working in farming, raising animals or handicraft	667	435	1,101	1 (*)	0	1 (*)	48 (*)	10 (*)	57 (*)	1,160
Working in fishing or gleaning seafood	258 (*)	0	258 (*)	0	0	0	169 (*)	0	169 (*)	427
Working in another sector (e.g. government, NGO, store, hotels, etc.)	9,362	3,980	13,342	0	0	0	0	0	0	13,342
Looking for work	119	0	119	569	96 (*)	665	630	353	984	1,767
Taking care of the household or family	292	603	895	105	133	237	2,899	10,018	12,916	14,049
Voluntary work (community, village, church, etc.)	123	76 (*)	199	91 (*)	1 (*)	92 (*)	384	260	644	935
Long-term illness, injury or disability	29 (*)	0	29 (*)	0	0	0	424	423	847	876
Retired or pensioner	16 (*)	0	16 (*)	0	0	0	891	825	1,715	1,731
Other activity	98	3 (*)	101	101 (*)	1 (*)	102 (*)	299	105	404	608
Not stated	0	0	0	0	0	0	10 (*)	0	10 (*)	10 (*)

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

As seen earlier, women were more involved in household care activities than men across all labour force status. Employed women who self-reported household care as their main activity also represented 11.7% of total female employment, against 2.7% for their male counterpart (Table 31).

Table 31. Main activity status by labour force status classification (% in the working-age population)

Labour force status	Employed			Unemployed			Outside the labour force		
Sex	Male	Female	Total	Male	Female	Total	Male	Female	Total
Main activity status (% distribution)									
Studying or training	0.4 (*)	1.1 (*)	0.6	1.5 (*)	0.0	1.2 (*)	24.4	14.0	17.7
Working in farming, raising animals or handicraft	6.1	8.4	6.8	0.1 (*)	0.0	0.1 (*)	0.6 (*)	0.1 (*)	0.3 (*)
Working in fishing or gleaning sea-food	2.3 (*)	0.0	1.6 (*)	0.0	0.0	0.0	2.2 (*)	0.0	0.8 (*)
Working in another sector (e.g. government, NGO, store, hotels, etc.)	85.0	77.2	82.5	0.0	0.0	0.0	0.0	0.0	0.0
Looking for work	1.1	0.0	0.7	64.6	41.5 (*)	59.8	8.3	2.5	4.6

Labour force status	Employed			Unemployed			Outside the labour force		
Sex	Male	Female	Total	Male	Female	Total	Male	Female	Total
Taking care of the household or family	2.7	11.7	5.5	11.9	57.6	21.4	38.1	71.8	59.9
Voluntary work (community, village, church, etc.)	1.1	1.5 (*)	1.2	10.4 (*)	0.4 (*)	8.3 (*)	5.0	1.9	3.0
Long-term illness, injury or disability	0.3 (*)	0.0	0.2 (*)	0.0	0.0	0.0	5.6	3.0	3.9
Retired or pensioner	0.1 (*)	0.0	0.1 (*)	0.0	0.0	0.0	11.7	5.9	8.0
Other activity	0.9	0.1 (*)	0.6	11.5 (*)	0.4 (*)	9.2 (*)	3.9	0.8	1.9
Not stated	0.0	0.0	0.0	0.0	0.0	0.0	0.1 (*)	0.0	0.0

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

9.3. Subsistence work and household care

The 19th International Conference of Labour Statisticians (ICLS) introduced a technical term of own-use production work to define all inputs of labour involved in production of goods and services for own final use by their families. This concept captures the type of work that is commonly considered as subsistence work (for goods) and the provision of services which is also known as household care work.

In this HIES, subsistence work consists of farming, fishing, and manufacturing of other goods for own use by the family; this also includes own-use producers of foodstuff (referred to as subsistence foodstuff producer in the 19th ICLS resolution).

In RMI, 13,380 persons of working-age were engaged in subsistence work and household or care work, representing 34.5% of total working-age population (see details in Appendices, Table A.4.5). About 0.6% (or 227 persons) of working-age population self-reported exclusively conducting subsistence work as their main activity.

Meanwhile, 13,153 persons of working-age were exclusively involved in unpaid household care work, representing 33.9% of the working-age population. There were 10,151 women and 3,002 men involved in unpaid household care, representing 52.5% and 15.4% of working-age population of their gender, respectively (Table 32).

Table 32. Subsistence work and household care by sex (% in the working-age population)

	Male	Female	Total
Subsistence work	1.1	<0.1 (*)	0.6
Household or family care	15.4	53.1	34.2
By age group			
15–24	24.7	38.7	31.7
25+	13.0	56.1	34.4
25–64	12.9	58.7	35.6
65+	14.1	29.8	22.2
By educational attainment			
Less than primary or none	26.8	48.3	34.6
Completed primary	23.4	58.9	41.4
Completed secondary	12.5	57.3	36.2
Tertiary (first stage or completed)	5.2	17.1	10.1
Level not stated	18.6	55.3	30.9

Source: RMI 2019/20 HIES.
Notes: (*) Denotes small sample cases of less than 10.

By age groups, women between 25–64 years were the largest group engaged in unpaid household care work. More than half (58.7%) of women in this age groups were involved in unpaid household care, compared to 12.9% of men in the same age group (Figure 21).

Figure 21. Numbers of male and female self-reporting household care as their main activity by age group
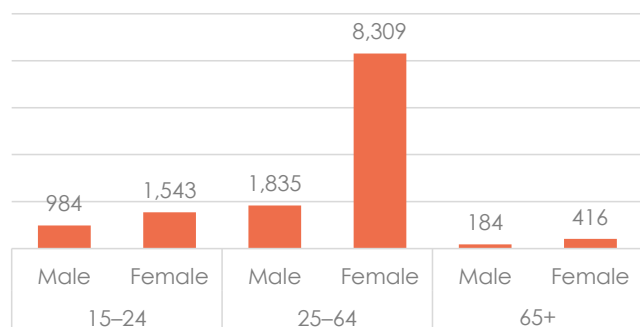
By geographic location, the share of working-age population in rural areas who were exclusively providing household or family care is 40.5%, which was higher than that among those in urban areas at 31.9%.

Table 33. Subsistence work and household care by geographic location (% in the working-age population)

	Urban areas	Rural areas	Total
Subsistence work	0.2	1.8 (*)	0.6
Household or family care	31.9	40.5	33.9
By age group			
15–24	30.2	39.1	31.7
25+	32.4	40.7	34.4
25–64	33.5	42.3	35.6
65+	20.6	26.7	22.2
By educational attainment			
Less than primary or none	31.0	47.4	34.6
Completed primary	40.5	43.3	41.4
Completed secondary	35.1	41.0	36.2
Tertiary (first stage or completed)	10.2	9.2	10.1
Level not stated	32.6	0.0	30.9

Notes: (*) Denotes small sample cases of less than 10.

Women at all age groups were more likely to be engaged in subsistence work and household or family care than men of the same age group. Together, the number of women (10,160 persons) in these forms of work was three times higher than men (Figure 22).

Figure 22. Numbers of male and female involved in subsistence work and household or family care combined by age group

Male

Female
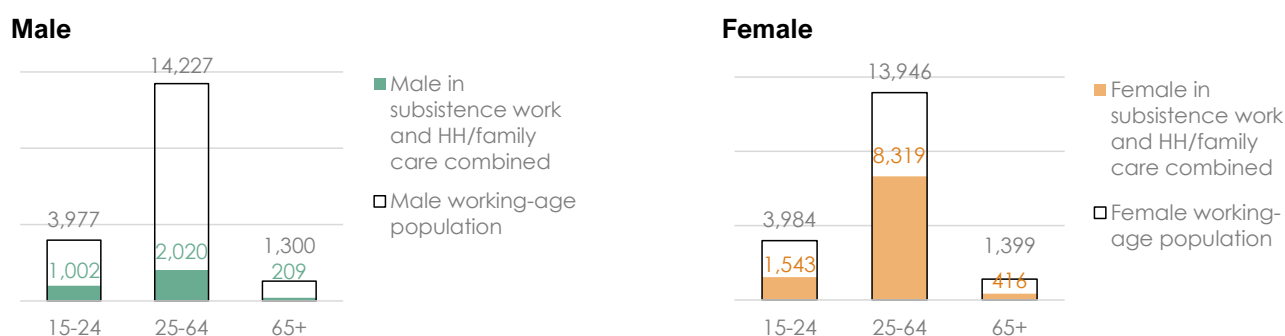
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APPENDICES

A.1. Main statistical concepts and definitions

The labour force module of the RMI NSDP Baseline Survey 2019 was designed in accordance with the international standards on statistics of work, employment, and labour underutilization adopted by the 19th International Conference of Labour Statisticians (Geneva, 2013)[3]. The main concepts and definitions used in this report are therefore in line with these standards, and are summarised below.

A.1.1 Labour force statistics concepts

Work

Work is defined as:

- "Any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use"
- It is "irrespective of its formal or informal character or the legality of the activity."
- It excludes "activities not involving production of goods or services (begging, stealing), self-care (personal grooming, hygiene) and activities that cannot be performed by another person on one's own behalf (sleeping, learning, own recreation)."

Employment

Persons in employment are defined as all of those above a specified age who, during a specific reference period, were engaged in any activity to produce goods or provide services for pay or profit. It excludes persons engaged solely in activities to produce goods or services for own final use such as producing agricultural, fishing and gathering products for own-consumption or cleaning, decorating, gardening and maintaining one's own dwelling or premises, durables and other goods.

Persons in employment comprise:

(j) employed persons at work, i.e., who worked in a job for at least one hour; and

(k) employed persons not at work due to temporary absence from a job, or due to working-time arrangements, such as shift work, flexi-time and compensatory leave for overtime.

Unemployment (U)

The international standard definition of unemployment should satisfy three criteria simultaneously: "without work", "currently available for work" and "seeking work". The "unemployed" comprise all persons of working age who during the reference period were:

(a) without work – not in paid employment nor self-employed;

(b) currently available for work – available for paid employment or self-employment during the reference period; and

(c) seeking work – had taken specific steps in a specified reference period to seek paid employment or self-employment.

The definition of unemployment provides an exception in the case of future starters. They are considered as unemployed even if they did not carry out activities to seek employment during the specified period.

Youth vs. adult

The term "youth" refers to persons aged 15–24 years and "adult" is persons aged 25 years+.

Time-related underemployment (TRU)

Persons in time-related underemployment are defined as all persons in employment who, during a specified reference period:

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3   International Conference of Labour Statisticians (ICLS). (2013). Resolution Concerning Statistics of Work, Employment, and Labour Underu-
   tilization. In 19th International Conference of Labour Statisticians. Geneva. October. population.

(a) wanted to work additional hours;

(b) whose working time in all jobs was less than a specified hours threshold; and

(c) who were available to work additional hours given an opportunity for more work.

In RMI 2019/20 HIES, the underemployment threshold was set at 40 hours usually worked per week.

Potential labour force (PLF)

Potential labour force is defined as all persons of working age who, during the reference period, were neither in employment nor in unemployment but who were considered as:

(a) unavailable jobseekers – who were seeking employment but not currently available; or

(b) available potential jobseekers – who wanted employment, were currently available for employment but did not carry out activities to seek employment.

Labour underutilization (LU)

Labour underutilization (LU) "refers to mismatches between labour supply and demand, which translate into an unmet need for employment among the population" (ILO, 2013; Resolution I, Para 40). LU comprises three main components: time-related underemployment, unemployment, and potential labour force.

Figure A.1 illustrates the relationship of aforementioned concepts.

Figure A.1. Components of labour underutilization relating to insufficient labour absorption
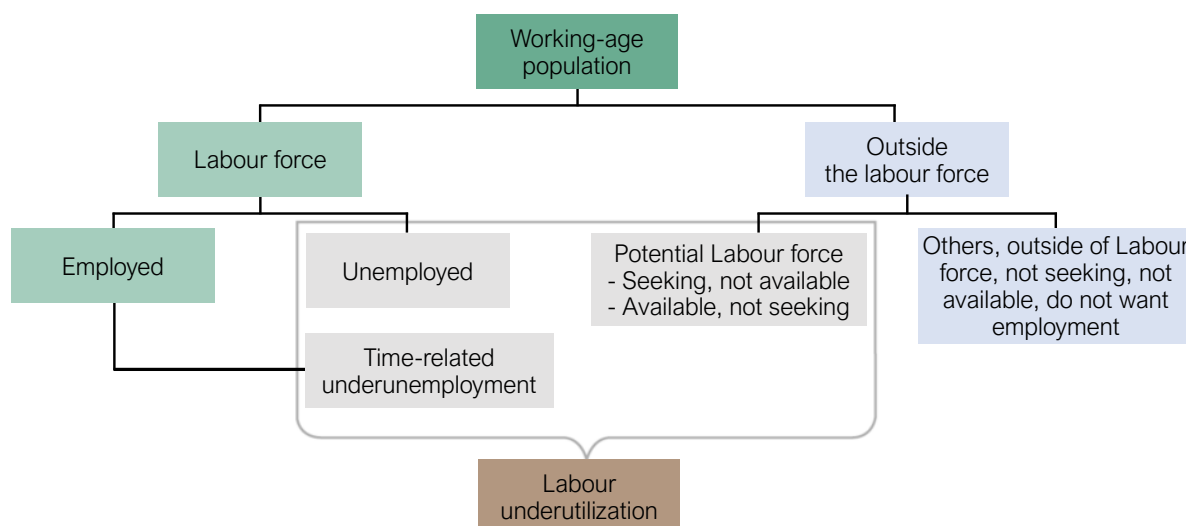
Working Age Population (WAP)

The working age population comprises persons who are aged 15 years old and above.

$$WAP\ (aged\ 15+) = LF\ (Labour\ Force) + NLF\ (Not\ in\ labour\ force)$$

Labour Force (LF)

The total labour force is the sum of the total of employed and unemployed population of the working age population.

$$LF = E\ (Employed) + U\ (Unemployed)$$

Population outside of the labour force

Population outside of the labour force are persons of the working age who are not part of the labour force. It also refers to the working age population who are neither employed nor unemployed.

Labour Force Participation Rate (LFPR)

Labour force participation rate is defined as the ratio of the labour force to the working-age population (aged 15+). It is a measure of the proportion of working-age population that actively engages in labour market, either by working or looking for work.

$$LFPR = \frac{LF}{WAP}$$

Employment to Population Ratio (EPR)

The employment-to-population ratio is defined as the proportion of employed population to the working-age population. A high ratio means that a large share of a country's population is employed, while a low ratio means that a large share of the population is not directly participated in economic activities, as they are either unemployed or out of the labour force.

$$EPR = \frac{Employed\ population}{WAP}$$

Labour Underutilization (LU)

The composite measure of all those who are in unemployment (U), in time-related underemployment (TRU) or in the potential labour force (PLF).

$$LU = U + TRU + PLF$$

Extended labour force (Extended LF)

Extended labour force is the total population in the labour force and potential labour force.

$$Extended\ LF = LF + PLF$$

Unemployment Rate (UR or LU1)

Unemployment rate is the proportion of unemployed population to the total population in labour force.

$$UR = \frac{Unemployed\ population}{LF}$$

Combined rate of time-related underemployment and unemployment (LU2)

The combined rate of time-related underemployment and unemployment (LU2) refers to the proportion of the labour force that are either in unemployment or time-related underemployment.

$$LU2 = \frac{U\ +\ TRU}{LF}$$

Combined rate of unemployment and potential labour force (LU3)

The combined rate of unemployment and potential labour force (LU3) represents the share of the extended labour force that are in unemployment or the potential labour force.

$$LU3 = \frac{U\ +\ PLF}{Extended\ LF}$$

Composite measure of labour underutilization (LU4)

The composite measure of labour underutilization (LU4) represents the share of the extended labour force that are in unemployment, time-related underemployment or the potential labour force.

$$LU4 = \frac{U\ +\ TRU\ +\ PLF}{Extended\ LF}$$

Informal sector

The informal sector consists of unregistered and/or small unincorporated private enterprises engaged in the production of goods or services for profits. It consists all economic units (business enterprises) that are not covered or not fully covered by formal requirements by law; or informal arrangements in practice.

In this report, a formal sector enterprise is defined as either a public enterprise, or a private enterprise that is registered (with a national businesses registration system) or has full bookkeeping for national reporting.

Employment in the informal sector contains all jobs in informal sector enterprises.

Informal employment

Informal employment is defined as the type of employment where the diversified set of economic activities, enterprises, jobs, and workers are not regulated or protected by the government, have no explicit or written contracts of employment, no certain employment benefits (such as social protection coverage, severance pay,

paid sick and annual leave) or for which labour regulations are not applied nor enforced.

Informal employment comprises all persons with informal jobs, whether carried out in formal or informal sector enterprises, or in HHs, during a given reference period, which includes:

- Own-account workers (self-employed with no employees) in their own informal sector enterprises;
- Employers (self-employed with employees) in their own informal sector enterprises;
- Contributing family workers, irrespective of type of enterprise;
- Members of informal producers' cooperatives (not established as legal entities);
- Employees holding informal jobs as defined according to the employment relationship (in law or in practice, jobs not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (paid annual or sick leave, etc.);
- Own-account workers engaged in production of goods exclusively for own final use by their HH.

In this report, employees are considered as having a formal job if the employer contributes to a national pension or social protection system on their behalf, or if they received both paid sick leave and paid annual leave.

Subsistence production

Subsistence production constitutes the subgroup of persons who performed any of the specified activities to produce foodstuff from farming, fishing, raising animals, fishing, or making handicraft that contribute to the livelihood of the household or family. Excluded are persons who engaged in such production as recreational or leisure activities.

Reference period

For the employment section, the reference period is a week prior to the interview.

A.1.2 Main classifications used in this report

Status in employment

Status in employment is classified in accordance with the International Classification of Status in Employment of 1993 (ICSE-93), namely:

- Wage and salaried employee – a person who works in any economic unit such as the government department, private business enterprises or organisations, including family businesses, and receives regular pay;
- Employer – a person who runs a business on his/her own or in partnership and engages at least one paid employee on a continuous basis in operating the business;
- Own account worker – a person who runs a business on his/her own or in partnership but does not engage any paid employee on regular basis (self-employed and not employing others);
- Contributing family worker – a person who works in his/her family business without receiving any regular pay.

Employment by economic sectors

Economic sectors are defined in line with the International Standard Industrial Classification of All Economics Activities (ISIC Rev.4, of 2008), which classifies economic sectors according to the activity they carry out.

Employment by occupation

The kind of work or group of tasks done during the reference period by the person employed, classified according to the International Standard Classification of Occupations (ISCO-08, of 2008).

A.2. Sample sizes and sampling errors for selected statistics

Table A.2.1. Sample size by sex

	Male	Female	Total
Total sample	2,369	2,400	4,769
Working-age population	1,534	1,535	3,069
By age			
<15	835	865	1,700
15–24	391	381	772
25+	1,143	1,154	2,297
25–64	1,063	1,076	2,139
65+	80	78	158
Labour force	862	386	1,248
Employment	791	358	1,149
By education (% distribution)			
Less than primary or none	10	5	15
Completed primary	244	89	333
Completed secondary	372	175	547
Tertiary (first stage or completed)	158	88	246
Level not stated	7	1	8
By status in employment (% distribution)			
Employees	683	270	953
Employers	2	3	5
Own-account workers	71	67	138
Contributing family workers	19	9	28
Workers not classifiable by status	16	9	25
By economic industry (% distribution)			
Agriculture, forestry and fishery	72	4	76
Industry	147	22	169
Services	572	332	904
By occupation			
Managers	73	27	100
Professionals	90	73	163
Technicians and associate professionals	73	32	105
Clerical support workers	51	25	76
Service and sales workers	134	79	213
Skilled agricultural, forestry & fishery workers	41	0	41
Craft and related trades workers	113	83	196
Plant and machine operators, and assemblers	60	5	65
Elementary occupations	146	33	179
Armed forces occupations	10	1	11
Unemployment	71	28	99
Outside labour force	672	1,149	1,821
Subsistence work	15	2	17
Household or family care	300	845	1,145

Source: RMI 2019/20 HIES.

Table A.2.2. Sample size by geographic location

	Urban areas	Rural areas	Total
Total sample	3,069	1,700	4,769
Working-age population	2,057	1,012	3,069
By age			
<15	1,012	688	1,700
15–24	551	221	772
25+	1,506	791	2,297
25–64	1,402	737	2,139
65+	104	54	158
Labour force	855	393	1,248
Employment	790	359	1,149
By education (% distribution)			
Less than primary or none	8	7	15
Completed primary	164	169	333
Completed secondary	412	135	547
Tertiary (first stage or completed)	201	45	246
Level not stated	5	3	8
By status in employment (% distribution)			
Employees	747	206	953
Employers	4	1	5
Own-account workers	20	118	138
Contributing family workers	9	19	28
Workers not classifiable by status	10	15	25
By economic industry (% distribution)			
Agriculture, forestry and fishery	25	51	76
Industry	138	31	169
Services	627	277	904
By occupation			
Managers	55	45	100
Professionals	110	53	163
Technicians and associate professionals	88	17	105
Clerical support workers	61	15	76
Service and sales workers	176	37	213
Skilled agricultural, forestry & fishery workers	16	25	41
Craft and related trades workers	120	76	196
Plant and machine operators, and assemblers	62	3	65
Elementary occupations	96	83	179
Armed forces occupations	6	5	11
Unemployment	65	34	99
Outside labour force	1,202	619	1,821
Subsistence work	2	15	17
Household or family care	730	415	1,145

Source: RMI 2019/20 HIES.
Note: For cells where sample cases are less than 10, statistics presented in the report should be used with caution.

Table A.2.3. Sampling errors – employed population

Employed population (aged 15+)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Total employment	16,162	673	14,819	17,505
By occupation				
Managers, professionals, and technicians	5,572	513	4,547	6,597
Clerical, service and sales workers	3,883	304	3,276	4,490
Skilled agricultural and trades workers	3,227	301	2,627	3,827
Plant and machine operators	902	133	637	1,168
Elementary occupations	2,428	287	1,855	3,000
Armed forces	150	62	26	275
By economic industry				
Agriculture	826	144	538	1,114
Manufacturing	515	110	296	734
Construction	1,150	190	770	1,529
Mining and quarrying; Electricity, gas and water supply	889	203	483	1,295
Market services	5,410	366	4,680	6,141
Non market service	7,372	540	6,294	8,451
By status of employment				
Employees	13,618	548	12,523	14,713
Employers	156	86	-	328
Own-account workers	1,634	274	1,088	2,180
Contributing family workers	424	121	182	666
Workers not classifiable by status	330	84	162	499

Source: RMI 2019/20 HIES.

Table A.2.4. Sampling errors – labour force participation rate

Labour force participation rate (LFPR)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Labour force participation rate	44.5%	1.3%	41.8%	47.1%
By gender				
Male	61.0%	1.8%	57.3%	64.6%
Female	27.9%	1.8%	24.2%	31.5%
By age group				
15–24	16.0%	1.8%	12.5%	19.6%
25–54	57.1%	1.5%	54.2%	60.0%
55–64	41.7%	4.1%	33.4%	49.9%
65+	25.2%	4.3%	16.7%	33.8%
By Geographic location				
Urban areas	45.6%	1.6%	42.3%	48.9%
Rural areas	40.7%	1.9%	36.8%	44.6%
By educational attainment				
Less than primary or none	26.2%	9.1%	7.9%	44.4%
Completed primary	32.8%	2.0%	28.8%	36.8%
Completed secondary	43.4%	1.6%	40.1%	46.6%
Tertiary (first stage or completed)	77.3%	3.1%	71.0%	83.5%
Level not stated	33.1%	11.7%	9.6%	56.5%

Source: RMI 2019/20 HIES.

Table A.2.5. Sampling errors – unemployment rate

Labour force participation rate (LFPR)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Unemployment rate	6.4%	1.1%	4.3%	8.5%
By gender				
Male	7.4%	1.3%	4.7%	10.1%
Female	4.3%	1.3%	1.6%	6.9%
By age group				
15–24	26.0%	5.0%	16.0%	36.1%
25–54	5.4%	1.1%	3.1%	7.7%
55–64	0.7%	0.6%	0.0%	2.0%
65+	7.0%	5.1%	0.0%	17.2%
By Geographic location				
Urban areas	6.6%	1.2%	4.3%	8.9%
Rural areas	5.8%	2.5%	0.7%	10.9%
By educational attainment				
Less than primary or none	23.7%	10.8%	2.2%	45.1%
Completed primary	8.5%	2.5%	3.4%	13.6%
Completed secondary	5.9%	1.3%	3.3%	8.5%
Tertiary (first stage or completed)	4.9%	1.5%	1.9%	8.0%
Level not stated	0.0%			

Source: RMI 2019/20 HIES.

Table A.2.6. Sampling errors – time-related underemployment rate

Labour force participation rate (LFPR)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Time-related underemployment rate	30.8%	2.4%	26.0%	35.6%
By gender				
Male	31.2%	2.9%	25.5%	36.9%
Female	30.0%	3.5%	22.9%	37.0%
By age group				
15–24	27.3%	5.9%	15.4%	39.1%
25–54	30.3%	2.4%	25.5%	35.0%
55–64	41.3%	7.1%	27.2%	55.4%
65+	16.1%	8.2%	0.0%	32.4%
By Geographic location				
Urban areas	31.6%	2.8%	26.0%	37.2%
Rural areas	27.9%	4.1%	19.6%	36.1%

Source: RMI 2019/20 HIES.

Table A.2.7. Sampling errors – youth not in employment, education or training (NEET)

Youth not in employment, education or training (NEET)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
NEET rate	41.2%	2.5%	36.2%	46.2%
By gender				
Male	37.1%	3.2%	30.8%	43.4%
Female	45.2%	3.6%	37.9%	52.4%
By Geographic location				
Urban areas	40.4%	2.8%	34.8%	45.9%
Rural areas	45.0%	5.7%	33.6%	56.5%

Source: RMI 2019/20 HIES.

Table A.2.8. Sampling errors – potential labour force

Potential labour force	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Potential labour force rate	10.8%	1.4%	8.0%	13.5%
By gender				
Male	7.4%	1.3%	4.8%	9.9%
Female	17.5%	2.6%	12.4%	22.7%
By geographic location				
Urban areas	9.7%	1.5%	6.7%	12.7%
Rural areas	14.7%	3.3%	8.1%	21.2%

Source: RMI 2019/20 HIES.

Table A.2.9. Sampling errors – informal sector working population

Informal sector working population (aged 15+)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Population employed in the informal sector	742	150	443	1,040
Population employed in the formal sector	13,491	544	12,405	14,576
Population employed in households	1,929	316	1,298	2,561
By gender				
Male	544	108	321	768
Female	197	53	88	307
By age group				
15–24	43	23	-	91
25–54	629	107	409	850
55–64	38	28	-	95
65+	32	18	-	69
By Geographic location				
Urban areas	390	78	230	550
Rural areas	352	83	181	523
By educational attainment				
Less than primary or none	1	1	-	3
Completed primary	353	85	178	528
Completed secondary	279	70	134	424
Tertiary (first stage or completed)	87	55	-	201
Level not stated	22	15	-	53

Source: RMI 2019/20 HIES.

Table A.2.10. Sampling errors – informal employment population

Informal sector working population (aged 15+)	Estimate	Standard error	95% Confidence interval	
			Lower bound	Upper bound
Population with formal employment	12,502	535	11,434	13,570
Population with informal employment	3,660	388	2,886	4,434
By gender				
Male	2,260	288	1,684	2,836
Female	1,400	177	1,046	1,755
By age group				
15–24	282	60	162	402
25–54	2,951	327	2,297	3,606
55–64	285	73	140	431
65+	141	63	16	267
By Geographic location				
Urban areas	1,711	190	1,330	2,092
Rural areas	1,949	306	1,336	2,562
By educational attainment				
Less than primary or none	97	54	-	205
Completed primary	1,839	264	1,312	2,367
Completed secondary	1,344	173	997	1,690
Tertiary (first stage or completed)	325	92	141	509
Level not stated	55	32	-	119

Source: RMI 2019/20 HIES.

A.3. Additional statistical tables

Table A.3.1. Key indicators of the labour market (KILM) by sex and age group

	Male	Female	Aged 15–24	Aged 25+	Aged 25–64	Aged 65+	Total
Labour force participation rate (%)	61.0	27.9	16.0	16.0	54.4	25.2	44.5
Employment-to-population ratio (%)	56.4	26.7	11.9	49.3	51.8	23.5	41.6
Employment	11,009	5,153	944	15,218	14,585	633	16,162
By education (% distribution)							
Less than primary or none	0.6	1.2	1.5	0.7	0.8	0.0	0.8
Completed primary	27.8	21.7	28.6	25.7	25.4	31.8	25.8
Completed secondary	45.1	44.0	38.4	45.1	45.7	32.6	44.7
Tertiary (first stage or completed)	25.2	33.0	31.5	27.5	27.1	35.5	27.7
Level not stated	1.4	0.1	0.0	1.0	1.1	0.0	1.0
By status in employment (% distribution)							
Employees	86.5	79.5	79.4	84.6	84.7	80.3	84.3
Employers	0.7	1.5	0.2	1.0	1.1	6.5	1.0
Own-account workers	7.8	15.1	8.7	10.2	10.2	9.9	10.1
Contributing family workers	3.0	1.7	7.6	2.3	2.3	1.2	2.6
Workers not classifiable by status	2.0	2.2	4.1	1.9	1.7	2.1	2.0
By economic industry (% distribution)							
Agriculture, forestry and fishery	6.9	1.3	2.7	5.3	5.4	2.2	5.1

	Male	Female	Aged 15–24	Aged 25+	Aged 25–64	Aged 65+	Total
Industry	20.4	5.9	29.1	15.0	15.2	12.9	15.8
Services	72.7	92.8	68.2	79.8	79.4	84.9	3.2
By occupation (% distribution)							
Managers	9.2	9.7	2.9	9.7	9.3	20.7	9.3
Professionals	12.1	21.4	15.7	15.0	14.8	20.6	15.1
Technicians and associate professionals	9.0	12.3	4.8	10.4	10.7	3.9	10.0
Clerical support workers	6.8	6.3	10.3	6.4	6.3	9.2	6.7
Service and sales workers	17.3	17.6	17.4	17.4	17.9	4.0	17.4
Skilled agricultural, forestry & fishery workers	5.2	0.0	1.3	3.7	3.8	1.6	3.5
Craft and related trades workers	15.0	19.6	23.8	16.0	16.1	14.1	16.4
Plant and machine operators, and assemblers	7.0	2.6	6.1	5.5	5.7	2.1	5.6
Elementary occupations	17.2	10.3	17.6	14.9	14.5	23.8	15.0
Armed force occupations	1.3	0.2	0.0	1.0	1.0	0.0	0.9
Average actual hours of work per week	38.8	37.2	37.4	38.9	39.0	37.5	38.8
Informal employment rate (%)	20.5	27.2	29.9	22.2	22.2	22.3	22.6
Unemployment rate (%)	7.4	4.3	26.0	4.9	4.8	7.0	6.4
Youth unemployment rate, aged 15–24 (%)	31.0	14.2	26.0				26.0
Composite rate of labour underutilization (%)	43.1	45.8	65.1	43.0	42.5	28.5	44.0
Youth NEET rate, aged 15–24 (%)	37.1	45.2	41.2				41.2
Time-related underemployment rate (%)	31.2	30.0	27.3	30.9	31.7	16.1	30.8

Source: RMI 2019/20 HIES.
Note: Time-related underemployment rate is based on less than 40 actual hours of work per week.

Table A.3.2. Key indicators of the labour market (KILM) by geographic location

	Urban areas	Rural areas	Total
Labour force participation rate (%)	45.6	40.7	44.5
Employment-to-population ratio (%)	42.6	38.4	41.6
Employment	12,792	3,370	16,162
By education (% distribution)			
Less than primary or none	0.8	0.8	0.8
Completed primary	19.2	51.0	25.8
Completed secondary	47.1	35.7	44.7
Tertiary (first stage or completed)	31.9	11.9	27.7
Level not stated	1.0	0.6	1.0
By status in employment (% distribution)			
Employees	92.9	51.4	84.3
Employers	1.2	0.1	1.0
Own-account workers	3.2	36.2	10.1
Contributing family workers	1.2	7.9	2.6
Workers not classifiable by status	1.4	4.4	2.0
By economic industry (% distribution)			
Agriculture, forestry and fishery	2.6	14.5	5.1
Industry	18.2	6.7	15.8

	Urban areas	Rural areas	Total
Services	79.2	78.7	79.1
By occupation (% distribution)			
Managers	9.4	8.9	9.3
Professionals	15.2	14.7	15.1
Technicians and associate professionals	11.8	3.4	10.0
Clerical support workers	7.2	4.6	6.7
Service and sales workers	20.0	7.6	17.4
Skilled agricultural, forestry & fishery workers	1.9	9.7	3.5
Craft and related trades workers	15.0	22.0	16.4
Plant and machine operators, and assemblers	7.0	0.4	5.6
Elementary occupations	11.7	27.6	15.0
Armed force occupations	0.9	1.1	0.9
Average actual hours of work per week	41.2	29.5	38.8
Informal employment rate (%)	13.4	57.8	22.6
Unemployment rate (%)	6.6	5.8	6.4
Youth unemployment rate, aged 15–24 (%)	29.4	12.8	26.0
Composite rate of labour underutilization (%)	44.2	43.4	44.0
Youth NEET rate, aged 15–24 (%)	40.4	45.0	41.2
Time-related underemployment rate (%)	31.6	27.9	30.8

Source: RMI 2019/20 HIES.

Table A.3.3. Main activity status by sex and age (number)

	Male	Female	Aged 15–24	Aged 25+	Aged 25–64	Aged 65+	Total
Main activity status							
Studying or training	1,921	2,009	3,662	267	267	-	3,929
Working in farming, raising animals, fishing or making handicraft	715	444	121	1,038	992	46	1,160
Working in another sector/activity (government or private sector, business)	427	0	0	427	427	-	427
Looking for work	9,362	3,980	697	12,644	12,146	498	13,342
Taking care of the household or family	1,318	449	478	1,289	1,289	-	1,767
Voluntary work (community, village, church, etc.)	3,295	10,754	2,605	11,443	10,793	650	14,049
Long-term illness, injury or disability	598	337	153	782	712	70	935
Retired or old person	453	423	152	724	532	191	876
Normally work but not last week (leave, sick...)	907	825	-	1,731	523	1,208	1,731
Other	498	109	93	515	481	34	608
Not stated	10	-	-	10	10	-	10

Source: RMI 2019/20 HIES.

Table A.3.4. Main activity status by geographic location (number)

	Urban areas	Rural areas	Total
Main activity status			
Studying or training	3,446	483	3,929
Working in farming, raising animals, fishing or making handicraft	181	978	1,160
Working in another sector/activity (government or private sector, business)	239	188	427
Looking for work	11,757	1,584	13,342
Taking care of the household or family	1,530	237	1,767
Voluntary work (community, village, church, etc.)	9,886	4,162	14,049
Long-term illness, injury or disability	668	267	935
Retired or old person	633	243	876
Normally work but not last week (leave, sick...)	1,369	363	1,731
Other	337	271	608
Not stated	0	10	10

Source: RMI 2019/20 HIES.

Table A.3.5. Subsistence work and household care by sex (number)

	Male	Female	Total
Subsistence work	218	10 (*)	227
Household or family care	3,002	10,151	13,153
By age group			
15-24	984	1,543	2,527
25+	2,018	8,608	10,626
25–64	1,835	8,192	10,026
65+	184	416	600
By educational attainment			
Less than primary or none	107	110	218
Completed primary	1,603	4,164	5,766
Completed secondary	1,050	5,358	6,407
Tertiary (first stage or completed)	185	432	617
Level not stated	58	87	145

Source: RMI 2019/20 HIES.

Table A.3.6. Subsistence work and household care by geographic location (number)

	Urban areas	Rural areas	Total
Subsistence work	65 (*)	162	227
Household or family care	9,598	3,555	13,153
By age group			
15-24	1,987	539	2,527
25+	7,611	3,016	10,626
25–64	7,209	2,817	10,026
65+	402	198	600
By educational attainment			
Less than primary or none	153	65	218

	Urban areas	Rural areas	Total
Completed primary	3,672	2,095	5,766
Completed secondary	5,057	1,350	6,407
Tertiary (first stage or completed)	572	45	617
Level not stated	145	0	145

Source: RMI 2019/20 HIES.

Table A.3.7. Summary of SDG indicators from labour force module of RMI 2019/20 HIES

SDG Indicator	Male	Female	Total
INDICATORS FOR WHICH ILO IS THE CUSTODIAL AGENCY OR INVOLVED			
1.1.1 Proportion of the population living below the international poverty line by sex, age, status in employment and geographic location (urban/rural)			
3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex			
5.5.2 Proportion of women in managerial positions		33.2	
8.2.1 Real GDP per employed person			
8.3.1 Proportion of informal employment in total employment, by sector and sex			
By sex	20.5	27.2	22.6
By economic industry			
Agriculture, forestry and fishery	47.1	0.0	43.4
Industry	10.9	39.8	14.3
Services	20.7	26.7	23.0
8.5.2 Unemployment rate by sex and age			
By sex	7.4	4.3	6.4
By age			
15–24	31.0	14.2	26.0
25–64	5.3	3.7	4.8
65+	9.8	0.0	7.0
8.6.1 Proportion of youth (aged 15–24 years) not in education, employment or training	37.1	45.2	41.2
OTHER EMPLOYMENT RELATED SDG INDICATORS			
9.2.2 Manufacturing employment as a proportion of total employment	3.0	3.7	3.2

Source: RMI 2019/20 HIES.

HOUSEHOLD INCOME AND EXPENDITURE IN THE REPUBLIC OF THE MARSHALL ISLANDS

BASED ON ANALYSIS OF THE 2019/20 HOUSEHOLD INCOME AND EXPENDITURE SURVEY

SECTION 4: HOUSEHOLD INCOME AND EXPENDITURE

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This Section provides a brief summary of the 2019/20 HIES, which is followed by presentation of the results of the analysis of the 2019/20 HIES, in relation to:

- Population and household profile
- Household expenditure
- Household income
- Additional analysis

The analysis aims to present the patterns of HH income, expenditure, consumption, production, and economic activity by population groups. This section also includes a series of statistical tables and appendices.

This Section presents information, such as HH income and expenditure, by the following population groups:

i. **Strata (or Cluster)**: geographic domain for each of the six sampling clusters of RMI. This allows us to understand the characteristics of HHs in the different atolls of RMI.

ii. **Urban-rural**: geographic domain of areas defined as urban (Majuro and Kwajalein) and those defined as rural (other atolls).

iii. **Sex of main respondent**: the gender of the 'reference person', or the person identified by the respondent(s) to be the HH head and the person listed first on the HH listing.

iv. **Age of main respondent**: the age group from which the 'reference person' belongs to.

v. **Household with person with disability**: HHs that have at least one HH member with a disability as defined by the WashingtonGroup .

vi. **Household expenditure quintile**: HHs ranked by their per capita consumption expenditure (excluding transfers and intermediate expenditure) and put into five groups with group 1 having the lowest consumption and group 5 having the highest consumption.

This summary provides an overview of RMI's population structure and distribution and HH expenditure and income. All income and expenditure estimates are reported in US Dollars (US$), unless otherwise specified. Through the application of sampling weights, all reported results are extrapolated to be representative the total population.

1. Population

Based on the 2020 population estimates, RMI is estimated to have 14,950 HHs with a population of 54,388 persons. Average HH size is 3.6 persons and RMI has a sex ratio of 99, meaning that there are 99 males for every 100 females. The median age of the population is 30 and 40% of the population is aged less than 15 years old. RMI's dependency ratio is estimated to be 51, meaning that for every 100 working-aged persons, there are 51 dependents.

The main activity in the past 7 days for the population aged 15+ was 'Taking care of the household and family', with 36% of persons reporting this as their main activity. Following this, 34% reported undertaking employment-related activities, 10% were students while another 5% reported seeking for work.

Around 35% of HHs were participating in agricultural activities, 15% in fisheries, 27% in livestock and 17% in copra/coconut production and 10% in crop production.

2. Household expenditure

Total annual HH expenditure in RMI is estimated to be US$251 million (average of US$16,819 million and a median of US$14,686). Almost all HH expenditure is consumption expenditure, with a little less than 6% of total HH expenditure being classified as transfers.

In terms of consumption source, 65% is cash based (cash purchased goods and services), 3% is own account production (home production for subsistence purposes), 21% is rents (actual and imputed), 0.4% is exchange (barter) and 10% is gifts (in-kind receipts).

Consumption expenditure is mainly dedicated to housing which represents one third of the total consumption expenditure. Food and non-alcoholic beverages accounts for 29% of total HH expenditure with restaurants accounting for 11%. The lowest share of total HH expenditure was on education and health which respectively represented 1% and 0.2%.

The distribution of HH expenditure is not even and there's a degree of inequality – in terms of total HH expenditure – among different population groups of RMI. 50% of total HH expenditure in RMI is accounted for by 40% of the population.

Table 1. Average annual household expenditure (US$) by COICOP Division

	Food, beverage	Alcohol, tobac, kava	Clothing, footwear	Housing, utilities	Furnishings, assets	Health	Transport	Commu-nication	Recreation, culture	Education	Restaurants	Miscell-aneous	Transfers	Total
Strata														
Majuro	4,795	605	516	6,331	786	42	1,443	478	280	164	2,002	735	532	18,710
Kwajalein	4,097	834	392	6,237	579	25	703	266	234	189	2,430	657	364	17,007
Rural 1	4,207	358	478	1,753	333	28	90	71	53	1	480	160	173	8,187
Rural 2	5,478	1,068	412	3,820	502	20	196	462	222	82	696	464	510	13,931
Rural 3	6,008	1,196	605	5,281	692	5	966	462	339	3	1,735	433	513	18,238
Rural 4	5,616	279	390	2,963	409	43	629	26	142	4	793	328	368	11,990
Sex														
Male	4,839	667	471	5,474	667	37	1,072	341	250	118	1,652	598	502	16,687
Female	4,698	533	490	5,658	663	35	1,096	414	223	167	2,124	675	363	17,139
Age group														
18–59 years	4,833	638	481	5,517	635	33	1,005	351	216	139	1,761	600	350	16,560
60+ years	4,691	596	463	5,560	757	48	1,297	395	320	112	1,878	682	789	17,587
Disability status														
With disability	5,353	636	486	5,601	698	52	1,284	345	247	184	2,098	631	1,045	18,660
Without disability	4,729	626	475	5,519	662	35	1,054	365	242	126	1,753	619	390	16,594
Per capita expenditure quintile														
Lowest	3,813	420	382	3,807	353	51	434	161	93	30	952	347	123	10,966
2	4,826	623	461	4,852	523	37	835	263	164	112	1,551	561	243	15,050
3	4,763	621	464	5,202	604	31	927	335	238	170	1,612	551	550	16,068
4	5,376	677	534	5,808	793	36	1,284	513	258	197	2,152	773	482	18,883
Highest	5,211	796	543	7,977	1,056	27	1,917	542	459	151	2,688	871	910	23,146
Urban–Rural														
Urban	4,634	658	487	6,310	738	38	1,271	429	270	170	2,101	717	493	18,316
Rural	5,306	531	443	3,095	441	31	480	156	158	14	825	321	360	12,162
Total	**4,797**	**627**	**477**	**5,528**	**666**	**37**	**1,079**	**363**	**242**	**132**	**1,791**	**620**	**461**	**16,819**

3. Household income

Total annual HH income in RMI is estimated to be US$316 million (average of US$21,071 and a median of US$16,084). Two thirds of HH income is cash-based, with 12% coming from gifts, 16% from rents and 3% from the consumption of home production.

Income is mainly sourced from employment-related activities, such as salaries and income from the sale of primary produce. Employment-related activities account for 62% of gross HH income.

The distribution of HH income is not even and there's a certain degree of inequality – in terms of total HH income – among different population groups of RMI. A little less than 50% of HH income in RMI is accounted for by 40% of the population.

Table 2. Average annual household income (US$) by COICOP Division

	Employment income	Property income	Transfer income	Gifts, remittance	Imputed rent	Intermediate exp.	Total
Strata							
Majuro	13,813	362	1,581	2,169	4,599	-131	22,395
Kwajalein	10,372	1,235	1,245	1,520	3,681	-2	18,050
Rural 1	12,447	0	316	1,786	1,501	-43	16,006
Rural 2	10,996	40	499	3,075	3,037	-39	17,608
Rural 3	12,136	13	1,178	7,612	5,016	-77	25,879
Rural 4	14,940	12	359	3,410	2,710	-129	21,302
Sex of main respondent							
Male	13,555	401	1,284	2,352	3,950	-128	21,414
Female	12,046	500	1,181	2,456	4,093	-25	20,250
Age group							
18–59 years	13,323	364	942	2,337	3,928	-76	20,817
60+ years	12,480	627	2,176	2,518	4,180	-161	21,821
Disability status							
With disability	14,128	40	1,491	2,828	4,045	-110	22,422
Without disability	12,986	478	1,224	2,328	3,985	-96	20,905
Per capita expenditure quintile							
Lowest	11,650	85	753	1,937	3,135	-107	17,454
2	12,289	629	824	2,177	3,713	-122	19,510
3	10,505	229	884	2,089	4,017	-53	17,672
4	12,606	240	944	2,742	4,339	-106	20,765
Highest	18,502	967	2,864	2,970	4,759	-102	29,959
Urban–Rural							
Urban	13,016	564	1,504	2,019	4,386	-101	21,389
Rural	13,402	13	475	3,514	2,764	-89	20,080
Total	**13,110**	**430**	**1,253**	**2,383**	**3,992**	**-98**	**21,070**

POPULATION AND HOUSEHOLD PROFILE

In this section we provide a brief profile of the population – the persons and HHs – of RMI. We mainly focus on characticstics of the population that are related to income and expenditure. The HIES is not a demographic survey, however it collected interesting information on the economic activities of the population, which are presented below.

1. Population profile

Table 3. 2019 estimated population of RMI (persons), by strata, broad age group and sex

	Male					Female					Total				
	0–14 years	15–17 years	18–59 years	60+ years	Total	0–14 years	15–17 years	18–59 years	60+ years	Total	0–14 years	15–17 years	18–59 years	60+ years	Total
Strata															
Majuro	3,660	688	9,083	1,625	15,057	4,053	1,011	8,712	1,529	15,304	7,713	1,699	17,795	3,154	30,361
Kwajalein	1,411	268	3,062	292	5,033	1,607	264	2,985	526	5,383	3,018	533	6,047	818	10,417
Rural 1	383	31	736	126	1,276	434	75	764	76	1,349	817	106	1,499	202	2,625
Rural 2	228	44	489	116	876	416	44	499	74	1,033	644	87	988	190	1,909
Rural 3	321	52	528	49	950	293	29	462	53	837	614	80	990	103	1,787
Rural 4	1,538	144	1,838	333	3,853	1,212	90	1,797	338	3,437	2,750	233	3,635	671	7,289
Urban–Rural															
Urban	5,070	957	12,145	1,917	20,090	5,660	1,275	11,697	2,055	20,687	10,731	2,232	23,842	3,973	40,777
Rural	2,469	270	3,591	624	6,955	2,355	237	3,522	542	6,656	4,824	508	7,113	1,166	13,611
Total	**7,540**	**1,227**	**15,736**	**2,542**	**27,045**	**8,015**	**1,512**	**15,219**	**2,597**	**27,344**	**15,555**	**2,739**	**30,955**	**5,139**	**54,388**

In 2019, RMI had a population of 54,388 persons, with around 99 males for every 100 females. Around 75% of Marshallese live in Majuro and Kwajalein – which form the urban region of RMI, with the remainder living in rural areas. Rural 3 (Enewatak, Kili, Utirik) is the smallest stratum by population, accounting for 3% of the national population.

29% of the population of RMI is aged 0–14, which is indicative of a moderately young population. 9% of the population is aged 60+. The distribution of the population is presented in the below figures.

Figure 1. Distribution of the population by age, sex and urban/rural
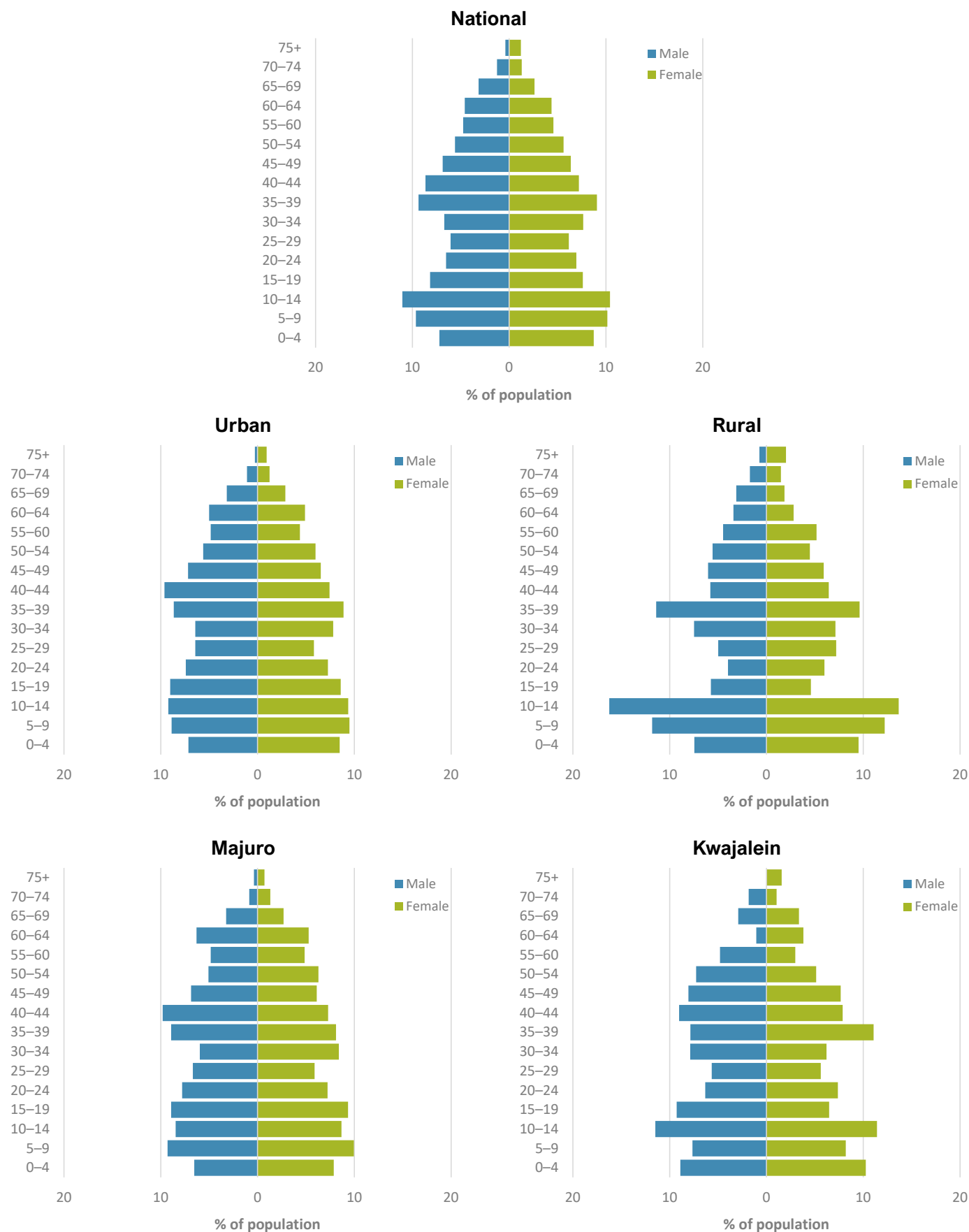
The above figure presents the shape of the population distribution in RMI. The national age pyramid suggests that the country has a lot of families with children but with an obvious outmigration of older children 15–19 and young adults aged between 20–29. The outmigration is all the more obvious in rural areas.

1.1. Demographic characteristics

The HIES collected information on the demographic characteristics of the population, which are summarised in the below table.

Table 4. Demographic characteristics of the population

	Sex ratio	Dependency	Ethnicity (Marshallese)	Marital status (married)	Median age	Average HH size
Strata						
Majuro	98	43	92%	63%	30	3.5
Kwajalein	93	52	98%	64%	30	4.0
Rural 1	95	63	97%	78%	33	3.0
Rural 2	85	67	100%	71%	27	3.6
Rural 3	113	57	96%	68%	28	3.8
Rural 4	112	75	99%	68%	27	4.2
Urban–Rural						
Urban	97	45	94%	63%	30	3.6
Rural	104	69	99%	71%	28	3.7
Total	**99**	**51**	**95%**	**65%**	**30**	**3.6**

The Sex Ratio – the ratio of males to females – shows us that there are 99 males for every 100 females in RMI. Across most strata, there are more females than males, except in Rural 3 and Rural 4. There are fairly similar numbers of males and females in Majuro.

The Dependency Ratio is the ratio of the dependent (persons who are not in the economically active age range; persons aged less than 15 and persons aged 65+) to the economically active population (persons aged 15–64). A high Dependency Ratio means those of working age, and the overall economy, face a greater burden in supporting the youngest and the older individuals. In the case of RMI, the national Dependency Ratio is 51, which means that there are 51 economically inactive persons for every 100 economically active persons. When we look at the age and sex structure of the population in RMI, it can be seen that around 29% of the population is aged 0–14 and that 5% is aged 65+.

The population of RMI is almost entirely Marshallese.

A little bit less than two-thirds of the population aged 15+ are married (legally and/common law) andthe rates are fairly similar across all strata.

The median age in RMI is 30 years old. This means that half of the population is aged 30 years or less and the other half is aged 30 or more.

The average HH size from the 2019/20 HIES is 3.6 persons per HH. Geographically, the average HH size is fairly similar across all strata.

1.2. Education profile of persons aged 3+

The HIES collected a wealth of information in relation to education, however the below summary is designed to be relevant to HH income and expenditure. As such, this is not intended to be an in-depth education analysis, it is rather intended to provide indication on education-related HH income and expenditure.

Ever attended school

Approximately 94% of Marshallese aged 3+ have ever attended school (Figure 2). Equally, 94% of the urban and rural population has attended school. By strata, this ranges from 91% in Kwajalein to 97% in Rural 1. There is an equal distribution of males and females who have ever attended school. 98% of the population aged 15+ attended school, while 81% of persons aged 3–14 have attended school. 90% of persons with disabilities have ever attended school in comparison to 97% of persons without. By expenditure quintile, school attendance increased correspondingly to expenditure quintile with the lowest quintile having 91% and the highest having 98% of persons ever attended school.

Figure 2. Percentage of the population who ever attended school
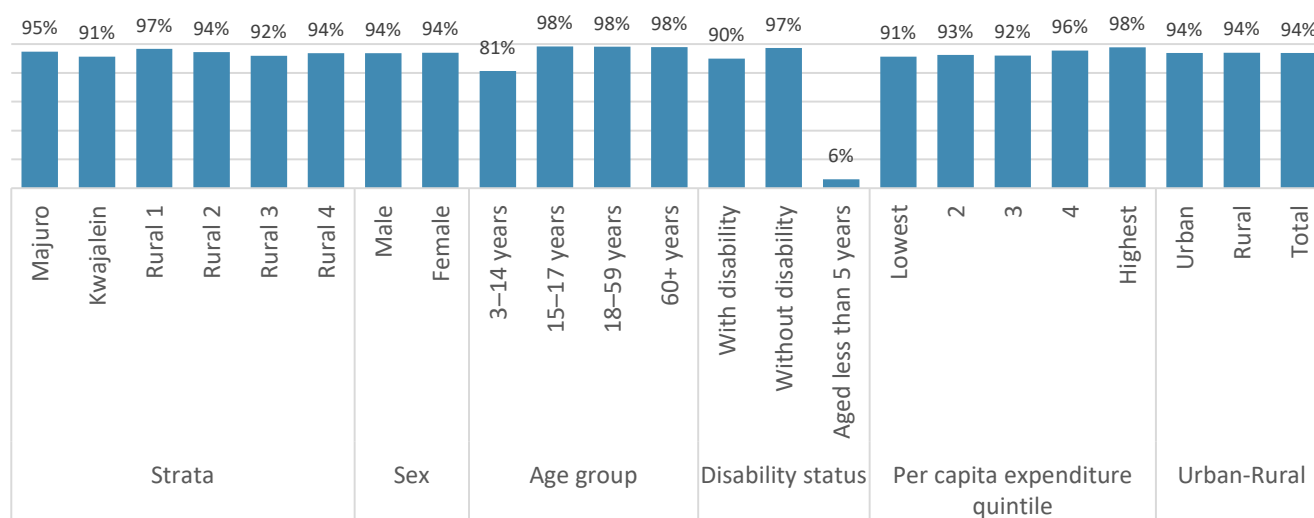
Highest level of schooling attended

Around 45% of people in RMI have attended secondary eduction/high school as highest level of school (Figure 3). The proportion of individuals having attended primary education as their highest level was higher in rural areas than in urban areas (respectively 47% and 30%). Individuals from urban atolls, without disability and from higher expenditure quintiles were more likely to attend post-secondary, tertiary and post-tertiary education. For example, 6% of persons in Q1 has attended such level of education compared to 40% of persons in Q5.

Figure 3. Distribution of population, by highest level of school attendance
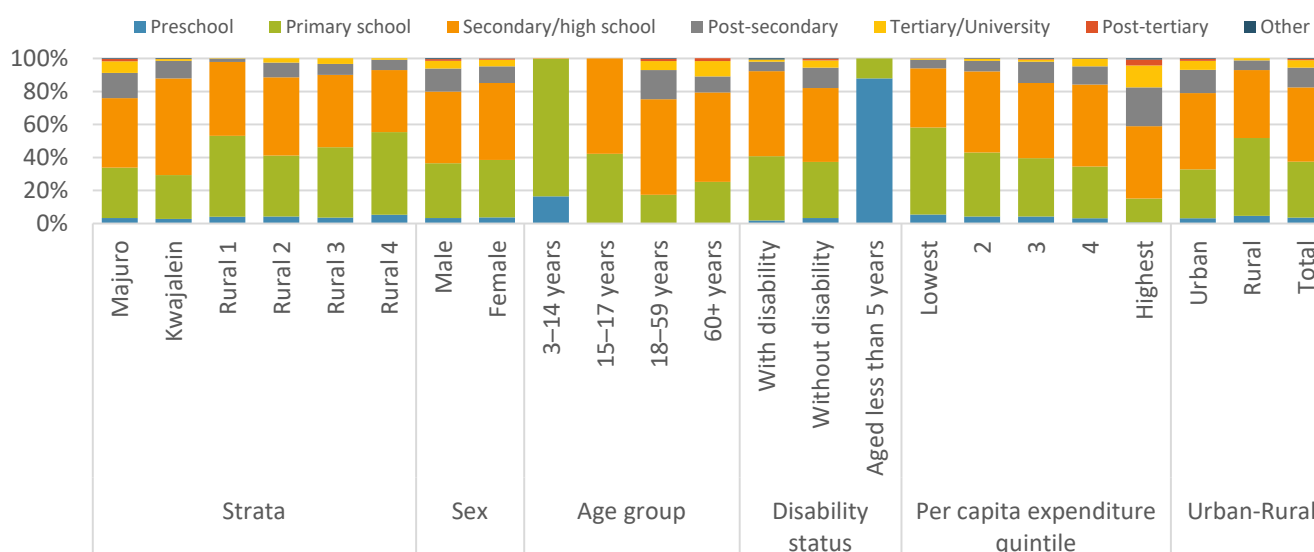
Currently attending school

Approximately 29% of Marshallese were currently attending school (Figure 4). 28% of the urban and 33% of the rural population were currently attending school. By strata, this ranged from 27% in Kwajalein to 34% in Rural 4 cluster. There was a fairly equal distribution of males and females who were currently attending school. 97% of the population aged 3–14 were currently attending school, while 82% of the population aged 15–17 were. 6% and 0% of persons aged 18–59 years and 60+, respectively, were currently attending school. The distribution of people with and without disabilities who were currently attending school was significantly different with respective rates being at 12% and 30%. By expenditure quintile, school attendance decreased as expenditure quintile increased, with the lowest quintile being at 39% and the highest being at 15% of persons currently attending school. This can be explained by the fact that individuals belonging to the 5th quintile were older (Figure 73) and hence, less likely to currently be attending school.

Figure 4. Percentage of the population currently attending school
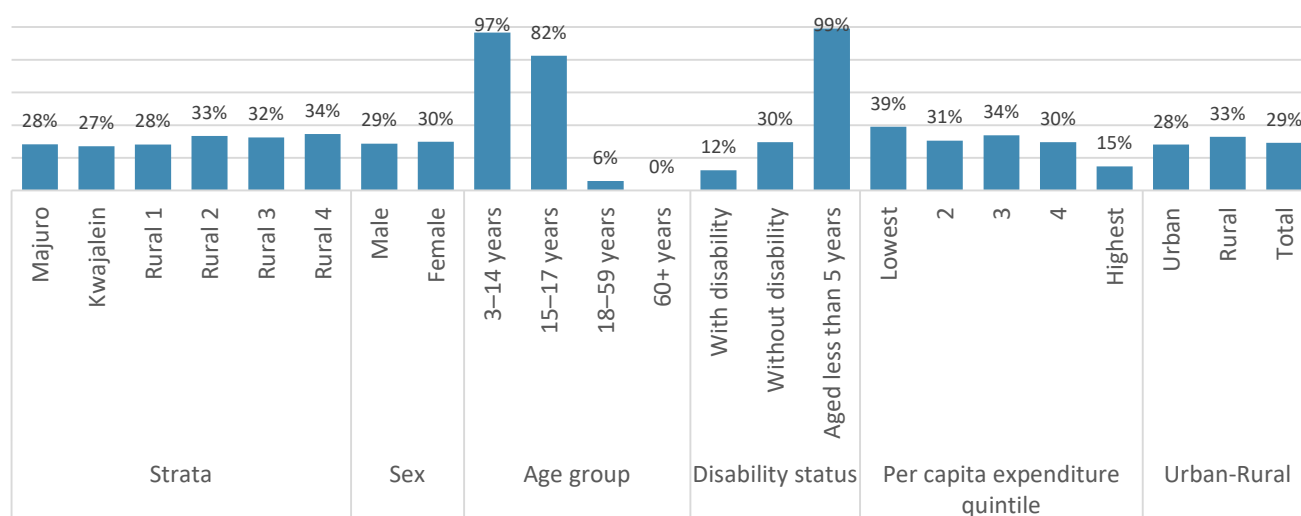
Education-related expenditure

Approximately 25% of Marshallese paid education-related expenditure (Figure 5). Corresponding to the proportion of the population that attended school, around 67% of persons aged 3–17 years incurred education-related expenditure. It is obvious that individuals with disability were spending less on education than those without disability (respectively 9% and 27%), which is a function of the majority of the population with disabilities being older.

Figure 5. Percentage of the population that paid education-related expenses
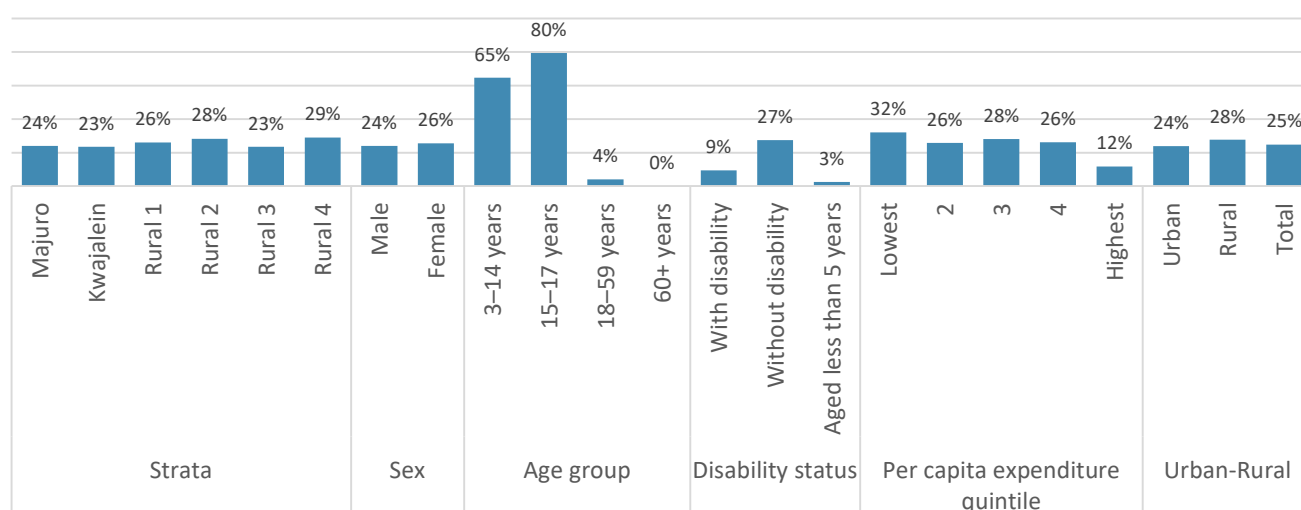
1.3. Received scholarship

Less than 1% of Marshallese aged 15+ received a scholarship (Table 7). Persons living in urban areas – especially in Majuro and males appeared to be more likely to receive scholarships.

Table 5. Individuals that received a scholarship (aged 15+)

	Yes	No	Total
Strata			
Majuro	364	22,284	22,648
Kwajalein	0	7,398	7,398
Rural 1	0	1,808	1,808
Rural 2	10	1,255	1,265
Rural 3	4	1,170	1,173
Rural 4	9	4,531	4,540
Sex			
Male	231	19,274	19,505
Female	155	19,173	19,329
Age group			
15–17 years	0	2,739	2,739
18–59 years	386	30,569	30,955
60+ years	0	5,139	5,139
Disability status			
With disability	13	1,626	1,639
Without disability	373	36,821	37,194
Per capita expenditure quintile			
Lowest	26	6,422	6,448
2	69	7,261	7,330
3	137	7,241	7,378
4	75	7,960	8,034
Highest	80	9,564	9,644
Urban–Rural			
Urban	364	29,683	30,047
Rural	22	8,764	8,787
Total	**386**	**38,447**	**38,834**

1.4. Health

Ongoing chronic health problem

Around 16% of the total population reported having a chronic health issue[1]. 10% of these individuals reporting chronic illness took medication to treat their health issue(s) while around 7% of them was unable to complete their usual activities (e.g., education, work) as a result of their chronic health issue. Individuals from higher expenditure quintiles were more likely to report having a chronic illness.

Figure 6. Population with chronic health issues
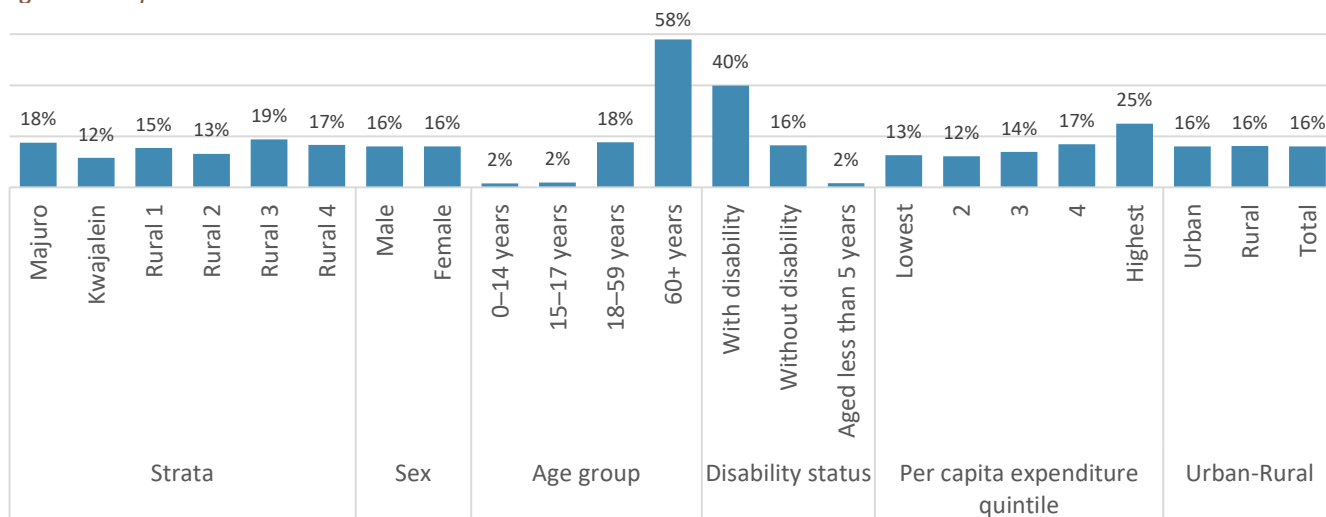
Other health problem

Around 11% of the population reported having another health problem[2] (Figure 7). The most commonly reported other illness was fever (31%). Around 36% of these individuals were unable to complete their usual activities (e.g., education, work) while 16% of them incurred a loss of earnings/income.

Figure 7. Proportion of the population with other types of health problems

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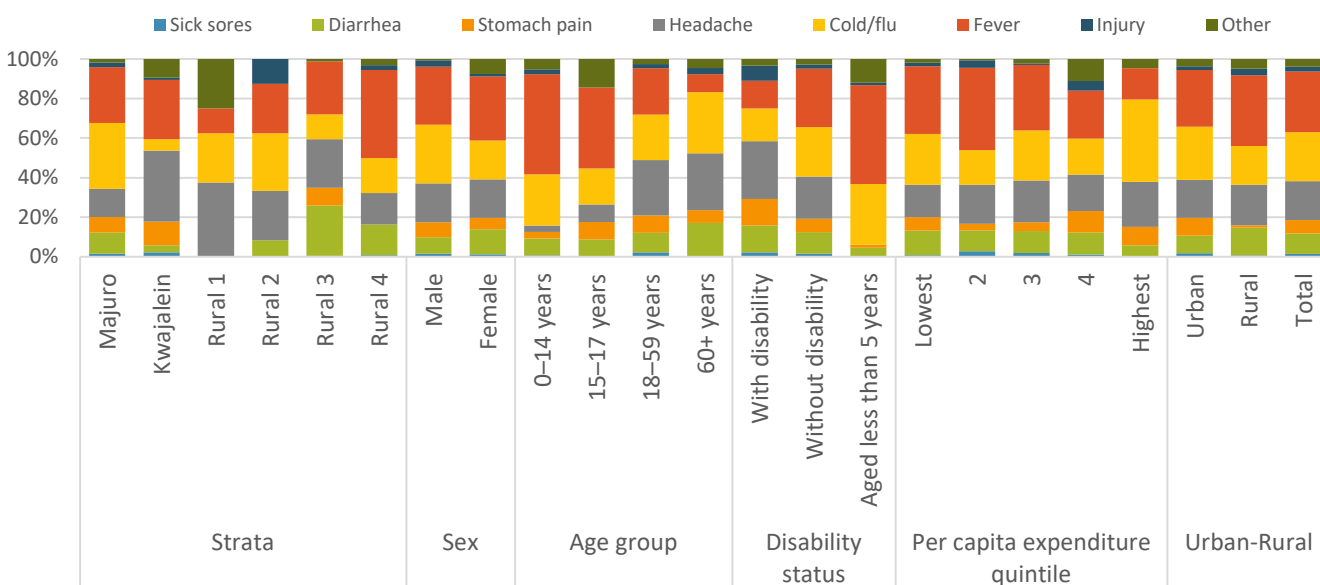
1   Cancer, Diabetes, Heart disease, Asthma, Chronic bronchite, Liver disease, Kidney / renal disease, Hypertension, Gout, Obesity, Mental disorder, Stroke, Tuberculosis, Malaria, Hepatitis B.

2   Sick sores, Diarrhea, Headache, Stomach pain, Cold / flu, Fever, Injury, etc.

Health-related expenditure

Approximately 40% of the population incurred health-related expenditure. Urban population were more likely to incur health-related expenditure compared to rural population (respectively 43% and 29%). By strata, Rural 3 had the lowest proportion of the population that incurred health expenditure (13% of all people living in these atolls), while Rural 1 had the highest (47%). By sex, females incurred slightly more health expenditure than men, with 41% and 38% incurring expenditure respectively. Persons in older age groups also incurred more health-related expenditure, with 37% of those aged 0–17 and 58% of those aged 60+ incurring health expenditure.

Figure 8. Percentage of the population that paid health-related expenses
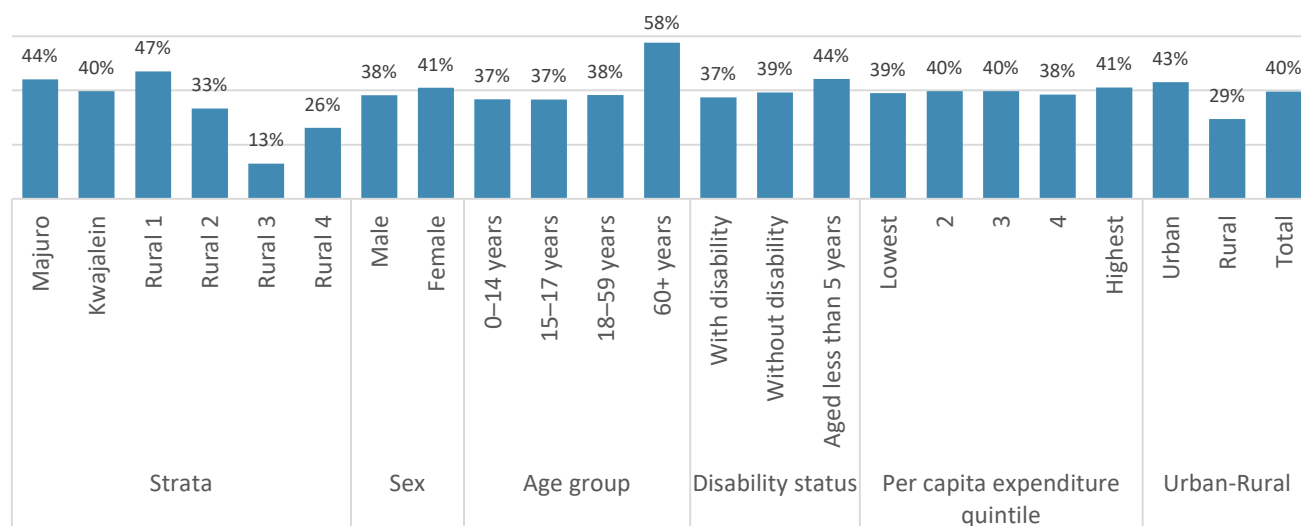
Functioning challenges (aged 5+)

Applying the Washington Group cut-off point for persons with disabilities[3], the disability prevalence rate in RMI was 3%.

All trends tended to be similar throughout all population groups except for persons belonging to the older age group.

Figure 9. Disability prevalence rates

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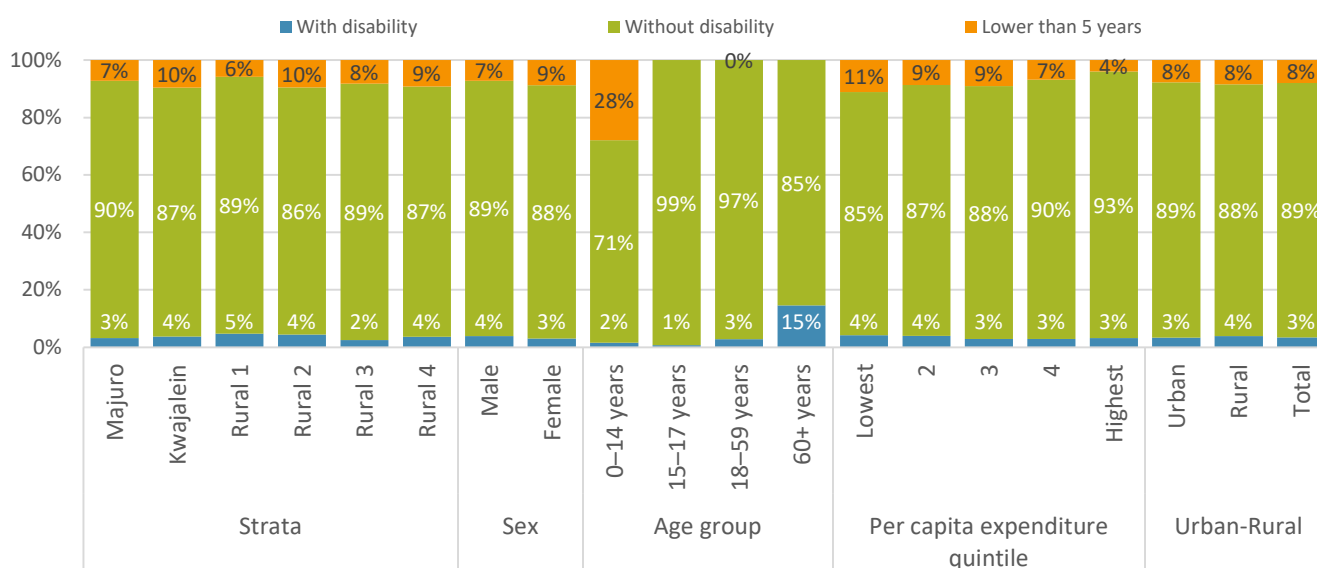
3   The applied cut-off point corresponds to international definition where a person is classified as 'with disability' where the respondent stated they have a 'lot of difficulty' or 'cannot do' in respect to at east one functional challenges in the domains of seeing, hearing, walking, remembering, self-care and communication.

1.5. Population characteristics

Access Internet

36% of Marshallese aged 10+ accessed the Internet in the last 30 days. Urban population was more likely to access the Internet (46%) than people living in rural areas (6%). People without disability were more likely to access the internet compared to people with disability (respectively 37% and 26%). The wealthier the persons were, the more likely they were to access the Internet as well. 9% of individuals from the lowest quintile accessed the Internet compared to 60% in Q5.

Figure 10. Percentage of the population that access the internet
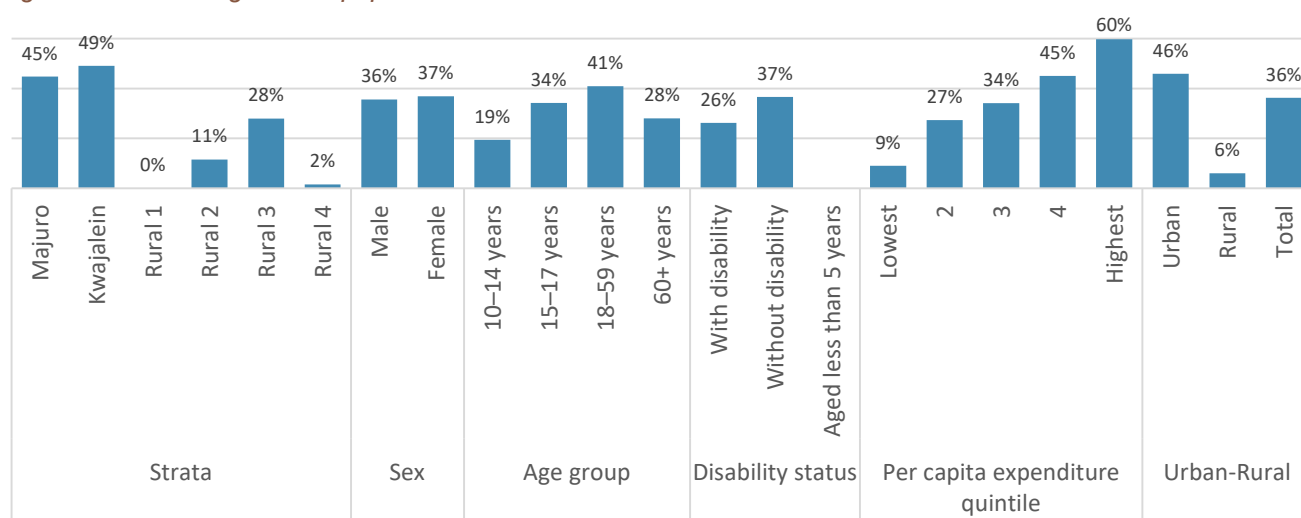
Mobile phone use (age 10+)

Access to a mobile phone to make or receive calls was slightly higher than that of internet. Around 43% of the population used a mobile phone in the last month and the male-female rates are almost identical. Across strata, mobile phone use ranged from 20% in Rural 4 to 52% in Majuro. The results hence indicate that urban population tended to have more access to cell phones than people living in rural areas, with use rates of 47% and 31% respectively. Half of the persons aged 18+ used a mobile phone, while younger people were less likely to use mobile phones. It is noted that mobile phone use data were not collected for persons aged less than 10 years. There is a strong positive relationship between quintile and mobile phone use where 16% of persons in Q1 accessed a mobile phone in comparison to 69% in Q5.

Figure 11. Mobile phone use (aged 10+)
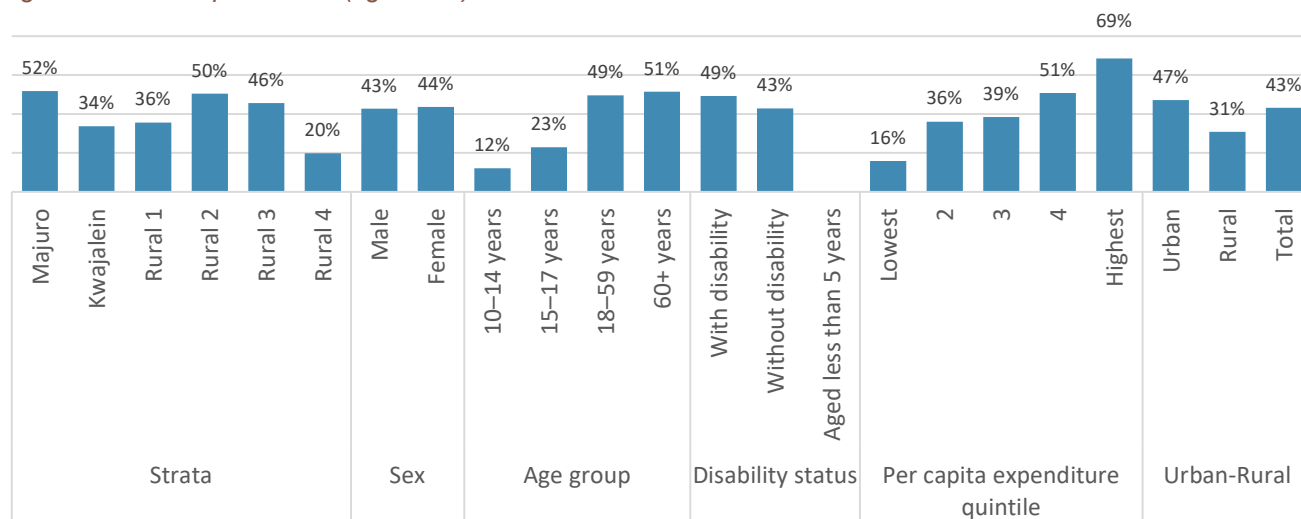
Communication device ownership (age 10+)

National rates of mobile phone, digital tablet and laptop ownership were respectively 39%, 5% and 5%. The below figures show the rates of communication device ownership by the statistical domains we are presenting herein. Across all three assets, there was an apparent trend of higher rates of ownership in urban areas, upper quintiles but also among 18+ age groups.

Figure 12. Ownership of mobile phone
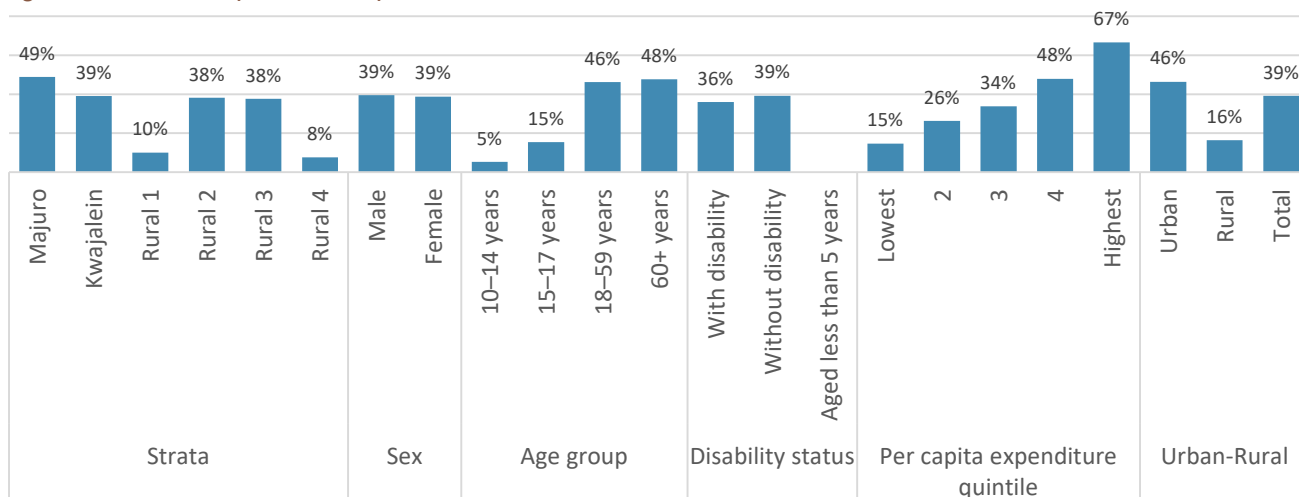
Figure 13. Ownership of tablet
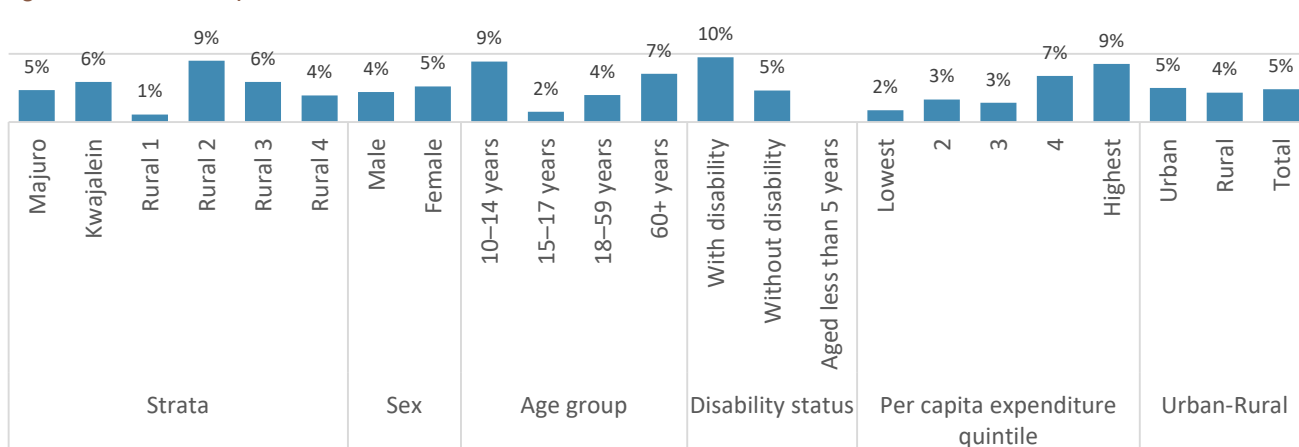
Figure 14. Ownership of laptop
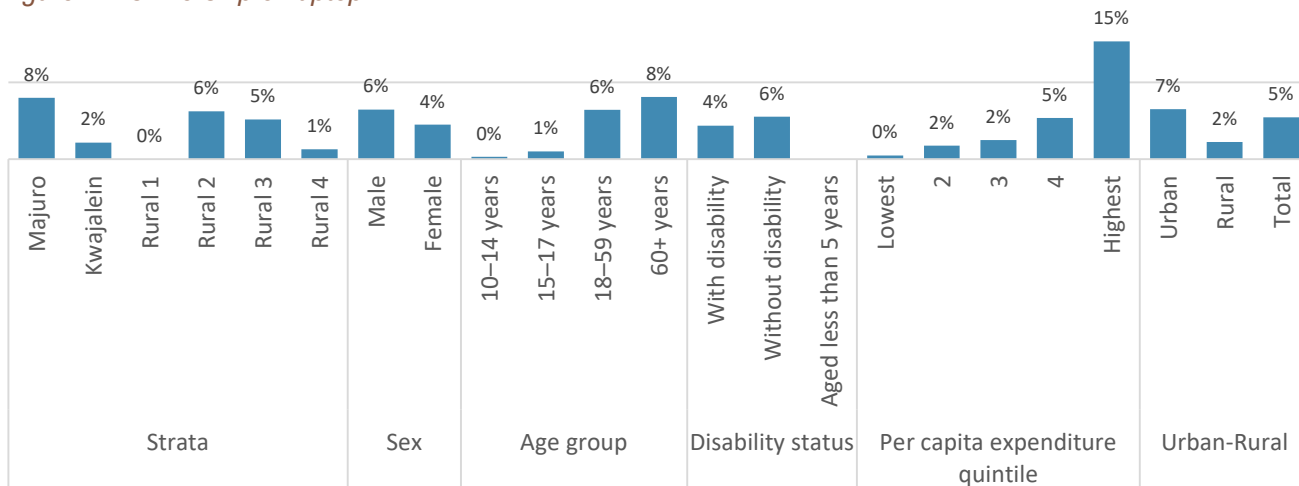
Alcohol consumption (age 15+)

Nationally, 9% of the population aged 15+ reported having consumed alcohol (beer, wine or spirits) in RMI during the last 7-days. There was a common trend where males, urban population, people without disability or from higher expenditure quintiles were more likely to consume alcohol.

Figure 15. Consumed alcohol in the last 7-days
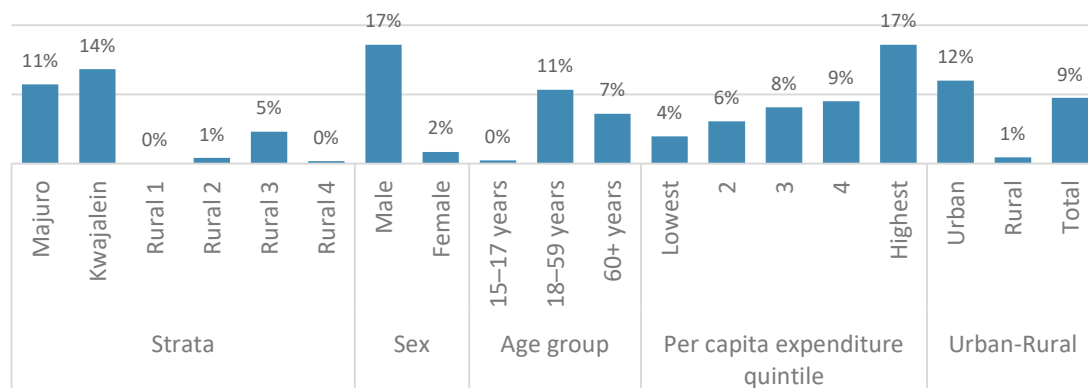
Kava consumption (aged 15+)

Consumption of kava was lower than that of alcohol with a national rate of 3% for people aged 15+. Similarly to alcohol consumption, that of kava was higher within the male population (5% for males against 1% for females). However, persons living in rural areas consumed more kava than those living in urban areas.

Figure 16. Consumed kava in the last 7-days
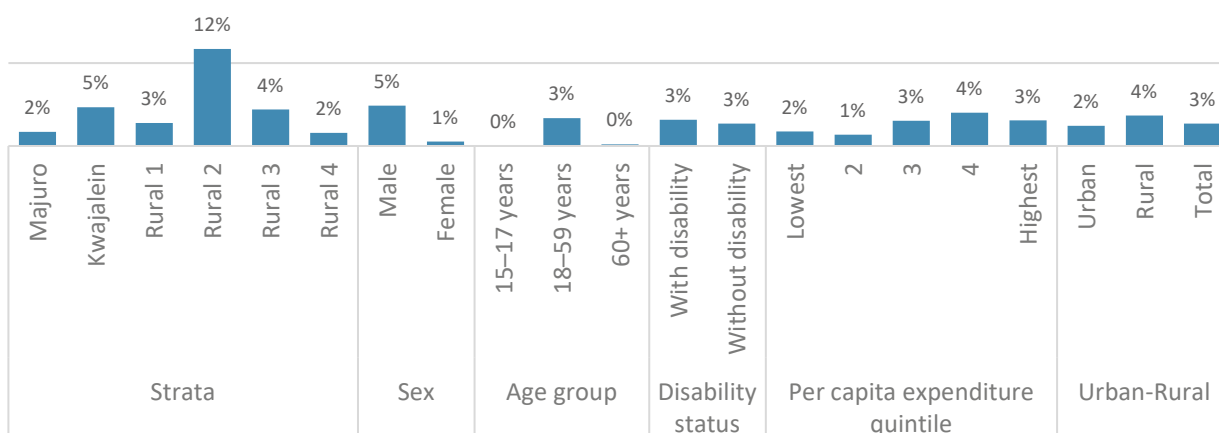
Toddy consumption (age 15+)

Less than 1% of the population aged 15+ stated they had consumed toddy during the last 7-days. Individuals from Rural 3 atolls were more likely to consume toddy.

Figure 17. Consumed toddy in the last 7-days
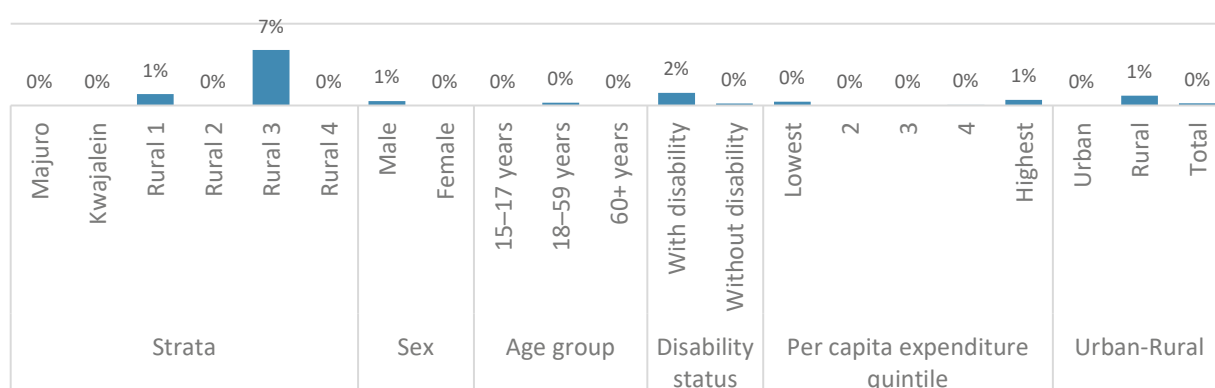
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Tobacco use (age 15+)

19% of the population aged 15+ in RMI reported having smoked (smoking or smokeless tobacco) in the last 7-days. Males and people among the 18–59 age group were more likely to smoke. Around 6% of youths aged 15–17 declared smoking against 22% of those aged 18–59. 18% of individuals with a disability were smoking as well.

Figure 18. Smoke tobacco in the last 7-days
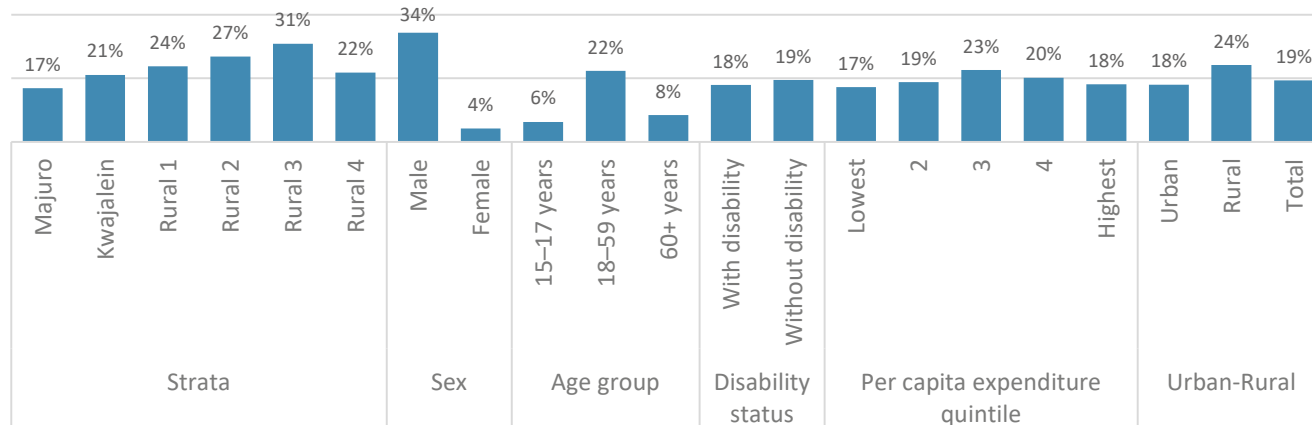
1.6. Activity profile (aged 15+)

This component intends to provide relevant information on income and expenditure in relation to economic activity. It is not intended to be a labour market analysis as presented in the earlier Section.

Overall, 'Taking care of the HH and family' was the most prevalent main activity for Marshallese throughout all population groups making up to 36% of the population aged 15+.

The second highest activity was 'Working in another sector (e.g., government, hotels, NGO…)' which acounted for 34% of the population. It is interesting to note that the higher the quintile, the more people were likely to be part of this category. Moreover, this was the main economic activity among the urban population (39%).

The rates of 'Job seeking' were fairly similar throughout all population groups except for males, people with disability and those aged 18–59.

4% on individuals across the whole country stated they were working in the primary industry as their main activity, including 1% in urban areas and 13% in rural areas. This rate was higher among individuals belonging to the lowest expenditure quintile.

More people with a disability, from Rural 1 or aged 60+ reported being ill as their main activity (respectively 20%, 6% and another 6% nationally).

Finally, among the 15–17 age group, up to 79% of individuals said they were students.

Figure 19. Distribution of main activity in the last 7-days
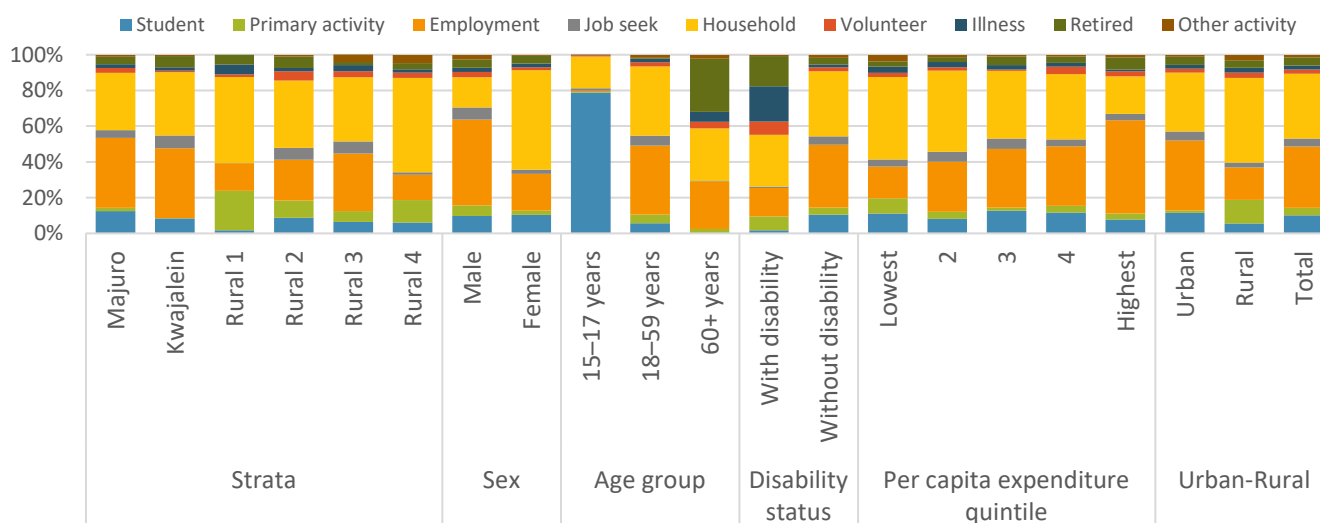
Main primary activity

Up to 42% of individuals mainly involved in primary activities were producing Copra/coconut. This was an exclusive rural-area activity. People from lower quintiles and with a disability were also more likely to produce Copra/coconut.

The second highest primary activity was Handicraft accounting for 28%. This activity was only undertaken by females. It is also interesting to note that among all 4 primary activities, females were only involved in handicraft.

27% of those mainly involved in primary activities were fishing or gleaning seafood. This activity was more undertaken among people living in urban areas and without disability.

Livestock and aquaculture activities accounted for 4% of all primary activities and were exclusive among the 15–17 age group.

Figure 20. Distribution of activity for those primarily involved in agriculture
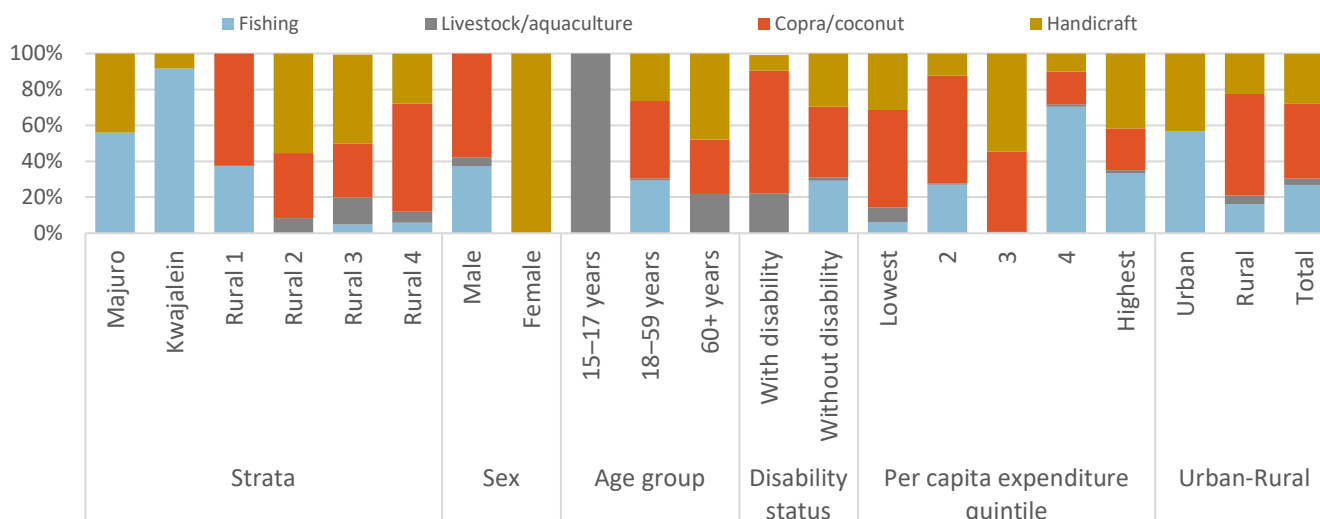
Fishing and seafood collecting participation (age 5+)

Nationally, 5% of individuals aged 5+ in RMI were involved in fishing and seafood gathering activities (while not being their main professional activity, which needs to be differentiated from the data from Figure 20). It is evident that rural population's participation was higher than that of urban (respectively 15% and 5%)

Alternatively, fishing activities were higher among males and individuals belonging to lower expenditure quintiles.

Figure 21. Individuals (aged 5+) participating in fishing and hunting activities
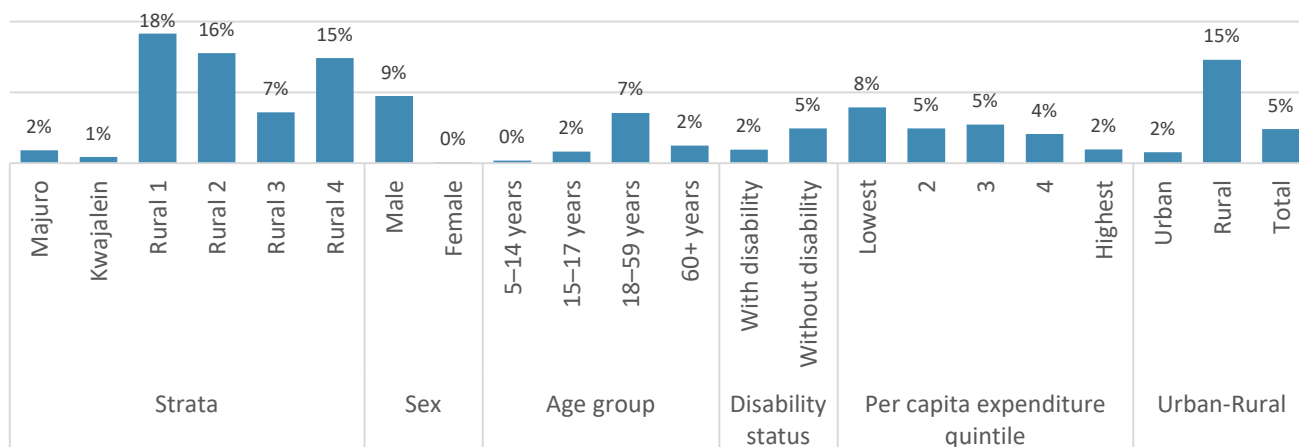
Fishing method (persons aged 5+ who were involved in fishing activities)

Spearfishing was the most popular fishing method in RMI as per the 2019/20 HIES data. It was dominant across most disaggregation groups and exclusive to individuals with disability. Females were however, almost exclusively involved in gleaning activities. 'Fishing with a net' and 'Handline activities' were the second and third most popular fishing methods in RMI (accounting respectively for 29 and 27% of individuals engaged in fishing activities). 4% of those individuals were gleaning and collecting seafood (Figure 22).

The 'Other' category comprised trolling, freediving activities and others.

Figure 22. Percentage of individuals (aged 5+) practicing fishing method in the last 7-days
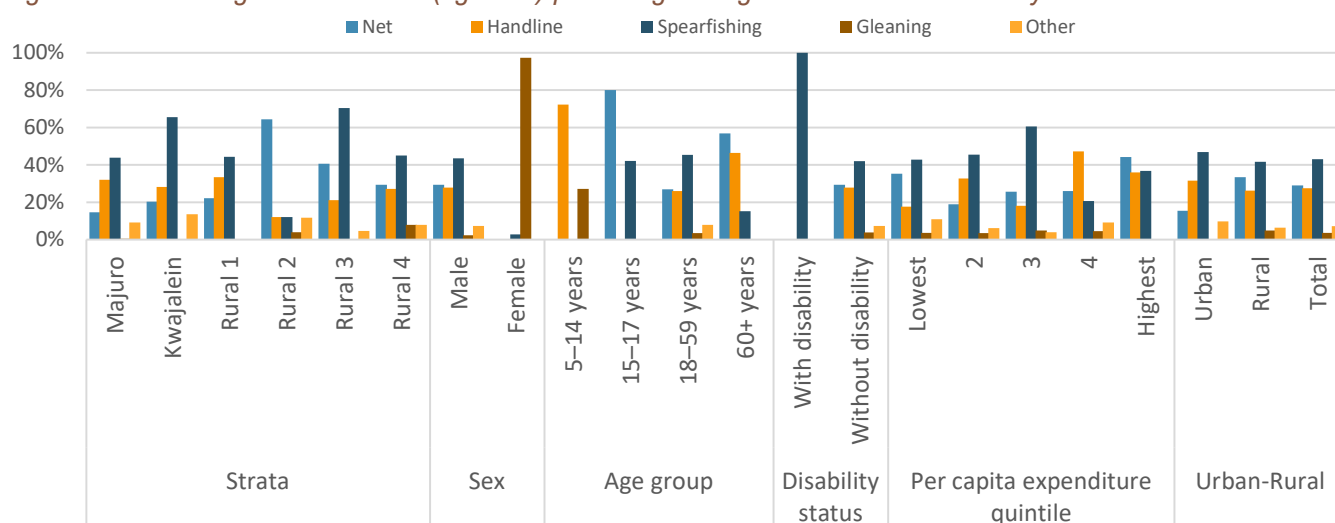
Table 6. Estimated number of individuals (aged 5+) regularly practicing fishing methods, by population groups

	Net	Handline	Spearfishing	Gleaning	Other
Strata					
Majuro	74	164	224	2	47
Kwajalein	17	23	54	0	11
Rural 1	100	151	200	0	0
Rural 2	172	32	32	10	31
Rural 3	48	25	83	0	5
Rural 4	288	267	441	77	78
Sex of main respondent					
Male	700	663	1,035	55	172
Female	0	0	1	34	0
Age group					
5–14 years	0	30	0	11	0
15–17 years	36	0	19	0	0
18–59 years	591	573	997	78	172
60+ years	73	59	20	0	0
Disability status					
With disability	0	0	36	0	0
Without disability	700	663	999	89	172
Per capita expenditure quintile					
Lowest	270	135	328	28	83
2	93	161	224	17	30
3	137	97	323	26	21
4	109	197	86	19	39
Highest	91	74	76	0	0
Urban–Rural					
Urban	91	188	279	2	58
Rural	608	475	757	87	114
Total	**700**	**663**	**1,036**	**89**	**172**

Purpose of fishing (persons aged 5+ who were involved in fishing activities)

Nationally, one fourth of individuals engaged in fishing activities were selling their products. By strata, the rates ranged from 7% in Rural 3 to 43% in Rural 2. Females were more likely to sell their products.

Figure 23. Distribution of individuals (aged 5+) engaged in fishing activities that are selling their products
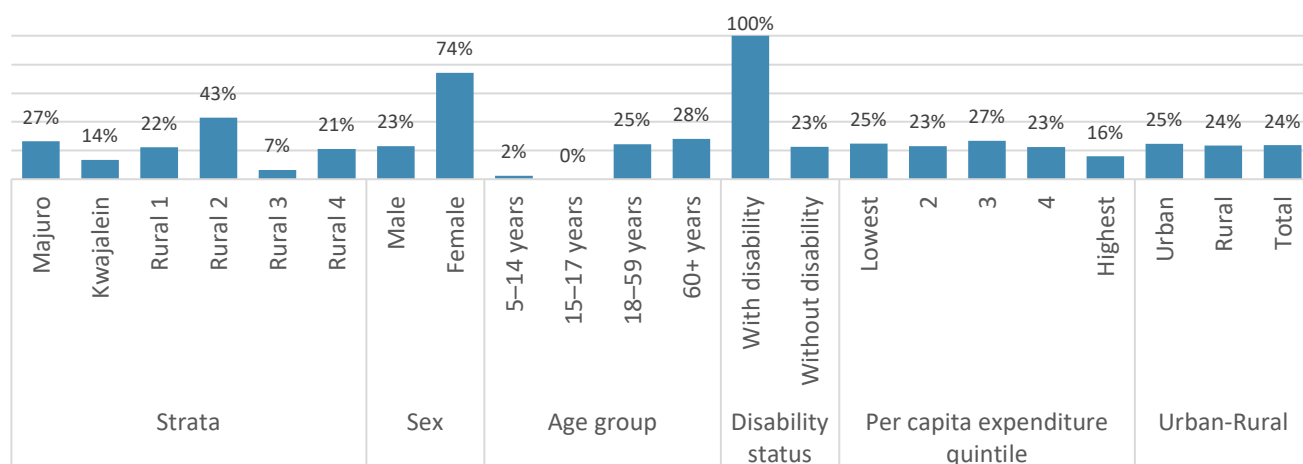
Participation in the production of handicrafts (persons aged 5+)

Handicraft production concerned 4% of individuals aged 5+ in RMI (this needs to be differentiated from the main professional activity data from Figure 20). Females and individuals from rural areas and from lower expenditure quintiles were more involved in handicraft activities if compared to other population disaggregations.

Figure 24. Individuals (aged 5+) participating in the production of handicraft
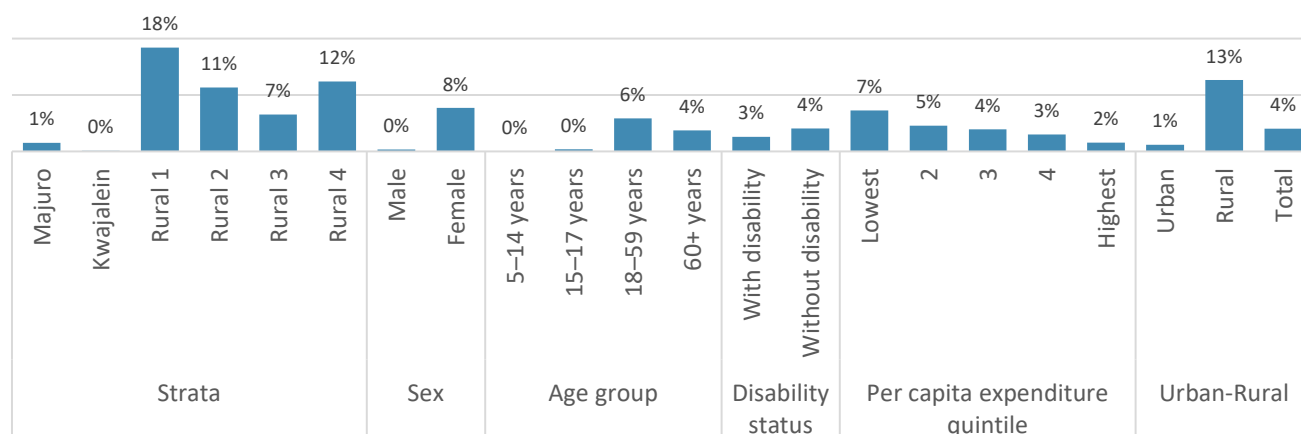
Handicraft products (persons aged 5+)

The main types of handicraft activities that Marshallese were involved in were 'Weaving' and 'Other handicraft' (comprising for instance carving and production of clothes and traditional clothes). They respectively represented 80% and 12% of individuals engaged in handicraft production. The remaining 13% were split between food preparation and jewelry making. Food making was mostly engaged by males while weaving activities by females.

Figure 25. Percentage of individuals (aged 5+) producing handicrafts
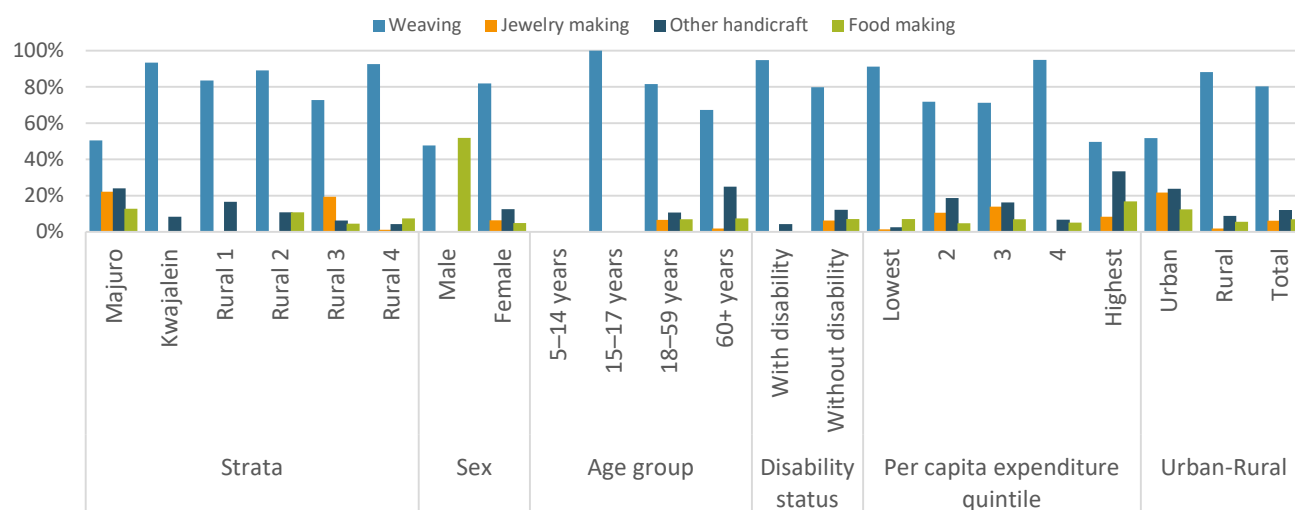
Handcraft purpose (persons aged 5+)

It can be noticed that individuals aged 5+ engaged in handicraft were selling more products than those engaged in fishing activities as 86% of them were doing so. The trend was fairly even across all disaggregations except for individuals from higher expenditure quintiles who sold less products compared to those from lower quintiles.

Figure 26. Distribution of individuals (aged 5+) engaged in handicraft production that are selling their products

Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	0–14 years	15–17 years	18–59 years	60+ years	With disability	Without disability	Lowest	2	3	4	Highest	Urban	Rural	Total
90%	100%	84%	94%	87%	82%	72%	86%	0%	93%	86%	79%	98%	85%	88%	99%	78%	82%	59%	91%	84%	86%

| Strata | Sex | Age group | Disability status | Per capita expenditure quintile | Urban-Rural |
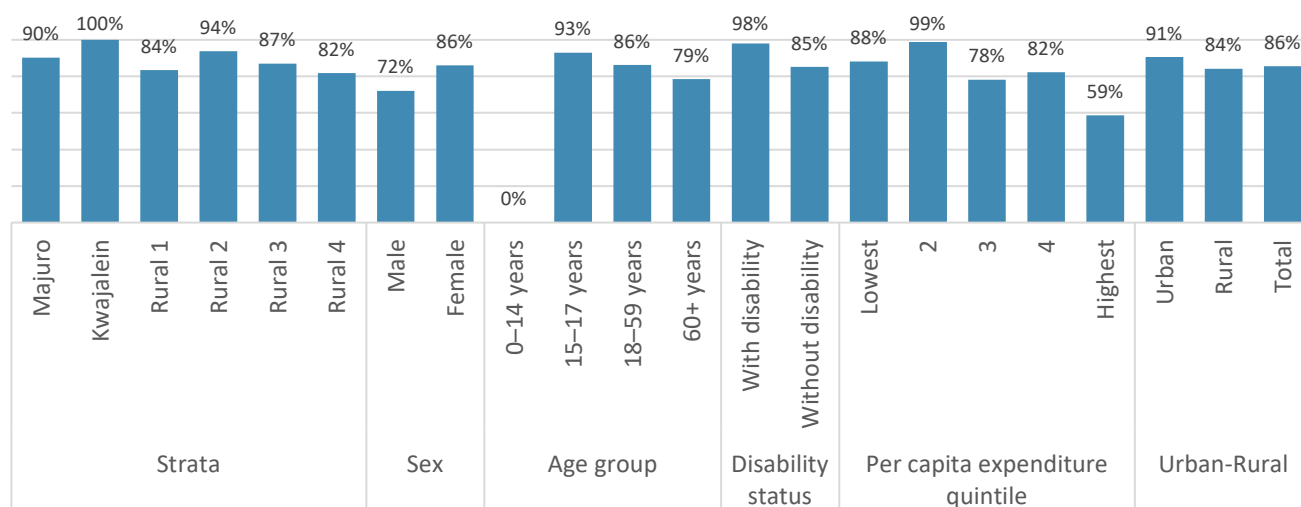
2. Household characteristics

2.1. Dwelling characteristics

Dwelling tenure

Analysis will now shift from individuals to HHs. 'Sex' and 'Age group' disaggregations will concern the head of the HH (person responding to the questionnaire) while 'Disability status' will be HHs which has or has not individuals with a disability – as per the Washington group definition. It is to be noted that there weren't any HH heads aged 15–17 years in RMI as per the RMI 2019/20 HIES.

Figure 27 below shows that a vast majority of RMI dwellings were owned outright (79%). 11% of them were living in a house for free provided by the family or church, another 5% lived in a house provided by the employer for free. Households that were renting or owning the house with a mortgage represented respectively 4% and less than 1%.

HHs in higher expenditure quintiles, with persons without disability or living in Rural 3 were more likely to be living for free in houses provided by the employer.

Figure 27. Tenure status of the dwelling in which the household resides

Legend: Own house outright · Live for free - from church, family · Live for free - from employer · Renting · Own house with mortgage

Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years	With disability	Without disability	Lowest	2	3	4	Highest	Urban	Rural	Total

| Strata | Sex | Age group | Disability status | HH per capita expenditure quintile | Urban-Rural |
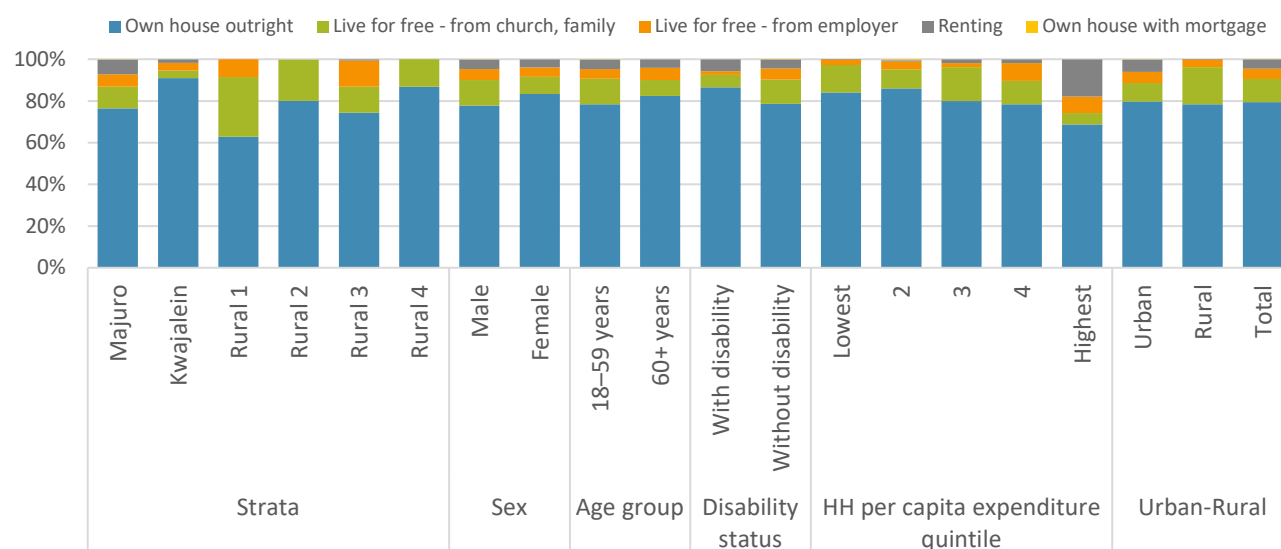
Kitchen location

There were different patterns of kitchen locations across all disaggregation groups in RMI – especially when compared by strata. Nationally, most kitchens were located in a separate building (36%) and in a living/sleeping room (26%).

HHs in urban regions and from higher expenditure quintiles were more likely to have a kitchen in a separate room. Households in rural areas, and especially in Rural 1, 2 and 4 were more likely to have an outdoor kitchen.

Figure 28. Distribution of kitchen location
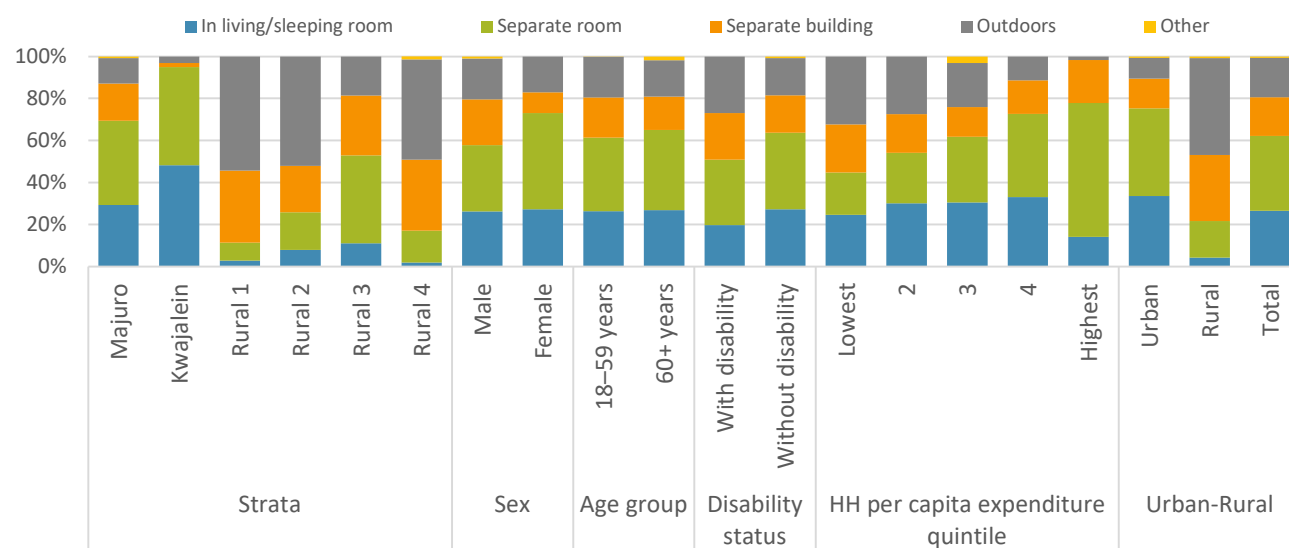
Main source of lighting

Almost all HHs in Majuro and Kwajalein were using electricity as their main source of lighting (96%) while HHs from rural areas were more relying on solar panel electricity instead (88%).

A few HHs with private generators could also be found in Rural 2 and Kwajalein.

Figure 29. Main source of lighting
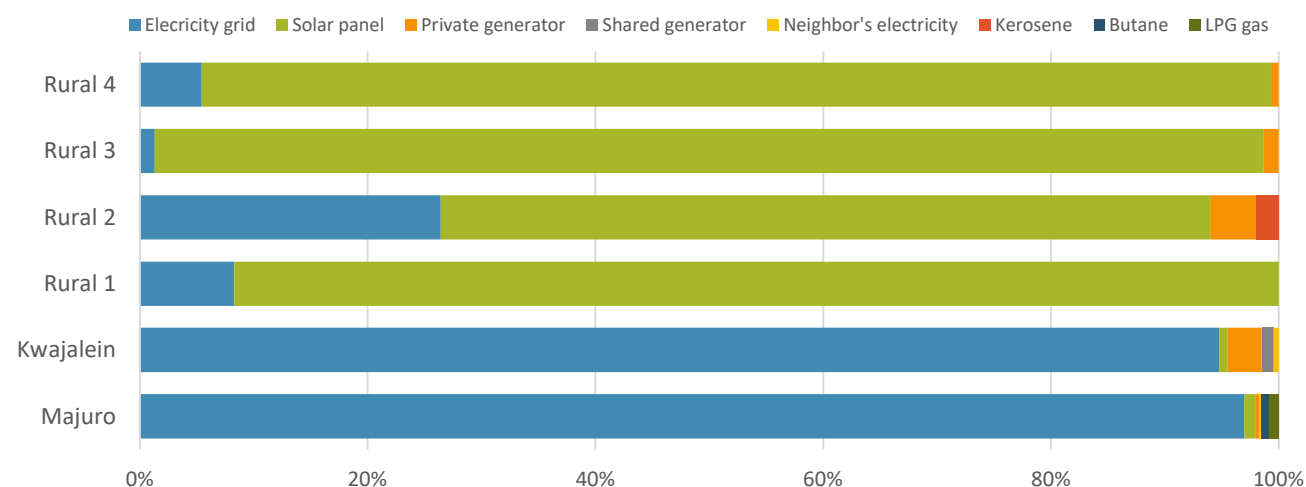
Main source of cooking energy

Although electricity was the main source of lighting in RMI, most of the HHs were using butane as main source of cooking energy. LPG gas was also fairly used across all strata except in Rural 1 where HHs exclusively relied on butane as cooking energy.

Figure 30. Main source of cooking energy

Legend: Butane · LPG gas · Electricity grid · Solar panel · Private generator · Kerosene · Other
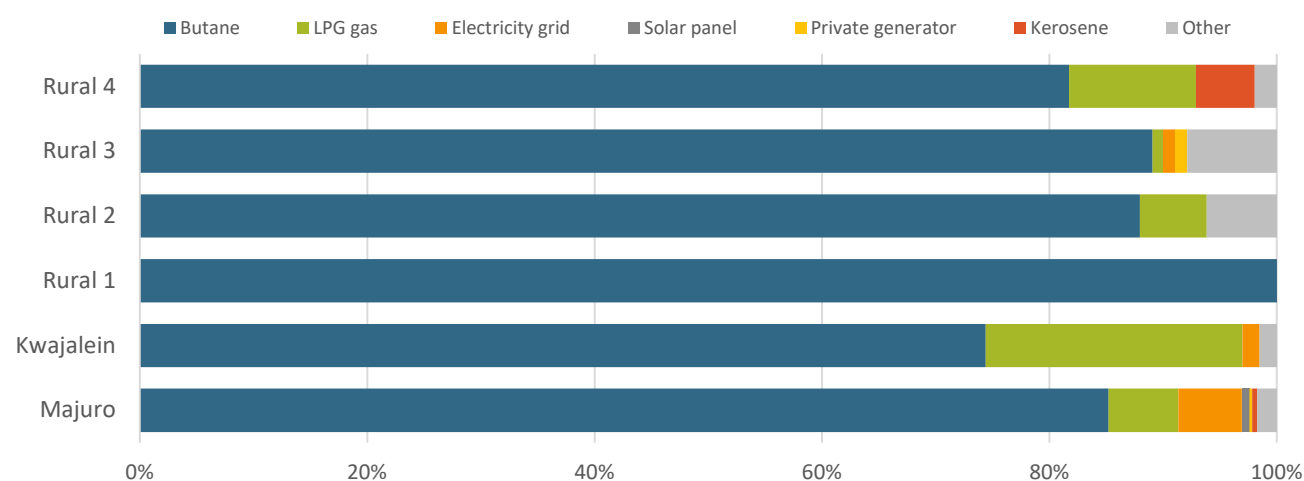
Access to an improved source of drinking water[4]

Almost all HHs in RMI accessed an improved drinking water source as per the RMI 2019/20 HIES (98%). Households with the lowest rate were located in Rural 2 (93%). 5% of HHs with persons with disability did not access an improved drinking water source.

Figure 31. Percentage of population with access to an improved source of drinking water
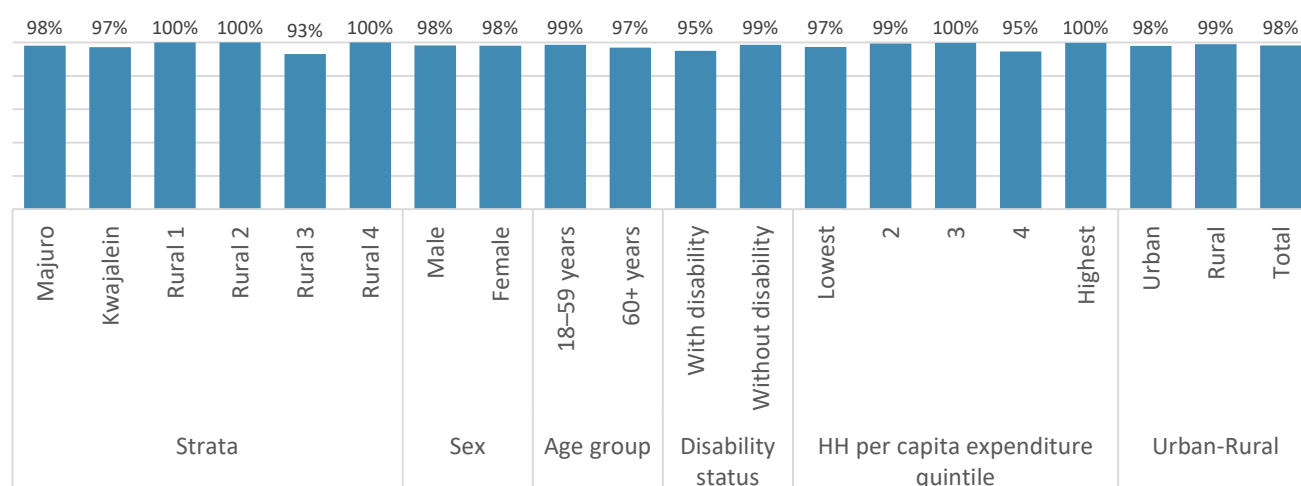
4   Improved sources of drinking water included: piped, tank – protected, bottled, protected ground water.

Access to an improved sanitary facility[5]

HHs having access to an improved sanitary facility in RMI reached 86% in 2019/20.

HHs in urban areas had more access to improved sanitary facility compared to rural HHs (respectively 91% and 72%). The difference between the lowest and highest quintiles was important: 72% of HHs from lowest quintile had access to improved sanitation against 99% of HHs from the highest quintile.

Figure 32. Percentage of households with access to an improved sanitary facility
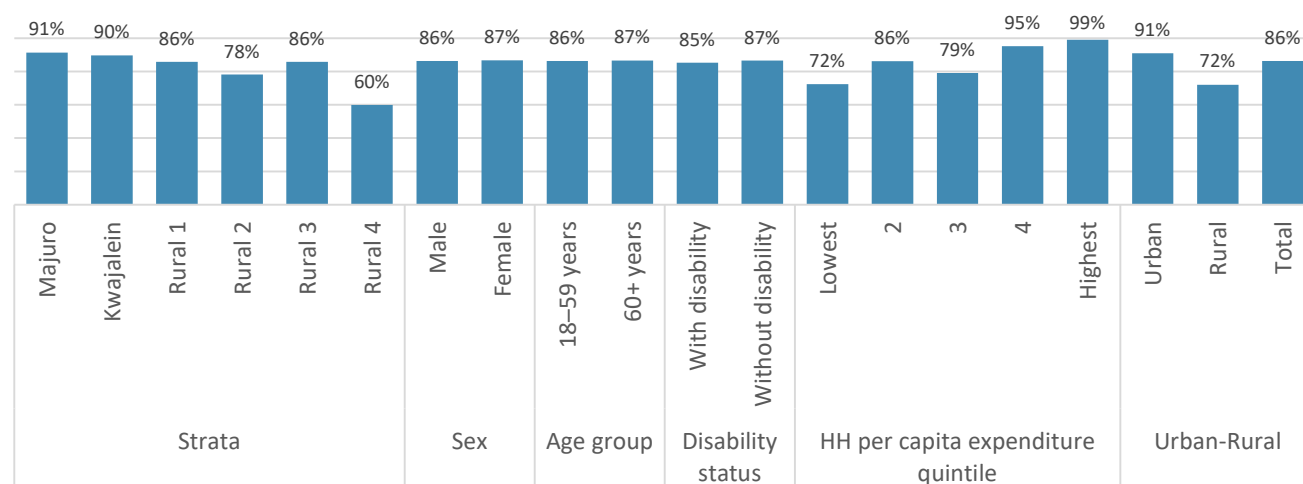
2.2. Expenditure-related household characteristics

Vehicle ownership

Around 28% of all private HHs in RMI owned at least one vehicle (car, van, motorbike, bicycle, cart) with bicycles and cars being the most owned vehicles.

44% of all vehicles present in RMI were bicycles while 38% of them were cars. There was a total of 2,221 cars or pick-ups and 334 boats (canoes or motor boats) that were owned by Marshallese HHs.

Table 7. Number of vehicles reported as being owned by households

	Car	Large truck, bus	Motorbike, scooter	Bicycle	Boat w. motor	Canoe	Outboard motor	Cart	Other vehicle
Strata									
Majuro	2,081	68	0	321	67	0	47	0	0
Kwajalein	130	0	17	457	67	0	0	0	0
Rural 1	0	0	0	77	0	0	0	25	50
Rural 2	0	0	21	125	52	0	0	53	0
Rural 3	11	0	79	62	12	7	0	4	0
Rural 4	0	0	26	1,538	9	121	0	269	9
Total	**2,221**	**68**	**142**	**2,581**	**206**	**128**	**47**	**351**	**59**

Private travel

Respectively 8% and 6% of HHs reported having undertaken a domestic and international trip in the last 12-months.

There were a total of 1,045 international trips and 1,247 domestic trips. It is interesting to see that the highest number of international trips was in Majuro while that of domestic trips was in Rural 4.

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5   Improved sanitary facilities include: flush to septic, flush, VIP, latrine with slab, composting.

Table 8. Number of private travel events reported as being undertaken by households

	International		Domestic	
	HHs consuming	Trips per annum	HHs consuming	Trips per annum
Strata				
Majuro	759	899	302	358
Kwajalein	124	124	78	90
Rural 1	0	0	100	150
Rural 2	0	0	52	63
Rural 3	12	21	95	103
Rural 4	0	0	465	483
Total	**896**	**1,045**	**1,094**	**1,247**

Financial support: proportion of households gifting

30% of private HHs provided financial support in the last 12-months. Out of the 6,800 transfers in total, most of them were donations to church (12%), transfers for family event (12%) or to another HH (8%).

Table 9. Percentage of households providing different types of financial support

	Familly support	Family event	Church support	Community support	Community event	School event	Other
Strata							
Majuro	5%	12%	10%	3%	5%	8%	0%
Kwajalein	14%	12%	7%	12%	3%	1%	0%
Rural 1	6%	6%	29%	0%	0%	9%	0%
Rural 2	10%	12%	16%	0%	4%	2%	0%
Rural 3	9%	22%	23%	5%	2%	7%	0%
Rural 4	10%	12%	17%	1%	1%	2%	0%
Total	**8%**	**12%**	**12%**	**4%**	**4%**	**6%**	**0%**

2.3. Income-related household characteristics

Remittances received

Almost half of private HHs received cash remittances in RMI during the last 12-months prior to the survey.

The highest percentages of remittances received were reached in Kwajalein and Rural 4 (respectively 69% and 59%). Households with at least one person with disability received more remittances (53% againt 44% for HHs with no person with disability). A similar pattern can be seen between male-headed and female-headed HHs where the 51% of female-headed HHs received remittances against 43% of male-headed HHs.

Figure 33. Percentage of households receiving remittances in the last 12-months
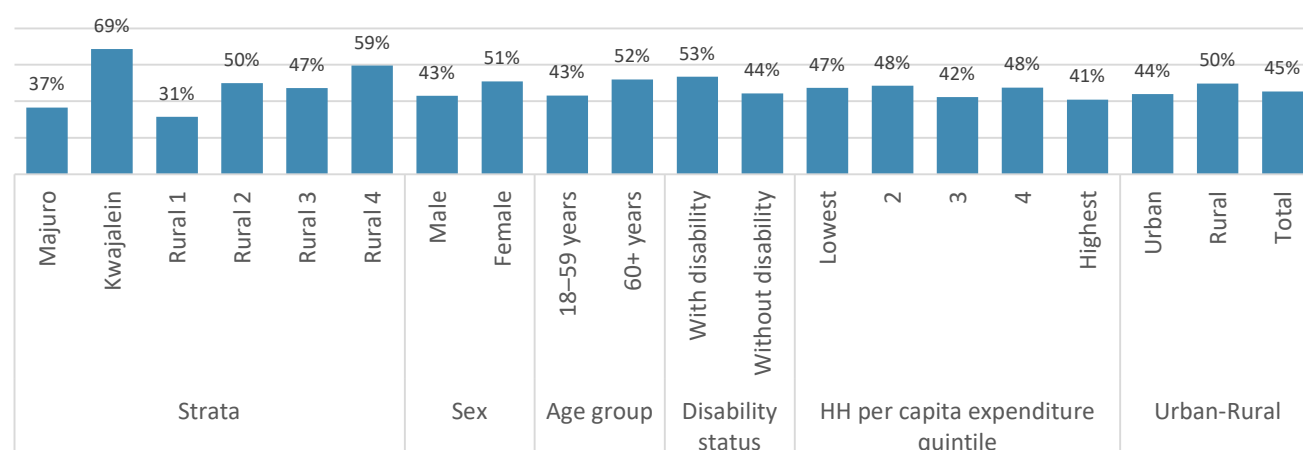
Remittances origin

The vast majority of remittances was coming from outside RMI – especially in urban HHs (91% of remittances). Almost one third of remittances in rural areas were originating from urban areas (Majuro or Kwajalein).

Figure 34. Origin of remittances
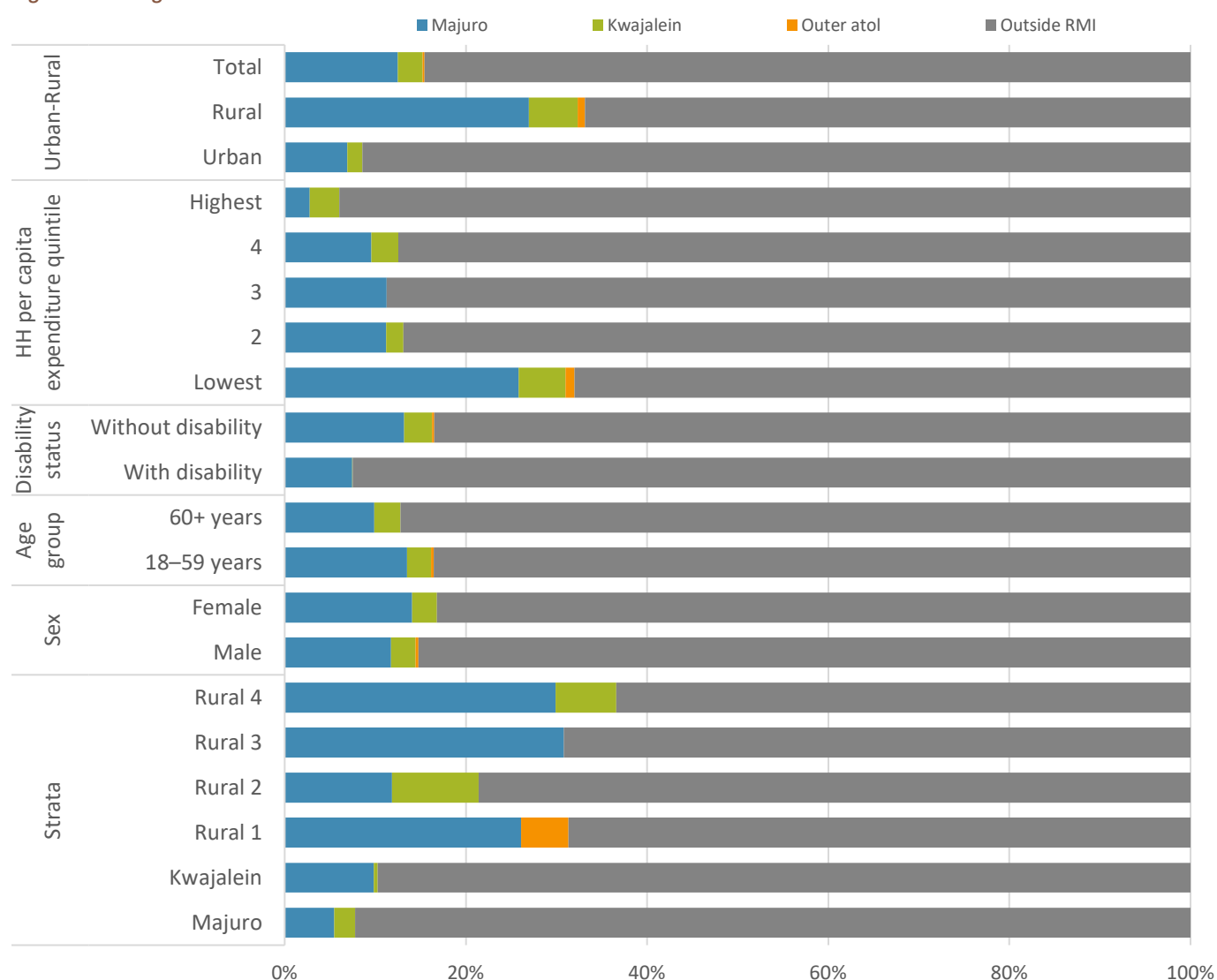
3,741 HHs received 1 remittance in the last 12-months while 13 HHs (located in Majuro) received up to 18 remittances (Table 10).

Table 10. Annual number of remittances received by households

	1	2	3	4	5	6	10	18
Strata								
Majuro	1,678	1,044	304	80	53	1	0	13
Kwajalein	1,222	439	35	17	28	45	11	0
Rural 1	125	100	51	0	0	0	0	0
Rural 2	105	136	21	0	0	0	0	0
Rural 3	130	74	15	0	4	0	0	0
Rural 4	481	261	278	17	9	0	0	0
Sex of main respondent								
Male	2,459	1,395	527	101	29	1	11	13
Female	1,282	659	177	13	65	45	0	0
Age group								
18–59 years	2,540	1,721	337	64	90	46	11	13
60+ years	1,202	334	367	50	3.5	0	0	0
Disability status								
With disability	541	186	108	33	0	0	0	0
Without disability	3,200	1,868	596	81	93	46	11	13
Per capita expenditure quintile								
Lowest	772	435	186	0	8.5	0	0	13
2	880	393	150	30	3.5	1	0	0
3	747	266	103	50	81	0	11	0
4	669	562	157	33	0	0	0	0
Highest	673	400	107	0	0	45	0	0
Urban–Rural								
Urban	2,900	1,483	339	97	81	46	11	13
Rural	841	571	365	17	12	0	0	0
Total	**3,741**	**2,055**	**704**	**114**	**93**	**46**	**11**	**13**

Remittance senders

Half of all remittance senders were children sending cash to their parents – this was all the more visible for HH heads aged 60+ and female-headed HHs (representing respectively 78% and 66% of remittances in those population groups).

Figure 35. Relationship of sender of remittancer to the household head
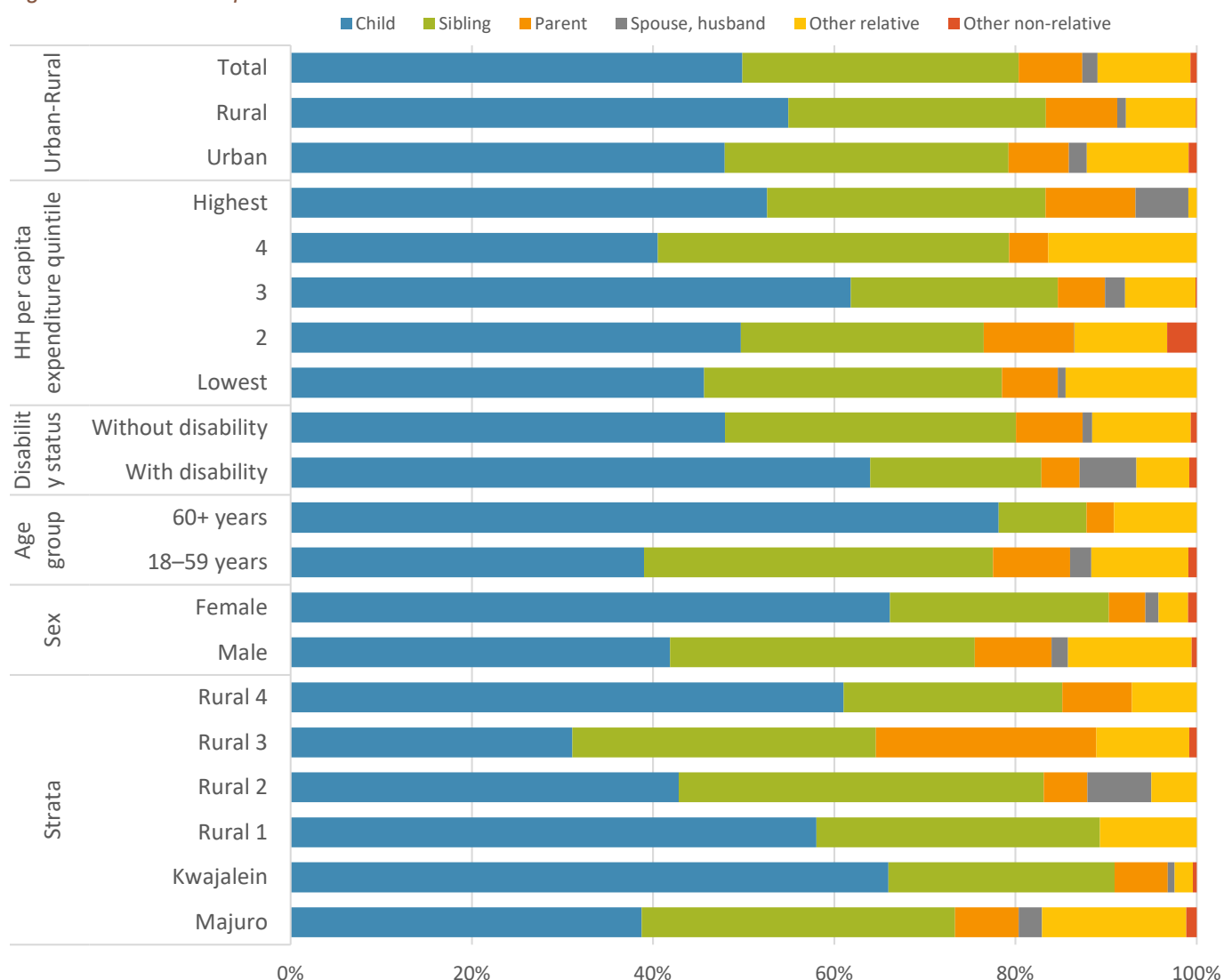
Livestock and aquaculture participation

Around 27% of HHs in RMI were participating in livestock and aquaculture activities. The highest participation rate of 91% was reached in Rural 4 strata. Conversely, HHs located in urban areas and from the highest expenditure quintile had the lowest participation rates (respectively 10% and 8%).

Figure 36. Household participation in livestock and aquaculture activities
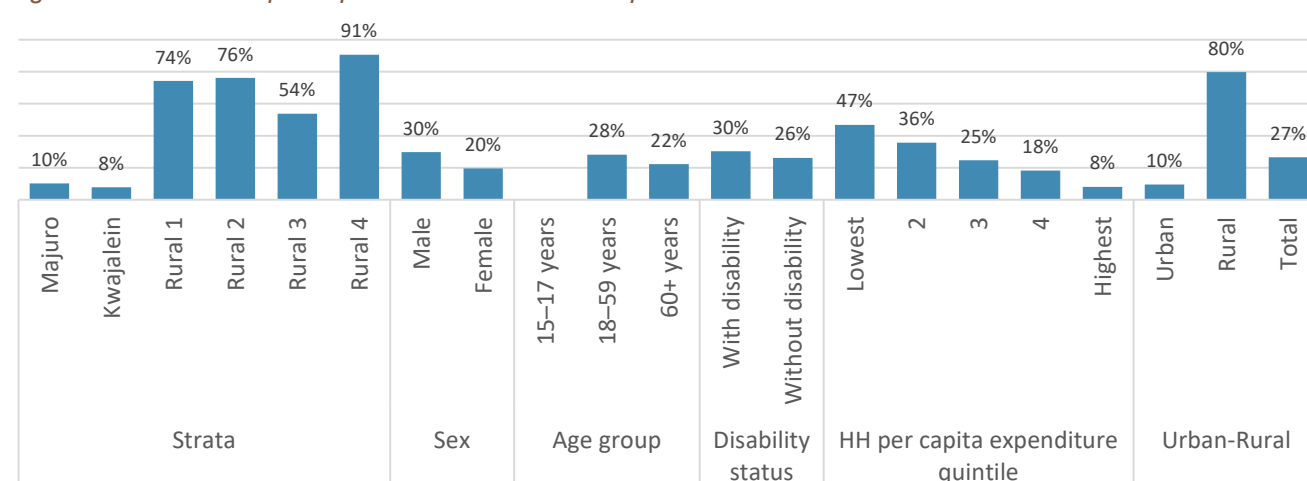
Animals reared

Chickens were the most reared livestock in RMI as per the HIES data. 24% of all private HHs were raising chickens, ranging between 5% in Kwajalein and 85% in Rural 4 atolls. HHs raising pigs were also fairly numerous with a national rate of 21%. Rural HHs, and especially in Rural 4, Rural 2 and Rural 1 strata, were more engaged in such activities than urban HHs. Aquaculture involvement nationally represented less than 1%.

Figure 37. Percentage of total households rearing livestock
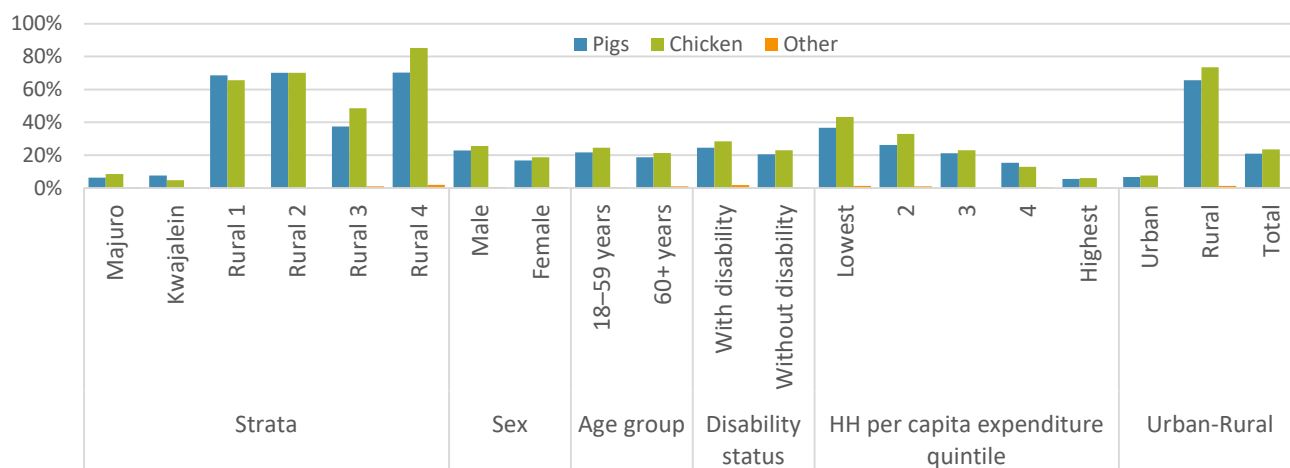
Table 11. Number of households rearing livestock

	Pigs	Chicken	Ducks	Other
Strata				
Majuro	550	734	33	1
Kwajalein	196	123	11	0
Rural 1	603	577	0	0
Rural 2	369	369	0	0
Rural 3	177	229	4.5	0
Rural 4	1,234	1,498	35	0
Sex of main respondent				
Male	2,395	2,708	61	1
Female	734	823	23	0
Age group				
18–59 years	2,425	2,725	47	0
60+ years	704	805	38	1
Disability status				
With disability	398	462	29	0
Without disability	2,732	3,068	55	1
Per capita expenditure quintile				
Lowest	1,099	1,295	36	0
2	787	988	28	0
3	627	683	0	0
4	453	382	20	0
Highest	163	182	0	1
Urban–Rural				
Urban	747	857	45	1
Rural	2,383	2,673	40	0
Total	**3,129**	**3,530**	**84**	**1**

Livestock and aquaculture purpose

One-fifth of private HHs raising chickens and pigs sold their products while none sold their ducks or other products.

Agriculture participation

Nationally, the percentage of HHs owning a parcel of land to undertake agricultural activities ranged from 1% in Kwajalein to 57% in Rural 1 and Rural 4 atolls. Note the questionnaire used a question on whether the HH "have any parcels/plots/lands used for agricultural purposes?", which has used as a less than ideal filtering question to estimate HH participation in agriculture. Households from higher quintiles or those having a person with disability participated less in such activities. Households located in rural areas were also more involved in agriculture (54% against 3% in urban areas).

Figure 38. Household participation in agricultual activities
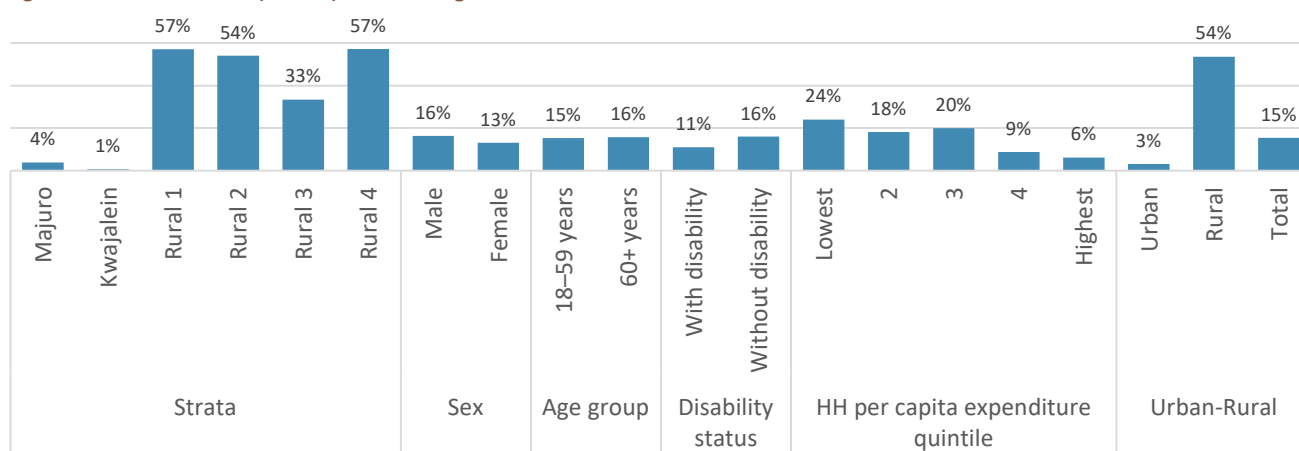
Agricultural land tenure

Figure 39 below is showing the tenure status of agricultural land. The vast majority of the parcels of land belonged to the HH (73%) with the exception of Kwajalein where 100% of lands were used for free.

Only a few parcels were rented for cash throughout RMI, with the example of the third expenditure quintile, in Majuro and Rural 2 where the rates reached 4%.

Figure 39. Tenure status of agricultural land
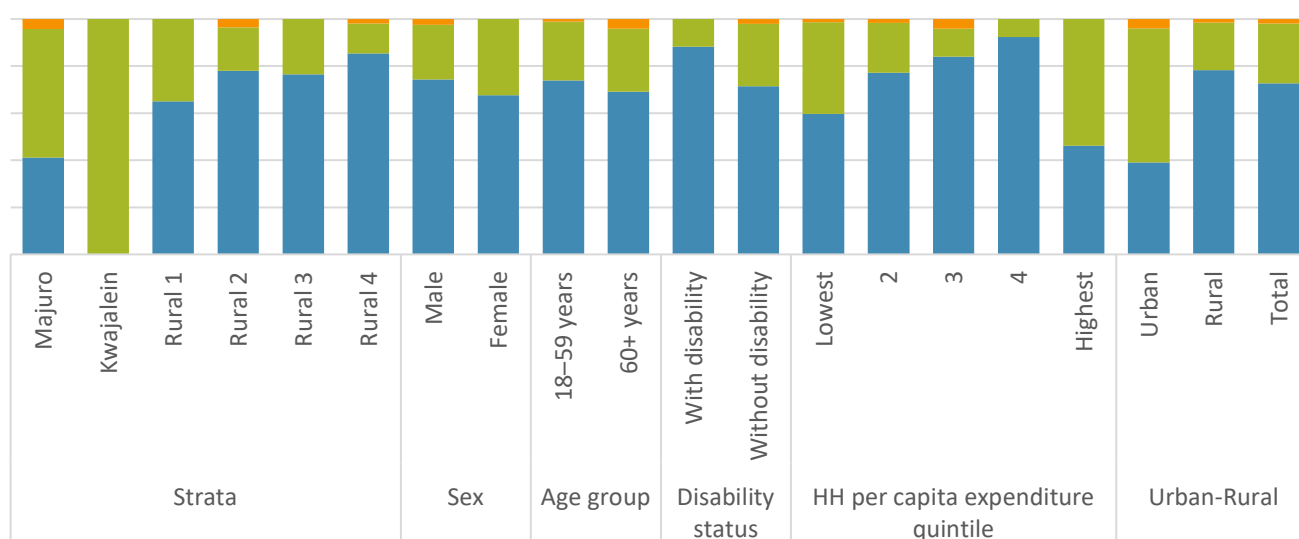
Participation in the production of vegetables

Less than 1% of private HHs in RMI were harvesting vegetables. None of these HHs sold their products.

Vegetable products

The only harvested vegetables in RMI were pumpkin.

Participation in the production of root crops

Similarly to vegetable production, less than 1% of private HHs were growing root crops. None of these HHs sold their products.

Root crop products

The only root crops harvested were taro.

Participation in the production of fruit

10% of HHs in RMI were participating in the production of fruit. Looking at the different strata, the rates ranged from 0% in Kwajalein to 37% in Rural 4. Rural HHs hence harvested more fruit than urban ones. Morevover, the lower the expenditure quintile, the higher the participation in fruit production was.

Figure 40. Household participation in the production of fruit in the last month
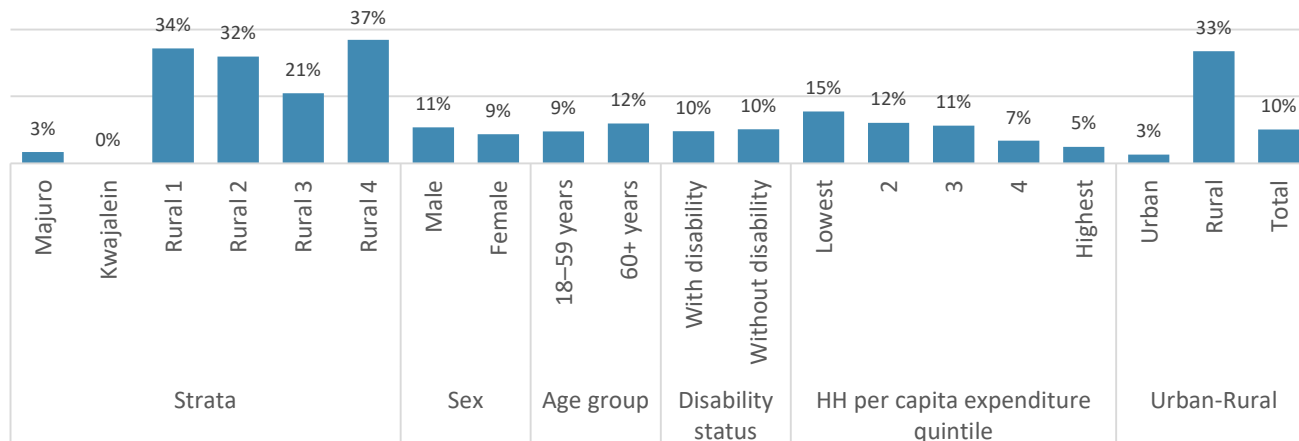
Fruit products

The main fruit harvested as per the RMI 2019/20 HIES were bananas, breadfruit and brown coconut. In Rural 3 atolls, HHs produced more breadfruit than bananas.

Figure 41. Distribution of fruit harvested in the past month
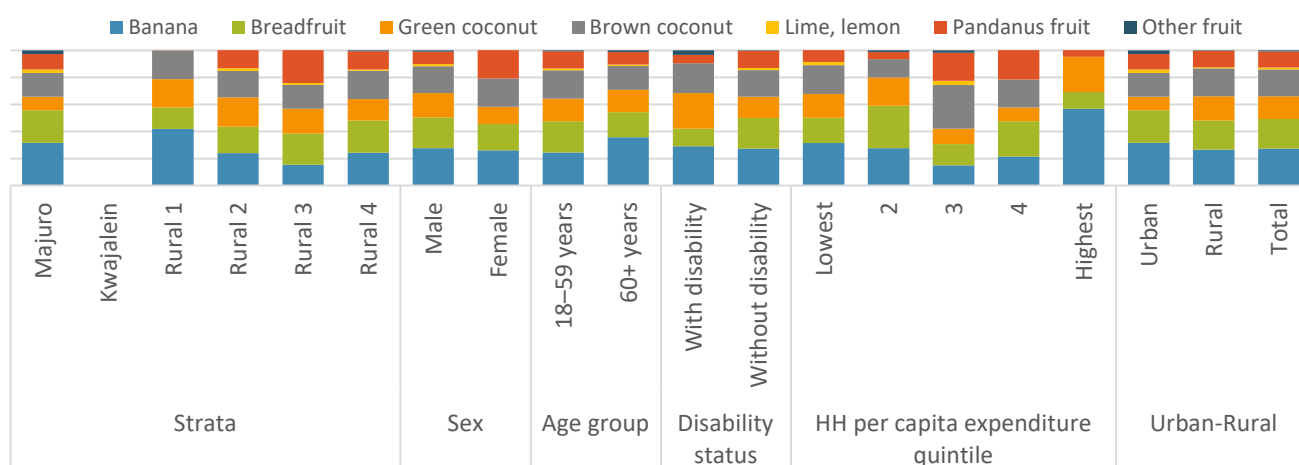
Fruit purpose

40% of HHs harvesting fruit were selling their products with the highest rate being in Rural 2 (62%) and the lowest in Rural 1 (33%). Urban HHs were slightly more likely to sell their crops than rural ones. Households from higher quintiles sold less products than HHs from lower quintiles.

Figure 42. Distribution of households selling their fruit harvested
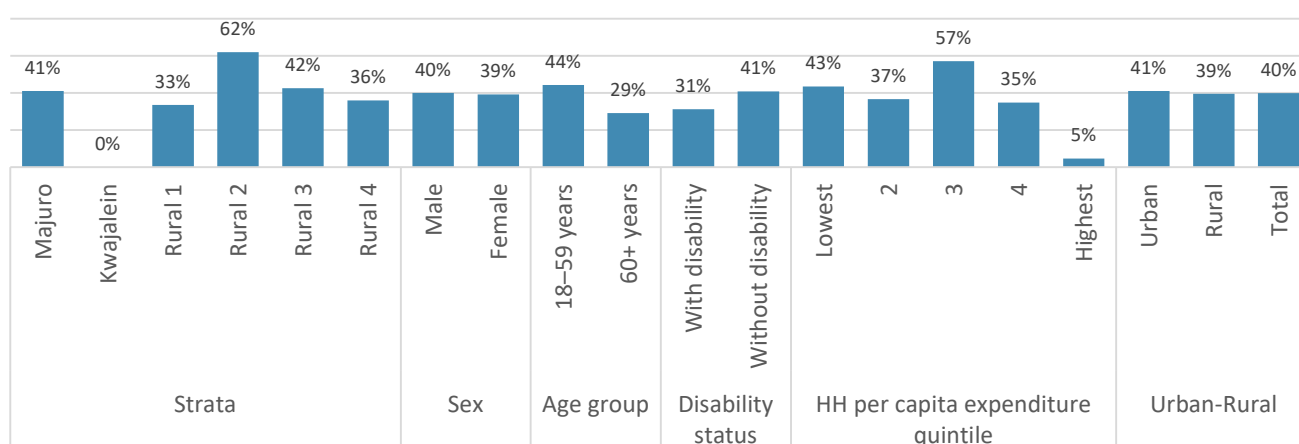
HOUSEHOLD EXPENDITURE

Here, we provide a summary of the main components of HH expenditure in RMI. The first subsection highlights some of the important facts relating to the distribution of HH expenditure. In the next section, we look at what goods and services are consumed, and their sources. We then provide more details on the main HH expenditure items of food and beverage, housing and utilities, transportation and alcohol, tobacco and kava.

This summary highlights the main elements of HH expenditure and aims to present the main findings of the expenditure component of the HIES.

1. Total household expenditure

Total annual HH consumption expenditure amounted to US$251,440,927 in 2019/20 while the monthly HH expenditure was US$20,953,411 (Table 12). About two-thirds of HH expenditure was cash-based, with another 21% being rents (actual and imputed rents). Gifts and home production represented respectively 10% and 3% of the total HH expenditure. Exchange (or barter) represented less than 1% of total expenditure.

Table 12. Total monthly household expenditure, by population group and expenditure source (US$)

	Cash	Home production	Gifts	Exchange	Imputed rents	Total
Strata						
Majuro	9,289,628	138,526	1,242,883	3,340	2,880,870	13,555,246
Kwajalein	2,716,957	22,937	217,240	5,677	750,412	3,713,224
Rural 1	330,317	77,011	121,002	7,601	64,440	600,372
Rural 2	334,516	63,111	91,682	8,172	113,153	610,634
Rural 3	271,682	46,249	233,533	158	165,744	717,365
Rural 4	738,328	379,136	238,890	55,772	344,443	1,756,569
Sex of main respondent						
Male	9,556,165	585,915	1,489,520	66,206	2,968,545	14,666,351
Female	4,125,263	141,055	655,709	14,514	1,350,518	6,287,059
Age group						
18–59 years	10,045,716	578,652	1,619,268	58,744	3,124,436	15,426,816
60+ years	3,635,712	148,318	525,961	21,976	1,194,627	5,526,595
Disability status						
With disability	1,668,040	96,663	221,856	17,923	522,370	2,526,852
Without disability	12,013,388	630,307	1,923,373	62,798	3,796,693	18,426,559
Per capita expenditure quintile						
Lowest	1,475,531	201,876	340,060	36,593	678,412	2,732,473
2	2,348,719	218,140	353,805	14,293	834,999	3,769,956
3	2,556,409	135,668	439,033	14,104	843,720	3,988,935
4	3,106,500	95,507	571,725	10,176	914,743	4,698,651
Highest	4,194,268	75,778	440,606	5,554	1,047,190	5,763,396
Urban–Rural						
Urban	12,006,585	161,463	1,460,123	9,017	3,631,282	17,268,470
Rural	1,674,843	565,507	685,107	71,703	687,781	3,684,940
Total	**13,681,428**	**726,969**	**2,145,229**	**80,720**	**4,319,063**	**20,953,411**

Figure 43. Total monthly household expenditure (million US$) by population group
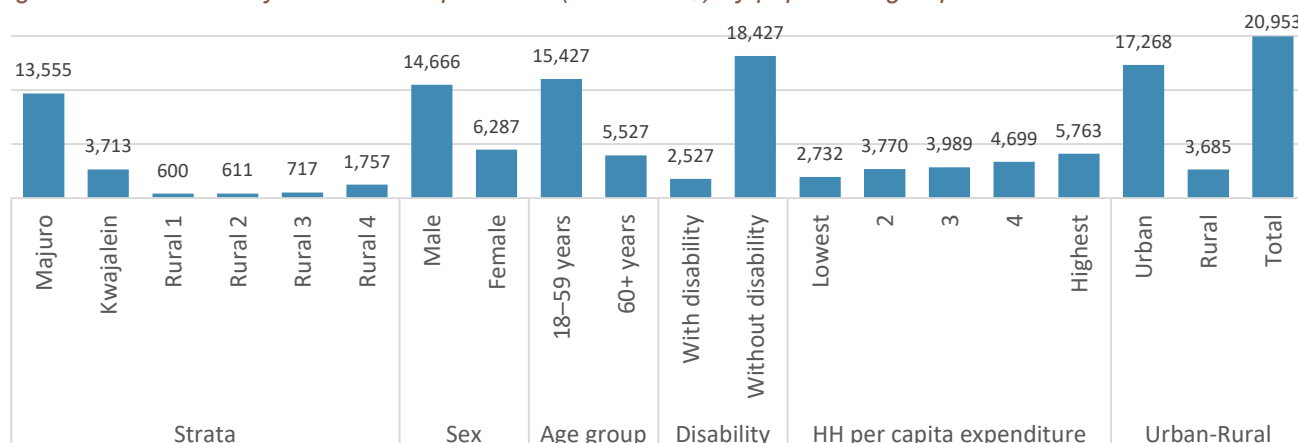
2. Average and median household expenditure

National average monthly HH expenditure amounted to around US$1,402. This average was higher in urban than rural areas (US$1,526 in urban and US$1,013 in rural). To give a better understanding of the expenditure distribution among HHs, the median expenditure – the expenditure of the 50th HH percentile – is provided in this analysis. The monthly median HH expenditure was US$1,224 (US$1,372 in urban and US$863 in rural).

Urban HHs, female-headed HHs and those with persons with disability had higher average and median expenditure than resepectively rural HHs, male-headed HHs and HHs without persons with disability.

Figure 44. Average and median monthly household expenditure
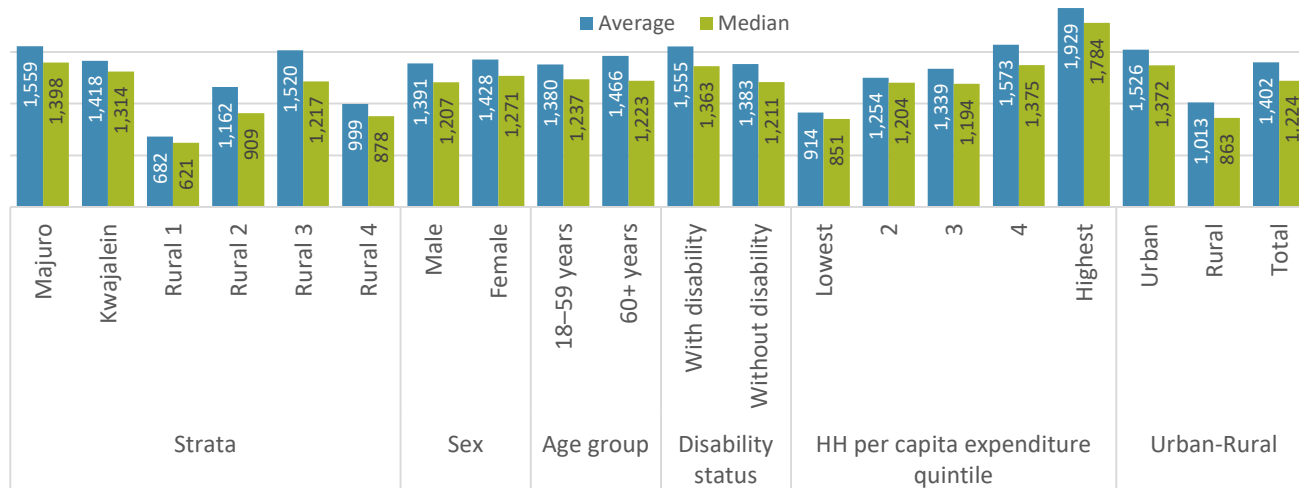
3. Composition of household expenditure

HH expenditure is made up of many different categories and types of expenditure.

Expenditure categories are divided into 3: 1) consumption expenditure, 2) non-consumption transfers, 3) non-consumption intermediate expenditure. For the sake of this analysis, expenditure tables exclude intermediate expenditure (3rd category) but non-consumption transfers are included. The reason for this inclusion is because non-consumption expenditure transfers is usually a significant component of Pacific Island Countries and Territories (PICTs) HH cash exchange. However, this category is not used for Consumer Price Index (CPI) rebasing or for poverty analysis. Non-consumption expenditure is expenditure that the HH incurs while there is no good or service in return for that expenditure (e.g.: donations to church, to another HH).

Moreover, consumption expenditure follows the United Nations Statistical Division's Classification of Individual Consumption According to Purpose (COICOP). This COICOP classification consists of 12 divisions, shown in Figure 43 below.

Finally, expenditure types consist of cash, home production, gifts, exchange (or barter) and imputed rents.

- Cash expenditure refers to expenditure incurred through cash-based transaction where a good/service is acquired in exchange for money.
- Subsistence expenditure is the value of a primary product which is home-produced (e.g.: livestock, crop, fish…) for HH consumption.
- Gift expenditure makes reference to the value of gifts that are received by the HH for consumption by the HH.
- Exchange (or barter) is the procedure where a HH exchange an item with another item.
- Imputed rents are the value of the services that the owner of the dwelling derive from living in their dwelling.

The majority of HH expenditure was on 'Housing, utilities' (Figure 45) which accounted for 33% of total HH expenditure. The next highest expenditure was on 'Food, beverage' and 'Restaurants', respectively making up to 29% and 11% of total HH expenditure. It is interesting to see the differences between disaggregation groups, in particular between strata. For instance, it is clear that rural HHs spent less on 'Housing, utilities' (25%) and more on 'Food, beverage' (44%). This is all the more obvious in Rural 1 and Rural 4 atolls where expenditure on 'Food, beverage' represented respectively 51% and 47%. Another interesting analysis is when looking at the quintile distribution of expenditure: the wealthier the HHs were, the lower were the expenditure on 'Food, beverage' (Q1: 35%, Q5: 23%).

Figure 45. Composition of household expenditure, by COICOP divisions 1 to 12 and cash transfers
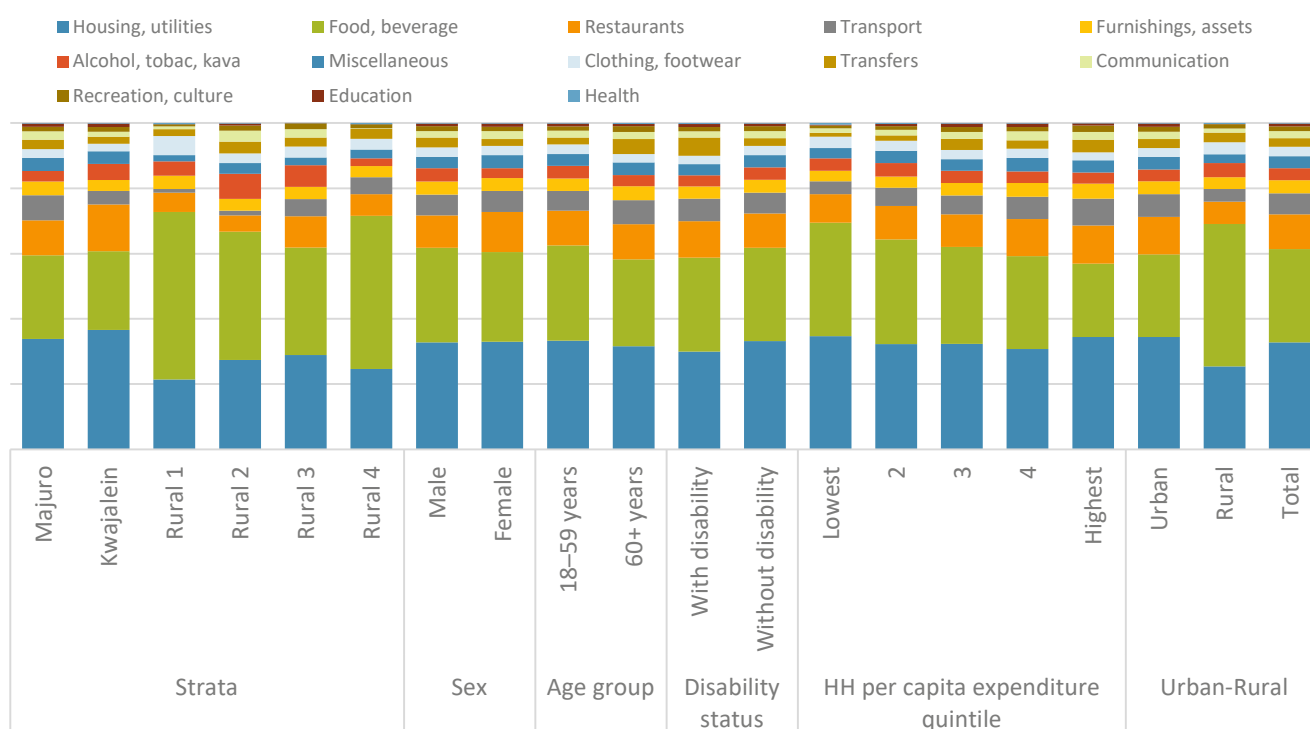
3.1. Expenditure source

When looking at the distribution of expenditure by type of expenditure, it seems evident that urban HHs rely more on cash expenditure than rural HHs. To cope with this lack of cash expenditure, rural HHs home produced, gifted and exchanged more than urban HHs. The wealthier the HHs were, the more they spent in cash while contrarily, the poorer the HHs were, the more they relied on home production and gifts.

Figure 46. Composition of expenditure, by expenditure source

© Skye Hohmann
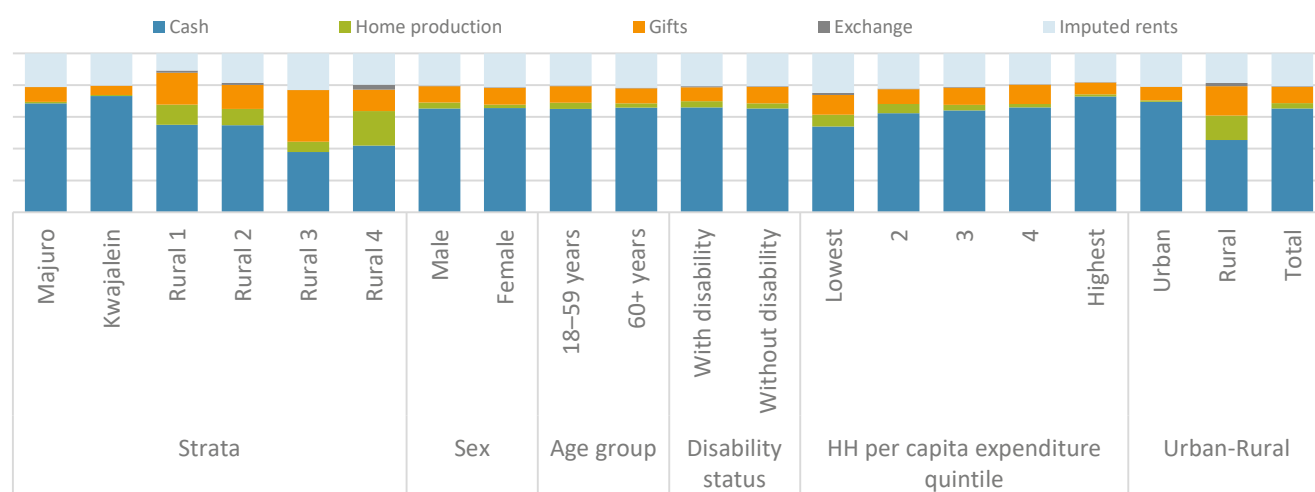
3.2. Expenditure composition by category and source

The graphs below show the distribution of expenditure by expenditure aource and national, urban and rural.

Figure 47. Percentage of total household expenditure, by COICOP divisions and composition of expenditure source
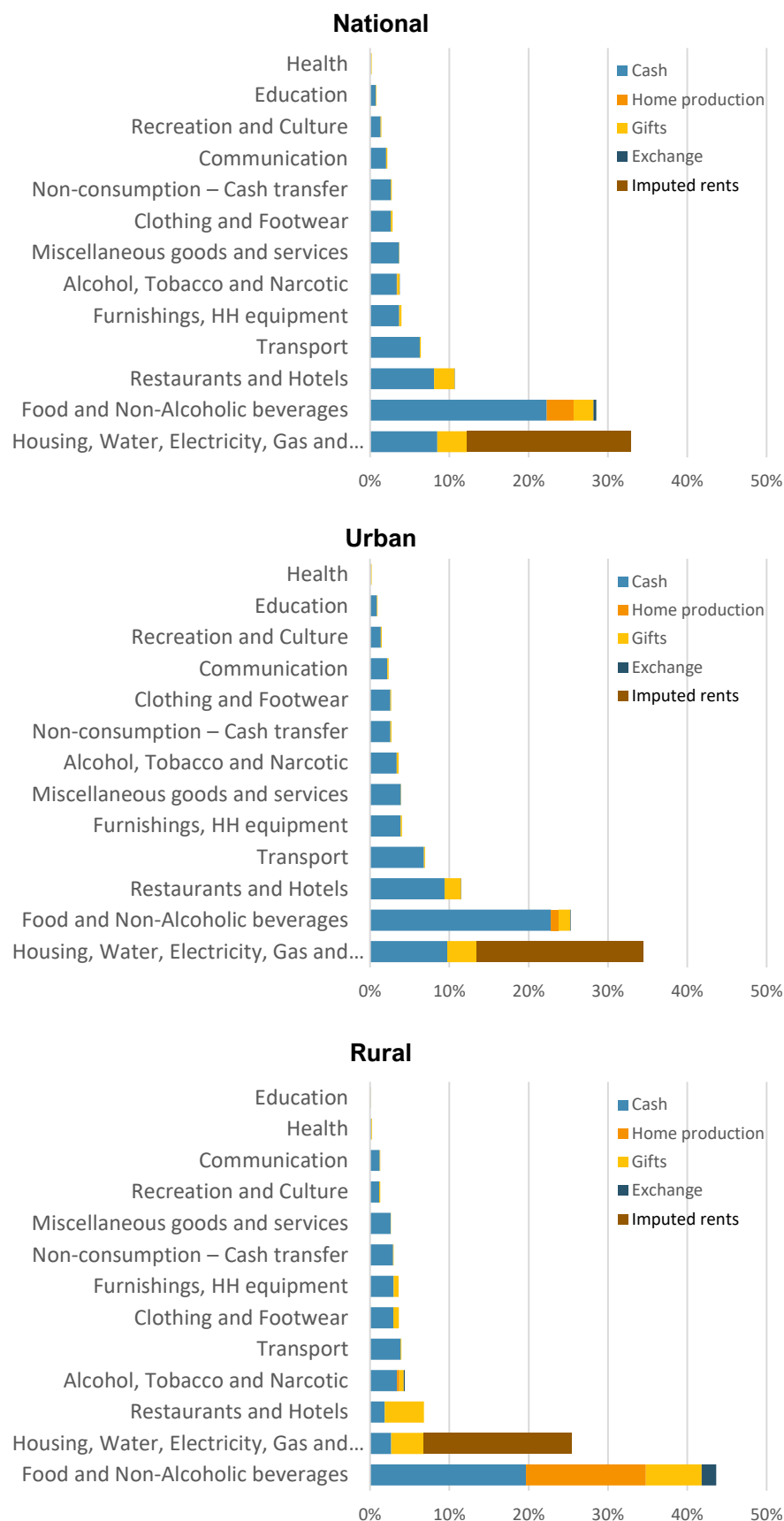
Figure 47. Percentage of total household expenditure, by COICOP divisions and composition of expenditure source (cont')
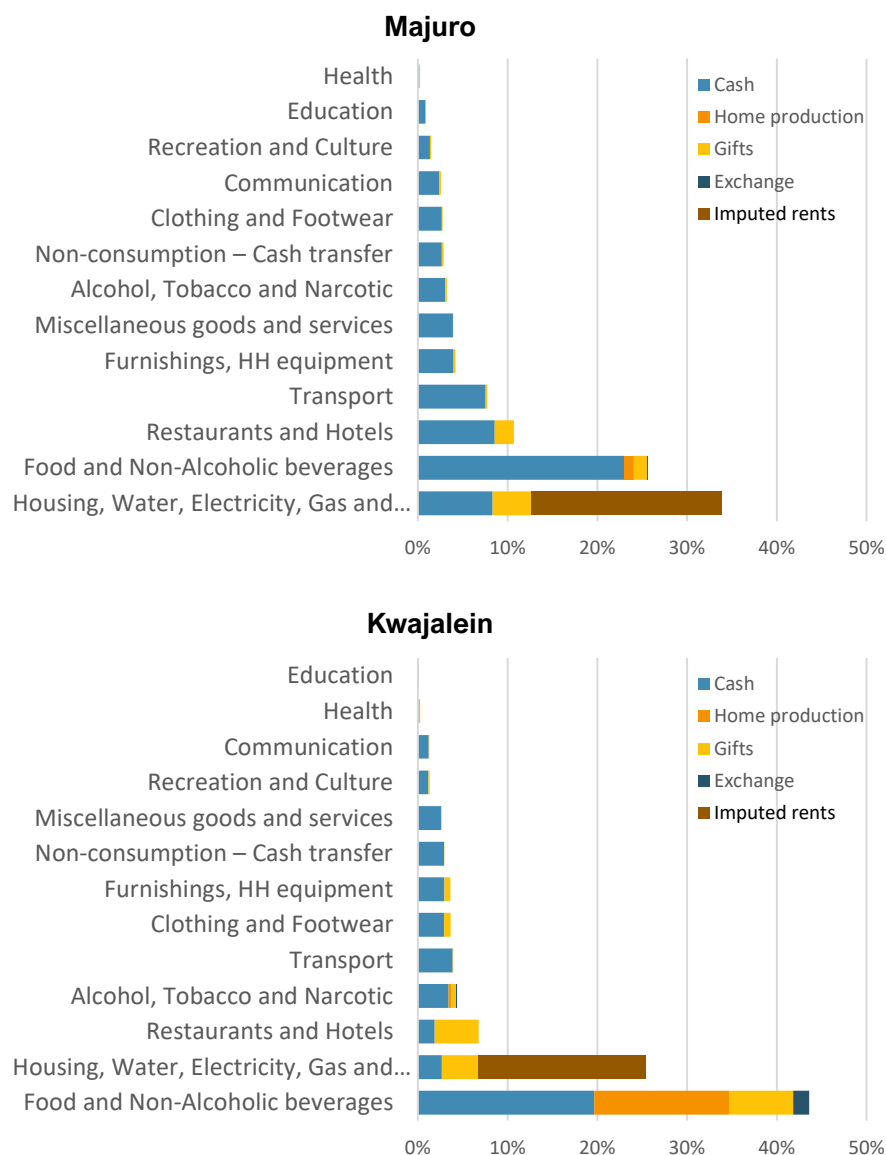
4. Main expenditure items

4.1. Food and non-alcoholic beverages (COICOP division 1 and COICOP group 11.1)

Percentage of households reporting consumption of food

All HHs reported consumption of 'Food and non-alcoholic beverages' (COICOP division 1 and COICOP group 11.1).

Average and median expenditure on food and non-alcoholic beverages

The avergage monthly HH expenditure on 'Food, beverages & Catering services' was US$549 while the median was US$479.

Urban HHs, wealthier HHs and HHs with at least one person with disability had higher expenditure on that category. Households from Rural 3 had the highest average expenditure across all strata in 'Food, beverages & Catering services' while the lowest average expenditure was in Rural 1.

Looking at Figure 49, rural HHs had higher expenditure on 'Fish & seafood' and 'Fruit' while urban HHs had much higher expenditure on 'Restaurants, catering'. Lower quintile HHs spent more on 'Bread, cereals' and 'Fish, seafood' while higher quintile HHs spent more on 'Restaurants'.

Figure 48. Average and median monthly household expenditure on food and non-alcholic beverages
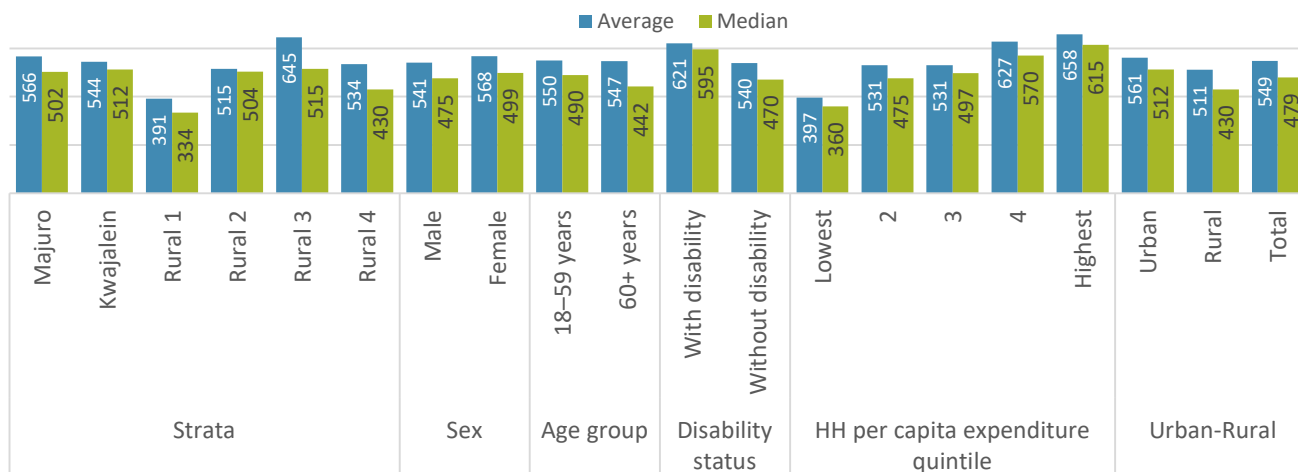
Figure 49. Composition of household expenditure on food and non-alcoholic beverages, by COICOP class
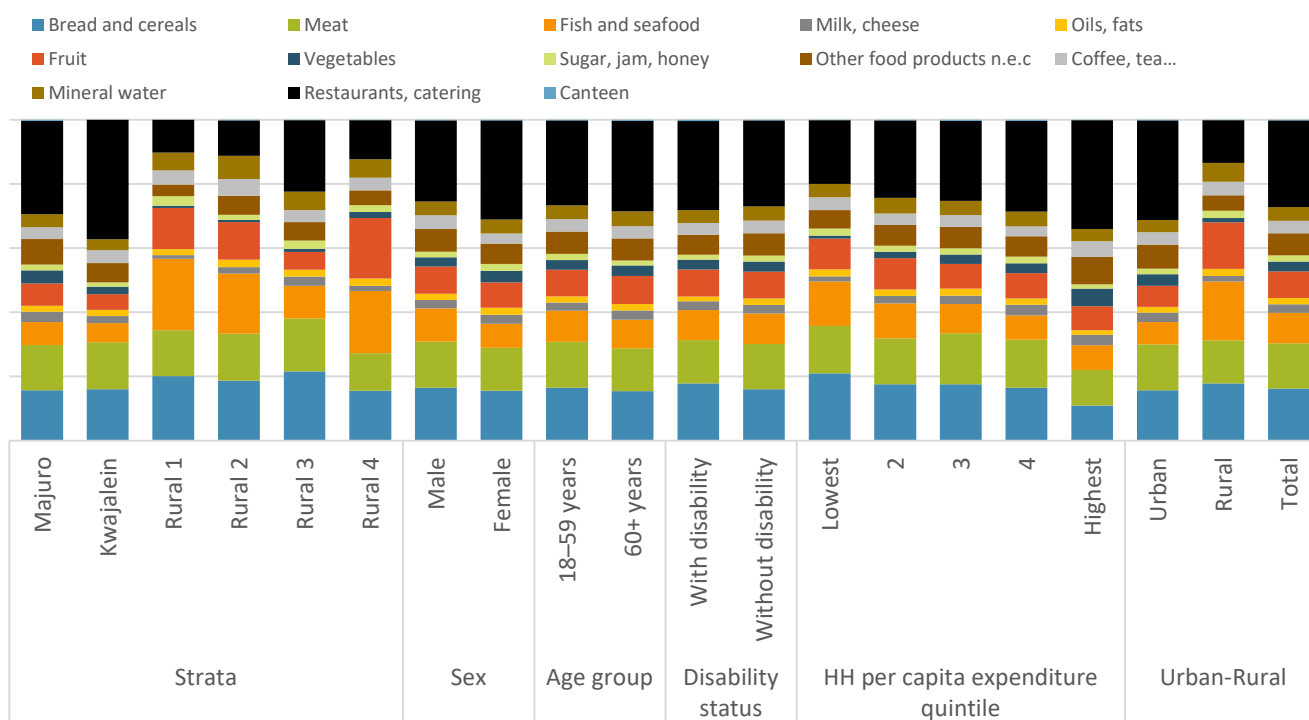
Source of expenditure on food and non-alcoholic beverages

Figure 50. Composition of household food expenditure, by COICOP class and source
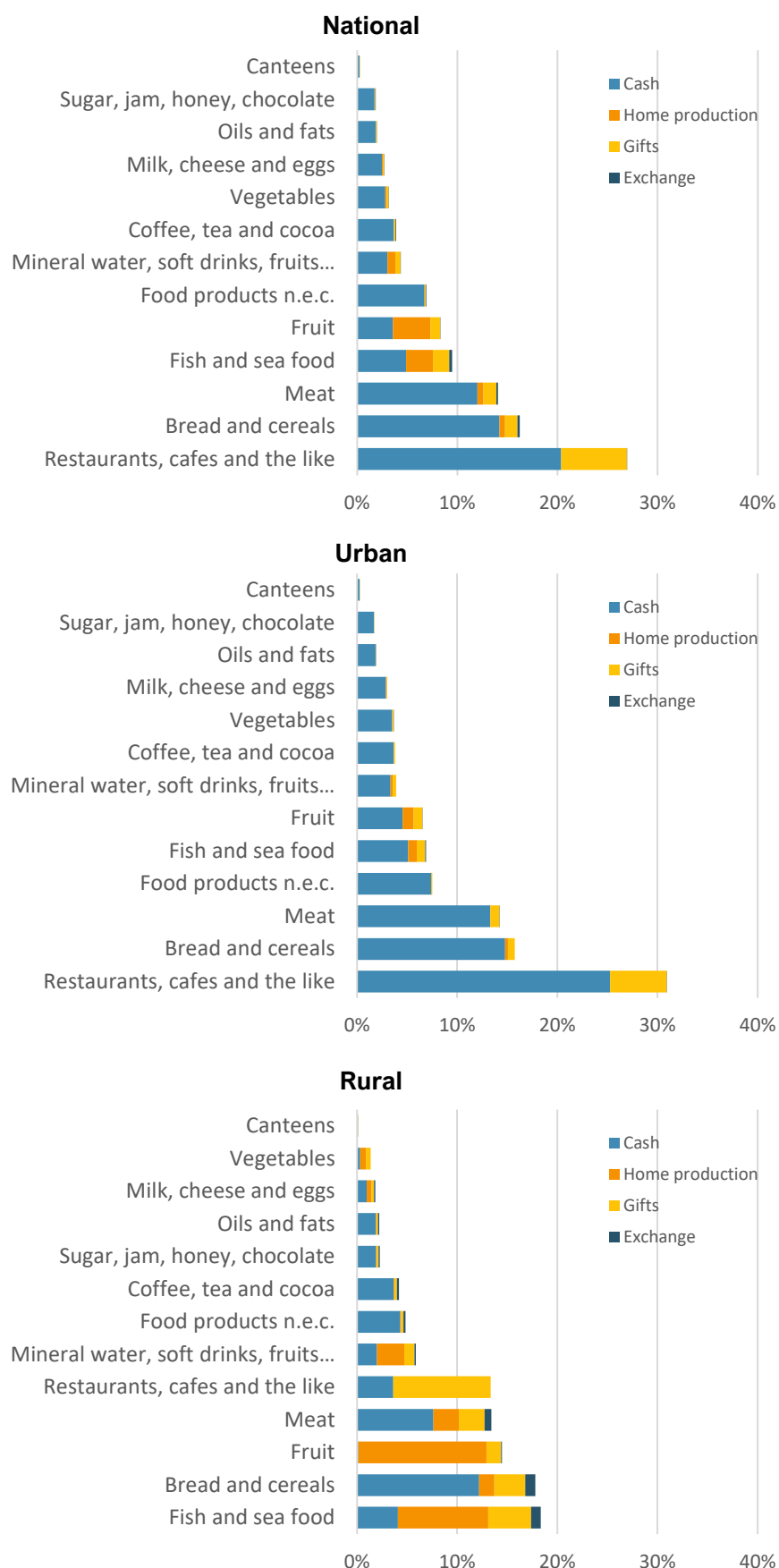
Figure 50. Composition of household food expenditure, by COICOP class and source (cont')

Majuro

Kwajalein

© SPC, Colette Wabnitz
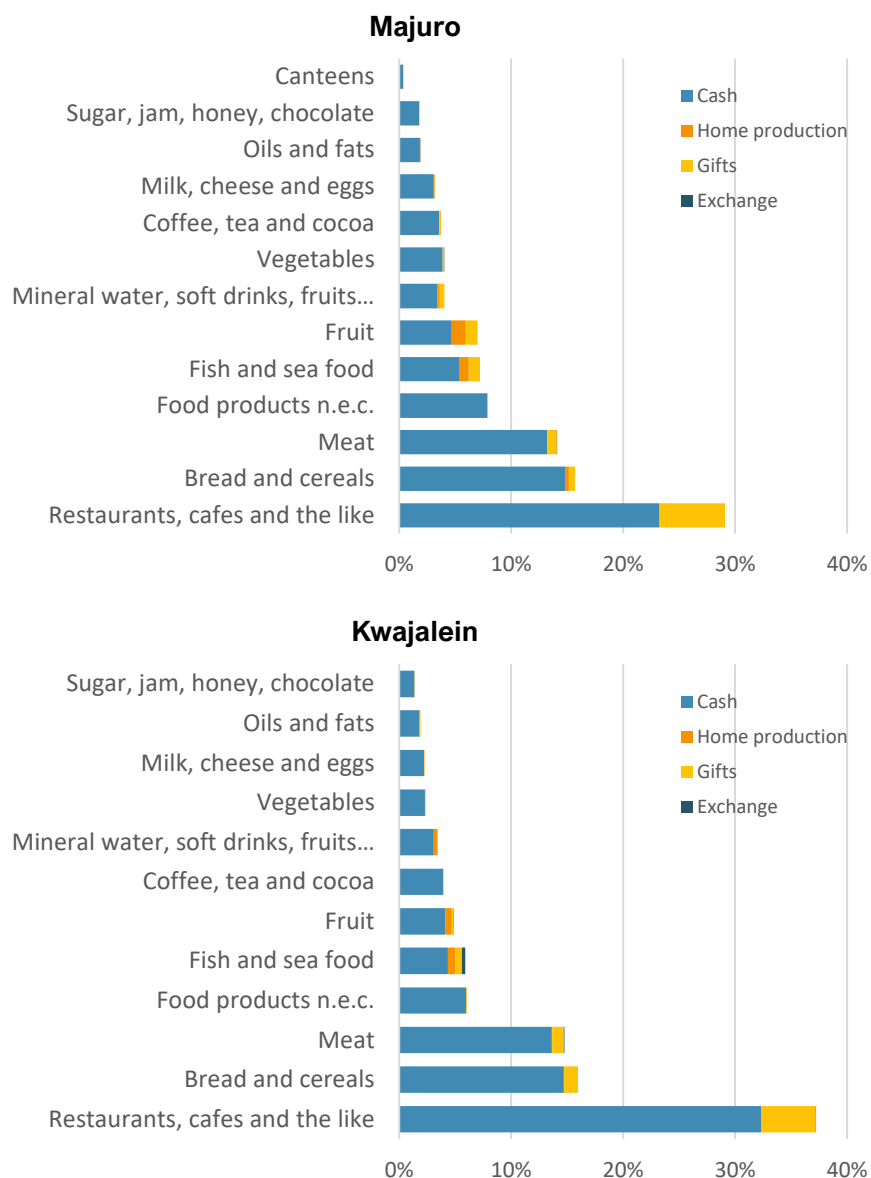
4.2. Housing, water, electricity, gas and other fuels (COICOP division 4)

Percentage of households reporting consumption of housing, water, gas and other fuels

All HHs reported consumption of housing, water, gas and other fuels (COICOP division 4).

Average and median expenditure on housing, water, electricity, gas and other fuels

The average monthly HH expenditure on 'Housing, water, electricity, gas and other fuels' was US$461 while the median was US$433. Urban HHs and HHs from higher expenditure quintiles were more likely to spend more on Housing.

Figure 50. Average and median monthly household expenditure on housing, water and energy
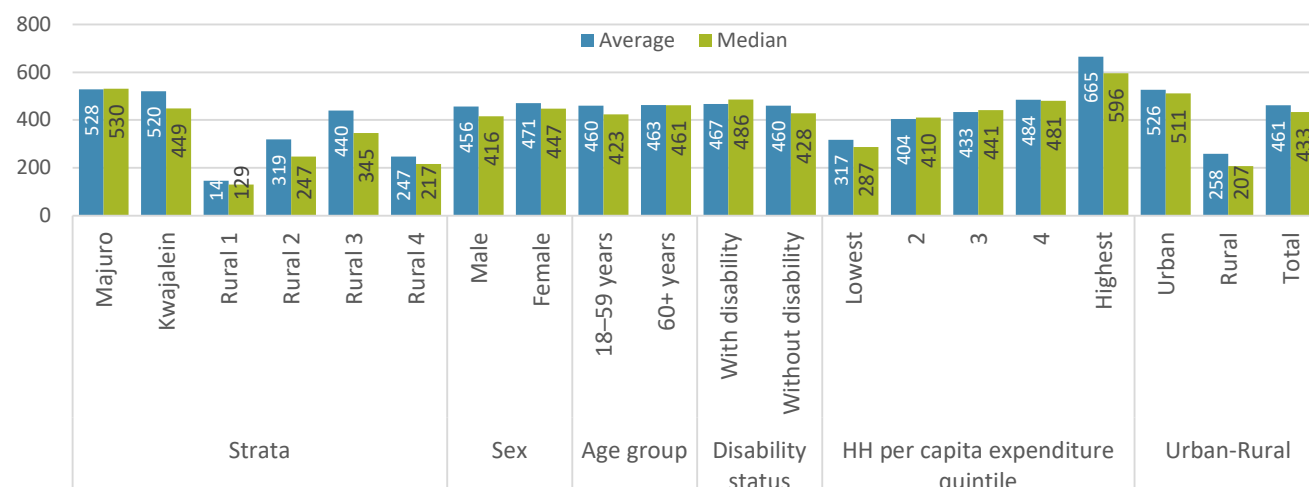
Composition of expenditure on housing, water, electricity, gas and other fuels

The composition of HH expenditure on 'Housing, water, electricity, gas and other fuels' was fairly harmonized across all disaggregation groups with Imputed rents being the highest share nationally. It is to be noted that the share of electricity was higher in Kwajalaein than anywhere else. Actual rentals were higher among HHs from the highest expenditure quintiles.

Figure 51. Composition of household expenditure on housing, water and energy
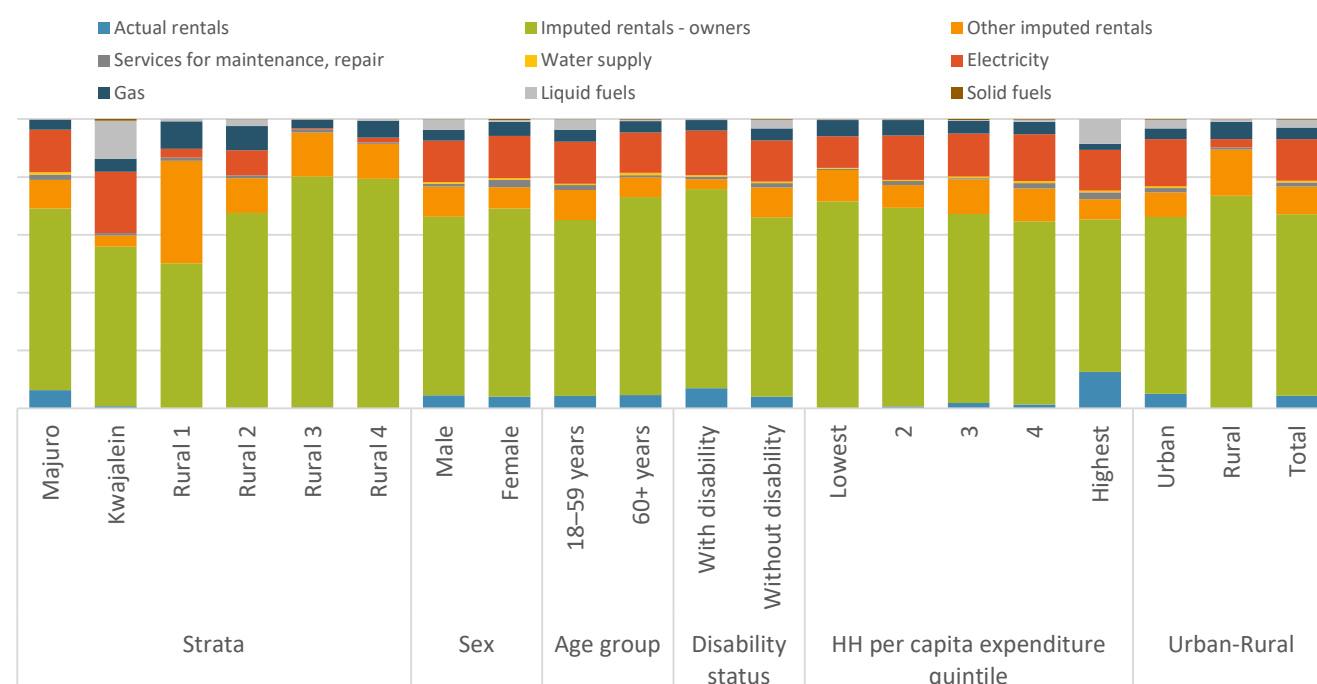
4.3. Transport (COICOP division 7)

Percentage of households reporting consumption of transportation goods and services

Around 70% of HHs reported having consumed transportation goods/services (COICOP division 7), with 77% in urban areas and 49% in rural.

Figure 52. Percentage of households reporting expenditure on transportation
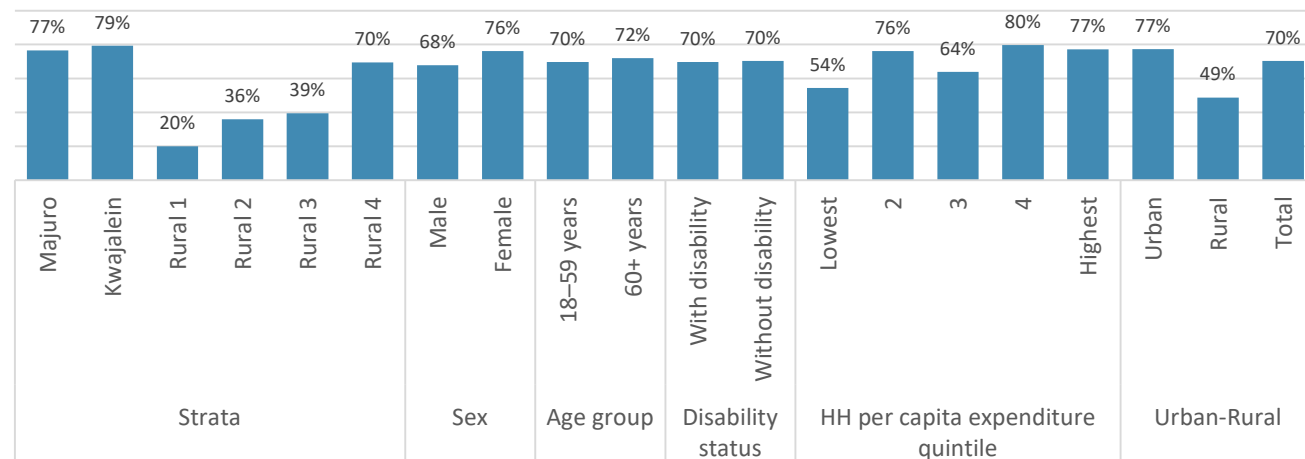
Average and median expenditure on transportation

The average monthly HH expenditure on 'Transportation' was US$90 while the median was US$39. Urban HHs and HHs from higher expenditure quintiles were more likely to spend more on transportation. The difference between the fourth and fifth expenditure quintiles was significant while HHs in Rural 1 and Rural 2 spent very little in transportation.

Figure 53. Average and median monthly household expenditure on transportation
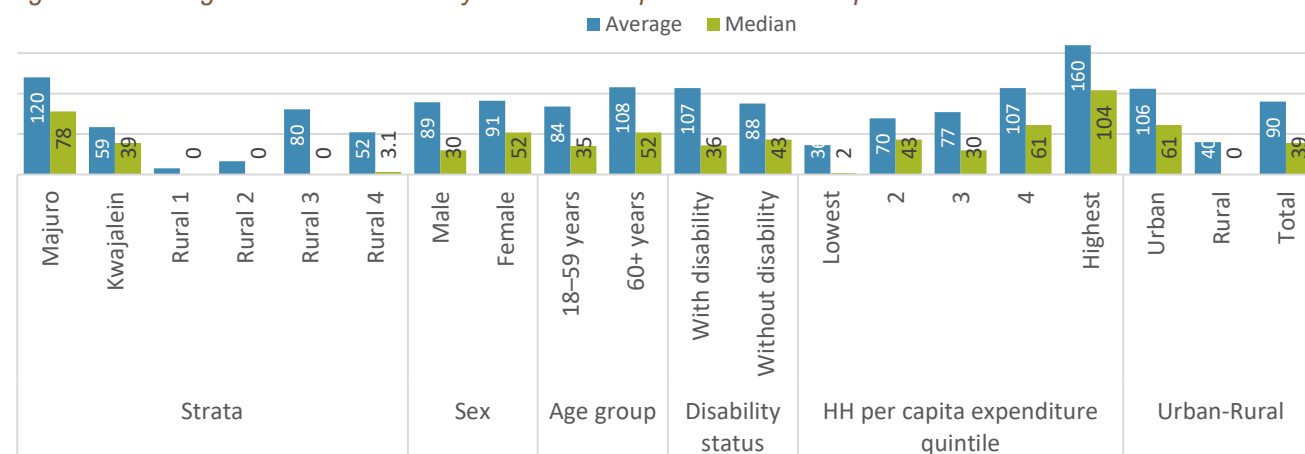
Composition of expenditure on transportation

Multiple different expenditure patterns erupt from Figure 55. Proportion of expenditure on road transportation was the highest nationally, followed by air transportation expenditure. In rural areas, air transport expenditure represented 62% of total expenditure on transportation Expenditure on Cars was higher in urban regions and higher quintiles while expenditure on Road transportation was higher for HHs from lower quintiles.

Figure 54. Composition of household expenditure on transportation
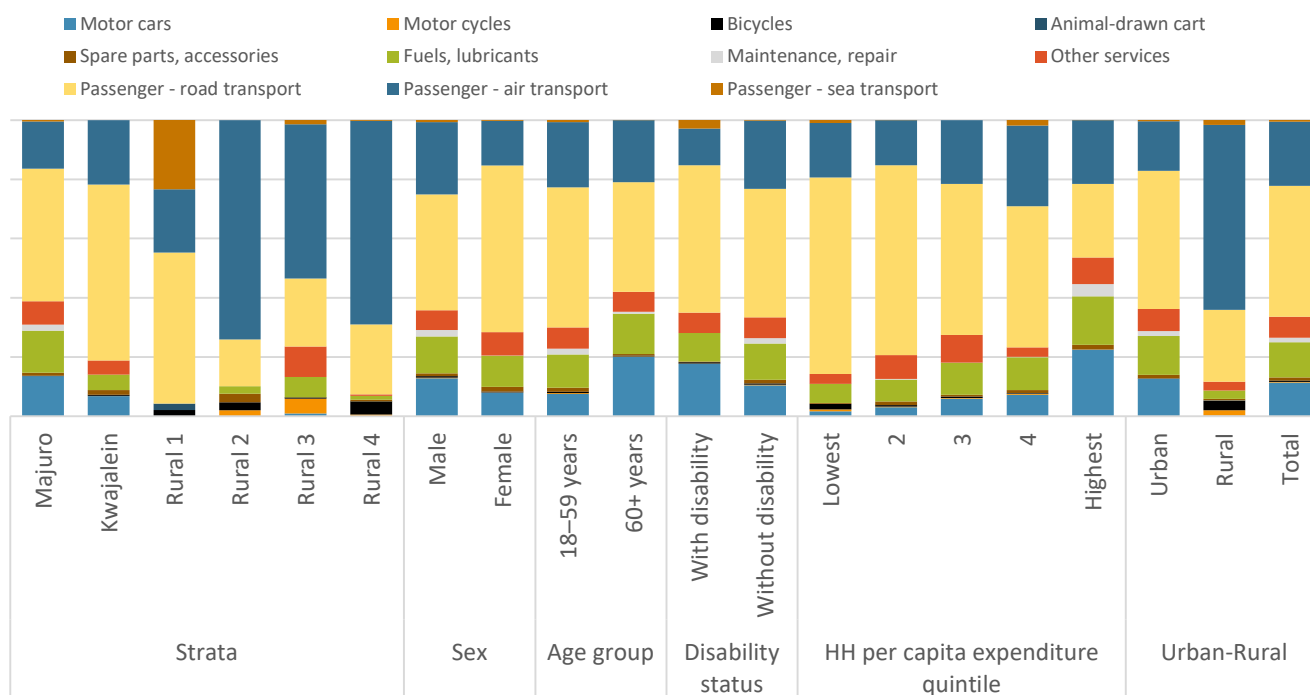
4.4. Alcohol, tobacco and kava (COICOP division 2)

Percentage of households reporting consumption of alcohol, tobacco and kava

50% of HHs reported consuming alcohol, tobacco and kava (COICOP division 2).

Figure 55. Percentage of households reporting expenditure on alcohol, tobacco and kava
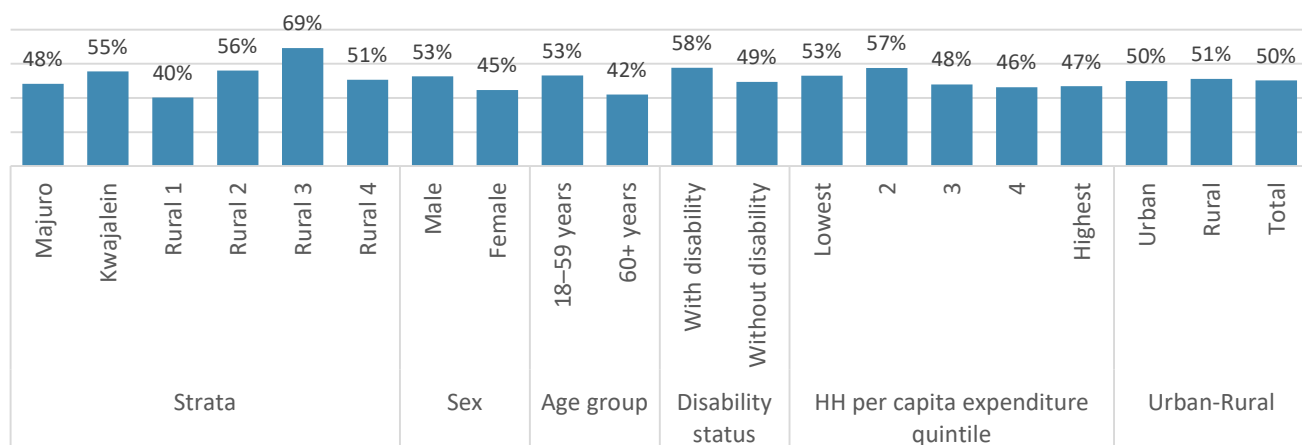
Average and median expenditure on alcohol, tobacco and kava

The average monthly HH expenditure on COICOP division 2 was US$78 while the median was US$4. Urban HHs were more likely to spend more on alcohol, tobacco and other narcotics. It seems clear that wealthier HHs spent more of these products than HHs from lower quintiles.

Figure 56. Average and median monthly household expenditure on alcohol, tobacco and kava

Legend: ■ Average ■ Median

	Average	Median
Strata		
Majuro	50	0
Kwajalein	70	22
Rural 1	3	0
Rural 2	89	15
Rural 3	100	33
Rural 4		4
Sex		
Male	56	10
Female	44	0
Age group		
18–59 years	53	13
60+ years	50	0
Disability status		
With disability	53	22
Without disability	52	0
HH per capita expenditure quintile		
Lowest	3	13
2	52	22
3	52	0
4	56	
Highest	66	0
Urban-Rural		
Urban	55	0
Rural	44	4
Total	52	4
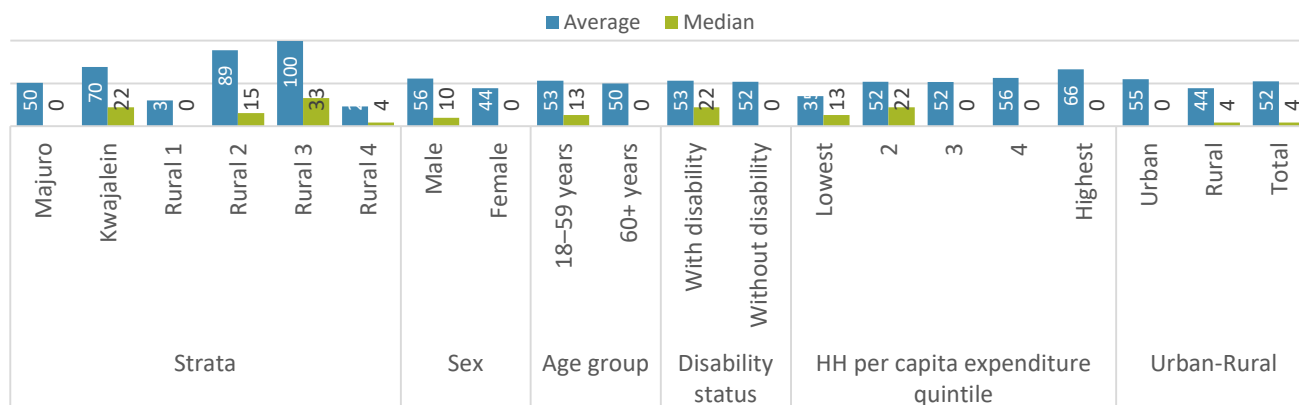
Composition of expenditure on alcohol, tobacco and kava

The patterns were fairly similar throughout all disaggregation groups with a few exceptions nevertheless. Rural HHs (and especially Rural 1, Rural 2 and Rural 4 atolls) consumed less beer than other atolls. Instead, Rural 1 and Rural 4 spent a lot more on tobacco. Kava consumption was more important in Rural 2. Higher expenditure quintiles spent proportionally less on tobacco but more on beer than HHs from lower quintiles.

Figure 57. Composition of household expenditure on alcohol, tobacco and kava

Legend: ■ Spirits ■ Wine ■ Beer ■ Tobacco ■ Kava

© Pixabay
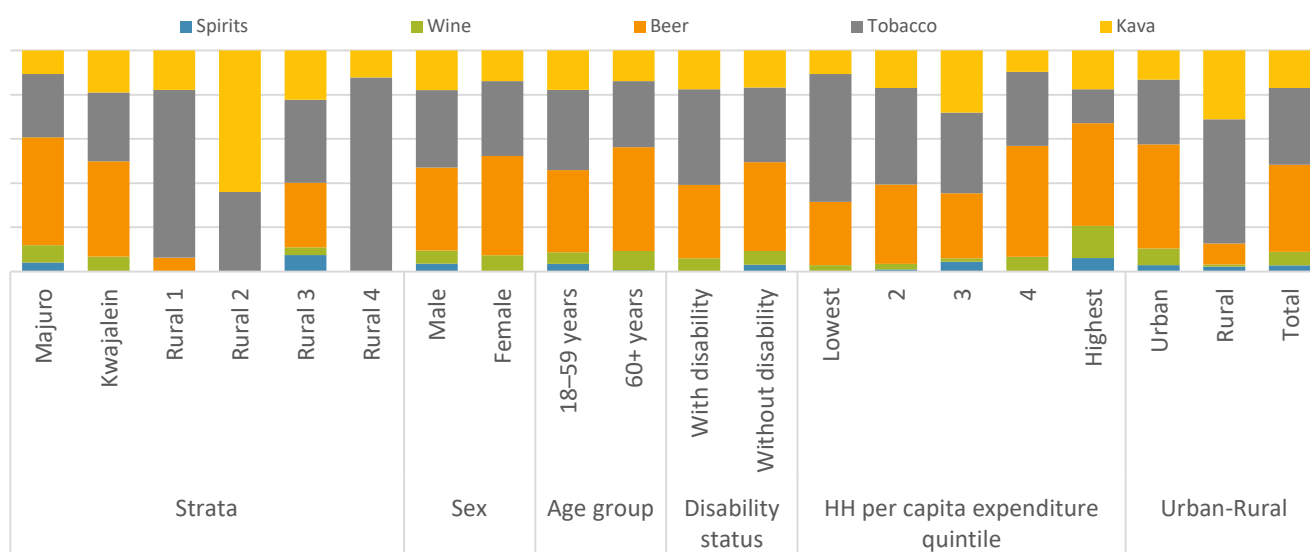
HOUSEHOLD INCOME

Here, we provide a summary of the main components of HH income in RMI. The first subsection highlights some of the important facts relating to the distribution of HH income. Next, we look at income sources and finally, we provide more details on the main HH income sources of employee benefits and primary industry.

This summary highlights the main elements of HH income and aims to present the main findings of the income component of the HIES. There is a multitude of opportunity for more in-depth analysis and thematic studies.

The income aggregates reported herein are all net of intermediate expenditure. Intermediate expenditure are all expenditures associated with any production activity of the HH (HHs purchasing pig food for raising and selling their pigs for instance).

1. Total household income

As per the RMI 2019/20 HIES, the total annual HH income was US$315,000,473 – which makes a total monthly HH income of US$26,250,039. Three-quarters of HH income were sourcing from Cash, 16% from Imputed rents, 12% from Gifts, 3% came from Home production while the remaining 2% were split between in-kind income (2%) and Exchange (less than 1%). The intermediate expenditure, which were subtracted from the total HH income, accounted for US$122,000.

Table 13. Total monthly household income, by population group and income source

	Cash	Home production	Gifts	Exchange	Imputed rents	Interm. exp.	In-kind	Total
Strata								
Majuro	11,116,267	138,526	1,707,951	3,340	2,880,870	-94,606	472,478	16,224,825
Kwajalein	2,862,078	22,937	269,349	5,677	750,412	-378	30,943	3,941,018
Rural 1	882,272	77,011	145,622	7,601	64,440	-3,171		1,173,775
Rural 2	454,637	63,111	134,388	8,172	113,153	-1,723	87	771,825
Rural 3	443,823	46,249	310,699	158	165,744	-3,025	54,276	1,017,923
Rural 4	1,873,088	379,136	486,720	55,772	344,443	-18,905	419	3,120,672
Sex								
Male	12,644,525	585,915	2,185,774	66,206	2,968,545	-112,624	483,182	18,821,522
Female	4,987,640	141,055	868,954	14,514	1,350,518	-9,185	75,021	7,428,517
Age group								
18–59 years	13,065,174	578,652	2,305,686	58,744	3,124,436	-71,259	331,465	19,392,898
60+ years	4,566,991	148,318	749,042	21,976	1,194,627	-50,551	226,738	6,857,141
Disability status								
With disability	1,984,482	96,663	330,614	17,923	522,370	-14,890	99,094	3,036,256
Without disability	15,647,683	630,307	2,724,114	62,798	3,796,693	-106,920	459,109	23,213,784
HH per capita expenditure quintile								
Lowest	2,907,883	201,876	499,266	36,593	678,412	-26,570	51,559	4,349,020
2	3,297,025	218,140	531,504	14,293	834,999	-30,455	21,640	4,887,145
3	2,823,767	135,668	559,897	14,104	843,720	-13,043	22,907	4,387,020
4	3,354,259	95,507	736,994	10,176	914,743	-26,344	81,670	5,167,004
Highest	5,249,232	75,778	727,067	5,554	1,047,190	-25,397	380,426	7,459,849
Urban–Rural								
Urban	13,978,345	161,463	1,977,300	9,017	3,631,282	-94,985	503,421	20,165,844
Rural	3,653,820	565,507	1,077,428	71,703	687,781	-26,825	54,782	6,084,196
Total	**17,632,165**	**726,969**	**3,054,728**	**80,720**	**4,319,063**	**-121,810**	**558,203**	**26,250,039**

Figure 58. Total monthly household income (million US$), by population group
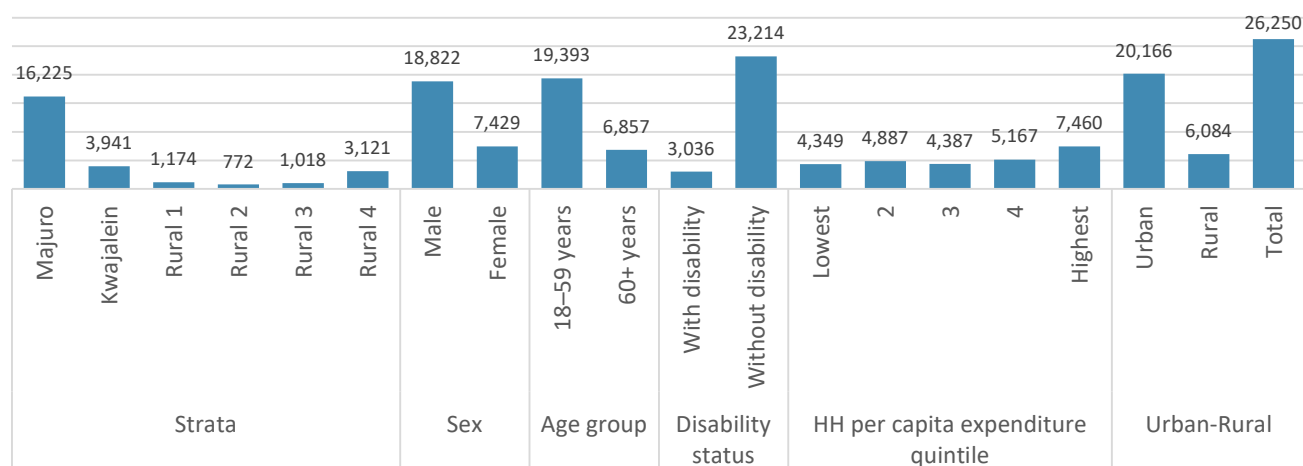
2. Average and median income

National average monthly HH income amounted to around US$1,756. This average was higher in urban than rural areas (US$1,782 in urban and US$1,673 in rural). To give a better understanding of the income distribution among HHs, the median income – the income of the 50th HH percentile – is provided in this analysis. The monthly median HH income was US$1,340 (US$1,333 in urban and US$1,340 in rural).

Urban HHs, male-headed HHs, older-headed HHs and HHs with persons with disability had higher average and median income than resepectively rural HHs, female-headed HHs, younger-headed HHs and HHs without persons with disability.

The stratum that reported the lowest average HH income was Rural 1 with US$1,334 while the lowest median income was in Rural 2 with US$940. Contrarily, the highest average and median income was recorded in Rural 3 atolls (average: US$2,157; median: US$1,921) and that of those in the highest expenditure quintile (average: US$2,497; median US$1,848).

Figure 59. Average and median monthly household income
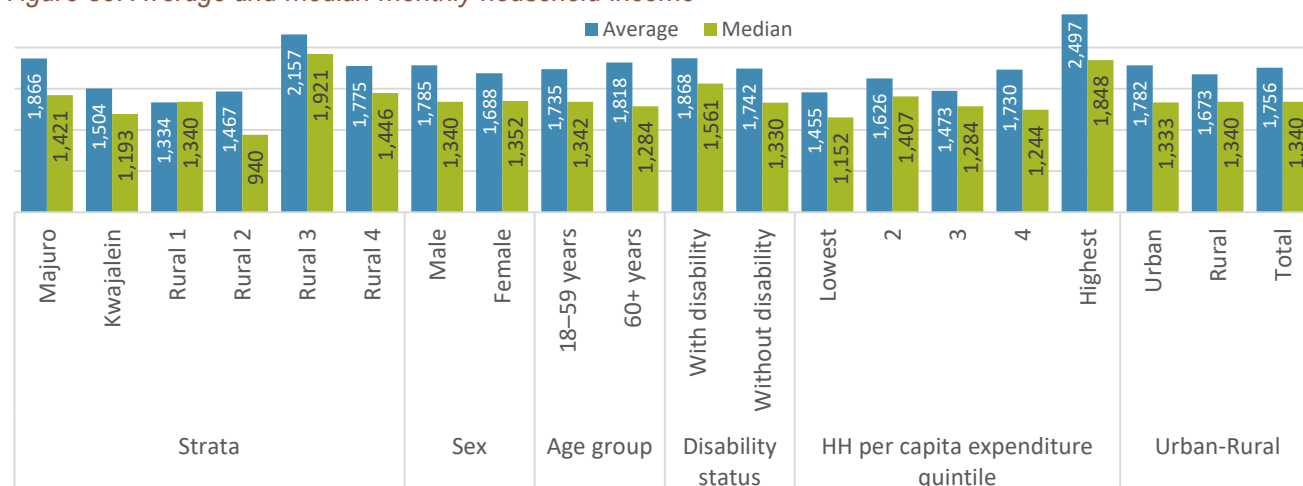
3. Composition of household income

As with expenditure, the main consideration to the categorisation of different HH income sources was to present the data in a logical and easily interpretable structure. For this sake, income analysis follows the Pacific Classification of Income (PACCOI) for classifying HH income.

Income categories are broadly made up of 5 PACCOI divisions: 1) Employment income; 2) Property income; 3) Transfer income; 4) Gifts and remittances income; 5) Imputed rents. These income categories are described as:

1. Employment income consists of employee-related income (e.g., wages, salaries, bonuses, overtime and in-kind employee income such as housing allowance, electricity, food and clothing).

2. Property income relates to the generation of income from assets owned by the HH, which are categorised as home rental (receiving rent from dwellings that the HH owns) or land lease (receiving payments for the use of a piece of land that the HH owns) and other general capital income (interest on deposits or loans, dividend).

3. Transfer income refers to receipts through social security, pension, superannuation or provident funds, child support (alimony), grants or scholarships, insurance claims and other.

4. Gifts and remittances refers to the receipt of cash gifts from domestic or foreign HHs and the receipt of items being home-produced.

5. Imputed rents have already been defined in Section 3 on HH Expenditure.

Income types have already been covered in Section 3 on HH Expenditure with the exception of the 'In-kind from employer' income type which is any good or service acquired in exchange for employee-related services.

3.1. Income category

Employment income accounted for 62% of HH income in RMI, which ranged from 47% to 78% of total HH income in Rural 3 and Rural 1 respectively.

All other income categories were harmonised throughout all disaggregation groups with the exception of 'Gifts and remittances' the share of which was higher in rural areas which accounted for 17% compared to 9% of total HH income in urban areas. Conversely, 'Imputed rents' were higher in urban areas than in rural atolls.

When looking at PACCOI group income distribution (Figure 68), income from Employee benefits was the most significant, followed by Imputed rents.

Share of total income from Employee benefits ranged from 26% in Rural 2 to 59% in Majuro. The share of income from Employee benefits was higher among HHs with persons without disability and in HHs from higher quintiles.

As stated above, income from Imputed rents was higher in urban areas but singularly low in Rural 1.

Income from Agriculture accounted for 10% of total income and was particularly high in Rural 1, Rural 4 atolls and in lower quintiles.

Figure 60. Composition of household income, by PACCOI division

| | | Strata | | | | | Sex | | Age group | | Disability status | | HH per capita expenditure quintile | | | | | Urban-Rural | | |
	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years	With disability	Without disability	Lowest	2	3	4	Highest	Urban	Rural	Total
Employment	61%	57%	78%	62%	47%	70%	63%	59%	64%	57%	63%	62%	66%	63%	59%	60%	62%	61%	66%	62%
Property	2%	7%	0%	0%	0%	0%	2%	2%	2%	3%	0%	2%	0%	3%	1%	1%	3%	3%	0%	2%
Transfer	7%	7%	2%	3%	5%	2%	6%	6%	5%	10%	7%	6%	4%	4%	5%	5%	10%	7%	2%	6%
Gifts, remittances	10%	8%	11%	17%	29%	16%	11%	12%	11%	11%	13%	11%	11%	11%	12%	13%	10%	9%	17%	11%
Imputed rents	20%	20%	9%	17%	19%	13%	18%	20%	19%	19%	18%	19%	18%	19%	23%	21%	16%	20%	14%	19%

Figure 61. Composition of household income, by PACCOI group
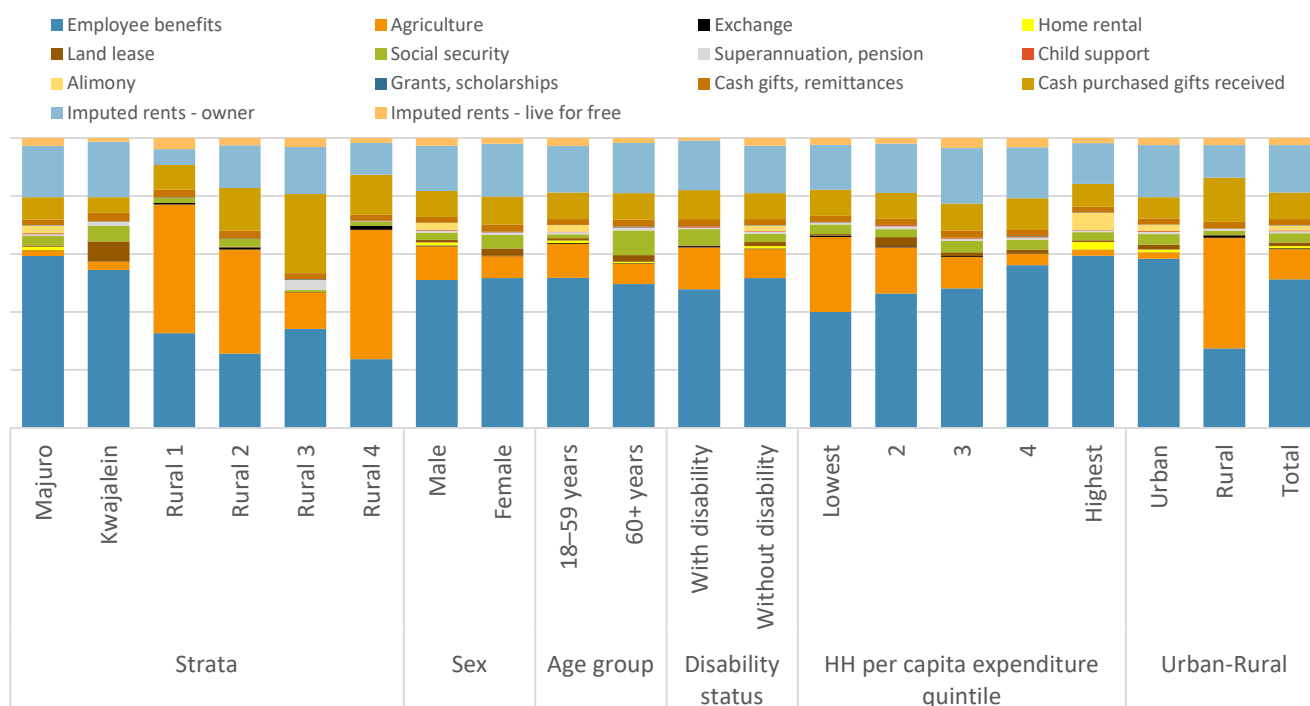
3.2. Income type

Figure 63 below shows the share of total HH income by PACCOI group and income type. Most of the income from Employee benefits and Primary industry were sourced from cash.

Figure 62. Percentage of total household income, by PACCOI group and income source
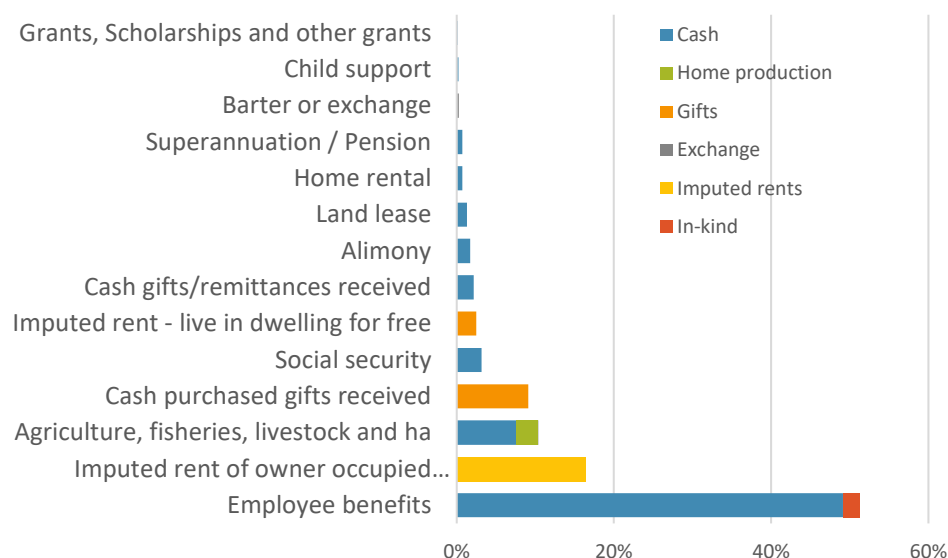
4. Main income items

4.1. Employee benefits

Percentage of households reporting income from employee benefits

Figure 64 shows that three-quarters of RMI HHs reported having received income from employee benefits (PACCOI group 11) including 83% in Kwajalein and 58% in Rural 2.

Figure 63. Percentage of household receiving income from employee benefits

	Strata					Sex		Age group		Disability status		HH per capita expenditure quintile					Urban-Rural		
Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years	With disability	Without disability	Lowest	2	3	4	Highest	Urban	Rural	Total
78%	83%	71%	58%	74%	61%	77%	72%	79%	65%	77%	75%	74%	78%	67%	80%	80%	79%	65%	76%
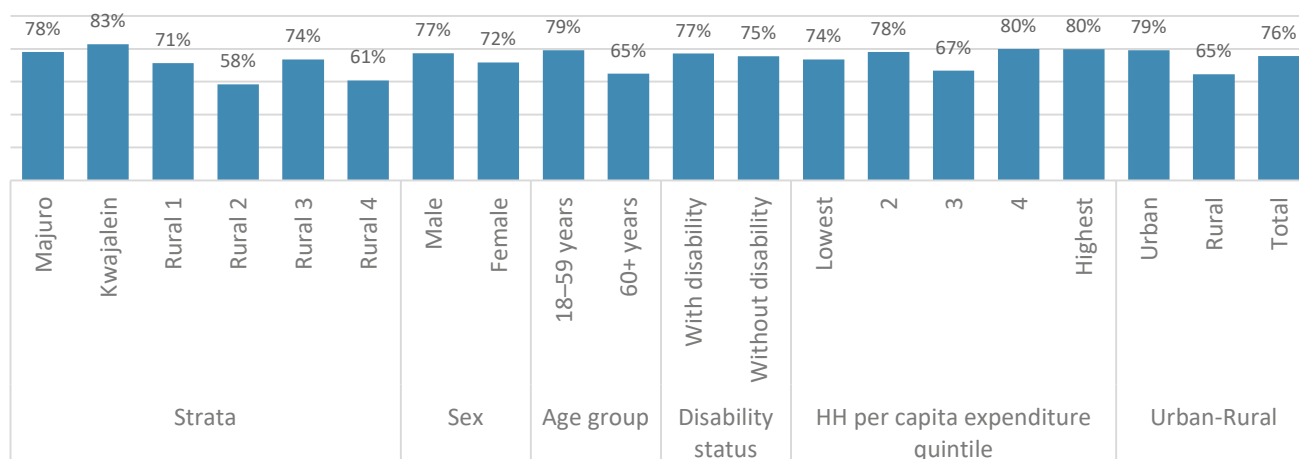
Average and median income from employee benefits

The average monthly HH income from employee benefits was US$904 while the median was US$597. Once again, urban HHs were more likely to have higher average and median employee benefit income. Households from higher quintiles also had higher income from this source.

Figure 64. Average and median monthly household income from employee benefits

■ Average   ■ Median

	Strata						Sex		Age group			Disability status		HH per capita expenditure quintile					Urban-Rural		
	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	15–17 years	18–59 years	60+ years	With disability	Without disability	Lowest	2	3	4	Highest	Urban	Rural	Total
Average	1,114	820	437	37	738	424	917	873		902	909	899	904	585	759	712	976	1,489	1,046	462	904
Median	760	617	326	109	424	90	600	595		625	391	543	600	435	541	402	613	913	693	148	597

Composition of employee benefit income

The vast majority of employee benefit income was generated from 'Cash wages' (92% nationally) than from 'Car' and "Other cash benefit – bonus' (2% for each catergoy). Employee benefit on cars was higher in Rural 3 and among HHs with persons with disability.

4.2. Primary activities

Percentage of households reporting income from primary activities

Around 41% of HHs in RMI reported receiving income from primary activities (PACCOI group 13) ranging between 12% in Kwajalein to 100% in both Rural 1 and Rural 2 atolls. Households from higher quintiles were less numerous than those from lower quintiles to receive income from agriculture, livestock, fishing and/or handicraft activities.

Figure 65. Percentage of household receiving income from primary activities
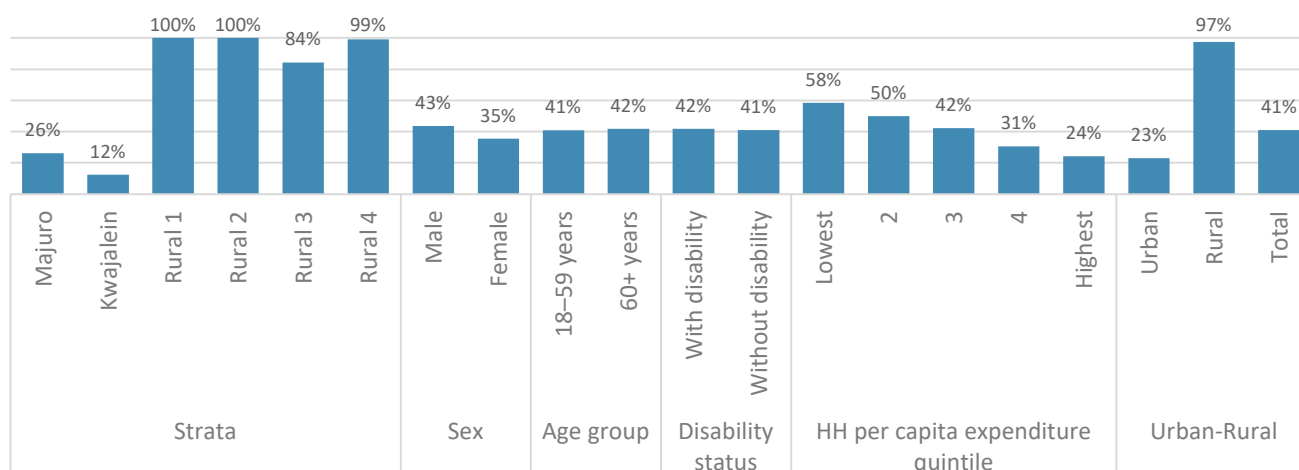
Average and median income from primary activities

The average monthly HH income from primary activities was US$184 while the median was US$0. Contrarily to employee benefits, rural HHs (especially in Rural 4 atolls) were more likely to have higher average and median income from primary activities. The median at US$0 can be explained by the small amount of HHs incurring primary activity income.

Figure 66. Average and median monthly household income from primary activities

© Skye Hohmann
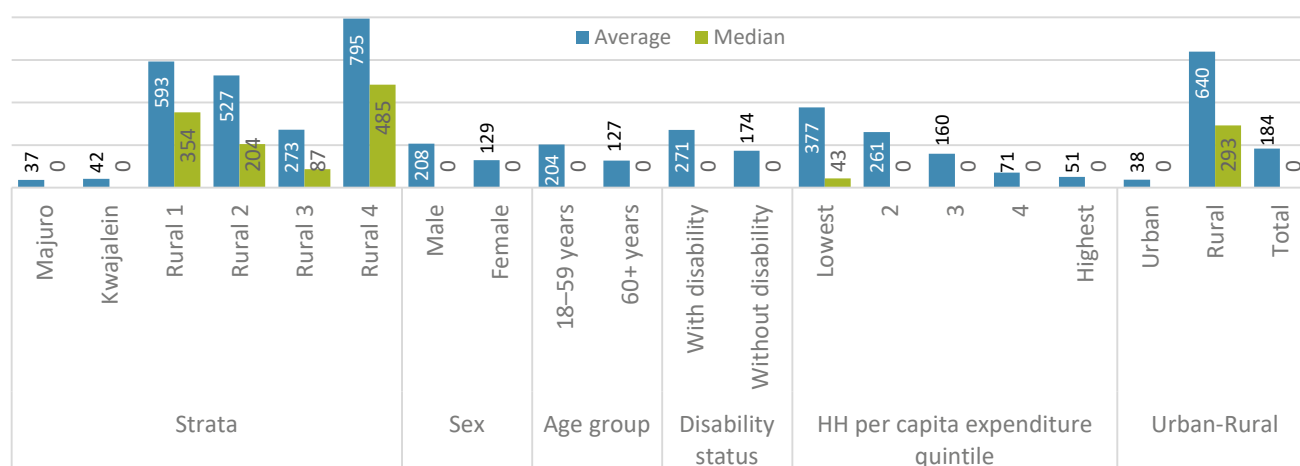
Composition of primary activities income

Nationally, cash generated by selling crops was the highest source of income from primary activities (57%) especially in HHs from lower expenditure quintiles and Kwajalein. This was then followed by 'Subsistence – crops' the share of which was higher in Majuro or in HHs from higher quintiles.

'Subsistence – fisheries' and 'Cash – fisheries' came next with rates respectively reaching 8% and 7% nationally. Households in Majuro fairly relied on fisheries to generate income or for subsistence.

Figure 67. Composition of household income from primary activities, by PACCOI group
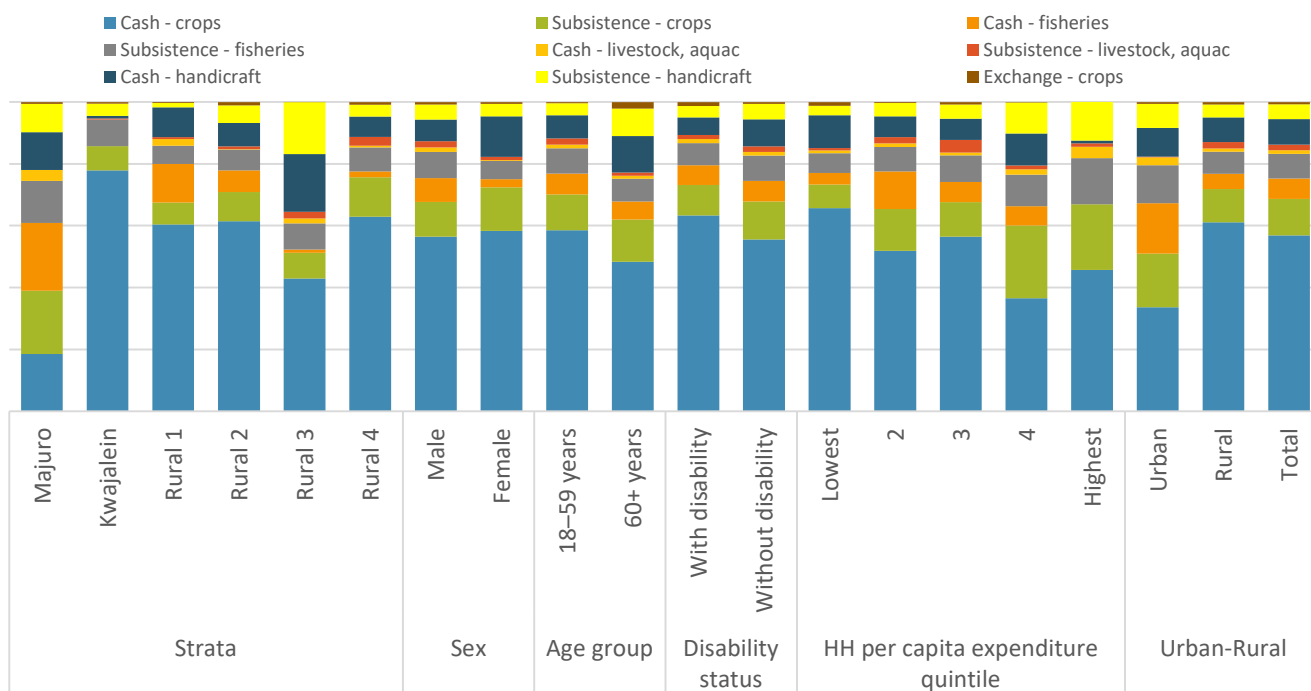
Source of primary activity income

73% of national primary activity income was originating from cash transactions, home production represented 26% while exchange accounted for 1%. The share of home production was higher in Majuro, Rural 3 atolls and in the 2 highest expenditure quintiles.

Figure 68. Source of primary income
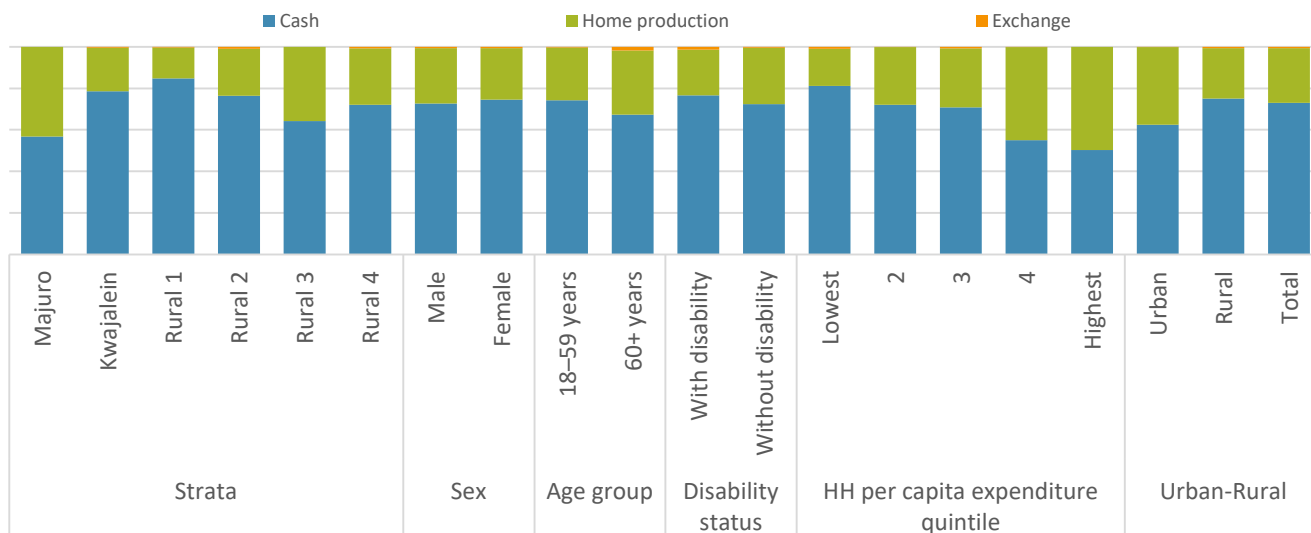
ADDITIONAL ANALYSES

Here, we examine imputed rents, intermediate expenditure and population distribution by expenditure quintile.

1. *Imputed rents*

Nationally, imputed rents (both Actual and Imputed rents) were estimated to be around US$353 per month per HH. Imputed rents in Rural 3 atolls (US$420) were higher than in the rest of the country while those from Rural 1 were the lowest (US$125).

Figure 69. Average household monthly estimates of rents, by population group (millions US$)
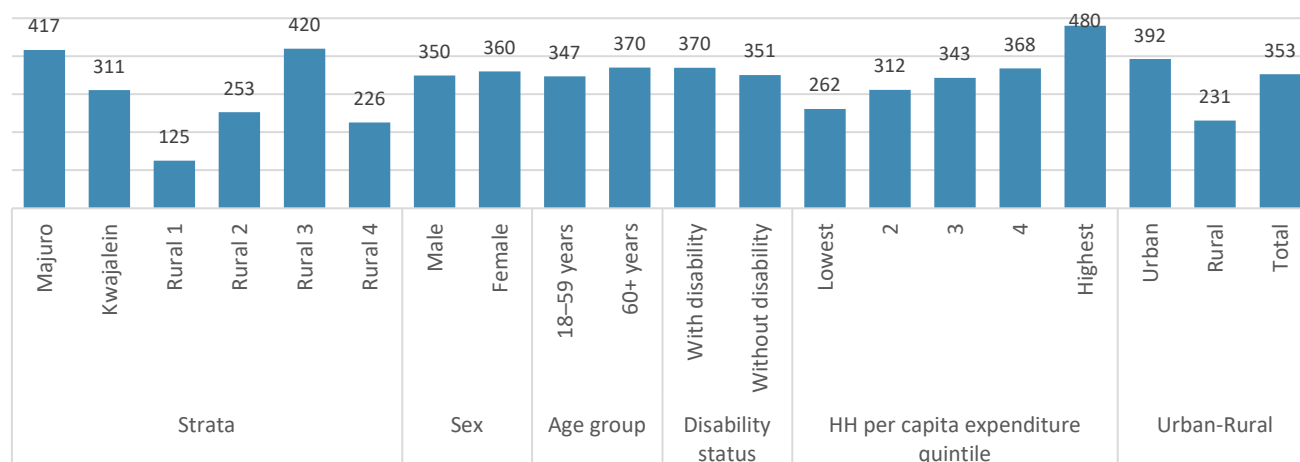
1.1. Intermediate expenditure

Percentage of households reporting intermediate expenditure

Intermediate expenditure was incurred by 17% of all private HHs in RMI, with a higher percentage in rural atolls and by HHs in lower expenditure quintiles.

Figure 70. Percentage of households reporting incurring intermediate expenditure
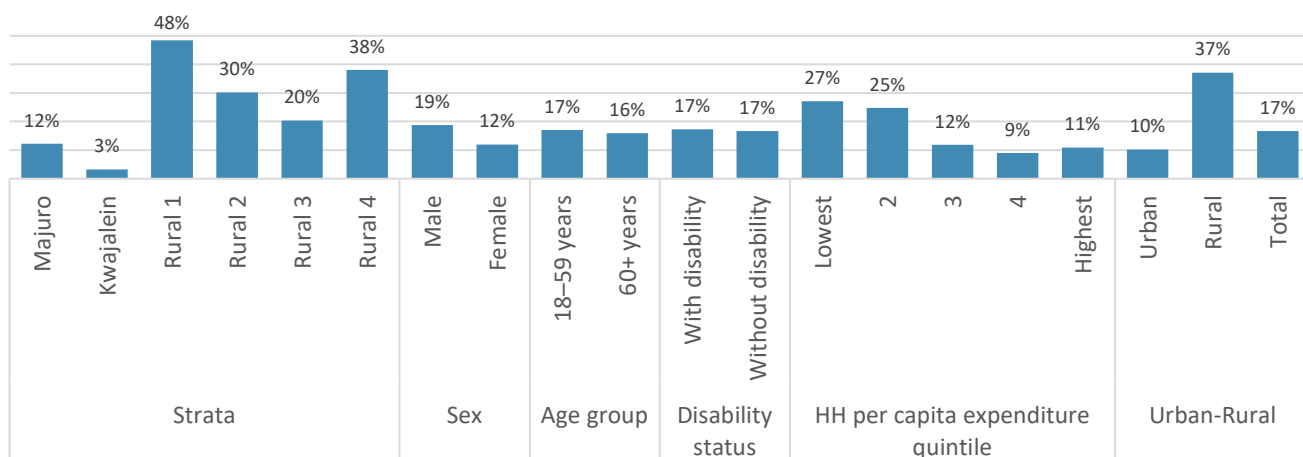
Composition of intermediate expenditure

Non-consumption intermediate expenditure were the most important share of the intermediate expenditure. Non-consumption intermediate expenditures are all expenditures associated with any activity production of the HH like handicraft, fishing, livestock, farming-related expenditures. They represented 86% of all intermediate expenditures, while vehicle purchase and other major recreation durables accounted for respectively 13% and

1% nationally. Households from higher quintiles incurred more intermediate expenditure on vehicle purchase while 50% of intermediate expenditure in Kwajalein were on 'Other major durables'.

Figure 71. Composition of intermediate expenditure, by COICOP group
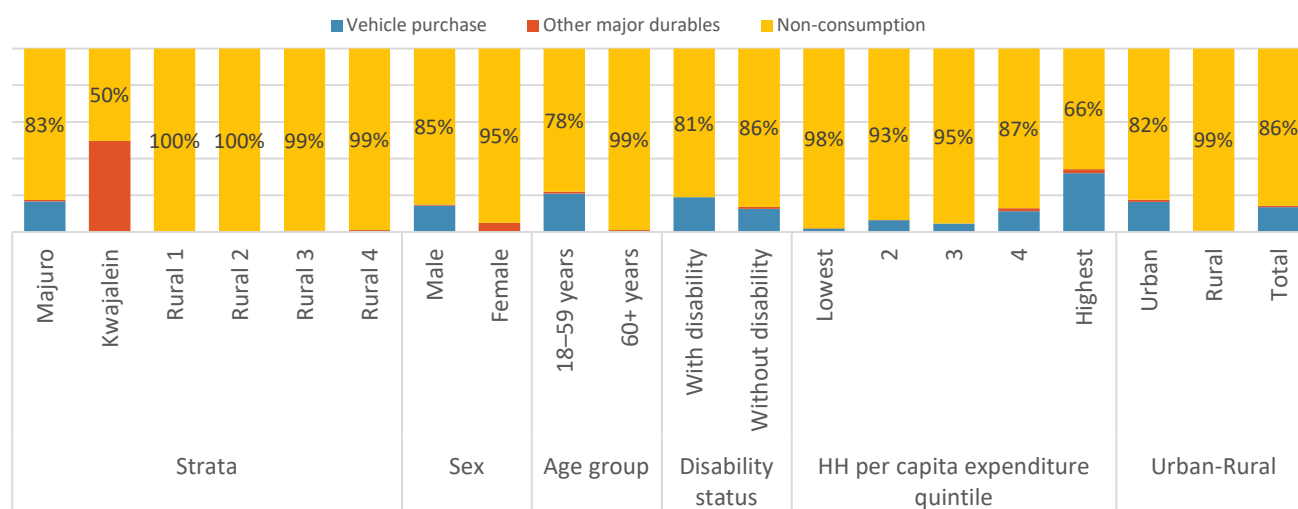
Composition of intermediate expenditure relating to primary activities

In Table 14 below, more detailed information on intermediate expenditure can be found.

Table 14. Total monthly intermediate expenditure on primary activities

	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Total
Non-consumption expenditure – Fishing							
Bait	10,419				177	11,589	22,185
Fishing Line, Fishing Gear	19,811		544		148	481	20,985
Ice	6,641			680			7,321
Fishing Labor	17,402						17,402
Other Small Fishing Item (Hook)	26,015				684	1,111	27,811
Speargun	336				76	113	525
Fishing Rods & Reels	328				47		375
Fishing Wheels	16				22		38
Other Fishing Equipment	392			44		123	558
Total fishing	**81,360**	**0**	**544**	**723**	**1,154**	**13,416**	**97,198**
Non-consumption expenditure – Agriculture							
Seeds	11	1	21	6	4	43	86
Fertilizer					1		1
Fencing		140					140
Freight/Cargo						88	88
Total agriculture	**11**	**142**	**21**	**6**	**5**	**130**	**315**
Non-consumption expenditure – Livestock / Aquaculture							
Feed	1,767					34	1,801
Fencing	2,388	187			45		2,620

	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Total
Total livestock / Aquaculture	**4,156**	**187**	**0**	**0**	**45**	**34**	**4,421**
Non-consumption expenditure – Handicraft							
Materials For Making Handicraft	5,262	50	702	814	1,399	3,470	11,696
Labor For Handicraft	1,829		1,504	168	188	813	4,502
Transport Of Handicraft Items	1,789		376		233	902	3,300
Other Handicraft Materials	200		25	12		139	376
Total handicraft	**9,080**	**50**	**2,606**	**993**	**1,821**	**5,325**	**19,875**
Non-consumption expenditure – Other business							
Materials For Home Processed Food	267			41	27	199	533
Packaging For Home Processed Food					13	26	39
Other Expenses For Home Processed Food						43	43
Total other business	**267**	**0**	**0**	**41**	**40**	**267**	**615**

1.1. Population by quintile

A quintile represents one-fifth of the population (HHs) grouped by their total consumption expenditure (excluding transfers and intermediate expenditure). Quintile 1 represents 20% of the HHs with the lowest expenditure, while Q5 represents 20% of the HHs with the highest expenditure.

Nationally, the distribution of expenditure quintiles is even as they were constructed at a national level. But when looking at this distribution by strata, it is clear that wealthier HHs from Q5 were more likely to be found in Majuro (28%) and Rural 3 (26%) than in Rural 1 (0%) or Rural 2 (10%). Conversely, more poorer HHs from Q1 could be found in Rural 4 and Rural 1 (respectively 47% and 33% of the population in Q1). Individuals from the '60+ years' age group were more likely to belong to the highest quintile.

Figure 72. Distribution of population, by national expenditure quintile
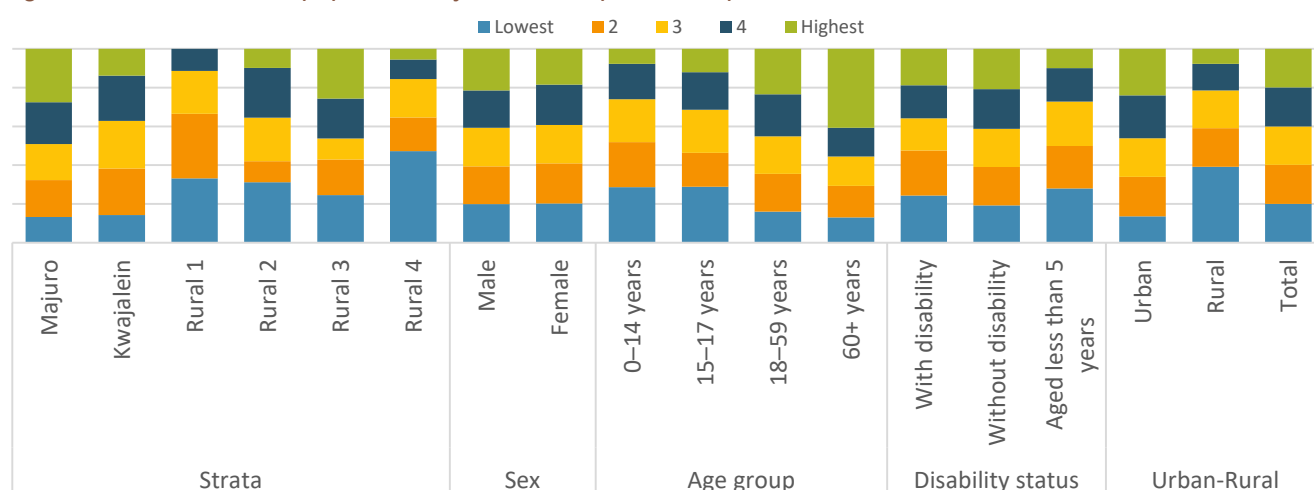
1.2. Income inequality

Lorenz curve and Gini coefficient are used to measure income or expenditure inequality. The Gini coefficient measures the inequality of a distribution among the values of a variable; the higher the value, the more inequal the distribution is. A Gini coefficient of 0 illustrates perfect income equality while a ratio of 1 corresponds to a perfect inequality of income. The Gini coefficient is often defined mathematically based on the Lorenz curve which graphically represents the proportion of total income that is cumulatively earned by x% of the total population.

Lorenz curve in Figure 74 shows that the bottom 20% of the population accounted for around 6% of total income, the bottom 50% of the population accounted for around 22% of total income while 80% of the total population accounted for around 53% of total income (or, in other word, 20% of the population accounted for 47% of total HH income).

Table 15 illustrates the Gini coefficient for each of the disaggregation groups that were used throughout this report. The Gini coefficient was fairly similar throughout all groups with a few exceptions at strata level where there were more income inequalities in Majuro for instance (higher coefficient).

Figure 73. Lorenz curve
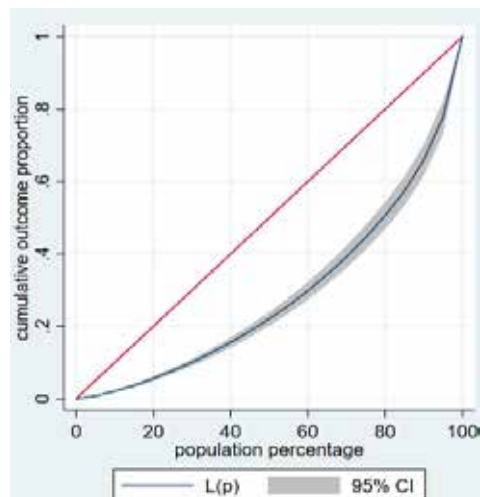
Table 15. Gini coefficient

	Gini coefficient
Strata	
Majuro	0.45
Kwajalein	0.38
Rural 1	0.38
Rural 2	0.31
Rural 3	0.38
Rural 4	0.39
Sex	
Male	0.44
Female	0.40
Age group	
18–59 years	0.42
60+ years	0.44
Disability status	
With disability	0.39
Without disability	0.43
HH per capita expenditure quintile	
Lowest	0.36
2	0.31
3	0.26
4	0.28
Highest	0.36
Urban–Rural	
Urban	0.44
Rural	0.38
Total	**0.43**

APPENDIX 1: SAMPLING ERRORS

The tables in this section present the Relative Sampling Errors (RSEs) for the income and expenditure aggregates. It is beyond the scope of this report to present sampling errors at a finer level of disaggregation, however it should be noted that there is an increased degree of error with finer levels of disaggregation, especially where income and expenditure categories have few transactions and the sample is relatively small.

As a general guide, the below thresholds can be used to help with interpretation of the RSEs and to guide the robustness of each aggregated income and expenditure estimate.

Data quality thresholds

Colour code legend				
RSE of	0.00%	to	4.99%	Reliable estimate
RSE of	5.00%	to	14.99%	Somewhat reliable estimate (use with some caution)
RSE of	15.00%	to	24.99%	Somewhat unreliable (use with caution)
RSE of	25.00%	to	100.00%	Unreliable estimate (do not use)

1. *Relative sampling errors for expenditure aggregates*

Table 16 presents the RSEs for the total expenditure aggregates, by COICOP division and Urban–Rural disaggregation. According to the data quality thresholds presented above, it can be seen that total RSE is 3.3% (i.e., national HH expenditure estimates are very reliable). Disaggregated by Urban–Rural, average annual HH expenditure estimates reach 3.6% in urban areas and 6.3% in rural areas, making the strata disaggregated HH expenditure estimates reliable.

Looking at the RSEs of HH expenditure by COICOP division, it can be seen that the estimates are reasonably reliable at a national level, however when disaggregated by Urban–Rural, they become less reliable. RSEs of expenditure in commonly consumed items, such as those that fall into the categories of 'Food and non-alcoholic beverages', 'Water, housing, electricity and gas', 'Restaurants and hotels' are reasonable across Urban–Rural disaggregations. RSEs of expenditure for items that are not consumed by all HHs, such as 'Education, 'Intermediate expenditure', and 'Recreation and Culture' are higher and the estimates should therefore be used with caution given the potential for being inaccurate.

Tables 17 and 18 present the RSEs for expenditure aggregates by COICOP Group and COICOP class and Urban–Rural. It can be seen that national estimates by COICOP Group and COICOP class are moderately reliable, although the potential for error greatly increases as expenditure estimates are disaggregated by COICOP (not shown here). Geographical expenditure estimates by COICOP Group and Class (and hence Sub-class and COICOP) should generally be treated with caution given the RSE increase the more we disaggregate the estimates.

Table 16. Average household expenditure and RSE, by COICOP division

COICOP division	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Food and non-alcoholic beverages	1,323	3.3%	1,290	4.1%	1,425	5.6%
Alcoholic beverages, tobacco, narcotics	172	8.5%	183	8.9%	142	22.7%
Clothing, footwear	131	6.2%	135	6.6%	118	15.9%
Housing, water, electricity, gas…	1,519	4.2%	1,751	4.3%	827	9.3%
Furnishings, HH equipment…	183	5.7%	205	6.5%	118	8.5%
Health	10	7.3%	11	7.9%	8	17.7%
Transport	301	7.8%	358	8.0%	128	21.8%
Communication	100	7.4%	119	7.2%	42	29.6%
Recreation and culture	67	10.9%	75	12.2%	42	21.2%
Education	36	14.4%	47	14.5%	4	62.1%

COICOP division	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Restaurants and hotels	491	5.1%	582	5.3%	221	12.1%
Miscellaneous goods and services	171	5.5%	199	5.6%	86	15.1%
Non-consumption – cash transfers	127	24.7%	137	29.8%	96	25.1%
Non-consumption – intermediate expenditure	27	32.5%	28	40.3%	24	39.2%
Total HH expenditure	**4,659**	**3.3%**	**5,119**	**3.6%**	**3,280**	**6.3%**

Table 17. Average household expenditure and RSE, by COICOP group and division

COICOP group	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Food	1,175	3.3%	1,146	4.0%	1,260	5.7%
Non-alcoholic beverages	149	5.0%	143	6.0%	165	9.4%
Alcoholic beverages	83	11.7%	105	11.7%	18	60.9%
Tobacco	60	6.9%	53	8.2%	80	12.3%
Narcotics	29	27.3%	24	30.6%	44	51.7%
Clothing	112	6.3%	116	6.9%	101	14.8%
Footwear	19	8.4%	19	8.1%	17	24.9%
Actual rentals for Housing	67	40.9%	89	41.0%	1	95.6%
Imputed rentals for Housing	1,097	3.9%	1,217	4.0%	738	9.8%
Maintenance and repair of the dwelling	22	37.4%	27	40.0%	6	28.0%
Water supply and miscellaneous services	9	17.3%	11	17.2%	0	-
Electricity, gas and other fuels	325	11.1%	406	11.8%	82	15.5%
Furniture and furnishings, carpets	17	9.8%	20	10.2%	6	23.5%
HH textiles	7	19.7%	7	21.5%	7	45.9%
HH appliances	30	7.1%	32	7.6%	24	16.5%
Glassware, tableware and HH	2	22.1%	2	24.6%	1	36.7%
Tools and equipment for house and gardening	6	11.6%	5	15.2%	9	17.3%
Goods and services for routine HH maintenance	121	6.6%	138	7.5%	71	8.9%
Medical products, appliances and equipment	2	16.3%	3	17.4%	1	29.2%
Outpatient services	8	8.0%	8	8.8%	8	18.4%
Purchase of vehicles	40	17.9%	51	18.6%	7	23.7%
Operation of personal transport equipment	64	14.0%	83	14.1%	8	48.0%
Transport services	197	7.4%	225	7.4%	113	22.5%
Postal services	0.2	96.5%	0	-	1	93.9%
Telephone and telefax equipment	25	7.1%	30	7.1%	7	25.7%
Telephone and telefax services	75	8.6%	89	8.4%	34	33.2%
Audio-visual, photographic and info. Equipment	15	10.0%	17	10.9%	7	16.7%
Other major durables for recreation	10	41.1%	10	50.4%	9	58.1%
Other recreational items and equipment	0.4	22.7%	1	23.4%	0.1	66.0%
Recreational and cultural services	32	18.0%	36	19.7%	17	40.0%
Newspapers, books and stationery	10	5.0%	11	5.8%	10	10.3%
Pre-primary and primary education	36	14.4%	47	14.6%	4	62.1%
Education not definable by level	0.2	37.4%	0	37.3%	0	-
Catering services	491	5.1%	582	5.3%	221	12.1%
Personal care	156	5.4%	181	5.5%	82	15.3%
Personal effects n.e.c	1	30.1%	1	32.0%	0.3	36.8%
Insurance	4	21.3%	4	21.8%	1	93.6%
Other services	9	28.8%	12	30.9%	3	31.1%
Non-consumption expenditure – cash	104	27.0%	108	33.5%	89	27.0%
Non-consumption expenditure – tax, fines	0.1	98.1%	0	98.1%	0	-
Non-consumption expenditure – home investment	23	64.2%	29	69.3%	7	45.5%
Non-consumption – intermediate expenditure	27	32.5%	28	40.3%	24	39.2%

Table 18. Average household expenditure and RSE, by COICOP class and division

COICOP class	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Bread and cereals	293	3.5%	294	3.7%	289	8.4%
Meat	255	3.6%	267	3.6%	221	9.8%
Fish and sea food	174	6.0%	130	7.1%	308	8.9%
Milk, cheese and eggs	49	6.8%	56	7.5%	30	13.1%
Oils and fats	36	5.2%	35	6.4%	36	8.2%
Fruit	151	5.4%	122	6.9%	237	8.9%
Vegetables	57	12.5%	69	13.0%	22	40.2%
Sugar, jam, honey, chocolate and confectionaries	33	6.5%	32	8.3%	37	9.2%
Food products n.e.c.	126	5.7%	141	6.4%	79	8.4%
Coffee, tea and cocoa	70	6.5%	71	8.1%	68	9.2%
Mineral water, soft drinks, juice	79	5.7%	73	6.2%	96	12.4%
Spirits	5	36.5%	5	39.7%	3	90.6%
Wine	11	27.5%	14	28.3%	1	60.8%
Beer	68	11.0%	86	10.8%	13	74.4%
Tobacco	60	6.9%	53	8.2%	80	12.3%
Yaqona; Kava; Sakau	29	27.3%	24	30.6%	44	51.7%
Clothing materials	2	31.9%	3	34.8%	1	42.6%
Garments	105	6.3%	107	6.8%	99	15.3%
Other articles of clothing and clothing	1	28.5%	1	33.6%	0.5	50.3%
Cleaning, repair and hire of clothing	5	17.9%	6	18.3%	1	55.7%
Shoes and other footwear	19	8.4%	19	8.1%	17	24.9%
Actual rentals paid by tenants	67	40.9%	89	41.0%	1	95.6%
Imputed rentals of owner occupiers	953	4.7%	1,069	4.7%	606	12.6%
Other imputed rentals	144	13.9%	148	16.8%	132	22.3%
Services for the maintenance and repair	22	37.4%	27	40.0%	6	28.0%
Water supply	9	17.3%	11	17.2%	0	-
Electricity	219	6.0%	284	5.9%	24	43.1%
Gas	62	4.5%	66	4.7%	51	12.2%
Liquid fuels	42	84.0%	54	87.5%	7	47.1%
Solid fuels	2	68.5%	2	71.1%	0.2	61.3%
Furniture and furnishings,	14	8.7%	17	9.1%	5	22.7%
Carpets and other floor coverings	3	32.3%	3	34.1%	1	53.4%
HH textiles	7	19.7%	7	21.5%	7	45.9%
Major HH appliances (electric or not)	28	7.4%	30	8.0%	23	16.8%
Small electric HH appliance	2	5.0%	2	4.9%	1	18.0%
Glassware, tableware and HH utensils	2	22.1%	2	24.6%	1	36.7%
Major tools and equipment	3	18.8%	3	21.3%	2	35.5%
Small tools and miscellaneous accessories	3	14.9%	2	21.0%	8	19.2%
Non durable HH goods	118	6.1%	134	7.0%	71	8.9%
Domestic services and HH service	3	80.1%	4	80.6%	0.1	99.6%
Pharmaceutical products	2	14.4%	2	15.4%	1	29.6%
Therapeutic appliances and equipment	0.2	62.8%	0.3	63.1%	0.0	93.7%
Medical services	7	8.8%	7	8.7%	6	25.1%
Paramedical services	1	18.7%	1	24.2%	2	27.2%
Motor cars	38	18.8%	50	18.7%	0.3	94.0%
Motor cycles	1	43.6%	0	98.7%	2	47.7%
Bicycles	1	24.5%	0	24.3%	4	29.9%
Animal drawn cart etc	0.0	91.5%	0	-	0.1	88.9%
Spare parts and accessories for personal vehicle	3	35.0%	4	36.7%	1	36.1%
Fuels and lubricants for personal vehicle	35	14.6%	46	14.8%	4	49.1%
Maintenance and repair of personal vehicle	5	75.2%	6	75.2%	0	-

COICOP class	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Other services in respect of personal vehicle	21	18.6%	27	18.8%	4	87.0%
Passenger transport by road	131	7.4%	165	7.3%	31	30.1%
Passenger transport by air	64	13.6%	59	16.9%	80	23.6%
Passenger transport by sea	2	58.2%	1	81.9%	2	54.3%
Postal services	0.2	96.5%	0.0	-	1	93.9%
Telephone and telefax equipment	25	7.1%	30	7.1%	7	25.7%
Telephone and telefax services	75	8.6%	89	8.4%	34	33.2%
Equipment for the reception, recording of sounds, pictures	5	8.4%	6	9.4%	3	17.0%
Information processing equipment	9	14.2%	11	15.2%	3	24.2%
Major durables for outdoor recreation	1	36.3%	1	44.8%	1	49.8%
Maintenance and repair of other major durables	9	42.2%	10	51.7%	9	58.8%
Games, toys and hobbies	0.4	22.7%	1	23.4%	0.1	68.7%
Veterinary and other services for pets	0.0	85.6%	0.0	98.2%	0.0	95.6%
Recreational and sporting services	3	43.6%	3	47.6%	1	93.9%
Cultural services	16	18.1%	18	20.3%	11	37.9%
Games of chance	13	26.5%	16	28.0%	4	77.3%
Books	5	5.3%	5	6.1%	4	10.9%
Newspapers and periodicals	2	16.3%	2	16.2%	0	-
Stationery and drawing materials	4	9.5%	3	12.4%	5	13.2%
Pre-primary and primary education	36	14.4%	47	14.6%	4	62.1%
Education not defined by level	0.2	37.4%	0.3	37.3%	0	-
Restaurants, cafes and the like	487	5.1%	577	5.2%	219	12.2%
Canteens	4	22.8%	5	25.4%	2	35.0%
Hairdressing salons and personal grooming establishments	3	24.2%	4	24.4%	0.1	71.8%
Other appliances, articles and products	153	5.3%	177	5.3%	82	15.3%
Other personal effects	1	30.1%	1	32.0%	0.3	36.8%
Life insurance	0.0	82.6%	0.0	98.9%	0.0	95.6%
Insurance connected with health	0.2	87.9%	0.0	98.9%	1	94.9%
Insurance connected with transport	3	22.1%	4	22.1%	0	-
Other insurance	0.0	99.1%	0.0	99.1%	0	-
Other services n.e.c.	9	28.8%	12	30.9%	3	31.1%
Non-consumption expenditure – cash donations	104	27.0%	108	33.5%	89	27.0%
Non-consumption expenditure – tax, fines	0.1	98.1%	0.1	98.1%	0	-
Non-consumption expenditure – home investment	23	64.2%	29	69.3%	7	45.5%
Non-consumption – intermediate	27	32.5%	28	40.3%	24	39.2%

2. *Relative sampling errors for income aggregates*

Table 19 presents the RSEs for the total income aggregates, by PACCOI division and Urban–Rural disaggregation. According to the data quality thresholds presented above, it can be seen that total RSE is 6.2% (i.e., national HH income estimates are fairly reliable). Disaggregated by Urban–Rural, the error potential of average annual HH income estimates reach 7.6% in urban areas and 9.2% in rural areas. This makes the strata disaggregation moderately reliable when looking at total HH income estimates.

Looking at the RSEs of HH income by PACCOI division, it can be seen that the estimates should be used with caution at a national level, ranging from 3.9 to 35.5%, however when disaggregated by Urban–Rural, they become less reliable. RSEs for common income items, such as those that fall into the categories of 'Imputed rents' and 'Employment income' are reasonable across all strata. RSEs of income for items that are not common income sources, such as 'Property', 'Transfer' and 'Intermediate expenditure', are higher and the estimates should therefore be used with caution given the potential for being inaccurate.

Tables 20 and 21 present the RSEs for income aggregates by PACCOI group and PACCOI Class. It can be seen that national estimates by PACCOI group and PACCOI Class should be used with caution. This is all the more the case when income estimates are disaggregated by PACCOI and Urban–Rural areas. Geographical expenditure estimates by PACCOI group and Class should generally be treated with caution given the RSE increase the more we disaggregate the estimates.

Table 19. Average household income and RSE, by PACCOI division

COICOP division	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Employment income	3,605	6.2%	3,612	7.6%	3,585	9.2%
Property Income	118	35.5%	157	35.7%	4	47.1%
Transfer Income	345	29.0%	417	31.9%	127	19.2%
Gifts and remittances	655	7.3%	561	9.5%	938	12.1%
Imputed rent	1,097	3.9%	1,217	4.0%	738	9.8%
Intermediate	-27	-32.7%	-28	-40.4%	-24	-39.7%
Total HH income	**3,605**	**6.0%**	**3,612**	**7.6%**	**3,585**	**9.2%**

Table 20. Average household income and RSE, by PACCOI group and division

COICOP group	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Employee benefits	2,981	7.1%	3,482	7.9%	1,481	10.8%
Agriculture, fisheries, livestock, handicraft	610	14.2%	127	29.6%	2,055	14.5%
Barter or exchange	14	33.5%	2	56.3%	50	38.3%
Home rental	43	81.4%	57	81.4%	0	-
Land lease	75	32.6%	99	33.0%	4	47.1%
Social security	185	11.5%	219	12.5%	80	23.8%
Superannuation / Pension	42	23.7%	44	27.5%	36	44.5%
Child support	13	26.9%	17	27.6%	2	61.1%
Alimony	99	96.6%	131	97.0%	2	93.5%
Grants, scholarships and other grants	6	37.2%	6	49.1%	8	49.5%
Cash gifts / remittances received	125	8.9%	127	11.0%	121	12.1%
Cash purchased gifts received	530	8.1%	434	10.9%	818	13.2%
Imputed rent of owner occupied HHs	953	4.7%	1,069	4.7%	606	12.6%
Imputed rent – live in dwelling for free	144	13.9%	148	16.8%	132	22.3%
Intermediate expenditure	-27	-32.7%	-28	-40.4%	-24	-39.7%

Table 21. Average household income and RSE, by PACCOI class and division

COICOP class	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Cash income from employers	2,858	6.3%	3,334	7.0%	1,432	10.8%
In-kind income from employers	123	44.0%	148	48.3%	48	62.2%
Cash from agricultural crops	346	20.3%	43	52.4%	1,253	20.7%
Subsistence from agricultural crops	72	10.9%	22	29.3%	222	11.4%
Cash from fisheries	40	42.1%	21	68.0%	99	51.8%
Subsistence from fisheries	50	11.6%	16	31.1%	152	11.2%
Cash from livestock & aquaculture	7	32.4%	3	62.0%	19	34.5%
Subsistence from livestock & aquaculture	11	30.8%	0.1	94.4%	43	32.2%
Cash from handicrafts	50	18.7%	12	29.3%	165	19.4%
Subsistence from handicrafts	29	12.7%	10	27.9%	86	16.0%
Barter from agricultural crops	4	26.1%	1	57.1%	16	29.6%
Barter from fisheries	5	39.6%	2	66.3%	16	48.9%

COICOP class	NATIONAL		Urban		Rural	
	Mean	RSE	Mean	RSE	Mean	RSE
Barter from livestock & aquaculture	4	41.1%	1	73.3%	12	47.4%
Barter from handicrafts	5	33.4%	0.1	73.9%	22	33.5%
Home rental	43	81.4%	57	81.4%	0	-
Land lease	75	32.6%	99	33.0%	4	47.1%
Social security / Pension	185	11.5%	219	12.5%	80	23.8%
Four atolls / 177 pay	42	23.7%	44	27.5%	36	44.5%
Grants, Scholarships and other grants	13	26.9%	17	27.6%	2	61.1%
Insurance claim	99	96.6%	131	97.0%	2	93.5%
Other transfer income	6	37.2%	6	49.1%	8	49.5%
Cash gifts/remittances received	125	8.9%	127	11.0%	121	12.1%
Gift received	530	8.1%	434	10.9%	818	13.2%
Imputed rent of owner occupied HHs	953	4.7%	1,069	4.7%	606	12.6%
Imputed rent – live in dwelling for free	144	13.9%	148	16.8%	132	22.3%
Agriculture	-0.1	-46.6%	0.0	-87.6%	-0.1	-37.8%
Fisheries	-21	-40.5%	-24	-46.5%	-14	-68.5%
Livestock	-1	-39.0%	-1	-39.6%	-0.1	-70.5%
Handicraft	-4	-20.3%	-3	-32.5%	-9	-24.8%

APPENDIX 2: POPULATION TABLES

Table 22: Population that ever attended school (aged 3+)

	Yes	No	Do not know	Total
Strata				
Majuro	27,495	1,485	47	29,027
Kwajalein	9,084	754	112	9,950
Rural 1	2,438	86		2,524
Rural 2	1,652	86	10	1,749
Rural 3	1,559	129	8	1,697
Rural 4	6,505	448		6,953
Sex of main respondent				
Male	24,244	1,488	135	25,867
Female	24,489	1,502	42	26,033
Age group				
3–14 years	10,625	2,441		13,067
15–17 years	2,697	42		2,739
18–59 years	30,375	430	150	30,955
60+ years	5,035	76	27	5,139
Disability status				
With disability	1,694	175	11	1,881
Without disability	46,923	1,077	166	48,166
Aged less than 5 years	116	1,737		1,853
Per capita expenditure quintile				
Lowest	9,237	826	51	10,114
2	9,679	728	45	10,453
3	9,535	776	45	10,356
4	9,954	454	11	10,420
Highest	10,328	205	25	10,558
Urban–Rural				
Urban	36,579	2,239	159	38,977
Rural	12,154	750	18	12,923
Total	48,733	2,990	177	51,900

Table 23: Reason for never attending school (aged 3+)

	Too young	Too expensive	Too far away/ school unavailable	No transportation available	Medical reasons	Disability	Family problems	Closest school is full	Other (note)	Not interested	Total
Strata											
Majuro	1,080	2	13		13	69	153	16	67	71	1,485
Kwajalein	600					22	59		17	56	754
Rural 1	56			1			29				86
Rural 2	53						32		1		86
Rural 3	82		12	1	6	13	6		5	3	129
Rural 4	359				17	18	45			9	448
Sex											
Male	1,010	2	4	1	36	62	193	14	90	76	1,488
Female	1,221		22	1	1	60	132	2		62	1,502
Age group											
3–14 years	2,230	2		1	11	55	57	16	22	46	2,441
15–17 years	1					3	26			12	42
18–59 years			7	1	26	64	184		68	80	430
60+ years			19				58				76
Disability status											
With disability	33		16		22	60	36			9	175
Without disability	462	2	10	2	15	61	289	16	90	129	1,077
Aged less than 5 years	1,736						1				1,737
Per capita expenditure quintile											
Lowest	547	2	7	1	20	59	145	16	14	14	826
2	581		13		1	1	79		5	47	728
3	611		3	1	13	46	42		17	42	776
4	354		3		3	14	14		53	14	454
Highest	138					2	45			20	205
Urban–Rural											
Urban	1,680	2	13		13	91	212	16	84	127	2,239
Rural	551		12	2	23	31	113		6	11	750
Total	2,231	2	26	2	37	122	325	16	90	138	2,990

Table 24: Highest level of school attended (aged 3+)

	Preschool	Primary school	Secondary/ high school	Post-secondary	Tertiary/ University	Post-tertiary	Other	Total
Strata								
Majuro	919	8,412	11,569	4,168	1,900	435	93	27,495
Kwajalein	256	2,415	5,322	956	95	11	28	9,084
Rural 1	101	1,192	1,090	51	4			2,438
Rural 2	73	606	784	146	43			1,652
Rural 3	55	666	682	104	53			1,559
Rural 4	350	3,249	2,442	411	52			6,505
Sex								
Male	808	8,070	10,486	3,358	1,170	245	108	24,244
Female	947	8,469	11,402	2,479	977	201	13	24,489
Age group								
3–14 years	1,755	8,840	30					10,625
15–17 years		1,137	1,560					2,697
18–59 years		5,290	17,569	5,353	1,673	368	121	30,375
60+ years		1,272	2,728	483	473	78		5,035
Disability status								
With disability	33	658	873	96	21		13	1,694
Without disability	1,620	15,867	21,016	5,740	2,126	446	108	46,923
Aged less than 5 years	102	14						116
Per capita expenditure quintile								
Lowest	506	4,861	3,323	469	67	11		9,237
2	429	3,728	4,762	614	119	13	13	9,679
3	420	3,359	4,332	1,232	130	34	28	9,535
4	316	3,116	4,936	1,110	449	13	13	9,954
Highest	84	1,476	4,535	2,412	1,381	374	67	10,328
Urban–Rural								
Urban	1,175	10,826	16,891	5,124	1,995	446	121	36,579
Rural	580	5,713	4,997	713	152			12,154
Total	1,755	16,539	21,888	5,837	2,147	446	121	48,733

Table 25: Currently attending school (aged 3+)

	Yes	No	Do not know	Total
Strata				
Majuro	7,784	19,678	33	27,495
Kwajalein	2,467	6,617		9,084
Rural 1	684	1,754		2,438
Rural 2	551	1,100	1	1,652
Rural 3	505	1,052	3	1,559
Rural 4	2,237	4,268		6,505
Sex of main respondent				
Male	6,955	17,289		24,244
Female	7,272	17,179	37	24,489
Age group				
3–14 years	10,267	359		10,625
15–17 years	2,222	476		2,697
18–59 years	1,739	28,619	17	30,375
60+ years		5,015	20	5,035
Disability status				
With disability	210	1,464	20	1,694
Without disability	13,903	33,004	17	46,923
Aged less than 5 years	115	1		116
Per capita expenditure quintile				
Lowest	3,598	5,638	1	9,237
2	2,955	6,725		9,679
3	3,209	6,326		9,535
4	2,948	6,991	16	9,954
Highest	1,518	8,789	20	10,328
Urban–Rural				
Urban	10,251	26,295	33	36,579
Rural	3,977	8,173	4	12,154
Total	14,228	34,468	37	48,733

Table 26: Illness (number of persons)

	Ongoing illness		Other illness		Illness prevents activity		Illness causes loss of earnings		Total
	Yes	No	Yes	No	Yes	No	Yes	No	
Strata									
Majuro	5,333	25,028	3,488	26,873	2,058	28,303	502	29,859	30,361
Kwajalein	1,205	9,212	1,070	9,347	649	9,768	187	10,230	10,417
Rural 1	404	2,221	200	2,425	226	2,400	25	2,600	2,625
Rural 2	251	1,658	250	1,659	64	1,846	94	1,816	1,909
Rural 3	334	1,453	228	1,559	110	1,677	28	1,758	1,787
Rural 4	1,210	6,079	1,092	6,198	511	6,779	171	7,118	7,289
Sex									
Male	4,349	22,695	3,252	23,793	1,849	25,196	624	26,421	27,045
Female	4,387	22,956	3,076	24,267	1,767	25,576	383	26,960	27,344
Age group									
0–14 years	239	15,315	2,049	13,505	560	14,994	68	15,486	15,555
15–17 years	53	2,686	152	2,588	36	2,703	9	2,731	2,739
18–59 years	5,471	25,484	3,263	27,692	2,213	28,743	812	30,143	30,955
60+ years	2,973	2,166	865	4,274	807	4,332	118	5,020	5,139
Disability status									
With disability	749	1,131	517	1,364	354	1,527	106	1,775	1,881
Without disability	7,915	40,252	5,087	43,079	3,032	45,134	875	47,291	48,166
Aged less than 5 years	73	4,268	724	3,617	230	4,111	27	4,314	4,341
Per capita expenditure quintile									
Lowest	1,372	9,538	1,331	9,579	665	10,245	169	10,742	10,910
2	1,330	9,598	1,398	9,530	689	10,239	236	10,692	10,928
3	1,493	9,332	1,345	9,480	701	10,123	211	10,613	10,824
4	1,833	9,047	1,254	9,626	619	10,261	186	10,693	10,880
Highest	2,709	8,137	1,000	9,846	941	9,905	205	10,641	10,846
Urban–Rural									
Urban	6,537	34,240	4,557	36,220	2,707	38,071	689	40,089	40,777
Rural	2,200	11,411	1,771	11,840	910	12,701	319	13,292	13,611
Total	8,737	45,651	6,328	48,060	3,616	50,772	1,007	53,381	54,388

Table 27: Individuals (aged 5+) having functional challenges, by domain

	Seeing		Hearing		Mobility		Communication		Memory		Self-care		Total
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Strata													
Majuro	360	27,811	91	28,080	249	27,922	103	28,068	290	27,881	144	28,027	28,171
Kwajalein	45	9,371	34	9,383	266	9,150	57	9,359	60	9,356	48	9,368	9,416
Rural 1	25	2,448	100	2,372		2,473		2,473		2,473		2,473	2,473
Rural 2	1	1,726		1,727	83	1,644		1,727		1,727		1,727	1,727
Rural 3	6	1,634	4	1,636	28	1,612	4	1,636	7	1,633	14	1,626	1,640
Rural 4	73	6,547	43	6,578	125	6,495	35	6,585	87	6,533	17	6,603	6,620
Sex													
Male	174	24,918	215	24,878	381	24,711	138	24,955	299	24,793	144	24,949	25,093
Female	335	24,620	57	24,897	371	24,584	62	24,893	144	24,810	79	24,875	24,954
Age group													
5–14 years	35	11,179	32	11,181	68	11,145	88	11,126	106	11,107	114	11,100	11,213
15–17 years	12	2,727	3	2,736	3	2,737	2	2,737		2,739	3	2,737	2,739
18–59 years	304	30,651	179	30,776	255	30,701	85	30,870	112	30,843	51	30,905	30,955
60+ years	158	4,981	57	5,082	427	4,712	25	5,114	225	4,914	56	5,083	5,139
Disability status													
With disability	509	1,372	271	1,609	752	1,129	200	1,681	443	1,437	223	1,658	1,881
Without disability		48,166		48,166		48,166		48,166		48,166		48,166	48,166
Per capita expenditure quintile													
Lowest	166	9,525	41	9,650	144	9,547	72	9,619	86	9,605	45	9,646	9,691
2	112	9,865	108	9,868	193	9,783	43	9,933	59	9,918	48	9,928	9,976
3	59	9,775	60	9,774	142	9,692	62	9,772	90	9,744	38	9,796	9,834
4	50	10,084	42	10,092	185	9,949	20	10,114	119	10,015	38	10,096	10,134
Highest	122	10,290	20	10,392	88	10,324	2	10,410	89	10,323	53	10,359	10,412
Urban–Rural													
Urban	405	37,183	124	37,463	515	37,072	160	37,427	350	37,237	192	37,395	37,587
Rural	104	12,356	147	12,313	237	12,223	39	12,420	93	12,366	31	12,429	12,460
Total	509	49,538	271	49,775	752	49,295	200	49,847	443	49,603	223	49,824	50,047

Table 28: Use of media and ownership of technology (aged 10+)

	Access the Internet		Mobile phone use		Mobile phone ownership		Tablet ownership		Laptop ownership		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Total
Strata											
Majuro	11,299	13,949	13,066	12,182	12,366	12,881	1,177	24,070	2,021	23,226	25,248
Kwajalein	4,220	4,371	2,889	5,702	3,350	5,241	507	8,083	184	8,406	8,591
Rural 1	0	2,266	808	1,458	227	2,040	25	2,241		2,266	2,266
Rural 2	173	1,332	759	746	576	929	136	1,369	94	1,411	1,505
Rural 3	400	1,032	652	780	538	894	85	1,347	74	1,358	1,432
Rural 4	88	5,535	1,115	4,508	433	5,190	220	5,403	72	5,551	5,623
Sex											
Male	8,013	14,473	9,591	12,896	8,878	13,609	994	21,493	1,452	21,035	22,487
Female	8,166	14,012	9,698	12,480	8,611	13,566	1,156	21,021	994	21,184	22,177
Age group											
10–14 years	1,131	4,700	705	5,126	308	5,523	517	5,314	18	5,813	5,831
15–17 years	938	1,801	625	2,115	422	2,317	41	2,698	27	2,713	2,739
18–59 years	12,665	18,290	15,318	15,638	14,314	16,641	1,228	29,727	1,983	28,972	30,955
60+ years	1,445	3,694	2,642	2,497	2,445	2,694	364	4,775	418	4,721	5,139
Disability status											
With disability	472	1,328	884	915	648	1,151	171	1,628	79	1,721	1,800
Without disability	15,707	27,157	18,404	24,461	16,841	26,024	1,979	40,886	2,367	40,498	42,865
Per capita expenditure quintile											
Lowest	737	7,466	1,304	6,899	1,199	7,004	142	8,061	38	8,165	8,203
2	2,400	6,373	3,165	5,607	2,318	6,455	291	8,482	154	8,619	8,773
3	2,894	5,579	3,262	5,211	2,864	5,609	240	8,233	210	8,263	8,473
4	4,107	4,999	4,623	4,482	4,370	4,736	614	8,491	488	8,617	9,105
Highest	6,042	4,069	6,934	3,176	6,739	3,372	864	9,246	1,555	8,555	10,110
Urban–Rural											
Urban	15,518	18,320	15,955	17,884	15,716	18,122	1,685	32,153	2,206	31,633	33,838
Rural	661	10,165	3,334	7,492	1,773	9,053	466	10,360	240	10,586	10,826
Total	16,179	28,485	19,289	25,376	17,489	27,175	2,150	42,514	2,446	42,219	44,664

Table 29: Location of internet access (internet users reported up to 3 locations)

	Modem	Work	Café	Education place	Another HH	3G	Other
Strata							
Majuro	6,690	2,445	13	774	2,896	831	28
Kwajalein	2,345	955	0	259	1,492	196	303
Rural 1	0	0	0	0	0	0	0
Rural 2	0	21	0	120	43	0	21
Rural 3	41	61	2.3	74	149	16	118
Rural 4	0	8.5	0	37	44	0	0
Sex							
Male	4,490	2,296	16	564	2,055	540	234
Female	4,586	1,194	0	699	2,569	503	236
Age group							
10–14 years	796	4	0	186	285	71	7
15–17 years	417	0	0	279	420	14	12
18–59 years	6,798	3,143	16	784	3,812	844	448
60+ years	1,066	343	0	14	107	113	1
Disability status							
With disability	387	15	13	1	38	33	0
Without disability	8,689	3,475	2.3	1,262	4,585	1,009	469
Per capita expenditure quintile							
Lowest	86	49	0	108	595	6	1
2	944	296	0	135	1,071	48	26
3	1,703	600	0	323	761	45	68
4	2,488	805	16	351	923	330	225
Highest	3,855	1,740	0	345	1,274	614	149
Urban–Rural							
Urban	9,035	3,399	13	1,033	4,389	1,027	330
Rural	41	90	2	231	235	16	139
Total	9,076	3,490	16	1,263	4,624	1,043	469

Table 30: Use of alcohol, kava, betel nut and tobacco (aged 15+)

	Alcohol		Kava		Toddy		Tobacco	
	Yes	No	Yes	No	Yes	No	Yes	No
Strata								
Majuro	2,594	20,055	387	22,261		22,648	3,835	18,814
Kwajalein	1,009	6,389	347	7,052		7,398	1,558	5,841
Rural 1		1,808	50	1,758	25	1,783	429	1,379
Rural 2	10	1,255	148	1,117		1,265	339	927
Rural 3	55	1,119	52	1,122	79	1,094	362	812
Rural 4	17	4,523	72	4,468		4,540	990	3,550
Sex								
Male	3,354	16,150	950	18,555	105	19,400	6,690	12,815
Female	330	18,998	106	19,222		19,329	822	18,507
Age group								
15–17 years	13	2,726	1	2,738		2,739	173	2,567
18–59 years	3,301	27,654	1,045	29,910	105	30,851	6,907	24,049
60+ years	370	4,768	10	5,128		5,139	433	4,706
Disability status								
With disability	27	1,613	52	1,587	25	1,614	293	1,347
Without disability	3,658	33,536	1,004	36,190	79	37,115	7,219	29,975
Per capita expenditure quintile								
Lowest	255	6,193	111	6,337	29	6,419	1,110	5,338
2	447	6,883	99	7,231	2	7,328	1,373	5,957
3	602	6,776	226	7,151	3	7,375	1,667	5,710
4	725	7,309	322	7,713	5	8,030	1,615	6,420
Highest	1,656	7,988	298	9,346	67	9,577	1,747	7,897
Urban–Rural								
Urban	3,603	26,444	734	29,312		30,047	5,392	24,654
Rural	82	8,705	322	8,465	105	8,682	2,120	6,667
Total	3,685	35,149	1,056	37,777	105	38,729	7,512	31,321

Table 31: Main activity in the last 7-days (aged 15+)

	Studying	Primary activity	Employment	Job seeking	HH work	Voluntary work	Illness, disability	Retired	Other	Total
Strata										
Majuro	2,830	408	8,865	991	7,269	604	503	903	274	22,648
Kwajalein	616	12	2,892	539	2,617	64	130	465	63	7,398
Rural 1	29	401	278	3	871	26	100	100		1,808
Rural 2	110	121	285	84	475	64	22	83	20	1,265
Rural 3	74	72	378	80	420	40	41	22	47	1,173
Rural 4	269	573	644	69	2,396	138	80	157	214	4,540
Sex										
Male	1,921	1,142	9,362	1,318	3,295	598	453	907	508	19,505
Female	2,009	444	3,980	449	10,754	337	423	825	109	19,329
Age group										
15–17 years	2,158	10	20	40	487	18	4		2	2,739
18–59 years	1,771	1,458	11,956	1,716	12,036	734	581	199	505	30,955
60+ years		119	1,366	11	1,525	183	291	1,532	111	5,139
Disability status										
With disability	28	125	264	11	477	122	323	277	11	1,639
Without disability	3,902	1,462	13,077	1,756	13,571	813	552	1,454	606	37,194
Per capita expenditure quintile										
Lowest	714	553	1,143	263	2,976	144	217	208	230	6,448
2	599	292	2,049	414	3,322	138	216	210	89	7,330
3	929	138	2,423	421	2,796	48	180	359	83	7,378
4	929	303	2,684	309	2,944	322	180	293	69	8,034
Highest	757	300	5,043	359	2,011	283	82	661	147	9,644
Urban–Rural										
Urban	3,446	420	11,757	1,530	9,886	668	633	1,369	337	30,047
Rural	483	1,166	1,584	237	4,162	267	243	363	281	8,787
Total	3,929	1,587	13,342	1,767	14,049	935	876	1,731	618	38,833

Table 32: Main primary activity in the last 7-days (aged 15+)

	Fishing	Livestock, aquaculture	Copra, coconut	Handicraft	Total
Strata					
Majuro	228			180	408
Kwajalein	11			1	12
Rural 1	150		251		401
Rural 2		10	44	67	121
Rural 3	4	11	22	36	73
Rural 4	34	34	345	159	573
Sex					
Male	427	56	660		1,143
Female			1	443	444
Age group					
15–17 years		10			10
18–59 years	427	20	626	386	1,459
60+ years		26	36	57	119
Disability status					
With disability		28	86	11	126
Without disability	427	28	575	432	1,462
Per capita expenditure quintile					
Lowest	34	45	300	174	553
2	79	2	175	36	292
3	1		62	77	139
4	213	5	55	31	303
Highest	100	5	70	125	300
Urban–Rural					
Urban	239			181	420
Rural	188	56	661	262	1,167
Total	427	56	661	443	1,588

Table 33: Industry of employment activity (aged 15+)

	A – Agriculture, forestry, fishing	B – Mining, quarrying	C – Manufacturing	D – Electricity, gas,…	E – Water supply, sewerage, waste management…	F – Construction	G – Wholesale, retail trade	H – Transportation, storage	I – Accomodation, food service activities	J – Information, communication	K – Financial, insurance activities	L – Real estate activities	M – Professional, scientific, technical activities	N – Administrative, support service activities	O – Public administration, defense	P – Education	Q – Human health, social work	R – Arts, entertainment, recreation	S – Other service activities	T – Activities of HH as employers	U – Activities of extraterritorial organizations	Total
Strata																						
Majuro	324	27	342	452	150	742	1,143	777	263	151	291	33	134	454	1,688	1,363	569	2	164	403	288	9,762
Kwajalein	11		92	130		392	404	233	405	28	63		22	495	182	226	208	2	78	41	17	3,030
Rural 1	101						150		25					25	25	51				402		780
Rural 2	31			52			1		10				10	31	54	136			21	215		562
Rural 3	85		3	26		15	22	10		4			25	35	127	55	16	2		81		508
Rural 4	272		78	35	17		17	18		34			9	87	183	185	43			543		1,520
Sex																						
Male	760	27	326	629	130	1,137	961	904	373	188	164	33	154	744	1,700	1,107	394	6	170	844	258	11,009
Female	66		189	67	37	12	776	134	329	29	190		47	384	561	909	442		93	841	47	5,153
Age group																						
15–17 years			13			20														17		50
18–59 years	785	27	469	658	150	1,025	1,724	899	703	144	299	33	193	979	1,946	1,696	631	6	264	1,503	305	14,437
60+ years	41		33	38	17	105	13	139		72	54		8	149	315	320	205			165		1,675
Disability status																						
With disability	13		23	22		60	33	13	50	17	1			9	48					115		405
Without disability	812	27	492	673	167	1,089	1,704	1,025	653	200	353	33	201	1,128	2,252	1,968	836	6	264	1,570	305	15,757
Per capita expenditure quintile																						
Lowest	217		78	68	3	105	167	134	37	7	13		10	181	181	169	46	2	36	519	13	1,986
2	174	13	158	84	50	213	438	195	92	11	13		14	198	179	269	56	2	28	300	48	2,535
3	76	13	86	145	40	152	480	187	119	62	81		58	161	446	216	173		30	272		2,798
4	261		110	37	73	172	308	333	181	84	106		59	181	395	461	118	2	88	257	44	3,270
Highest	97		84	362		508	344	188	274	53	140	33	60	407	1,060	902	443		81	337	200	5,574
Urban–Rural																						
Urban	336	27	434	582	150	1,134	1,547	1,010	667	179	354	33	157	950	1,871	1,589	777	4	243	445	305	12,792
Rural	490		81	114	17	15	190	28	35	38			44	178	390	427	59	2	21	1,240		3,370
Total	826	27	515	695	167	1,150	1,737	1,038	703	216	354	33	201	1,128	2,261	2,016	836	6	264	1,685	305	16,162

Table 34: Occupation of employment activity (aged 15+)

	1 – Managers	2 – Professionals	3 – Technicians, professionals	4 – Clerical support workers	5 – Service, sales workers	6 – Skilled agricultural, forestry, fishery workers	7 – Craft, relatedtrades workers	8 – Plant, machine operators/ assemblers	9 – Elementary occupations	0 – Armed forces	Total
Strata											
Majuro	1,062	1,659	1,330	561	2,139	217	1,159	742	894		9,762
Kwajalein	147	283	178	361	414	28	757	148	603	112	3,030
Rural 1	75	51		50	25	75	175	1	327		780
Rural 2	22	167	21	21	12		160		148	10	562
Rural 3	92	68	43	14	77	14	89	12	91	11	508
Rural 4	113	211	52	69	140	237	315		365	17	1,520
Sex											
Male	1,008	1,336	988	753	1,902	571	1,647	767	1,898	139	11,009
Female	502	1,102	635	323	905		1,009	135	529	11	5,153
Age group											
15–17 years								20	30		50
18–59 years	1,181	2,095	1,402	1,017	2,624	535	2,422	822	2,188	150	14,437
60+ years	329	344	222	59	182	36	214	80	209		1,675
Disability status											
With disability	34	55		36	39	10	75	13	143		405
Without disability	1,476	2,384	1,624	1,040	2,768	561	2,581	889	2,285	150	15,757
Per capita expenditure quintile											
Lowest	120	111	84	135	210	111	526	103	564	22	1,986
2	119	295	136	155	470	124	495	160	556	25	2,535
3	221	280	405	171	661	11	416	168	436	28	2,798
4	80	647	230	216	616	240	599	275	349	19	3,270
Highest	970	1,105	770	399	850	84	620	195	523	56	5,574
Urban–Rural											
Urban	1,208	1,942	1,508	922	2,552	245	1,916	889	1,497	112	12,792
Rural	301	497	115	154	254	326	740	13	931	38	3,370
Total	1,510	2,439	1,624	1,076	2,807	571	2,656	902	2,428	150	16,162

Table 35: Secondary activity (aged 15+)

	Employer	Employee	Self-employed	Total
Strata				
Majuro		100	53	154
Kwajalein	12			12
Rural 1			25	25
Rural 2			31	31
Rural 3	5	2	7	15
Rural 4		9	155	163
Sex				
Male	18	111	236	364
Female			36	36
Age group				
15–17 years				
18–59 years	18	78	272	367
60+ years		33		33
Disability status				
With disability		13		13
Without disability	18	98	272	387
Per capita expenditure quintile				
Lowest		22	61	83
2			41	41
3			46	46
4	12	53	72	138
Highest	5	36	51	92
Urban–Rural				
Urban	12	100	53	166
Rural	5	11	218	234
Total	**18**	**111**	**272**	**400**

Table 36: Industry of secondary employment activity (aged 15+)

	A – Agriculture, forestry, fishing	D – Electricity, gas,…	G – Wholesale, retail trade	H – Transportation, storage	O – Public administration, defense	S – Other service activities	T – Activities of HH as employers	Total
Strata								
Majuro			53	47		53		154
Kwajalein		1	11					12
Rural 1							25	25
Rural 2	10						21	31
Rural 3			2	3		3	7	15
Rural 4			17		9		138	163
Sex								
Male	10	1	84	49	9	56	155	364
Female							36	36
Age group								
15–17 years								
18–59 years	10	1	84	16	9	56	191	367
60+ years				33				33
Disability status								
With disability				13				13
Without disability	10	1	84	36	9	56	191	387
Per capita expenditure quintile								
Lowest				13	9		61	83
2							41	41
3			17				29	46
4	10	1	65			53	9	138
Highest			2	36		3	51	92
Urban–Rural								
Urban		1	65	47		53		166
Rural	10		19	3	9	3	191	234
Total	10	1	84	49	9	56	191	400

Table 37: Occupation of secondary employment activity (aged 15+)

	1 – Managers	2 – Professionals	5 – Service, sales workers	7 – Craft, relatedtrades workers	8 – Plant, machine operators/ assemblers	9 – Elementary occupations	Total
Strata							
Majuro		53	53		47		154
Kwajalein	12						12
Rural 1						25	25
Rural 2				10		21	31
Rural 3			5			10	15
Rural 4	17		9	26		112	163
Sex							
Male	29	53	67		47	168	364
Female				36			36
Age group							
15–17 years							
18–59 years	29	53	67	36	13	168	367
60+ years					33		33
Disability status							
With disability					13		13
Without disability	29	53	67	36	33	168	387
Per capita expenditure quintile							
Lowest			9		13	61	83
2				10		31	41
3	17					29	46
4	12	53	53			19	138
Highest			5	26	33	28	92
Urban–Rural							
Urban	12	53	53		47		166
Rural	17		13	36		168	234
Total	29	53	67	36	47	168	400

APPENDIX 3: HOUSEHOLD TABLES

Table 38: Household access to energy (number of households)

	Electricity – main grid	Generator	Gas	Kerosene	Wood, charcoal	Other
Strata						
Majuro	8,083	20	7,477	210	723	107
Kwajalein	2,524	118	2,203	56	56	0
Rural 1	780	0	629	152	403	0
Rural 2	526	31	388	10	201	0
Rural 3	457	3	251	0	130	3
Rural 4	1,643	26	833	82	882	26
Sex						
Male	9,857	141	8,100	264	1,780	115
Female	4,155	56	3,681	247	616	20
Age group						
18–59 years	10,415	163	8,900	327	1,732	135
60+ years	3,597	34	2,882	184	663	
Disability status						
With disability	1,413		1,278	59	345	20
Without disability	12,598	197	10,504	452	2,051	115
HH per capita expenditure quintile						
Lowest	2,747	50	2,206	81	819	0
2	2,881	28	2,459	194	457	20
3	2,607	22	2,286	59	721	46
4	2,859	21	2,530	177	324	3
Highest	2,916	76	2,300	0	74	67
Urban–Rural						
Urban	10,607	138	9,680	266	779	107
Rural	3,405	60	2,102	245	1,617	28
Total	14,012	197	11,782	511	2,396	135

Table 39: Main source of energy for lighting (number of households)

	Electricity – main grid	Generator	Gas	Kerosene
Strata				
Majuro	6,616	20	102	0
Kwajalein	2,153	90	0	0
Rural 1	302	0	0	0
Rural 2	494	21	0	10
Rural 3	206	3	0	0
Rural 4	1,421	9	0	0
Sex				
Male	7,816	97	87	10
Female	3,377	45	15	0
Age group				
18–59 years	8,325	108	35	0
60+ years	2,868	34	67	10
Disability status				
With disability	1,190	0	13	10
Without disability	10,003	142	89	0
HH per capita expenditure quintile				
Lowest	2,185	11	1	0
2	2,226	11	34	0
3	2,094	22	13	10
4	2,358	21	0	0
Highest	2,331	76	53	0
Urban–Rural				
Urban	8,769	110	102	0
Rural	2,424	32	0	10
Total	11,193	142	102	0

Table 40: Main source of energy for cooking (number of households)

	Electricity – main grid	Generator	Gas	Kerosene	Wood, charcoal
Strata					
Majuro	2,090	20	7,300	210	136
Kwajalein	248	11	2,203	56	34
Rural 1	0	0	629	152	0
Rural 2	0	0	357	0	22
Rural 3	3	3	239	0	20
Rural 4	0	0	825	82	17
Sex					
Male	1,709	0	7,925	254	158
Female	631	34	3,628	247	71
Age group					
18–59 years	1,603	11	8,739	327	116
60+ years	737	23	2,814	173	113
Disability status					
With disability	210	0	1,257	49	68
Without disability	2,130	34	10,296	452	161
HH per capita expenditure quintile					
Lowest	181	0	2,196	81	63
2	365	0	2,401	194	27
3	407	14	2,253	49	25
4	347	0	2,456	177	78
Highest	1,040	20	2,247	0	36
Urban–Rural					
Urban	2,338	31	9,503	266	170
Rural	3	3	2,050	235	59
Total	2,340	34	11,553	501	229

Table 41: Commected to public water supply (number of households)

	Yes	No	Total
Strata			
Majuro	2,100	6,594	8,694
Kwajalein	2,024	595	2,620
Rural 1	0	880	880
Rural 2	0	526	526
Rural 3	30	442	472
Rural 4	10	1,748	1,758
Sex			
Male	2,621	7,927	10,547
Female	1,544	2,858	4,402
Age group			
18–59 years	3,102	8,077	11,179
60+ years	1,063	2,708	3,771
Disability status			
With disability	458	1,167	1,625
Without disability	3,707	9,618	13,325
HH per capita expenditure quintile			
Lowest	423	2,567	2,990
2	806	2,200	3,006
3	832	2,148	2,979
4	1,047	1,939	2,986
Highest	1,057	1,931	2,988
Urban–Rural			
Urban	4,125	7,189	11,314
Rural	40	3,596	3,636
Total	4,165	10,785	14,950

Table 42: Main source of water for drinking (number of households)

	Piped water into dwelling	Piped water into yard	Piped water to neighbor	Public/ shared tap	Protected well	Unprotected well	Rainwater tank	Shallow ground water	Bottle of water	Other	Total
Strata											
Majuro	570	13	87	376	235	13	5,618	27	1,628	127	8,694
Kwajalein	288	231	11	807	56	62	1,098		56	11	2,620
Rural 1							880				880
Rural 2			31				484		10		526
Rural 3	14	7.6		120	16	5.4	259		22	28	472
Rural 4					11		1,747				1,758
Sex											
Male	552	150	109	745	194	36	7,347	27	1,261	127	10,547
Female	320	102	20	557	124	45	2,739		456	39	4,402
Age group											
18–59 years	617	251	63	1,120	190	67	7,557	27	1,225	63	11,179
60+ years	255	1	67	183	128	13	2,530		492	103	3,771
Disability status											
With disability	41	17		169	22		1,136	13	159	68	1,625
Without disability	831	235	129	1,133	296	80	8,951	13	1,558	98	13,325
HH per capita expenditure quintile											
Lowest	86	23	22	166	18		2,525	27	71	53	2,990
2	141	56	20	350		5.4	2,247		174	14	3,006
3	134	36	67	205	170		2,077		286	5.3	2,979
4	213	91	21	148	69	75	1,903		378	88	2,986
Highest	298	45		434	61		1,335		809	5.3	2,988
Urban–Rural											
Urban	858	244	98	1,182	291	75	6,716	27	1,684	138	11,314
Rural	14	7.6	31	120	27	5.4	3,370		33	28	3,636
Total	872	252	129	1,302	318	80	10,087	27	1,717	166	14,950

Table 43: Main source of water for cooking (number of households)

	Piped water into dwelling	Piped water into yard	Piped water to neighbor	Public/ shared tap	Protected well	Unprotected well	Rainwater tank	Shallow ground water	Bottle of water	Other	Total
Strata											
Majuro	294	60	33	113	1		7,402		607	183	8,694
Kwajalein	1,102	308	11	669			518			11	2,620
Rural 1					26		854				880
Rural 2					11	10	504				526
Rural 3	15		8	60	14		376				472
Rural 4					119	51	1,554	9		26	1,758
Sex											
Male	891	195	11	446	151	62	8,195		413	184	10,547
Female	519	174	42	396	20		3,014	9	194	36	4,402
Age group											
18–59 years	1,010	288	53	702	118	51	8,423	9	440	87	11,179
60+ years	401	80		140	53	10	2,786		167	133	3,771
Disability status											
With disability	269	22		34	27	10	1,183		13	67	1,625
Without disability	1,142	346	53	808	144	51	10,025	9	593	153	13,325
HH per capita expenditure quintile											
Lowest	157	78	11	152	76	10	2,483	9		13	2,990
2	380	90	33	207	66		2,182			48	3,006
3	383	72		162	3	26	2,202		40	92	2,979
4	321	129	8	118		26	2,205		113	67	2,986
Highest	170			203	26		2,136		453		2,988
Urban–Rural											
Urban	1,396	368	45	783	1		7,920		607	194	11,314
Rural	15		8	60	170	62	3,288	9		26	3,636
Total	1,410	368	53	842	171	62	11,208	9	607	220	14,950

Table 44: Main source of water for cleaning (number of households)

	Piped water into dwelling	Piped water into yard	Piped water to neighbor	Public/ shared tap	Protected well	Unprotected well	Rainwater tank	Shallow ground water	Other	Total
Strata										
Majuro	774	141	154	113	516	27	6,632	221	117	8,694
Kwajalein	1,788	321	22	73	28	67	281	28	11	2,620
Rural 1					404	75	351	50		880
Rural 2					84	32	409			526
Rural 3	15			11	136	3	279	13	16	472
Rural 4					622	119	946	45	26	1,758
Sex										
Male	1,670	215	143	125	1,295	258	6,393	323	125	10,547
Female	906	246	33	72	496	65	2,504	34	45	4,402
Age group										
18–59 years	1,941	368	176	153	1,467	202	6,542	228	103	11,179
60+ years	635	94		45	323	122	2,356	130	67	3,771
Disability status										
With disability	357	48		11	113	33	955	41	67	1,625
Without disability	2,219	414	176	186	1,677	290	7,943	317	103	13,325
HH per capita expenditure quintile										
Lowest	288	92	56	50	611	51	1,728	101	13	2,990
2	656	85	33	45	455	60	1,589	35	48	3,006
3	493	58	33	3	279	131	1,876	80	26	2,979
4	677	160	53	33	303	26	1,539	120	75	2,986
Highest	462	67		67	142	56	2,165	21	8	2,988
Urban–Rural										
Urban	2,562	462	176	186	544	94	6,913	249	128	11,314
Rural	15			11	1,246	229	1,985	108	42	3,636
Total	2,576	462	176	197	1,791	323	8,898	357	170	14,950

Table 45: Main sanitation facility (number of households)

	Flush to sewer system	Flush to septic tank	Flush to pit latrine	Flush to somewhere else	Flush do not know where	Ventilated improved pit latrine	Pit latrine without slab	Composting toilet	Bucket toilet	No facility	Total
Strata											
Majuro	6,498	1,410	33						249	504	8,694
Kwajalein	2,023	298			11	17			107	164	2,620
Rural 1		755		75						50	880
Rural 2		389	22						83	31	526
Rural 3	87	293	25				5		27	34	472
Rural 4	17	908	26	26	85		26	17	140	514	1,758
Sex											
Male	6,033	2,887	78	101	85		5	17	424	918	10,547
Female	2,592	1,166	28		11	17	26		182	379	4,402
Age group											
18–59 years	6,539	2,951	91	75	37	17	22	17	437	994	11,179
60+ years	2,087	1,102	16	26	60		9		169	303	3,771
Disability status											
With disability	801	545	6		26			9	12	226	1,625
Without disability	7,825	3,508	100	101	71	17	31	9	594	1,071	13,325
HH per capita expenditure quintile											
Lowest	1,060	1,023	48	26	26		26	9	273	501	2,990
2	1,696	810	20		45	17	5		162	251	3,006
3	1,479	836	33	75				9	154	393	2,979
4	2,136	676	5		26				17	126	2,986
Highest	2,254	708								26	2,988
Urban–Rural											
Urban	8,522	1,708	33		11	17			355	667	11,314
Rural	104	2,345	73	101	85		31	17	251	630	3,636
Total	8,625	4,053	106	101	96	17	31	17	606	1,297	14,950

Table 46: Nearest health facility (number of households)

	Hospital	Health center	Dispensary	Total
Strata				
Majuro	8,098	489	107	8,694
Kwajalein	2,378	34	207	2,620
Rural 1	226	303	352	880
Rural 2	106	199	220	526
Rural 3	136	116	220	472
Rural 4	499	575	685	1,758
Sex				
Male	8,039	1,124	1,384	10,547
Female	3,404	592	407	4,402
Age group				
18–59 years	8,396	1,403	1,380	11,179
60+ years	3,048	312	411	3,771
Disability status				
With disability	1,396	105	124	1,625
Without disability	10,047	1,610	1,667	13,325
HH per capita expenditure quintile				
Lowest	1,975	554	461	2,990
2	2,185	359	462	3,006
3	2,148	511	321	2,979
4	2,376	204	406	2,986
Highest	2,759	88	141	2,988
Urban–Rural				
Urban	10,477	523	314	11,314
Rural	967	1,192	1,477	3,636
Total	11,443	1,715	1,791	14,950

Table 47: Main mode of transport to nearest health facility (number of households)

	Walk	Public transport	Private vehicle	Canoe, boat	Other	Total
Strata						
Majuro	1,216	5,751	1,633	60	33	8,694
Kwajalein	832	1,707	69		11	2,620
Rural 1	880					880
Rural 2	306		94	126		526
Rural 3	343	41	65		23	472
Rural 4	1,326	43	60	168	163	1,758
Sex						
Male	3,429	5,073	1,624	229	192	10,547
Female	1,473	2,469	297	125	38	4,402
Age group						
18–59 years	3,697	5,803	1,251	247	181	11,179
60+ years	1,205	1,739	670	107	49	3,771
Disability status						
With disability	479	844	215	57	29	1,625
Without disability	4,423	6,698	1,706	297	201	13,325
HH per capita expenditure quintile						
Lowest	1,469	1,157	172	108	84	2,990
2	1,048	1,540	283	90	45	3,006
3	1,092	1,488	233	91	76	2,979
4	829	1,571	496	65	26	2,986
Highest	464	1,786	737			2,988
Urban–Rural						
Urban	2,048	7,459	1,702	60	45	11,314
Rural	2,854	83	219	294	186	3,636
Total	4,902	7,542	1,921	354	230	14,950

Table 48: Dwelling tenure status (number of households)

	Renting	Live for free – provided by employer	Live for free – provided by church/family	Own house outright	Own house with mortgage	Total
Strata						
Majuro	614	516	906	6,644	13	8,694
Kwajalein	45	95	95	2,384		2,620
Rural 1		75	251	554		880
Rural 2			104	421		526
Rural 3	3	59	59	351		472
Rural 4			233	1,525		1,758
Sex						
Male	487	548	1,292	8,207	13	10,547
Female	174	198	357	3,673		4,402
Age group						
18–59 years	508	527	1,360	8,771	13	11,179
60+ years	154	219	289	3,109		3,771
Disability status						
With disability	93	28	97	1,407		1,625
Without disability	568	718	1,552	10,473	13	13,325
HH per capita expenditure quintile						
Lowest	3	81	391	2,516		2,990
2	20	113	275	2,585	13	3,006
3	53	61	483	2,382		2,979
4	53	254	336	2,343		2,986
Highest	532	237	164	2,055		2,988
Urban–Rural		Urban–Rural				
Urban	659	611	1,002	9,028	13	11,314
Rural	3	134	647	2,852		3,636
Total	662	746	1,649	11,880	13	14,950

Table 49: Provision of financial support in the last month (number of households)

	Family support	Family event	Church	Village support	Village event	School	Other
Strata							
Majuro	469	1,029	903	241	451	680	13
Kwajalein	365	303	191	309	78	17	
Rural 1	50	50	252			75	
Rural 2	52	63	83		21	10	
Rural 3	43	105	109	24	12	32	
Rural 4	174	213	294	26	26	44	
Sex							
Male	837	1,164	1,233	264	271	566	13
Female	317	599	599	336	317	293	
Age group							
18–59 years	892	1,380	1,290	317	469	702	
60+ years	262	383	542	283	118	157	13
Disability status							
With disability	65	119	225	23	66	129	
Without disability	1,089	1,644	1,606	577	521	729	13
HH per capita expenditure quintile							
Lowest	80	109	294	60	129	110	
2	89	302	192	103	100	70	
3	220	237	301	111	86	193	
4	472	381	565	190	106	206	13
Highest	294	734	479	136	167	280	
Urban–Rural							
Urban	835	1,332	1,094	551	530	697	13
Rural	319	431	738	50	58	162	
Total	1,154	1,763	1,832	600	588	859	13

Table 50: Receipt of cash remittance in the last 12-months

	Yes	No
Strata		
Majuro	3,174	5,520
Kwajalein	1,797	822
Rural 1	277	603
Rural 2	262	264
Rural 3	223	249
Rural 4	1,045	713
Sex		
Male	4,536	6,011
Female	2,241	2,161
Age group		
18–59 years	4,822	6,357
60+ years	1,956	1,815
Disability status		
With disability	869	756
Without disability	5,909	7,416
HH per capita expenditure quintile		
Lowest	1,415	1,575
2	1,457	1,549
3	1,259	1,720
4	1,421	1,565
Highest	1,225	1,763
Urban–Rural		
Urban	4,971	6,343
Rural	1,807	1,829
Total	**6,778**	**8,172**

Table 51: Number of remittances received in the last 12-months

	1	2	3	4	5	6	10	18
Strata								
Majuro	1,678	1,044	304	80	53	1		13
Kwajalein	1,222	439	35	17	28	45	11	
Rural 1	125	100	51					
Rural 2	105	136	21					
Rural 3	130	74	15		4			
Rural 4	481	261	278	17	9			
Sex								
Male	2,459	1,395	527	101	29	1	11	13
Female	1,282	659	177	13	65	45		
Age group								
18–59 years	2,540	1,721	337	64	90	46	11	13
60+ years	1,202	334	367	50	4			
Disability status								
With disability	541	186	108	33				
Without disability	3,200	1,868	596	81	93	46	11	13
HH per capita expenditure quintile								
Lowest	772	435	186		9			13
2	880	393	150	30	4	1		
3	747	266	103	50	81		11	
4	669	562	157	33				
Highest	673	400	107			45		
Urban–Rural								
Urban	2,900	1,483	339	97	81	46	11	13
Rural	841	571	365	17	12			
Total	3,741	2,055	704	114	93	46	11	13

Table 52: Location of sender of remittances

	Majuro	Kwajalein	Outer atol	Outside RMI
Strata				
Majuro	300	127		5,085
Kwajalein	275	11		2,507
Rural 1	125		25	329
Rural 2	52	42		345
Rural 3	105			236
Rural 4	582	131		1,235
Sex				
Male	908	209	25	6,593
Female	532	102		3,145
Age group				
18–59 years	1,125	219	25	6,957
60+ years	315	92		2,780
Disability status				
With disability	102	1		1,269
Without disability	1,338	310	25	8,469
HH per capita expenditure quintile				
Lowest	641	129	25	1,689
2	253	43		1,965
3	260			2,048
4	229	71		2,097
Highest	57	67		1,939
Urban–Rural				
Urban	575	138		7,593
Rural	865	173	25	2,145
Total	**1,440**	**311**	**25**	**9,738**

Table 53: Remittance senders

	Spouse husband	Son, daughter	Mother, father	Brother, sister	Other relative	Non-relative	Total
Strata							
Majuro	141	2,135	388	1,907	878	63	5,512
Kwajalein	22	1,843	164	697	56	11	2,793
Rural 1		278		150	51		479
Rural 2	31	188	21	177	22		439
Rural 3		106	83	114	35	3	342
Rural 4		1,189	150	470	139		1,948
Sex							
Male	141	3,240	654	2,602	1,057	41	7,735
Female	53	2,499	152	914	124	36	3,779
Age group							
18–59 years	195	3,247	708	3,208	891	77	8,326
60+ years		2,492	97	308	291		3,187
Disability status							
With disability	86	877	58	259	80	11	1,371
Without disability	109	4,862	747	3,256	1,101	66	10,142
HH per capita expenditure quintile							
Lowest	22	1,133	152	818	359		2,484
2	1	1,123	226	607	230	74	2,260
3	51	1,427	120	527	180	3	2,308
4		971	103	930	393		2,398
Highest	120	1,085	205	634	19		2,063
Urban–Rural							
Urban	164	3,978	552	2,604	934	74	8,306
Rural	31	1,761	253	912	247	3	3,208
Total	195	5,739	805	3,515	1,181	77	11,513

APPENDIX 4: EXPENDITURE TABLES

Table 54: Total annual household consumption expenditure (incl. transfers; US$), by source

	Cash	Home production	Gifts	Exchange	Imputed rents	Total
Strata						
Majuro	111,475,536	1,662,308	14,914,591	40,078	34,570,444	162,662,957
Kwajalein	32,603,482	275,245	2,606,884	68,128	9,004,945	44,558,684
Rural 1	3,963,805	924,129	1,452,028	91,217	773,285	7,204,464
Rural 2	4,014,197	757,334	1,100,178	98,065	1,357,838	7,327,611
Rural 3	3,260,186	554,984	2,802,391	1,896	1,988,925	8,608,383
Rural 4	8,859,933	4,549,634	2,866,681	669,260	4,133,319	21,078,827
Sex						
Male	114,673,982	7,030,977	17,874,244	794,472	35,622,544	175,996,218
Female	49,503,157	1,692,657	7,868,509	174,172	16,206,214	75,444,709
Age group						
18–59 years	120,548,596	6,943,823	19,431,217	704,928	37,493,229	185,121,792
60+ years	43,628,543	1,779,811	6,311,537	263,716	14,335,528	66,319,135
Disability status						
With disability	20,016,483	1,159,954	2,662,275	215,072	6,268,436	30,322,221
Without disability	144,160,656	7,563,680	23,080,478	753,571	45,560,321	221,118,706
HH per capita expenditure quintile						
Lowest	17,706,377	2,422,516	4,080,725	439,119	8,140,942	32,789,678
2	28,184,629	2,617,678	4,245,657	171,518	10,019,987	45,239,470
3	30,676,911	1,628,020	5,268,398	169,249	10,124,640	47,867,218
4	37,278,006	1,146,079	6,860,700	122,113	10,976,915	56,383,813
Highest	50,331,216	909,341	5,287,273	66,644	12,566,275	69,160,748
Urban–Rural						
Urban	144,079,018	1,937,553	17,521,475	108,207	43,575,389	207,221,642
Rural	20,098,121	6,786,081	8,221,278	860,437	8,253,368	44,219,286
Total	164,177,139	8,723,634	25,742,753	968,644	51,828,758	251,440,927

Table 55: Total annual average household consumption expenditure (incl. transfers; US$), by source

	Cash	Home production	Gifts	Exchange	Imputed rents	Total
Strata						
Majuro	12,822	191	1,716	5	3,976	18,710
Kwajalein	12,444	105	995	26	3,437	17,007
Rural 1	4,504	1,050	1,650	104	879	8,187
Rural 2	7,632	1,440	2,092	186	2,581	13,931
Rural 3	6,907	1,176	5,937	4	4,214	18,238
Rural 4	5,040	2,588	1,631	381	2,351	11,990
Sex						
Male	10,873	667	1,695	75	3,378	16,687
Female	11,246	385	1,787	40	3,682	17,139
Age group						
18–59 years	10,783	621	1,738	63	3,354	16,560
60+ years	11,569	472	1,674	70	3,802	17,587
Disability status						
With disability	12,318	714	1,638	132	3,857	18,660
Without disability	10,819	568	1,732	57	3,419	16,594
HH per capita expenditure quintile						
Lowest	5,922	810	1,365	147	2,723	10,966
2	9,376	871	1,412	57	3,333	15,050
3	10,298	546	1,769	57	3,399	16,068
4	12,484	384	2,298	41	3,676	18,883
Highest	16,844	304	1,770	22	4,206	23,146
Urban–Rural						
Urban	12,735	171	1,549	10	3,851	18,316
Rural	5,528	1,866	2,261	237	2,270	12,162
Total	10,982	584	1,722	65	3,467	16,819

Table 56: Total annual average per capita consumption expenditure (incl. transfers; US$), by source

	Cash	Home production	Gifts	Exchange	Imputed rents	Total
Strata						
Majuro	3,672	55	491	1	1,139	5,358
Kwajalein	3,130	26	250	7	864	4,278
Rural 1	1,510	352	553	35	295	2,745
Rural 2	2,102	397	576	51	711	3,838
Rural 3	1,824	311	1,568	1	1,113	4,817
Rural 4	1,215	624	393	92	567	2,892
Sex						
Male	4,240	260	661	29	1,317	6,508
Female	1,810	62	288	6	593	2,759
Age group						
18–59 years	3,894	224	628	23	1,211	5,980
60+ years	8,490	346	1,228	51	2,790	12,906
Disability status						
With disability	10,643	617	1,416	114	3,333	16,123
Without disability	2,993	157	479	16	946	4,591
HH per capita expenditure quintile						
Lowest	1,623	222	374	40	746	3,005
2	2,579	240	389	16	917	4,140
3	2,834	150	487	16	935	4,422
4	3,426	105	631	11	1,009	5,182
Highest	4,640	84	487	6	1,159	6,377
Urban–Rural						
Urban	3,533	48	430	3	1,069	5,082
Rural	1,477	499	604	63	606	3,249
Total	3,019	160	473	18	953	4,623

Table 57: Total average and median monthly household and per capita expenditure (US$)

	Total monthly HH expenditure	Average monthly HH expenditure	Median monthly HH expenditure	Average monthly per capita expenditure	Median monthly per capita expenditure
Strata					
Majuro	13,555,246	1,559	1,398	446	346
Kwajalein	3,713,224	1,417	1,314	356	297
Rural 1	600,372	682	621	229	209
Rural 2	610,634	1,161	909	320	303
Rural 3	717,365	1,520	1,217	401	339
Rural 4	1,756,569	999	878	241	202
Sex					
Male	14,666,351	1,391	1,207	542	299
Female	6,287,059	1,428	1,271	230	311
Age group					
18–59 years	15,426,816	1,380	1,237	498	302
60+ years	5,526,595	1,466	1,223	1,075	302
Disability status					
With disability	2,526,852	1,555	1,363	1,344	236
Without disability	18,426,559	1,383	1,211	383	312
HH per capita expenditure quintile					
Lowest	2,732,473	914	851	250	170
2	3,769,956	1,254	1,204	345	270
3	3,988,935	1,339	1,194	369	379
4	4,698,651	1,574	1,375	432	536
Highest	5,763,396	1,929	1,784	531	932
Urban–Rural					
Urban	17,268,470	1,526	1,372	423	328
Rural	3,684,940	1,013	863	271	218
Total	20,953,411	1,402	1,224	385	302

Table 58: Total annual household expenditure, by COICOP division and transfers (US$)

	Food, beverage	Alcohol, tobac, kava	Clothing, footwear	Housing, utilities	Furnishings, assets	Health	Transport	Communi-cation	Recreation, culture	Education	Restaurants	Miscellaneous	Transfers	Total
Strata														
Majuro	41,691,207	5,260,649	4,487,528	55,045,516	6,830,444	366,836	12,544,919	4,153,992	2,435,612	1,427,482	17,401,608	6,387,638	4,629,528	162,662,957
Kwajalein	10,733,417	2,185,845	1,027,056	16,342,085	1,516,805	65,113	1,840,640	696,739	614,016	494,295	6,366,804	1,722,452	953,416	44,558,684
Rural 1	3,702,160	315,320	421,002	1,542,751	293,292	24,401	79,548	62,101	46,709	752	422,770	141,198	152,461	7,204,464
Rural 2	2,881,231	561,753	216,913	2,009,292	263,845	10,735	102,872	242,952	116,837	42,933	366,112	243,978	268,159	7,327,611
Rural 3	2,835,791	564,442	285,726	2,492,811	326,579	2,564	455,780	218,061	159,984	1,491	818,776	204,366	242,012	8,608,383
Rural 4	9,872,799	490,089	686,169	5,209,033	719,407	76,121	1,105,446	45,883	249,983	7,461	1,393,702	576,098	646,636	21,078,827
Sex														
Male	51,035,302	7,032,033	4,967,382	57,736,556	7,029,905	391,866	11,303,223	3,597,959	2,641,173	1,241,192	17,420,271	6,303,881	5,295,473	175,996,218
Female	20,681,303	2,346,064	2,157,011	24,904,933	2,920,468	153,904	4,825,981	1,821,769	981,967	733,221	9,349,501	2,971,848	1,596,738	75,444,709
Age group														
18–59 years	54,027,192	7,129,281	5,379,341	61,674,894	7,096,083	363,642	11,239,013	3,928,691	2,417,238	1,553,773	19,689,428	6,705,503	3,917,714	185,121,792
60+ years	17,689,414	2,248,817	1,745,052	20,966,595	2,854,290	182,128	4,890,191	1,491,038	1,205,903	420,640	7,080,344	2,570,226	2,974,497	66,319,135
Disability status														
With disability	8,699,412	1,033,773	790,351	9,100,998	1,134,500	84,210	2,085,703	560,384	401,375	298,202	3,409,206	1,025,728	1,698,379	30,322,221
Without disability	63,017,193	8,344,325	6,334,042	73,540,491	8,815,873	461,560	14,043,501	4,859,345	3,221,766	1,676,211	23,360,566	8,250,002	5,193,832	221,118,706
HH per capita expenditure quintile														
Lowest	11,401,198	1,255,890	1,141,519	11,383,309	1,054,942	152,693	1,299,121	481,145	279,416	90,272	2,846,889	1,037,010	366,275	32,789,678
2	14,506,340	1,872,504	1,384,474	14,585,072	1,571,724	111,673	2,509,269	789,237	493,115	335,999	4,662,902	1,686,079	731,082	45,239,470
3	14,187,906	1,850,645	1,381,178	15,496,113	1,800,467	93,684	2,760,183	998,830	710,303	506,597	4,802,380	1,640,361	1,638,571	47,867,218
4	16,051,628	2,021,767	1,596,004	17,342,424	2,367,381	107,948	3,832,878	1,532,335	769,709	589,174	6,425,820	2,308,951	1,437,796	56,383,813
Highest	15,569,533	2,377,291	1,621,219	23,834,572	3,155,859	79,772	5,727,753	1,618,182	1,370,598	452,371	8,031,781	2,603,329	2,718,488	69,160,748
Urban–Rural														
Urban	52,424,624	7,446,494	5,514,584	71,387,601	8,347,249	431,950	14,385,559	4,850,731	3,049,628	1,921,777	23,768,412	8,110,090	5,582,943	207,221,642
Rural	19,291,981	1,931,603	1,609,810	11,253,888	1,603,124	113,820	1,743,645	568,998	573,513	52,636	3,001,360	1,165,640	1,309,268	44,219,286
Total	71,716,605	9,378,098	7,124,393	82,641,489	9,950,373	545,770	16,129,204	5,419,729	3,623,141	1,974,413	26,769,772	9,275,730	6,892,211	251,440,927

Table 59: Average annual household expenditure, by COICOP division and transfers (US$)

	Food, beverage	Alcohol, tobac, kava	Clothing, footwear	Housing, utilities	Furnishings, assets	Health	Transport	Communi-cation	Recreation, culture	Education	Restaurants	Miscellaneous	Transfers	Total
Strata														
Majuro	4,795	605	516	6,331	786	42	1,443	478	280	164	2,002	735	532	18,710
Kwajalein	4,097	834	392	6,237	579	25	703	266	234	189	2,430	657	364	17,007
Rural 1	4,207	358	478	1,753	333	28	90	71	53	1	480	160	173	8,187
Rural 2	5,478	1,068	412	3,820	502	20	196	462	222	82	696	464	510	13,931
Rural 3	6,008	1,196	605	5,281	692	5	966	462	339	3	1,735	433	513	18,238
Rural 4	5,616	279	390	2,963	409	43	629	26	142	4	793	328	368	11,990
Sex														
Male	4,839	667	471	5,474	667	37	1,072	341	250	118	1,652	598	502	16,687
Female	4,698	533	490	5,658	663	35	1,096	414	223	167	2,124	675	363	17,139
Age group														
18–59 years	4,833	638	481	5,517	635	33	1,005	351	216	139	1,761	600	350	16,560
60+ years	4,691	596	463	5,560	757	48	1,297	395	320	112	1,878	682	789	17,587
Disability status														
With disability	5,353	636	486	5,601	698	52	1,284	345	247	184	2,098	631	1,045	18,660
Without disability	4,729	626	475	5,519	662	35	1,054	365	242	126	1,753	619	390	16,594
HH per capita expenditure quintile														
Lowest	3,813	420	382	3,807	353	51	434	161	93	30	952	347	123	10,966
2	4,826	623	461	4,852	523	37	835	263	164	112	1,551	561	243	15,050
3	4,763	621	464	5,202	604	31	927	335	238	170	1,612	551	550	16,068
4	5,376	677	534	5,808	793	36	1,284	513	258	197	2,152	773	482	18,883
Highest	5,211	796	543	7,977	1,056	27	1,917	542	459	151	2,688	871	910	23,146
Urban–Rural														
Urban	4,634	658	487	6,310	738	38	1,271	429	270	170	2,101	717	493	18,316
Rural	5,306	531	443	3,095	441	31	480	156	158	14	825	321	360	12,162
Total	**4,797**	**627**	**477**	**5,528**	**666**	**37**	**1,079**	**363**	**242**	**132**	**1,791**	**620**	**461**	**16,819**

Table 60: Average annual per capita expenditure, by COICOP division and transfers (US$)

	Food, beverage	Alcohol, tobac, kava	Clothing, footwear	Housing, utilities	Furnishings, assets	Health	Transport	Communi-cation	Recreation, culture	Education	Restaurants	Miscellaneous	Transfers	Total
Strata														
Majuro	1,373	173	148	1,813	225	12	413	137	80	47	573	210	152	5,358
Kwajalein	1,030	210	99	1,569	146	6	177	67	59	47	611	165	92	4,278
Rural 1	1,410	120	160	588	112	9	30	24	18	0	161	54	58	2,745
Rural 2	1,509	294	114	1,052	138	6	54	127	61	22	192	128	140	3,838
Rural 3	1,587	316	160	1,395	183	1	255	122	90	1	458	114	135	4,817
Rural 4	1,354	67	94	715	99	10	152	6	34	1	191	79	89	2,892
Sex														
Male	1,887	260	184	2,135	260	14	418	133	98	46	644	233	196	6,508
Female	756	86	79	911	107	6	176	67	36	27	342	109	58	2,759
Age group														
18–59 years	1,745	230	174	1,992	229	12	363	127	78	50	636	217	127	5,980
60+ years	3,442	438	340	4,080	555	35	952	290	235	82	1,378	500	579	12,906
Disability status														
With disability	4,626	550	420	4,839	603	45	1,109	298	213	159	1,813	545	903	16,123
Without disability	1,308	173	132	1,527	183	10	292	101	67	35	485	171	108	4,591
HH per capita expenditure quintile														
Lowest	1,045	115	105	1,043	97	14	119	44	26	8	261	95	34	3,005
2	1,327	171	127	1,335	144	10	230	72	45	31	427	154	67	4,140
3	1,311	171	128	1,432	166	9	255	92	66	47	444	152	151	4,422
4	1,475	186	147	1,594	218	10	352	141	71	54	591	212	132	5,182
Highest	1,435	219	149	2,198	291	7	528	149	126	42	741	240	251	6,377
Urban–Rural														
Urban	1,286	183	135	1,751	205	11	353	119	75	47	583	199	137	5,082
Rural	1,417	142	118	827	118	8	128	42	42	4	221	86	96	3,249
Total	1,319	172	131	1,519	183	10	297	100	67	36	492	171	127	4,623

Table 61: Total annual household expenditure on food (COICOP division 1 and 11.2), by consumption source

	Cash	Home production	Gifts	Exchange	Total
Strata					
Majuro	51,400,130	1,662,308	5,990,298	40,078	59,092,814
Kwajalein	15,353,326	275,245	1,403,523	68,128	17,100,221
Rural 1	2,367,937	924,129	743,734	89,131	4,124,931
Rural 2	1,773,295	757,334	618,910	97,804	3,247,343
Rural 3	1,111,411	448,109	2,093,151	1,896	3,654,567
Rural 4	4,269,130	4,540,304	1,843,208	613,859	11,266,500
Sex					
Male	52,272,417	6,914,771	8,517,776	750,610	68,455,573
Female	24,002,812	1,692,657	4,175,049	160,286	30,030,804
Age group					
18–59 years	57,022,571	6,827,826	9,200,435	665,788	73,716,619
60+ years	19,252,657	1,779,603	3,492,390	245,108	24,769,758
Disability status					
With disability	8,810,403	1,152,845	1,944,183	201,187	12,108,618
Without disability	67,464,825	7,454,583	10,748,642	709,709	86,377,759
HH per capita expenditure quintile					
Lowest	9,281,289	2,410,067	2,140,664	416,068	14,248,087
2	14,087,460	2,615,598	2,303,551	162,633	19,169,242
3	14,713,578	1,628,020	2,483,036	165,652	18,990,286
4	18,015,375	1,129,200	3,232,973	99,899	22,477,447
Highest	20,177,526	824,543	2,532,601	66,644	23,601,314
Urban–Rural					
Urban	66,753,456	1,937,553	7,393,821	108,207	76,193,036
Rural	9,521,773	6,669,876	5,299,004	802,689	22,293,342
Total	76,275,228	8,607,428	12,692,825	910,896	98,486,377

Table 62: Average annual household expenditure on food (COICOP division 1 and 11.2), by consumption source

	Cash	Home production	Gifts	Exchange	Total
Strata					
Majuro	5,912	191	689	5	6,797
Kwajalein	5,860	105	536	26	6,527
Rural 1	2,691	1,050	845	101	4,687
Rural 2	3,371	1,440	1,177	186	6,174
Rural 3	2,355	949	4,435	4	7,743
Rural 4	2,428	2,583	1,048	349	6,409
Sex					
Male	4,956	656	808	71	6,491
Female	5,453	385	948	36	6,822
Age group					
18–59 years	5,101	611	823	60	6,594
60+ years	5,105	472	926	65	6,568
Disability status					
With disability	5,422	709	1,196	124	7,451
Without disability	5,063	559	807	53	6,482
HH per capita expenditure quintile					
Lowest	3,104	806	716	139	4,765
2	4,686	870	766	54	6,377
3	4,939	546	834	56	6,375
4	6,033	378	1,083	33	7,528
Highest	6,753	276	848	22	7,899
Urban–Rural					
Urban	5,900	171	654	10	6,734
Rural	2,619	1,834	1,457	221	6,131
Total	5,102	576	849	61	6,588

Table 63: Average annual per capita expenditure on food (COICOP division 1 and 11.2), by consumption source

	Cash	Home production	Gifts	Exchange	Total
Strata					
Majuro	1,693	55	197	1	1,946
Kwajalein	1,474	26	135	7	1,642
Rural 1	902	352	283	34	1,571
Rural 2	929	397	324	51	1,701
Rural 3	622	251	1,171	1	2,045
Rural 4	586	623	253	84	1,546
Sex					
Male	1,933	256	315	28	2,531
Female	878	62	153	6	1,098
Age group					
18–59 years	1,842	221	297	22	2,381
60+ years	3,747	346	680	48	4,820
Disability status					
With disability	4,685	613	1,034	107	6,439
Without disability	1,401	155	223	15	1,793
HH per capita expenditure quintile					
Lowest	851	221	196	38	1,306
2	1,289	239	211	15	1,754
3	1,359	150	229	15	1,754
4	1,656	104	297	9	2,066
Highest	1,860	76	234	6	2,176
Urban–Rural					
Urban	1,637	48	181	3	1,869
Rural	700	490	389	59	1,638
Total	1,402	158	233	17	1,811

Table 64: Total average and median monthly household and per capita expenditure on food (COICOP division 1 and 11.2; US$)

	Total monthly HH expenditure	Average monthly HH expenditure	Median monthly HH expenditure	Average monthly per capita expenditure	Median monthly per capita expenditure
Strata					
Majuro	4,924,401	566	502	162	123
Kwajalein	1,425,018	544	512	137	120
Rural 1	343,744	391	334	131	119
Rural 2	270,612	514	504	142	119
Rural 3	304,547	645	515	170	129
Rural 4	938,875	534	430	129	99
Sex					
Male	5,704,631	541	475	211	120
Female	2,502,567	569	499	92	122
Age group					
18–59 years	6,143,052	550	490	198	122
60+ years	2,064,146	547	442	402	112
Disability status					
With disability	1,009,052	621	595	537	98
Without disability	7,198,147	540	470	149	124
HH per capita expenditure quintile					
Lowest	1,187,341	397	360	109	73
2	1,597,437	531	475	146	111
3	1,582,524	531	497	146	149
4	1,873,121	627	570	172	226
Highest	1,966,776	658	615	181	345
Urban–Rural					
Urban	6,349,420	561	512	156	122
Rural	1,857,778	511	430	136	112
Total	8,207,198	549	479	151	120

Table 65: Total annual household expenditure on food, by COICOP class

	Bread, cereals	Meat	Fish, seafood	Milk, cheese, eggs	Oils, fats	Fruit	Vegetables	Sugar, jam, honey	Other food products	Coffee, tea, cocoa	Non-alcoholic beverages	Restaurants	Canteens	Total
Strata														
Majuro	9,269,314	8,341,003	4,236,420	1,882,229	1,100,106	4,142,618	2,376,159	1,073,308	4,685,995	2,199,813	2,384,239	17,192,295	209,312	59,092,814
Kwajalein	2,732,131	2,521,235	1,009,719	386,045	322,548	831,237	401,229	234,382	1,031,904	675,750	587,237	6,366,804		17,100,221
Rural 1	829,812	589,176	921,173	44,240	76,500	529,976	30,052	121,619	150,846	180,203	228,565	422,770		4,124,931
Rural 2	608,260	474,974	607,567	66,073	75,287	379,328	20,809	54,906	192,303	167,869	233,856	357,239	8,873	3,247,343
Rural 3	787,670	603,347	372,015	104,589	77,508	204,012	35,440	93,708	210,281	137,658	209,565	815,082	3,694	3,654,567
Rural 4	1,745,114	1,321,332	2,186,678	187,008	259,444	2,113,129	218,249	231,704	524,129	446,347	639,664	1,377,278	16,423	11,266,500
Sex														
Male	11,313,655	9,816,608	7,079,217	1,824,893	1,267,443	5,843,573	1,978,222	1,180,902	4,879,751	2,860,506	2,990,534	17,249,472	170,799	68,455,573
Female	4,658,646	4,034,458	2,254,355	845,292	643,950	2,356,727	1,103,716	628,725	1,915,707	947,134	1,292,592	9,281,997	67,503	30,030,804
Age group														
18–59 years	12,160,027	10,538,409	7,124,177	1,948,245	1,412,898	6,049,742	2,260,935	1,430,125	5,096,618	2,861,061	3,144,954	19,539,523	149,905	73,716,619
60+ years	3,812,274	3,312,657	2,209,395	721,939	498,495	2,150,558	821,003	379,501	1,698,840	946,578	1,138,171	6,991,947	88,397	24,769,758
Disability status														
With disability	2,155,321	1,640,501	1,129,151	335,027	177,408	1,024,917	372,723	182,471	751,115	442,942	487,836	3,361,621	47,585	12,108,618
Without disability	13,816,980	12,210,566	8,204,420	2,335,158	1,733,985	7,175,383	2,709,215	1,627,155	6,044,343	3,364,697	3,795,290	23,169,848	190,718	86,377,759
HH per capita expenditure quintile														
Lowest	2,992,451	2,104,830	1,964,224	241,901	312,058	1,346,303	139,803	309,184	829,173	564,932	596,341	2,820,891	25,998	14,248,087
2	3,356,520	2,748,560	2,096,014	435,283	395,949	1,865,472	398,916	350,224	1,247,327	683,829	928,248	4,617,493	45,409	19,169,242
3	3,338,470	3,021,868	1,735,496	475,571	433,886	1,448,653	561,519	375,597	1,268,511	696,116	832,220	4,745,215	57,165	18,990,286
4	3,697,214	3,367,283	1,715,755	759,414	411,895	1,776,256	696,520	465,254	1,434,014	690,668	1,037,354	6,352,299	73,520	22,477,447
Highest	2,587,647	2,608,525	1,822,082	758,016	357,605	1,763,617	1,285,179	309,369	2,016,434	1,172,095	888,963	7,995,571	36,210	23,601,314
Urban–Rural														
Urban	12,001,446	10,862,238	5,246,139	2,268,275	1,422,654	4,973,855	2,777,388	1,307,691	5,717,899	2,875,563	2,971,476	23,559,099	209,312	76,193,036
Rural	3,970,856	2,988,828	4,087,432	401,910	488,740	3,226,445	304,550	501,936	1,077,559	932,076	1,311,649	2,972,370	28,990	22,293,342
Total	15,972,302	13,851,066	9,333,571	2,670,184	1,911,394	8,200,300	3,081,938	1,809,627	6,795,458	3,807,639	4,283,126	26,531,469	238,303	98,486,377

Table 66: Average annual household expenditure on food, by COICOP class

	Bread, cereals	Meat	Fish, seafood	Milk, cheese, eggs	Oils, fats	Fruit	Vegetables	Sugar, jam, honey	Other food products	Coffee, tea, cocoa	Non-alcoholic beverages	Restaurants	Canteens	Total
Strata														
Majuro	1,066	959	487	216	127	476	273	123	539	253	274	1,977	24	6,797
Kwajalein	1,043	962	385	147	123	317	153	89	394	258	224	2,430	0	6,527
Rural 1	943	670	1,047	50	87	602	34	138	171	205	260	480	0	4,687
Rural 2	1,156	903	1,155	126	143	721	40	104	366	319	445	679	17	6,174
Rural 3	1,669	1,278	788	222	164	432	75	199	446	292	444	1,727	8	7,743
Rural 4	993	752	1,244	106	148	1,202	124	132	298	254	364	783	9	6,409
Sex														
Male	1,073	931	671	173	120	554	188	112	463	271	284	1,635	16	6,491
Female	1,058	917	512	192	146	535	251	143	435	215	294	2,109	15	6,822
Age group														
18–59 years	1,088	943	637	174	126	541	202	128	456	256	281	1,748	13	6,594
60+ years	1,011	878	586	191	132	570	218	101	451	251	302	1,854	23	6,568
Disability status														
With disability	1,326	1,010	695	206	109	631	229	112	462	273	300	2,069	29	7,451
Without disability	1,037	916	616	175	130	538	203	122	454	253	285	1,739	14	6,482
HH per capita expenditure quintile														
Lowest	1,001	704	657	81	104	450	47	103	277	189	199	943	9	4,765
2	1,117	914	697	145	132	621	133	117	415	227	309	1,536	15	6,377
3	1,121	1,014	583	160	146	486	188	126	426	234	279	1,593	19	6,375
4	1,238	1,128	575	254	138	595	233	156	480	231	347	2,127	25	7,528
Highest	866	873	610	254	120	590	430	104	675	392	298	2,676	12	7,899
Urban–Rural														
Urban	1,061	960	464	200	126	440	245	116	505	254	263	2,082	19	6,734
Rural	1,092	822	1,124	111	134	887	84	138	296	256	361	817	8	6,131
Total	1,068	926	624	179	128	549	206	121	455	255	286	1,775	16	6,588

Table 67: Average annual per capita expenditure on food, by COICOP class

	Bread, cereals	Meat	Fish, seafood	Milk, cheese, eggs	Oils, fats	Fruit	Vegetables	Sugar, jam, honey	Other food products	Coffee, tea, cocoa	Non-alcoholic beverages	Restaurants	Canteens	Total
Strata														
Majuro	305	275	140	62	36	136	78	35	154	72	79	566	7	1,946
Kwajalein	262	242	97	37	31	80	39	23	99	65	56	611	0	1,642
Rural 1	316	224	351	17	29	202	11	46	57	69	87	161	0	1,571
Rural 2	319	249	318	35	39	199	11	29	101	88	122	187	5	1,701
Rural 3	441	338	208	59	43	114	20	52	118	77	117	456	2	2,045
Rural 4	239	181	300	26	36	290	30	32	72	61	88	189	2	1,546
Sex														
Male	418	363	262	67	47	216	73	44	180	106	111	638	6	2,531
Female	170	148	82	31	24	86	40	23	70	35	47	339	2	1,098
Age group														
18–59 years	393	340	230	63	46	195	73	46	165	92	102	631	5	2,381
60+ years	742	645	430	140	97	418	160	74	331	184	221	1,361	17	4,820
Disability status														
With disability	1,146	872	600	178	94	545	198	97	399	236	259	1,787	25	6,439
Without disability	287	254	170	48	36	149	56	34	125	70	79	481	4	1,793
HH per capita expenditure quintile														
Lowest	274	193	180	22	29	123	13	28	76	52	55	259	2	1,306
2	307	252	192	40	36	171	37	32	114	63	85	423	4	1,754
3	308	279	160	44	40	134	52	35	117	64	77	438	5	1,754
4	340	310	158	70	38	163	64	43	132	63	95	584	7	2,066
Highest	239	241	168	70	33	163	118	29	186	108	82	737	3	2,176
Urban–Rural														
Urban	294	266	129	56	35	122	68	32	140	71	73	578	5	1,869
Rural	292	220	300	30	36	237	22	37	79	68	96	218	2	1,638
Total	294	255	172	49	35	151	57	33	125	70	79	488	4	1,811

Table 68: Total annual household expenditure on housing, water and energy (COICOP division 4), by consumption source

	Cash	Gifts	Imputed rents	Total
Strata				
Majuro	13,516,411	6,958,661	34,570,444	55,045,516
Kwajalein	6,668,442	668,698	9,004,945	16,342,085
Rural 1	222,198	547,268	773,285	1,542,751
Rural 2	406,824	244,630	1,357,838	2,009,292
Rural 3	104,595	399,291	1,988,925	2,492,811
Rural 4	441,639	634,074	4,133,319	5,209,033
Sex				
Male	15,190,496	6,923,516	35,622,544	57,736,556
Female	6,169,614	2,529,105	16,206,214	24,904,933
Age group				
18–59 years	16,630,163	7,551,502	37,493,229	61,674,894
60+ years	4,729,947	1,901,119	14,335,528	20,966,595
Disability status				
With disability	2,526,824	305,738	6,268,436	9,100,998
Without disability	18,833,286	9,146,883	45,560,321	73,540,491
HH per capita expenditure quintile				
Lowest	1,922,594	1,319,773	8,140,942	11,383,309
2	3,252,547	1,312,538	10,019,987	14,585,072
3	3,247,657	2,123,816	10,124,640	15,496,113
4	3,732,718	2,632,791	10,976,915	17,342,424
Highest	9,204,596	2,063,702	12,566,275	23,834,572
Urban–Rural				
Urban	20,184,853	7,627,359	43,575,389	71,387,601
Rural	1,175,257	1,825,262	8,253,368	11,253,888
Total	21,360,110	9,452,621	51,828,758	82,641,489

Table 69: Average annual household expenditure on housing, water and energy (COICOP division 4), by consumption source

	Cash	Gifts	Imputed rents	Total
Strata				
Majuro	1,555	800	3,976	6,331
Kwajalein	2,545	255	3,437	6,237
Rural 1	252	622	879	1,753
Rural 2	773	465	2,581	3,820
Rural 3	222	846	4,214	5,281
Rural 4	251	361	2,351	2,963
Sex				
Male	1,440	656	3,378	5,474
Female	1,402	575	3,682	5,658
Age group				
18–59 years	1,488	676	3,354	5,517
60+ years	1,254	504	3,802	5,560
Disability status				
With disability	1,555	188	3,857	5,601
Without disability	1,413	686	3,419	5,519
HH per capita expenditure quintile				
Lowest	643	441	2,723	3,807
2	1,082	437	3,333	4,852
3	1,090	713	3,399	5,202
4	1,250	882	3,676	5,808
Highest	3,081	691	4,206	7,977
Urban–Rural				
Urban	1,784	674	3,851	6,310
Rural	323	502	2,270	3,095
Total	1,429	632	3,467	5,528

Table 70: Average annual per capita expenditure on housing, water and energy (COICOP division 4), by consumption source

	Cash	Gifts	Imputed rents	Total
Strata				
Majuro	445	229	1,139	1,813
Kwajalein	640	64	864	1,569
Rural 1	85	208	295	588
Rural 2	213	128	711	1,052
Rural 3	59	223	1,113	1,395
Rural 4	61	87	567	715
Sex				
Male	562	256	1,317	2,135
Female	226	92	593	911
Age group				
18–59 years	537	244	1,211	1,992
60+ years	920	370	2,790	4,080
Disability status				
With disability	1,344	163	3,333	4,839
Without disability	391	190	946	1,527
HH per capita expenditure quintile				
Lowest	176	121	746	1,043
2	298	120	917	1,335
3	300	196	935	1,432
4	343	242	1,009	1,594
Highest	849	190	1,159	2,198
Urban–Rural				
Urban	495	187	1,069	1,751
Rural	86	134	606	827
Total	393	174	953	1,519

Table 71: Total average and median monthly household and per capita expenditure on housing, water and energy (COICOP division 4; US$)

	Total monthly HH expenditure	Average monthly HH expenditure	Median monthly HH expenditure	Average monthly per capita expenditure	Median monthly per capita expenditure
Strata					
Majuro	4,587,126	528	530	151	113
Kwajalein	1,361,840	520	449	131	96
Rural 1	128,563	146	129	49	46
Rural 2	167,441	318	247	88	61
Rural 3	207,734	440	345	116	86
Rural 4	434,086	247	217	60	44
Sex					
Male	4,811,380	456	416	178	93
Female	2,075,411	471	447	76	99
Age group					
18–59 years	5,139,575	460	423	166	95
60+ years	1,747,216	463	461	340	97
Disability status					
With disability	758,417	467	486	403	72
Without disability	6,128,374	460	428	127	99
HH per capita expenditure quintile					
Lowest	948,609	317	287	87	55
2	1,215,423	404	410	111	87
3	1,291,343	433	441	119	122
4	1,445,202	484	481	133	164
Highest	1,986,214	665	596	183	309
Urban–Rural					
Urban	5,948,967	526	511	146	109
Rural	937,824	258	207	69	52
Total	**6,886,791**	**461**	**433**	**127**	**95**

Table 72: Total annual household expenditure on housing, water and energy, by COICOP class

	Actual rents – tenants	Imputed rents – owners	Other imputed rentals	Maintenance services	Water supply	Electricity	Gas	Liquid fuels	Solid fuels	Total
Strata										
Majuro	3,498,153	34,570,444	5,414,259	990,061	468,569	8,103,120	1,929,273	71,375	261	55,045,516
Kwajalein	131,969	9,004,945	638,615	126,079		3,460,037	753,265	2,136,335	90,841	16,342,085
Rural 1		773,285	547,268	16,539		47,317	145,366	12,976		1,542,751
Rural 2		1,357,838	239,822	19,822		175,815	168,433	45,483	2,079	2,009,292
Rural 3	10,386	1,988,925	378,840	21,878		12,266	74,356	4,946	1,215	2,492,811
Rural 4		4,133,319	630,446	24,417		86,473	304,036	30,341		5,209,033
Sex										
Male	2,620,343	35,622,544	6,036,881	562,400	332,901	8,221,261	2,170,945	2,165,727	3,554	57,736,556
Female	1,020,165	16,206,214	1,812,368	636,396	135,669	3,663,766	1,203,784	135,729	90,841	24,904,933
Age group										
18–59 years	2,661,995	37,493,229	6,420,144	1,039,808	292,805	8,971,926	2,549,764	2,177,877	67,345	61,674,894
60+ years	978,513	14,335,528	1,429,105	158,987	175,764	2,913,101	824,965	123,580	27,050	20,966,595
Disability status										
With disability	634,544	6,268,436	304,035	75,771	48,383	1,403,233	337,110	29,485		9,100,998
Without disability	3,005,964	45,560,321	7,545,214	1,123,024	420,186	10,481,795	3,037,619	2,271,972	94,395	73,540,491
HH per capita expenditure quintile										
Lowest	10,386	8,140,942	1,233,150	39,003	45,337	1,227,836	644,030	39,332	3,293	11,383,309
2	97,866	10,019,987	1,140,605	199,209	72,750	2,229,746	763,256	49,116	12,537	14,585,072
3	289,169	10,124,640	1,843,464	70,594	99,027	2,281,756	691,960	42,513	52,991	15,496,113
4	234,342	10,976,915	1,978,577	315,170	117,468	2,800,868	769,714	123,794	25,575	17,342,424
Highest	3,008,746	12,566,275	1,653,452	574,818	133,987	3,344,822	505,770	2,046,702		23,834,572
Urban–Rural										
Urban	3,630,122	43,575,389	6,052,874	1,116,140	468,569	11,563,157	2,682,538	2,207,710	91,102	71,387,601
Rural	10,386	8,253,368	1,796,375	82,655		321,871	692,192	93,747	3,293	11,253,888
Total	3,640,508	51,828,758	7,849,249	1,198,796	468,569	11,885,028	3,374,729	2,301,457	94,395	82,641,489

Table 73: Average annual household expenditure on housing, water and energy, by COICOP class

	Actual rents – tenants	Imputed rents – owners	Other imputed rentals	Maintenance services	Water supply	Electricity	Gas	Liquid fuels	Solid fuels	Total
Strata										
Majuro	402	3,976	623	114	54	932	222	8	0	6,331
Kwajalein	50	3,437	244	48	0	1,321	288	815	35	6,237
Rural 1	0	879	622	19	0	54	165	15		1,753
Rural 2	0	2,581	456	38	0	334	320	86	4	3,820
Rural 3	22	4,214	803	46	0	26	158	10	3	5,281
Rural 4	0	2,351	359	14	0	49	173	17		2,963
Sex										
Male	248	3,378	572	53	32	779	206	205	0	5,474
Female	232	3,682	412	145	31	832	273	31	21	5,658
Age group										
18–59 years	238	3,354	574	93	26	803	228	195	6	5,517
60+ years	259	3,802	379	42	47	773	219	33	7	5,560
Disability status										
With disability	390	3,857	187	47	30	864	207	18		5,601
Without disability	226	3,419	566	84	32	787	228	171	7	5,519
HH per capita expenditure quintile										
Lowest	3	2,723	412	13	15	411	215	13	1	3,807
2	33	3,333	379	66	24	742	254	16	4	4,852
3	97	3,399	619	24	33	766	232	14	18	5,202
4	78	3,676	663	106	39	938	258	41	9	5,808
Highest	1,007	4,206	553	192	45	1,119	169	685		7,977
Urban–Rural										
Urban	321	3,851	535	99	41	1,022	237	195	8	6,310
Rural	3	2,270	494	23	0	89	190	26	1	3,095
Total	244	3,467	525	80	31	795	226	154	6	5,528

Table 74: Average annual per capita expenditure on housing, water and energy, by COICOP class

	Actual rents – tenants	Imputed rents – owners	Other imputed rentals	Maintenance services	Water supply	Electricity	Gas	Liquid fuels	Solid fuels	Total
Strata										
Majuro	115	1,139	178	33	15	267	64	2	0	1,813
Kwajalein	13	864	61	12	0	332	72	205	9	1,569
Rural 1	0	295	208	6	0	18	55	5		588
Rural 2	0	711	126	10	0	92	88	24	1	1,052
Rural 3	6	1,113	212	12	0	7	42	3	1	1,395
Rural 4	0	567	86	3	0	12	42	4		715
Sex										
Male	97	1,317	223	21	12	304	80	80	0	2,135
Female	37	593	66	23	5	134	44	5	3	911
Age group										
18–59 years	86	1,211	207	34	9	290	82	70	2	1,992
60+ years	190	2,790	278	31	34	567	161	24	5	4,080
Disability status										
With disability	337	3,333	162	40	26	746	179	16		4,839
Without disability	62	946	157	23	9	218	63	47	2	1,527
HH per capita expenditure quintile										
Lowest	1	746	113	4	4	113	59	4	0	1,043
2	9	917	104	18	7	204	70	4	1	1,335
3	27	935	170	7	9	211	64	4	5	1,432
4	22	1,009	182	29	11	257	71	11	2	1,594
Highest	277	1,159	152	53	12	308	47	189		2,198
Urban–Rural										
Urban	89	1,069	148	27	11	284	66	54	2	1,751
Rural	1	606	132	6	0	24	51	7	0	827
Total	67	953	144	22	9	219	62	42	2	1,519

Table 75: Total annual household expenditure on transportation (COICOP division 7), by consumption source

	Cash	Gifts	Total
Strata			
Majuro	12,307,202	237,717	12,544,919
Kwajalein	1,786,974	53,666	1,840,640
Rural 1	79,512	35	79,548
Rural 2	101,866	1,006	102,872
Rural 3	449,749	6,031	455,780
Rural 4	1,076,084	29,363	1,105,446
Sex			
Male	11,030,083	273,140	11,303,223
Female	4,771,304	54,678	4,825,981
Age group			
18–59 years	10,945,345	293,668	11,239,013
60+ years	4,856,042	34,149	4,890,191
Disability status			
With disability	2,065,079	20,624	2,085,703
Without disability	13,736,308	307,193	14,043,501
HH per capita expenditure quintile			
Lowest	1,245,133	53,988	1,299,121
2	2,447,003	62,265	2,509,269
3	2,744,520	15,663	2,760,183
4	3,780,528	52,350	3,832,878
Highest	5,584,202	143,550	5,727,753
Urban–Rural			
Urban	14,094,175	291,383	14,385,559
Rural	1,707,211	36,434	1,743,645
Total	**15,801,387**	**327,817**	**16,129,204**

Table 76: Total annual average household expenditure on transportation (COICOP division 7), by consumption source

	Cash	Gifts	Total
Strata			
Majuro	1,416	27	1,443
Kwajalein	682	20	703
Rural 1	90	0	90
Rural 2	194	2	196
Rural 3	953	13	966
Rural 4	612	17	629
Sex			
Male	1,046	26	1,072
Female	1,084	12	1,096
Age group			
18–59 years	979	26	1,005
60+ years	1,288	9	1,297
Disability status			
With disability	1,271	13	1,284
Without disability	1,031	23	1,054
HH per capita expenditure quintile			
Lowest	416	18	434
2	814	21	835
3	921	5	927
4	1,266	18	1,284
Highest	1,869	48	1,917
Urban–Rural			
Urban	1,246	26	1,271
Rural	470	10	480
Total	**1,057**	**22**	**1,079**

Table 77: Total annual average per capita expenditure on transportation (COICOP division 7), by consumption source

	Cash	Gifts	Total
Strata			
Majuro	405	8	413
Kwajalein	172	5	177
Rural 1	30	0	30
Rural 2	53	1	54
Rural 3	252	3	255
Rural 4	148	4	152
Sex			
Male	408	10	418
Female	174	2	176
Age group			
18–59 years	354	9	363
60+ years	945	7	952
Disability status			
With disability	1,098	11	1,109
Without disability	285	6	292
HH per capita expenditure quintile			
Lowest	114	5	119
2	224	6	230
3	254	1	255
4	347	5	352
Highest	515	13	528
Urban–Rural			
Urban	346	7	353
Rural	125	3	128
Total	291	6	297

Table 78: Total, average and median monthly household and per capita expenditure on transportation (COICOP division 7; US$)

	Total monthly HH expenditure	Average monthly HH expenditure	Median monthly HH expenditure	Average monthly per capita expenditure	Median monthly per capita expenditure
Strata					
Majuro	1,045,410	120	78	34	21
Kwajalein	153,387	59	39	15	9
Rural 1	6,629	8	0	3	0
Rural 2	8,573	16	0	4	0
Rural 3	37,982	80	0	21	0
Rural 4	92,121	52	3	13	1
Sex					
Male	941,935	89	30	35	11
Female	402,165	91	52	15	14
Age group					
15–17 years					
18–59 years	936,584	84	35	30	11
60+ years	407,516	108	52	79	12
Disability status					
With disability	173,809	107	36	92	10
Without disability	1,170,292	88	43	24	11
HH per capita expenditure quintile					
Lowest	108,260	36	2	10	1
2	209,106	70	43	19	12
3	230,015	77	30	21	17
4	319,407	107	61	29	27
Highest	477,313	160	104	44	79
Urban–Rural					
Urban	1,198,797	106	61	29	17
Rural	145,304	40	0	11	0
Total	1,344,100	90	39	25	11

Table 79: Total annual household expenditure on transportation, by COICOP class

	Motor cars	Motor cycles	Bicycles	Animal-drawn carts	Spare parts, accessories	Fuels, lubricants	Maintenance, repair	Other services for personal vehicle	Passenger transport – road	Passenger transport – air	Passenger transport – sea	Total
Strata												
Majuro	1,701,160		5,100		138,305	1,782,408	248,146	994,529	5,616,728	2,000,553	57,989	12,544,919
Kwajalein	125,744	1,489	5,410		31,309	95,320		87,381	1,092,062	401,925		1,840,640
Rural 1			1,643	1,734					40,588	17,040	18,543	79,548
Rural 2		2,031	2,808		3,025	2,504			16,305	76,199		102,872
Rural 3	4,416	22,622	1,915		255	30,910		47,253	104,798	237,343	6,267	455,780
Rural 4		6,229	49,611	92	5,354	15,337		5,010	261,739	759,163	2,910	1,105,446
Sex												
Male	1,448,898	27,382	53,149	1,827	102,731	1,417,288	242,306	752,907	4,421,173	2,763,728	71,833	11,303,223
Female	382,423	4,990	13,337		75,518	509,191	5,840	381,266	2,711,046	728,495	13,876	4,825,981
Age group												
18–59 years	847,927	29,622	47,601	1,827	157,214	1,258,197	218,044	805,227	5,318,838	2,472,809	81,707	11,239,013
60+ years	983,394	2,749	18,886		21,034	668,282	30,103	328,946	1,813,381	1,019,414	4,003	4,890,191
Disability status												
With disability	370,649	1,804	8,370		2,936	203,350		141,542	1,038,240	259,026	59,786	2,085,703
Without disability	1,460,672	30,568	58,117	1,827	175,312	1,723,129	248,146	992,631	6,093,979	3,233,197	25,923	14,043,501
HH per capita expenditure quintile												
Lowest	22,291	7,462	24,348		3,830	84,548	400	42,905	861,403	239,627	12,308	1,299,121
2	76,708	4,065	13,749	92	32,678	184,429	5,523	198,815	1,609,644	381,060	2,506	2,509,269
3	164,532	6,354	12,746		14,695	300,985	1,402	258,464	1,406,447	594,559		2,760,183
4	278,139	9,125	10,708	1,734	40,809	421,565	7,542	121,980	1,827,772	1,045,012	68,493	3,832,878
Highest	1,289,650	5,366	4,937		86,236	934,954	233,279	512,009	1,426,953	1,231,966	2,403	5,727,753
Urban–Rural												
Urban	1,826,904	1,489	10,509		169,614	1,877,728	248,146	1,081,910	6,708,790	2,402,478	57,989	14,385,559
Rural	4,416	30,882	55,977	1,827	8,634	48,751		52,263	423,429	1,089,745	27,720	1,743,645
Total	1,831,321	32,372	66,486	1,827	178,249	1,926,479	248,146	1,134,173	7,132,219	3,492,223	85,710	16,129,204

Table 80: Average annual household expenditure on transportation, by COICOP class

	Motor cars	Motor cycles	Bicycles	Animal-drawn carts	Spare parts, accessories	Fuels, lubricants	Maintenance, repair	Other services for personal vehicle	Passenger transport – road	Passenger transport – air	Passenger transport – sea	Total
Strata												
Majuro	196	0	1	0	16	205	29	114	646	230	7	1,443
Kwajalein	48	1	2	0	12	36	0	33	417	153	0	703
Rural 1	0	0	2	2	0	0	0	0	46	19	21	90
Rural 2	0	4	5	0	6	5	0	0	31	145	0	196
Rural 3	9	48	4	0	1	65	0	100	222	503	13	966
Rural 4	0	4	28	0	3	9	0	3	149	432	2	629
Sex												
Male	137	3	5	0	10	134	23	71	419	262	7	1,072
Female	87	1	3	0	17	116	1	87	616	165	3	1,096
Age group												
18–59 years	76	3	4	0	14	113	20	72	476	221	7	1,005
60+ years	261	1	5	0	6	177	8	87	481	270	1	1,297
Disability status												
With disability	228	1	5	0	2	125	0	87	639	159	37	1,284
Without disability	110	2	4	0	13	129	19	74	457	243	2	1,054
HH per capita expenditure quintile												
Lowest	7	2	8	0	1	28	0	14	288	80	4	434
2	26	1	5	0	11	61	2	66	535	127	1	835
3	55	2	4	0	5	101	0	87	472	200	0	927
4	93	3	4	1	14	141	3	41	612	350	23	1,284
Highest	432	2	2	0	29	313	78	171	478	412	1	1,917
Urban–Rural												
Urban	161	0	1	0	15	166	22	96	593	212	5	1,271
Rural	1	8	15	1	2	13	0	14	116	300	8	480
Total	122	2	4	0	12	129	17	76	477	234	6	1,079

Table 81: Average annual per capita expenditure on transportation, by COICOP class

	Motor cars	Motor cycles	Bicycles	Animal-drawn carts	Spare parts, accessories	Fuels, lubricants	Maintenance, repair	Other services for personal vehicle	Passenger transport – road	Passenger transport – air	Passenger transport – sea	Total
Strata												
Majuro	56	0	0	0	5	59	8	33	185	66	2	413
Kwajalein	12	0	1	0	3	9	0	8	105	39	0	177
Rural 1	0	0	1	1	0	0	0	0	15	6	7	30
Rural 2	0	1	1	0	2	1	0	0	9	40	0	54
Rural 3	2	13	1	0	0	17	0	26	59	133	4	255
Rural 4	0	1	7	0	1	2	0	1	36	104	0	152
Sex												
Male	54	1	2	0	4	52	9	28	163	102	3	418
Female	14	0	0	0	3	19	0	14	99	27	1	176
Age group												
18–59 years	27	1	2	0	5	41	7	26	172	80	3	363
60+ years	191	1	4	0	4	130	6	64	353	198	1	952
Disability status												
With disability	197	1	4	0	2	108	0	75	552	138	32	1,109
Without disability	30	1	1	0	4	36	5	21	127	67	1	292
HH per capita expenditure quintile												
Lowest	2	1	2	0	0	8	0	4	79	22	1	119
2	7	0	1	0	3	17	1	18	147	35	0	230
3	15	1	1	0	1	28	0	24	130	55	0	255
4	26	1	1	0	4	39	1	11	168	96	6	352
Highest	119	0	0	0	8	86	22	47	132	114	0	528
Urban–Rural												
Urban	45	0	0	0	4	46	6	27	165	59	1	353
Rural	0	2	4	0	1	4	0	4	31	80	2	128
Total	34	1	1	0	3	35	5	21	131	64	2	297

Table 82: Total annual household expenditure on alcohol, kava, tobacco and betel nut (COICOP division 2), by consumption source

	Cash	Home production	Gifts	Exchange	Total
Strata					
Majuro	5,004,986		255,663		5,260,649
Kwajalein	1,968,190		217,655		2,185,845
Rural 1	313,234			2,086	315,320
Rural 2	422,178		139,314	261	561,753
Rural 3	359,992	106,875	97,575		564,442
Rural 4	413,826	9,330	11,531	55,401	490,089
Sex					
Male	6,354,882	116,206	517,084	43,862	7,032,033
Female	2,127,525		204,654	13,886	2,346,064
Age group					
18–59 years	6,444,076	115,997	530,068	39,140	7,129,281
60+ years	2,038,331	209	191,669	18,608	2,248,817
Disability status					
With disability	981,082	7,109	31,697	13,886	1,033,773
Without disability	7,501,325	109,097	690,041	43,862	8,344,325
HH per capita expenditure quintile					
Lowest	1,106,297	12,449	114,093	23,051	1,255,890
2	1,759,779	2,080	101,760	8,886	1,872,504
3	1,644,690		202,358	3,597	1,850,645
4	1,716,151	16,879	266,522	22,215	2,021,767
Highest	2,255,489	84,797	37,005		2,377,291
Urban–Rural					
Urban	6,973,176		473,318		7,446,494
Rural	1,509,230	116,206	248,420	57,748	1,931,603
Total	**8,482,407**	**116,206**	**721,738**	**57,748**	**9,378,098**

Table 83: Average annual household expenditure on alcohol, kava, tobacco and betel nut (COICOP division 2), by consumption source

	Cash	Home production	Gifts	Exchange	Total
Strata					
Majuro	576	0	29	0	605
Kwajalein	751	0	83	0	834
Rural 1	356	0	0	2	358
Rural 2	803	0	265	0	1,068
Rural 3	763	226	207	0	1,196
Rural 4	235	5	7	32	279
Sex					
Male	603	11	49	4	667
Female	483	0	46	3	533
Age group					
18–59 years	576	10	47	4	638
60+ years	541	0	51	5	596
Disability status					
With disability	604	4	20	9	636
Without disability	563	8	52	3	626
HH per capita expenditure quintile					
Lowest	370	4	38	8	420
2	585	1	34	3	623
3	552	0	68	1	621
4	575	6	89	7	677
Highest	755	28	12	0	796
Urban–Rural					
Urban	616	0	42	0	658
Rural	415	32	68	16	531
Total	**567**	**8**	**48**	**4**	**627**

Table 84: Average annual per capita expenditure on alcohol, kava, tobacco and betel nut (COICOP division 2), by consumption source

	Cash	Home production	Gifts	Exchange	Total
Strata					
Majuro	165	0	8	0	173
Kwajalein	189	0	21	0	210
Rural 1	119	0	0	1	120
Rural 2	221	0	73	0	294
Rural 3	201	60	55	0	316
Rural 4	57	1	2	8	67
Sex					
Male	235	4	19	2	260
Female	78	0	7	1	86
Age group					
18–59 years	208	4	17	1	230
60+ years	397	0	37	4	438
Disability status					
With disability	522	4	17	7	550
Without disability	156	2	14	1	173
HH per capita expenditure quintile					
Lowest	101	1	10	2	115
2	161	0	9	1	171
3	152	0	19	0	171
4	158	2	24	2	186
Highest	208	8	3	0	219
Urban–Rural					
Urban	171	0	12	0	183
Rural	111	9	18	4	142
Total	**156**	**2**	**13**	**1**	**172**

Table 85: Total, average and median monthly household and per capita expenditure on transportation (COICOP division 2; US$)

	Total monthly HH expenditure	Average monthly HH expenditure	Median monthly HH expenditure	Average monthly per capita expenditure	Median monthly per capita expenditure
Strata					
Majuro	438,387	50	0	14	2
Kwajalein	182,154	70	22	17	10
Rural 1	26,277	30	0	10	0
Rural 2	46,813	89	15	25	5
Rural 3	47,037	100	33	26	5
Rural 4	40,841	23	4	6	2
Sex					
Male	586,003	56	10	22	3
Female	195,505	44	0	7	3
Age group					
15–17 years					
18–59 years	594,107	53	13	19	4
60+ years	187,401	50	0	36	1
Disability status					
With disability	86,148	53	22	46	6
Without disability	695,360	52	0	14	2
HH per capita expenditure quintile					
Lowest	104,658	35	13	10	3
2	156,042	52	22	14	5
3	154,220	52	0	14	0
4	168,481	56	0	15	0
Highest	198,108	66	0	18	0
Urban-Rural					
Urban	620,541	55	0	15	4
Rural	160,967	44	4	12	2
Total	**781,508**	**52**	**4**	**14**	**3**

Table 86: Total annual household expenditure on alcohol, kava, tobacco and betel nut, by COICOP class

	Spirits	Wine	Beer	Tobacco	Kava	Total
Strata						
Majuro	214,022	414,547	2,569,395	1,495,462	567,223	5,260,649
Kwajalein		148,504	941,026	677,951	418,365	2,185,845
Rural 1			19,599	239,536	56,185	315,320
Rural 2				202,213	359,540	561,753
Rural 3	42,111	20,357	163,753	212,464	125,758	564,442
Rural 4				429,767	60,322	490,089
Sex						
Male	255,976	409,696	2,641,357	2,463,570	1,261,435	7,032,033
Female	156	173,712	1,052,417	793,823	325,956	2,346,064
Age group						
18–59 years	244,040	385,207	2,640,082	2,585,675	1,274,277	7,129,281
60+ years	12,093	198,201	1,053,692	671,717	313,115	2,248,817
Disability status						
With disability	782	60,855	342,898	447,795	181,442	1,033,773
Without disability	255,350	522,552	3,350,876	2,809,597	1,405,950	8,344,325
HH per capita expenditure quintile						
Lowest	4,419	33,184	357,666	725,436	135,185	1,255,890
2	19,490	46,299	673,146	816,752	316,818	1,872,504
3	83,006	27,354	544,066	674,646	521,572	1,850,645
4	3,392	132,270	1,014,479	674,219	197,408	2,021,767
Highest	145,825	344,301	1,104,417	366,340	416,408	2,377,291
Urban–Rural						
Urban	214,022	563,051	3,510,421	2,173,413	985,587	7,446,494
Rural	42,111	20,357	183,353	1,083,979	601,804	1,931,603
Total	256,132	583,408	3,693,774	3,257,392	1,587,392	9,378,098

Table 87: Average annual household expenditure on alcohol, kava, tobacco and betel nut, by COICOP class

	Spirits	Wine	Beer	Tobacco	Kava	Total
Strata						
Majuro	25	48	296	172	65	605
Kwajalein	0	57	359	259	160	834
Rural 1	0	0	22	272	64	358
Rural 2	0	0	0	384	684	1,068
Rural 3	89	43	347	450	266	1,196
Rural 4	0	0	0	244	34	279
Sex						
Male	24	39	250	234	120	667
Female	0	39	239	180	74	533
Age group						
18–59 years	22	34	236	231	114	638
60+ years	3	53	279	178	83	596
Disability status						
With disability	0	37	211	276	112	636
Without disability	19	39	251	211	106	626
HH per capita expenditure quintile						
Lowest	1	11	120	243	45	420
2	6	15	224	272	105	623
3	28	9	183	226	175	621
4	1	44	340	226	66	677
Highest	49	115	370	123	139	796
Urban–Rural						
Urban	19	50	310	192	87	658
Rural	12	6	50	298	166	531
Total	17	39	247	218	106	627

Table 88: Average annual per capita expenditure on alcohol, kava, tobacco and betel nut, by COICOP class

	Spirits	Wine	Beer	Tobacco	Kava	Total
Strata						
Majuro	7	14	85	49	19	173
Kwajalein	0	14	90	65	40	210
Rural 1	0	0	7	91	21	120
Rural 2	0	0	0	106	188	294
Rural 3	24	11	92	119	70	316
Rural 4	0	0	0	59	8	67
Sex						
Male	9	15	98	91	47	260
Female	0	6	38	29	12	86
Age group						
18–59 years	8	12	85	84	41	230
60+ years	2	39	205	131	61	438
Disability status						
With disability	0	32	182	238	96	550
Without disability	5	11	70	58	29	173
HH per capita expenditure quintile						
Lowest	0	3	33	66	12	115
2	2	4	62	75	29	171
3	8	3	50	62	48	171
4	0	12	93	62	18	186
Highest	13	32	102	34	38	219
Urban–Rural						
Urban	5	14	86	53	24	183
Rural	3	1	13	80	44	142
Total	5	11	68	60	29	172

Table 89: Total annual household expenditure, by COICOP class

	Strata						Sex of main respondant		Age group	
	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years
Food and non-alcoholic beverages										
Bread and cereals	9,269,314	2,732,131	829,812	608,260	787,670	1,745,114	11,313,655	4,658,646	12,160,027	3,812,274
Meat	8,341,003	2,521,235	589,176	474,974	603,347	1,321,332	9,816,608	4,034,458	10,538,409	3,312,657
Fish and sea food	4,236,420	1,009,719	921,173	607,567	372,015	2,186,678	7,079,217	2,254,355	7,124,177	2,209,395
Milk, cheese and eggs	1,882,229	386,045	44,240	66,073	104,589	187,008	1,824,893	845,292	1,948,245	721,939
Oils and fats	1,100,106	322,548	76,500	75,287	77,508	259,444	1,267,443	643,950	1,412,898	498,495
Fruit	4,142,618	831,237	529,976	379,328	204,012	2,113,129	5,843,573	2,356,727	6,049,742	2,150,558
Vegetables	2,376,159	401,229	30,052	20,809	35,440	218,249	1,978,222	1,103,716	2,260,935	821,003
Sugar, jam, honey, chocolate…	1,073,308	234,382	121,619	54,906	93,708	231,704	1,180,902	628,725	1,430,125	379,501
Food products n.e.c.	4,685,995	1,031,904	150,846	192,303	210,281	524,129	4,879,751	1,915,707	5,096,618	1,698,840
Coffee, tea and cocoa	2,199,813	675,750	180,203	167,869	137,658	446,347	2,860,506	947,134	2,861,061	946,578
Mineral water, soft drinks, juices	2,384,239	587,237	228,565	233,856	209,565	639,664	2,990,534	1,292,592	3,144,954	1,138,171
Alcoholic beverages, tobacco and narcotics										
Spirits	214,022				42,111		255,976	156	244,040	12,093
Wine	414,547	148,504			20,357		409,696	173,712	385,207	198,201
Beer	2,569,395	941,026	19,599		163,753		2,641,357	1,052,417	2,640,082	1,053,692
Tobacco	1,495,462	677,951	239,536	202,213	212,464	429,767	2,463,570	793,823	2,585,675	671,717
Kava; Sakau	567,223	418,365	56,185	359,540	125,758	60,322	1,261,435	325,956	1,274,277	313,115
Clothing and footwear										
Clothing materials	76,894	26,689	4,009	2,253	972	2,931	47,788	65,961	81,352	32,397
Garments	3,561,744	809,009	322,236	182,588	240,063	604,107	4,087,842	1,631,904	4,317,147	1,402,600
Other articles of clothing and clothing accessories	18,256	6,034	2,606		3,917	85	25,046	5,852	25,458	5,440
Cleaning, repair and hire of clothing	174,544	63,060			2,921	5,283	111,834	133,974	166,826	78,982
Shoes and other footwear	656,091	122,263	92,150	32,072	37,854	73,763	694,872	319,319	788,559	225,633
Housing, water, electricity, gas										
Actual rentals paid by tenants	3,498,153	131,969			10,386		2,620,343	1,020,165	2,661,995	978,513
Imputed rentals of owner occupiers	34,570,444	9,004,945	773,285	1,357,838	1,988,925	4,133,319	35,622,544	16,206,214	37,493,229	14,335,528
Other imputed rentals	5,414,259	638,615	547,268	239,822	378,840	630,446	6,036,881	1,812,368	6,420,144	1,429,105
Services for the maintenance/repair of the dwelling	990,061	126,079	16,539	19,822	21,878	24,417	562,400	636,396	1,039,808	158,987
Water supply	468,569						332,901	135,669	292,805	175,764
Electricity	8,103,120	3,460,037	47,317	175,815	12,266	86,473	8,221,261	3,663,766	8,971,926	2,913,101
Gas	1,929,273	753,265	145,366	168,433	74,356	304,036	2,170,945	1,203,784	2,549,764	824,965
Liquid fuels	71,375	2,136,335	12,976	45,483	4,946	30,341	2,165,727	135,729	2,177,877	123,580
Solid fuels	261	90,841		2,079	1,215		3,554	90,841	67,345	27,050

Furnishings, HH equipment										
Furniture and furnishings,	594,156	112,641	9,493	17,064	29,799	14,073	568,468	208,759	542,095	235,132
Carpets and other floor coverings	103,823	24,316			6,696	1,534	67,154	69,215	56,191	80,178
HH textiles	281,104	22,219	46,509	8,426	20,684	18,515	296,874	100,583	276,871	120,585
Major HH appliances	1,030,342	184,836	18,979	40,750	98,242	160,271	1,113,545	419,874	1,072,121	461,298
Small electric HH appliance	74,583	19,338	1,738	1,754	2,660	2,342	73,815	28,600	74,847	27,568
Glassware, tableware and HH utensils	23,820	74,483		4,080	3,564	6,203	74,312	37,838	78,870	33,279
Major tools and equipment	112,433	4,749	7,231	1,412	7,304	6,271	112,667	26,731	105,899	33,500
Small tools and miscellaneous accessories	44,262	26,871	26,261	6,823	9,904	61,554	149,228	26,447	135,198	40,477
Non durable HH goods	4,435,966	1,031,209	183,081	183,537	146,827	448,646	4,564,465	1,864,800	4,733,343	1,695,922
Domestic services and HH services	129,955	16,144				900	9,377	137,622	20,648	126,351
Health										
Pharmaceutical products	83,929	6,018	1,864	678	450	5,067	73,512	24,494	50,709	47,297
Therapeutic appliances, equipment	11,881	900				85	12,380	486	7,975	4,891
Medical services	238,574	36,235	16,502	6,614	773	57,078	246,763	109,013	246,706	109,071
Paramedical services	32,452	21,961	6,034	3,443	1,341	13,891	59,211	19,911	58,252	20,870
Transport										
Motor cars	1,701,160	125,744			4,416		1,448,898	382,423	847,927	983,394
Motor cycles		1,489		2,031	22,622	6,229	27,382	4,990	29,622	2,749
Bicycles	5,100	5,410	1,643	2,808	1,915	49,611	53,149	13,337	47,601	18,886
Animal drawn cart etc			1,734			92	1,827		1,827	
Spare parts and accessories for vehicle	138,305	31,309		3,025	255	5,354	102,731	75,518	157,214	21,034
Fuels and lubricants for vehicle	1,782,408	95,320		2,504	30,910	15,337	1,417,288	509,191	1,258,197	668,282
Maintenance and repair of vehicle	248,146						242,306	5,840	218,044	30,103
Other services in respect of vehicle	994,529	87,381			47,253	5,010	752,907	381,266	805,227	328,946
Passenger transport by road	5,616,728	1,092,062	40,588	16,305	104,798	261,739	4,421,173	2,711,046	5,318,838	1,813,381
Passenger transport by air	2,000,553	401,925	17,040	76,199	237,343	759,163	2,763,728	728,495	2,472,809	1,019,414
Passenger transport by sea and inland waterway	57,989		18,543		6,267	2,910	71,833	13,876	81,707	4,003
Communication										
Postal services			13,066				13,066		13,066	
Telephone and telefax equipment	937,945	297,893	3,809	30,992	43,776	20,438	857,324	477,528	1,001,544	333,308
Telephone and telefax services	3,216,047	398,847	45,225	211,960	174,285	25,446	2,727,569	1,344,241	2,914,081	1,157,730
Recreation and culture										
Equipment for reception/recording of sound/pictures	186,380	62,409	10,596	6,656	14,910	11,620	209,213	83,358	220,170	72,401
Information processing equipment	396,040	60,320	358	14,275	16,463	15,720	354,124	149,052	317,335	185,841
Major durables for outdoor recreation	1,219	7,291		3,449	354	1,953	6,686	7,580	13,583	683
Maintenance and repair of other major durables	197,036	198,846		60,821	10,825	44,468	384,179	127,817	379,434	132,562
Games, toys and hobbies	17,224	5,861			1,002		16,319	7,767	17,442	6,645

Veterinary and other services for pets	5				40		45			45
Recreational and sporting services	127,385	2,242		261	16,295	465	138,886	7,762	71,476	75,172
Cultural services	572,892	145,432	9,773	11,476	82,135	51,593	630,445	242,856	479,075	394,225
Games of chance	582,597	55,533				2,576	55,537	507,302	188,941	486,271	209,973
Books	147,023	61,532	10,802	7,732	7,016	34,230	179,557	88,778	220,377	47,958
Newspapers and periodicals	76,542	7,599					64,015	20,127	51,568	32,574
Stationery and drawing materials	131,268	6,951	15,180	12,167	8,368	34,398	150,402	57,930	160,508	47,824
Education										
Pre-primary and primary education	1,416,901	494,295	752	42,933	1,491	7,461	1,235,224	728,609	1,546,865	416,968
Education not defined by level	10,580						5,968	4,612	6,908	3,672
Restaurants and hotels										
Restaurant, cafes…etc	17,192,295	6,366,804	422,770	357,239	815,082	1,377,278	17,249,472	9,281,997	19,539,523	6,991,947
Canteens	209,312			8,873	3,694	16,423	170,799	67,503	149,905	88,397
Miscellaneous goods and services										
Hairdressing salons and personal grooming	118,814	35,172			1,561		96,898	58,650	130,901	24,646
Other appliances/articles for personal care	5,693,313	1,541,655	140,446	231,123	195,142	545,368	5,609,966	2,737,081	6,010,877	2,336,170
Other personal effects	54,214	5,615		1,043	1,226	1,840	38,155	25,783	39,136	24,802
Life insurance	601				136		136	601	736	
Insurance connected with health	868				108	10,480	10,480	976	11,457	
Insurance connected with transport	139,453	39,798					119,452	59,799	98,448	80,803
Other insurance	1,802						1,802			1,802
Other services n.e.c.	378,574	100,211	752	11,812	6,193	18,410	426,992	88,960	413,948	102,003
Non-consumption – cash transfer										
Non-consumption expenditure – cash donations	3,471,336	944,447	127,402	221,213	242,012	623,398	4,198,899	1,430,910	2,696,621	2,933,188
Non-consumption expenditure – tax, fines	3,004						3,004		3,004	
Non-consumption expenditure – home investment	1,155,188	8,969	25,059	46,946		23,238	1,093,571	165,828	1,218,090	41,309
Non-consumption – intermediate expenditure										
Motor cars	229,615						229,615		229,048	567
Bicycles						1,129	1,129		876	252
Major durables for outdoor recreation	10,890	4,502			248	1,251	10,923	5,968	10,853	6,038
Non-consumption – intermediate	1,138,480	4,541	38,057	21,171	36,780	230,066	1,358,870	110,223	856,437	612,656

Table 89: Total annual household expenditure, by COICOP class (cont')

	HH with person with disability		HH per capita expenditure quintile					Urban–Rural		
	With disability	Without disability	Lowest	2	3	4	Highest	Urban	Rural	National
Food and non-alcoholic beverages										
Bread and cereals	2,155,321	13,816,980	2,992,451	3,356,520	3,338,470	3,697,214	2,587,647	12,001,446	3,970,856	15,972,302
Meat	1,640,501	12,210,566	2,104,830	2,748,560	3,021,868	3,367,283	2,608,525	10,862,238	2,988,828	13,851,066
Fish and sea food	1,129,151	8,204,420	1,964,224	2,096,014	1,735,496	1,715,755	1,822,082	5,246,139	4,087,432	9,333,571
Milk, cheese and eggs	335,027	2,335,158	241,901	435,283	475,571	759,414	758,016	2,268,275	401,910	2,670,184
Oils and fats	177,408	1,733,985	312,058	395,949	433,886	411,895	357,605	1,422,654	488,740	1,911,394
Fruit	1,024,917	7,175,383	1,346,303	1,865,472	1,448,653	1,776,256	1,763,617	4,973,855	3,226,445	8,200,300
Vegetables	372,723	2,709,215	139,803	398,916	561,519	696,520	1,285,179	2,777,388	304,550	3,081,938
Sugar, jam, honey, chocolate…	182,471	1,627,155	309,184	350,224	375,597	465,254	309,369	1,307,691	501,936	1,809,627
Food products n.e.c.	751,115	6,044,343	829,173	1,247,327	1,268,511	1,434,014	2,016,434	5,717,899	1,077,559	6,795,458
Coffee, tea and cocoa	442,942	3,364,697	564,932	683,829	696,116	690,668	1,172,095	2,875,563	932,076	3,807,639
Mineral water, soft drinks, juices	487,836	3,795,290	596,341	928,248	832,220	1,037,354	888,963	2,971,476	1,311,649	4,283,126
Alcoholic beverages, tobacco and narcotics										
Spirits	782	255,350	4,419	19,490	83,006	3,392	145,825	214,022	42,111	256,132
Wine	60,855	522,552	33,184	46,299	27,354	132,270	344,301	563,051	20,357	583,408
Beer	342,898	3,350,876	357,666	673,146	544,066	1,014,479	1,104,417	3,510,421	183,353	3,693,774
Tobacco	447,795	2,809,597	725,436	816,752	674,646	674,219	366,340	2,173,413	1,083,979	3,257,392
Kava; Sakau	181,442	1,405,950	135,185	316,818	521,572	197,408	416,408	985,587	601,804	1,587,392
Clothing and footwear										
Clothing materials	2,618	111,131	6,416	6,420	12,785	44,018	44,109	103,583	10,166	113,749
Garments	647,303	5,072,443	922,997	1,135,992	1,110,345	1,256,395	1,294,018	4,370,753	1,348,994	5,719,747
Other articles of clothing and clothing accessories	5,415	25,482	2,492	1,405	13,505	8,808	4,687	24,289	6,608	30,898
Cleaning, repair and hire of clothing	29,214	216,594	16,422	27,632	61,422	55,495	84,836	237,604	8,204	245,808
Shoes and other footwear	105,800	908,391	193,191	213,024	183,121	231,287	193,569	778,354	235,838	1,014,191
Housing, water, electricity, gas										
Actual rentals paid by tenants	634,544	3,005,964	10,386	97,866	289,169	234,342	3,008,746	3,630,122	10,386	3,640,508
Imputed rentals of owner occupiers	6,268,436	45,560,321	8,140,942	10,019,987	10,124,640	10,976,915	12,566,275	43,575,389	8,253,368	51,828,758
Other imputed rentals	304,035	7,545,214	1,233,150	1,140,605	1,843,464	1,978,577	1,653,452	6,052,874	1,796,375	7,849,249
Services for the maintenance/repair of the dwelling	75,771	1,123,024	39,003	199,209	70,594	315,170	574,818	1,116,140	82,655	1,198,796
Water supply	48,383	420,186	45,337	72,750	99,027	117,468	133,987	468,569		468,569
Electricity	1,403,233	10,481,795	1,227,836	2,229,746	2,281,756	2,800,868	3,344,822	11,563,157	321,871	11,885,028
Gas	337,110	3,037,619	644,030	763,256	691,960	769,714	505,770	2,682,538	692,192	3,374,729
Liquid fuels	29,485	2,271,972	39,332	49,116	42,513	123,794	2,046,702	2,207,710	93,747	2,301,457

Solid fuels		94,395	3,293	12,537	52,991	25,575		91,102	3,293	94,395
Furnishings, HH equipment										
Furniture and furnishings,	86,624	690,602	41,015	109,494	132,534	176,254	317,930	706,797	70,429	777,227
Carpets and other floor coverings	32,938	103,431	1,271	5,524	25,297	24,024	80,252	128,139	8,230	136,369
HH textiles	69,791	327,666	20,921	22,678	47,529	115,130	191,198	303,323	94,134	397,457
Major HH appliances	188,841	1,344,578	160,378	235,531	280,624	326,016	530,870	1,215,178	318,241	1,533,419
Small electric HH appliance	12,372	90,043	12,974	16,620	20,524	25,382	26,915	93,921	8,494	102,415
Glassware, tableware and HH utensils	19,280	92,870	3,839	9,672	47,141	32,381	19,117	98,304	13,846	112,150
Major tools and equipment	13,160	126,239	8,393	16,241	22,863	23,361	68,540	117,182	22,216	139,398
Small tools and miscellaneous accessories	26,196	149,479	28,731	34,548	47,909	45,158	19,328	71,133	104,542	175,675
Non durable HH goods	685,298	5,743,967	777,154	1,121,415	1,159,904	1,599,474	1,771,319	5,467,175	962,091	6,429,265
Domestic services and HH services		146,999	267		16,144	200	130,388	146,099	900	146,999
Health										
Pharmaceutical products	10,058	87,948	18,202	22,887	21,190	17,189	18,539	89,947	8,059	98,006
Therapeutic appliances, equipment	985	11,881	85			5,706	7,075	12,781	85	12,866
Medical services	59,828	295,949	123,033	72,551	54,460	58,236	47,497	274,809	80,968	355,777
Paramedical services	13,338	65,783	11,374	16,236	18,033	26,818	6,661	54,413	24,709	79,121
Transport										
Motor cars	370,649	1,460,672	22,291	76,708	164,532	278,139	1,289,650	1,826,904	4,416	1,831,321
Motor cycles	1,804	30,568	7,462	4,065	6,354	9,125	5,366	1,489	30,882	32,372
Bicycles	8,370	58,117	24,348	13,749	12,746	10,708	4,937	10,509	55,977	66,486
Animal drawn cart etc		1,827		92		1,734			1,827	1,827
Spare parts and accessories for vehicle	2,936	175,312	3,830	32,678	14,695	40,809	86,236	169,614	8,634	178,249
Fuels and lubricants for vehicle	203,350	1,723,129	84,548	184,429	300,985	421,565	934,954	1,877,728	48,751	1,926,479
Maintenance and repair of vehicle		248,146	400	5,523	1,402	7,542	233,279	248,146		248,146
Other services in respect of vehicle	141,542	992,631	42,905	198,815	258,464	121,980	512,009	1,081,910	52,263	1,134,173
Passenger transport by road	1,038,240	6,093,979	861,403	1,609,644	1,406,447	1,827,772	1,426,953	6,708,790	423,429	7,132,219
Passenger transport by air	259,026	3,233,197	239,627	381,060	594,559	1,045,012	1,231,966	2,402,478	1,089,745	3,492,223
Passenger transport by sea and inland waterway	59,786	25,923	12,308	2,506		68,493	2,403	57,989	27,720	85,710
Communication										
Postal services		13,066				13,066			13,066	13,066
Telephone and telefax equipment	128,869	1,205,983	116,455	238,425	268,346	380,069	331,557	1,235,837	99,015	1,334,852
Telephone and telefax services	431,514	3,640,296	364,690	550,811	730,484	1,139,200	1,286,626	3,614,894	456,916	4,071,810
Recreation and culture										
Equipment for reception/recording of sound/picture	31,426	261,145	25,134	50,976	71,661	66,178	78,621	248,788	43,782	292,570
Information processing equipment	55,876	447,300	27,751	40,083	77,356	102,562	255,425	456,360	46,817	503,176
Major durables for outdoor recreation	27	14,239	939	9,142	1,499	2,686		8,510	5,756	14,266
Maintenance and repair of other major durables	75	511,921	10,820	26,555	41,496	181,195	251,929	395,882	116,114	511,996

Games, toys and hobbies	1,596	22,491	594	5,103	4,919	5,971	7,500	23,085	1,002	24,087
Veterinary and other services for pets		45	40	5				5	40	45
Recreational and sporting services	500	146,148	965	4,339	7,649	20,290	113,406	129,627	17,021	146,648
Cultural services	112,998	760,303	25,385	103,981	105,723	156,108	482,104	718,325	154,976	873,301
Games of chance	117,860	578,384	32,730	124,679	274,481	146,023	118,332	638,131	58,112	696,243
Books	36,854	231,481	82,566	74,873	63,277	36,012	11,606	208,555	59,780	268,335
Newspapers and periodicals	15,470	68,671	1,496	3,637	13,626	25,654	39,728	84,141		84,141
Stationery and drawing materials	28,694	179,638	70,995	49,743	48,617	27,030	11,947	138,219	70,113	208,332
Education										
Pre-primary and primary education	295,512	1,668,320	87,401	335,899	502,139	589,174	449,220	1,911,196	52,636	1,963,833
Education not defined by level	2,690	7,890	2,870	100	4,459		3,152	10,580		10,580
Restaurants and hotels										
Restaurant, cafes…etc	3,361,621	23,169,848	2,820,891	4,617,493	4,745,215	6,352,299	7,995,571	23,559,099	2,972,370	26,531,469
Canteens	47,585	190,718	25,998	45,409	57,165	73,520	36,210	209,312	28,990	238,303
Miscellaneous goods and services										
Hairdressing salons and personal grooming	11,892	143,655	1,302	11,534	5,281	54,478	82,953	153,986	1,561	155,548
Other appliances/articles for personal care	924,485	7,422,562	989,607	1,561,173	1,510,422	2,096,719	2,189,126	7,234,968	1,112,079	8,347,047
Other personal effects	17,478	46,460	4,546	5,342	11,521	4,667	37,862	59,829	4,109	63,938
Life insurance		736	136				601	601	136	736
Insurance connected with health		11,457		10,480	108		868	868	10,589	11,457
Insurance connected with transport	10,036	169,215	6,473	12,449	30,132	60,250	69,947	179,251		179,251
Other insurance		1,802			1,802			1,802		1,802
Other services n.e.c.	61,836	454,115	34,946	85,101	81,095	92,836	221,973	478,785	37,166	515,951
Non-consumption – cash transfer										
Non-consumption expenditure – cash donations	1,659,072	3,970,736	343,036	628,523	832,607	1,138,451	2,687,191	4,415,783	1,214,025	5,629,808
Non-consumption expenditure – tax, fines	3,004						3,004	3,004		3,004
Non-consumption expenditure – home investment	36,303	1,223,096	23,238	102,559	805,964	296,341	31,298	1,164,156	95,243	1,259,399
Non-consumption – intermediate expenditure										
Motor cars	41,783	187,833	6,540	25,125	7,835	41,216	148,899	229,615		229,615
Bicycles		1,129		363		765			1,129	1,129
Major durables for outdoor recreation		16,891	238	111		6,141	10,401	15,392	1,499	16,891
Non-consumption – intermediate	178,879	1,290,214	319,896	367,607	157,495	319,334	304,761	1,143,021	326,073	1,469,093

Table 90: Percentage of households incurring expenditure, by COICOP class

	Strata						Sex of main respondant		Age group		HH with person with disability	
	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years	With disability	Without disability
Food and non-alcoholic beverages												
Bread and cereals	99%	100%	100%	100%	100%	99%	100%	98%	100%	98%	100%	99%
Meat	91%	96%	91%	90%	91%	70%	89%	92%	91%	87%	93%	89%
Fish and sea food	84%	92%	100%	92%	89%	95%	89%	87%	87%	94%	90%	88%
Milk, cheese and eggs	77%	68%	34%	40%	66%	39%	65%	71%	67%	68%	66%	67%
Oils and fats	73%	77%	54%	84%	74%	73%	72%	76%	73%	74%	68%	74%
Fruit	76%	78%	97%	80%	73%	94%	77%	86%	78%	85%	77%	80%
Vegetables	59%	46%	17%	14%	27%	18%	45%	50%	45%	53%	45%	47%
Sugar, jam, honey, chocolate…	70%	47%	74%	70%	81%	77%	64%	75%	66%	70%	61%	68%
Food products n.e.c.	95%	97%	89%	100%	92%	92%	95%	94%	95%	92%	95%	95%
Coffee, tea and cocoa	90%	96%	89%	94%	96%	84%	91%	89%	91%	90%	87%	91%
Mineral water, soft drinks, juices	74%	75%	77%	70%	79%	71%	72%	78%	74%	75%	75%	74%
Alcoholic beverages, tobacco and narcotics												
Spirits	4%	0%	0%	0%	4%	0%	3%	0%	3%	1%	0%	3%
Wine	6%	5%	0%	0%	6%	0%	4%	7%	5%	5%	6%	5%
Beer	25%	31%	3%	0%	17%	0%	20%	21%	21%	20%	18%	21%
Tobacco	37%	43%	40%	56%	64%	49%	44%	36%	44%	33%	45%	41%
Kava; Sakau	4%	11%	6%	18%	10%	5%	7%	6%	7%	6%	11%	6%
Clothing and footwear												
Clothing materials	3%	10%	6%	6%	2%	2%	3%	8%	4%	6%	2%	5%
Garments	76%	89%	66%	66%	75%	70%	75%	80%	79%	71%	83%	76%
Other articles of clothing, clothing accessories	2%	2%	6%	0%	3%	0%	2%	1%	2%	1%	3%	2%
Cleaning, repair and hire of clothing	10%	11%	0%	0%	3%	1%	6%	12%	7%	12%	11%	7%
Shoes and other footwear	48%	38%	43%	46%	46%	53%	43%	55%	46%	46%	44%	47%
Housing, water, electricity, gas												
Actual rentals paid by tenants	7%	2%	0%	0%	1%	0%	5%	4%	5%	4%	6%	4%
Imputed rentals of owner occupiers	76%	91%	63%	80%	74%	87%	78%	83%	78%	82%	87%	79%
Other imputed rentals	16%	7%	37%	20%	25%	13%	17%	13%	17%	13%	8%	17%
Services for maintenance/repair of dwelling	9%	16%	9%	10%	12%	3%	11%	7%	10%	8%	7%	10%
Water supply	20%	0%	0%	0%	0%	0%	11%	13%	10%	17%	11%	12%
Electricity	76%	82%	34%	94%	43%	81%	74%	77%	74%	77%	73%	75%
Gas	85%	84%	71%	68%	51%	47%	76%	82%	78%	76%	77%	78%
Liquid fuels	3%	6%	17%	8%	1%	6%	4%	7%	4%	6%	4%	5%
Solid fuels	0%	1%	0%	2%	2%	0%	0%	1%	0%	1%	0%	0%

Furnishings, HH equipment												
Furniture and furnishings,	77%	96%	71%	79%	75%	54%	78%	75%	75%	84%	82%	77%
Carpets and other floor coverings	4%	7%	0%	0%	4%	1%	3%	5%	3%	4%	6%	3%
HH textiles	12%	8%	6%	2%	13%	10%	12%	8%	11%	8%	14%	10%
Major HH appliances	93%	97%	86%	92%	93%	82%	92%	93%	92%	93%	92%	92%
Small electric HH appliance	84%	88%	29%	56%	53%	18%	71%	75%	72%	72%	76%	71%
Glassware, tableware and HH utensils	2%	11%	0%	4%	4%	2%	3%	4%	3%	4%	5%	3%
Major tools and equipment	33%	17%	14%	18%	35%	12%	28%	22%	24%	31%	36%	25%
Small tools and miscellaneous accessories	10%	24%	17%	10%	15%	24%	17%	10%	15%	15%	22%	14%
Non durable HH goods	79%	86%	66%	80%	55%	66%	79%	72%	78%	73%	78%	77%
Domestic services and HH services	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%	1%
Health												
Pharmaceutical products	22%	16%	14%	6%	3%	12%	18%	17%	16%	25%	22%	17%
Therapeutic appliances, equipment	2%	0%	0%	0%	0%	0%	1%	1%	1%	2%	1%	1%
Medical services	61%	52%	60%	44%	5%	42%	53%	58%	53%	61%	49%	55%
Paramedical services	5%	8%	6%	4%	2%	8%	6%	5%	6%	4%	9%	6%
Transport												
Motor cars	20%	5%	0%	0%	2%	0%	13%	11%	10%	22%	11%	13%
Motor cycles	0%	1%	0%	4%	15%	1%	1%	1%	1%	0%	0%	1%
Bicycles	3%	15%	9%	28%	12%	58%	14%	10%	13%	11%	16%	12%
Animal drawn cart etc	0%	0%	6%	0%	0%	0%	1%	0%	1%	0%	0%	0%
Spare parts and accessories for vehicle	4%	6%	0%	6%	1%	8%	5%	4%	4%	6%	2%	5%
Fuels and lubricants for vehicle	22%	5%	0%	4%	10%	1%	15%	11%	12%	22%	12%	14%
Maintenance and repair of vehicle	4%	0%	0%	0%	0%	0%	3%	1%	2%	5%	0%	3%
Other services in respect of vehicle	12%	3%	0%	0%	1%	2%	7%	8%	8%	7%	7%	8%
Passenger transport by road	60%	74%	11%	6%	11%	14%	47%	59%	52%	47%	53%	51%
Passenger transport by air	11%	7%	3%	8%	16%	25%	12%	8%	11%	12%	10%	11%
Passenger transport by sea, inland waterway	1%	0%	9%	0%	3%	1%	1%	1%	1%	0%	4%	1%
Communication												
Postal services	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Telephone and telefax equipment	81%	71%	26%	88%	67%	21%	67%	71%	69%	68%	64%	69%
Telephone and telefax services	77%	62%	23%	86%	60%	9%	62%	64%	63%	63%	62%	63%
Recreation and culture												
Equipment for reception, recording of sound	47%	61%	68%	54%	63%	44%	52%	48%	51%	52%	62%	50%
Information processing equipment	27%	18%	3%	38%	27%	14%	22%	24%	22%	25%	28%	22%
Major durables for outdoor recreation	0%	0%	0%	10%	1%	2%	1%	0%	1%	0%	0%	1%
Maintenance, repair of other major durables	1%	3%	0%	10%	3%	3%	2%	2%	2%	1%	0%	2%
Games, toys and hobbies	4%	6%	0%	0%	4%	0%	4%	4%	4%	4%	2%	4%

Veterinary and other services for pets	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Recreational and sporting services	3%	0%	0%	2%	3%	1%	2%	2%	2%	3%	0%	2%
Cultural services	15%	21%	9%	10%	23%	12%	16%	14%	15%	19%	20%	15%
Games of chance	4%	0%	0%	0%	1%	2%	3%	2%	3%	2%	4%	2%
Books	41%	47%	43%	46%	38%	50%	41%	50%	48%	31%	52%	42%
Newspapers and periodicals	17%	3%	0%	0%	0%	0%	11%	9%	9%	15%	18%	9%
Stationery and drawing materials	28%	5%	43%	48%	38%	41%	27%	27%	28%	23%	40%	26%
Education												
Pre-primary and primary education	16%	31%	3%	14%	7%	8%	16%	19%	18%	14%	22%	16%
Education not defined by level	2%	0%	0%	0%	0%	0%	1%	2%	1%	1%	4%	1%
Restaurants and hotels												
Restaurant, cafes…etc	90%	96%	51%	86%	93%	79%	88%	85%	86%	90%	83%	88%
Canteens	8%	0%	0%	4%	3%	4%	5%	7%	5%	5%	8%	5%
Miscellaneous goods and services												
Hairdressing salons and personal grooming	8%	9%	0%	0%	3%	0%	6%	8%	7%	5%	6%	6%
Other appliances, articles and products	87%	89%	46%	80%	65%	54%	79%	82%	80%	80%	83%	80%
Other personal effects	11%	7%	0%	4%	7%	5%	8%	10%	7%	14%	11%	8%
Life insurance	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Insurance connected with health	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Insurance connected with transport	11%	2%	0%	0%	0%	0%	8%	4%	5%	12%	5%	7%
Other insurance	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other services n.e.c.	44%	43%	6%	22%	23%	25%	43%	26%	38%	39%	45%	37%
Non-consumption – cash transfer												
Non-consumption expenditure – cash donations	30%	42%	37%	42%	44%	40%	33%	38%	32%	42%	34%	35%
Non-consumption expenditure – tax, fines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Non-consumption expenditure – home investment	2%	0%	6%	8%	0%	1%	2%	1%	2%	1%	3%	2%
Non-consumption – intermediate expenditure												
Motor cars	2%	0%	0%	0%	0%	0%	1%	0%	1%	0%	1%	1%
Bicycles	0%	0%	0%	0%	0%	3%	1%	0%	0%	0%	0%	0%
Major durables for outdoor recreation	1%	2%	0%	0%	2%	5%	1%	2%	2%	1%	0%	2%
Non-consumption – intermediate	11%	1%	48%	30%	18%	36%	17%	12%	15%	16%	16%	15%

Table 90: Percentage of households incurring expenditure, by COICOP class (cont')

	HH per capita expenditure quintile					Urban–Rural		National
	Lowest	2	3	4	Highest	Urban	Rural	
Food and non-alcoholic beverages								
Bread and cereals	100%	100%	99%	100%	97%	99%	99%	99%
Meat	83%	87%	93%	95%	91%	93%	81%	90%
Fish and sea food	87%	92%	87%	88%	88%	86%	95%	88%
Milk, cheese and eggs	42%	67%	65%	82%	79%	75%	42%	67%
Oils and fats	66%	78%	71%	79%	72%	74%	70%	73%
Fruit	71%	78%	74%	88%	87%	77%	90%	80%
Vegetables	20%	41%	43%	61%	70%	56%	18%	47%
Sugar, jam, honey, chocolate…	69%	73%	67%	69%	58%	64%	76%	67%
Food products n.e.c.	95%	96%	89%	97%	96%	95%	92%	95%
Coffee, tea and cocoa	87%	94%	90%	90%	92%	91%	88%	91%
Mineral water, soft drinks, juices	65%	73%	74%	78%	80%	74%	73%	74%
Alcoholic beverages, tobacco and narcotics								
Spirits	1%	2%	4%	0%	5%	3%	1%	2%
Wine	2%	2%	2%	5%	14%	6%	1%	5%
Beer	13%	19%	13%	26%	31%	26%	3%	21%
Tobacco	49%	50%	43%	37%	29%	39%	50%	41%
Kava; Sakau	4%	7%	10%	5%	6%	6%	8%	6%
Clothing and footwear								
Clothing materials	2%	2%	4%	8%	6%	5%	4%	4%
Garments	81%	82%	70%	81%	68%	79%	69%	77%
Other articles of clothing, clothing accessories	1%	1%	3%	4%	0%	2%	2%	2%
Cleaning, repair and hire of clothing	3%	6%	8%	9%	14%	10%	1%	8%
Shoes and other footwear	52%	50%	45%	44%	41%	46%	49%	46%
Housing, water, electricity, gas								
Actual rentals paid by tenants	0%	1%	2%	2%	18%	6%	0%	4%
Imputed rentals of owner occupiers	84%	86%	80%	78%	69%	80%	78%	79%
Other imputed rentals	16%	13%	18%	20%	13%	14%	22%	16%
Services for the maintenance and repair	3%	12%	5%	16%	13%	11%	6%	10%
Water supply	5%	8%	13%	12%	20%	15%	0%	12%
Electricity	73%	74%	70%	79%	78%	77%	67%	75%
Gas	73%	81%	76%	82%	77%	85%	56%	78%
Liquid fuels	3%	7%	2%	7%	3%	3%	8%	4%
Solid fuels	1%	0%	0%	0%	0%	0%	1%	0%

Furnishings, HH equipment								
Furniture and furnishings,	63%	74%	80%	82%	88%	82%	65%	77%
Carpets and other floor coverings	0%	1%	5%	4%	7%	4%	1%	4%
HH textiles	6%	7%	8%	17%	15%	11%	8%	11%
Major HH appliances	84%	92%	92%	96%	95%	94%	86%	92%
Small electric HH appliance	55%	64%	71%	79%	90%	85%	30%	72%
Glassware, tableware and HH utensils	1%	2%	6%	4%	4%	4%	2%	3%
Major tools and equipment	10%	19%	25%	28%	47%	29%	16%	26%
Small tools and miscellaneous accessories	14%	15%	16%	22%	6%	13%	19%	15%
Non durable HH goods	72%	79%	82%	84%	70%	80%	67%	77%
Domestic services and HH services	0%	0%	0%	0%	2%	1%	0%	1%
Health								
Pharmaceutical products	17%	20%	22%	20%	12%	20%	11%	18%
Therapeutic appliances, equipment	0%	0%	0%	2%	3%	1%	0%	1%
Medical services	61%	62%	51%	60%	41%	59%	42%	55%
Paramedical services	5%	6%	5%	8%	6%	6%	6%	6%
Transport								
Motor cars	3%	7%	9%	16%	28%	17%	0%	13%
Motor cycles	1%	1%	1%	1%	1%	0%	3%	1%
Bicycles	20%	14%	14%	11%	6%	5%	36%	13%
Animal drawn cart etc	0%	0%	0%	2%	0%	0%	2%	0%
Spare parts and accessories for vehicle	3%	4%	5%	7%	5%	5%	5%	5%
Fuels and lubricants for vehicle	4%	9%	10%	18%	29%	18%	3%	14%
Maintenance and repair of vehicle	0%	1%	1%	2%	8%	3%	0%	2%
Other services in respect of vehicle	1%	9%	9%	4%	15%	10%	1%	8%
Passenger transport by road	36%	57%	46%	61%	54%	63%	12%	51%
Passenger transport by air	6%	7%	11%	14%	17%	10%	16%	11%
Passenger transport by sea, inland waterway	1%	1%	0%	3%	0%	0%	3%	1%
Communication								
Postal services	0%	0%	0%	2%	0%	0%	1%	0%
Telephone and telefax equipment	46%	60%	71%	83%	82%	78%	38%	68%
Telephone and telefax services	36%	52%	68%	78%	80%	73%	30%	63%
Recreation and culture								
Equipment for reception, recording of sound	43%	48%	53%	58%	55%	50%	54%	51%
Information processing equipment	12%	15%	25%	22%	39%	25%	16%	23%
Major durables for outdoor recreation	0%	2%	1%	2%	0%	0%	3%	1%
Maintenance and repair of other major durable	0%	2%	1%	3%	4%	1%	3%	2%
Games, toys and hobbies	1%	4%	5%	4%	5%	5%	1%	4%

Veterinary and other services for pets	0%	0%	0%	0%	0%	0%	0%	0%
Recreational and sporting services	0%	2%	2%	1%	5%	2%	1%	2%
Cultural services	5%	11%	18%	19%	25%	17%	12%	16%
Games of chance	1%	3%	4%	2%	2%	3%	1%	3%
Books	67%	59%	50%	30%	11%	43%	46%	43%
Newspapers and periodicals	1%	2%	9%	14%	26%	14%	0%	10%
Stationery and drawing materials	47%	32%	31%	18%	7%	22%	42%	27%
Education								
Pre-primary and primary education	16%	21%	21%	16%	9%	20%	8%	17%
Education not defined by level	1%	0%	1%	0%	3%	1%	0%	1%
Restaurants and hotels								
Restaurant, cafes…etc	81%	89%	80%	91%	95%	91%	75%	87%
Canteens	4%	5%	6%	7%	3%	6%	3%	5%
Miscellaneous goods and services								
Hairdressing salons and personal grooming	1%	2%	3%	10%	16%	8%	0%	6%
Other appliances, articles and products	71%	83%	79%	82%	85%	87%	57%	80%
Other personal effects	6%	7%	8%	5%	17%	10%	4%	9%
Life insurance	0%	0%	0%	0%	0%	0%	0%	0%
Insurance connected with health	0%	1%	0%	0%	0%	0%	1%	0%
Insurance connected with transport	2%	3%	4%	9%	17%	9%	0%	7%
Other insurance	0%	0%	0%	0%	0%	0%	0%	0%
Other services n.e.c.	28%	40%	34%	37%	51%	44%	20%	38%
Non-consumption – cash transfer								
Non-consumption expenditure – cash donations	22%	26%	32%	45%	47%	33%	40%	35%
Non-consumption expenditure – tax, fines	0%	0%	0%	1%	0%	0%	0%	0%
Non-consumption expenditure – home investment	0%	1%	1%	5%	1%	1%	3%	2%
Non-consumption – intermediate expenditure								
Motor cars	1%	1%	0%	1%	2%	1%	0%	1%
Bicycles	0%	1%	0%	1%	0%	0%	1%	0%
Major durables for outdoor recreation	1%	1%	0%	2%	4%	1%	3%	2%
Non-consumption – intermediate	26%	23%	11%	8%	6%	8%	36%	15%

APPENDIX 5: INCOME TABLES

Table 91: Total annual household income, by income type

	Cash	Home production	Gifts	Exchange	Imputed rents	Intermediate exp.	In-kind	Total
Strata								
Majuro	133,395,211	1,662,308	20,495,410	40,078	34,570,444	-1,135,276	5,669,731	194,697,906
Kwajalein	34,344,935	275,245	3,232,190	68,128	9,004,945	-4,541	371,317	47,292,220
Rural 1	10,587,267	924,129	1,747,463	91,217	773,285	-38,057		14,085,304
Rural 2	5,455,650	757,334	1,612,651	98,065	1,357,838	-20,676	1,043	9,261,904
Rural 3	5,325,871	554,984	3,728,388	1,896	1,988,925	-36,301	651,313	12,215,077
Rural 4	22,477,051	4,549,634	5,840,636	669,260	4,133,319	-226,865	5,027	37,448,062
Sex								
Male	151,734,298	7,030,977	26,229,290	794,472	35,622,544	-1,351,493	5,798,183	225,858,271
Female	59,851,686	1,692,657	10,427,448	174,172	16,206,214	-110,223	900,249	89,142,203
Age group								
18–59 years	156,782,089	6,943,823	27,668,237	704,928	37,493,229	-855,108	3,977,581	232,714,779
60+ years	54,803,895	1,779,811	8,988,501	263,716	14,335,528	-606,608	2,720,851	82,285,695
Disability status								
With disability	23,813,788	1,159,954	3,967,364	215,072	6,268,436	-178,675	1,189,128	36,435,068
Without disability	187,772,196	7,563,680	32,689,374	753,571	45,560,321	-1,283,041	5,509,304	278,565,405
HH per capita expenditure quintile								
Lowest	34,894,596	2,422,516	5,991,196	439,119	8,140,942	-318,838	618,712	52,188,242
2	39,564,297	2,617,678	6,378,044	171,518	10,019,987	-365,464	259,684	58,645,743
3	33,885,204	1,628,020	6,718,766	169,249	10,124,640	-156,522	274,887	52,644,245
4	40,251,104	1,146,079	8,843,927	122,113	10,976,915	-316,131	980,041	62,004,049
Highest	62,990,783	909,341	8,724,805	66,644	12,566,275	-304,761	4,565,108	89,518,194
Urban–Rural								
Urban	167,740,146	1,937,553	23,727,601	108,207	43,575,389	-1,139,817	6,041,048	241,990,127
Rural	43,845,838	6,786,081	12,929,137	860,437	8,253,368	-321,899	657,384	73,010,347
Total	211,585,984	8,723,634	36,656,738	968,644	51,828,758	-1,461,716	6,698,432	315,000,473

Table 92: Average annual household income, by income type

	Cash	Home production	Gifts	Exchange	Imputed rents	Intermediate exp.	In-kind	Total
Strata								
Majuro								
Kwajalein	15,343	191	2,357	5	3,976	-131	652	22,395
Rural 1	13,109	105	1,234	26	3,437	-2	142	18,050
Rural 2	12,031	1,050	1,986	104	879	-43	0	16,006
Rural 3	10,372	1,440	3,066	186	2,581	-39	2	17,608
Rural 4	11,284	1,176	7,899	4	4,214	-77	1,380	25,879
Sex	12,786	2,588	3,322	381	2,351	-129	3	21,302
Male								
Female	14,386	667	2,487	75	3,378	-128	550	21,414
Age group	13,596	385	2,369	40	3,682	-25	205	20,250
18–59 years								
60+ years	14,025	621	2,475	63	3,354	-76	356	20,817
Disability status	14,533	472	2,384	70	3,802	-161	722	21,821
With disability								
Without disability	14,655	714	2,441	132	3,857	-110	732	22,422
HH per capita expenditure quintile	14,092	568	2,453	57	3,419	-96		413
Lowest								
2	11,670	810	2,004	147	2,723	-107	207	17,454
3	13,162	871	2,122	57	3,333	-122	86	19,510
4	11,375	546	2,255	57	3,399	-53	92	17,672
Highest	13,480	384	2,962	41	3,676	-106	328	20,765
Urban–Rural	21,081	304	2,920	22	4,206	-102	1,528	29,959
Urban								
Rural	14,826	171	2,097	10	3,851	-101	534	21,389
Total	12,059	1,866	3,556	237	2,270	-89	181	20,080

Table 93: Average annual per capita income, by income type

	Cash	Home production	Gifts	Exchange	Imputed rents	Intermediate exp.	In-kind	Total
Strata								
Majuro	4,394	55	675	1	1,139	-37	187	6,413
Kwajalein	3,297	26	310	7	864	0	36	4,540
Rural 1	4,033	352	666	35	295	-14	0	5,366
Rural 2	2,857	397	845	51	711	-11	1	4,851
Rural 3	2,980	311	2,086	1	1,113	-20	364	6,836
Rural 4	3,084	624	801	92	567	-31	1	5,137
Sex								
Male	5,611	260	970	29	1,317	-50	214	8,351
Female	2,189	62	381	6	593	-4	33	3,260
Age group								
18–59 years	5,065	224	894	23	1,211	-28	128	7,518
60+ years	10,665	346	1,749	51	2,790	-118	529	16,013
Disability status								
With disability	12,663	617	2,110	114	3,333	-95	632	19,374
Without disability	3,898	157	679	16	946	-27	114	5,783
HH per capita expenditure quintile								
Lowest	3,198	222	549	40	746	-29	57	4,783
2	3,620	240	584	16	917	-33	24	5,367
3	3,130	150	621	16	935	-14	25	4,864
4	3,700	105	813	11	1,009	-29	90	5,699
Highest	5,808	84	804	6	1,159	-28	421	8,253
Urban–Rural								
Urban	4,114	48	582	3	1,069	-28	148	5,934
Rural	3,221	499	950	63	606	-24	48	5,364
Total	3,890	160	674	18	953	-27	123	5,792

Table 94: Total average and median monthly household income and per capita income (US$)

	Total monthly HH expenditure	Average monthly HH expenditure	Median monthly HH expenditure	Average monthly per capita expenditure	Median monthly per capita expenditure
Strata					
Majuro	16,224,825	1,866	1,421	534	357
Kwajalein	3,941,018	1,504	1,193	378	301
Rural 1	1,173,775	1,334	1,340	447	428
Rural 2	771,825	1,467	940	404	360
Rural 3	1,017,923	2,157	1,921	570	433
Rural 4	3,120,672	1,775	1,446	428	321
Sex					
Male	18,821,522	1,785	1,340	696	339
Female	7,428,517	1,688	1,352	272	342
Age group					
18–59 years	19,392,898	1,735	1,342	626	343
60+ years	6,857,141	1,818	1,284	1,334	327
Disability status					
With disability	3,036,256	1,868	1,561	1,614	307
Without disability	23,213,784	1,742	1,330	482	346
HH per capita expenditure quintile					
Lowest	4,349,020	1,455	1,152	399	214
2	4,887,145	1,626	1,407	447	301
3	4,387,020	1,473	1,284	405	379
4	5,167,004	1,730	1,244	475	542
Highest	7,459,849	2,497	1,848	688	1,241
Urban–Rural					
Urban	20,165,844	1,782	1,333	495	333
Rural	6,084,196	1,673	1,340	447	359
Total	**26,250,039**	**1,756**	**1,340**	**483**	**339**

Table 95: Total annual household income, by PACCOI division (US$)

	Employm ent income	Property income	Transfer income	Gifts, remittances	Imputed rent	Intermediate exp	Total
Strata							
Majuro	120,090,005	3,147,562	13,749,446	18,861,467	39,984,703	-1,135,276	194,697,906
Kwajalein	27,174,626	3,234,876	3,261,833	3,981,866	9,643,560	-4,541	47,292,220
Rural 1	10,953,288		277,965	1,571,555	1,320,553	-38,057	14,085,304
Rural 2	5,784,069	20,865	262,315	1,617,671	1,597,660	-20,676	9,261,904
Rural 3	5,728,394	6,333	556,127	3,592,759	2,367,765	-36,301	12,215,077
Rural 4	26,264,376	21,557	631,058	5,994,171	4,763,765	-226,865	37,448,062
Sex							
Male	142,968,391	4,231,893	13,541,572	24,808,483	41,659,424	-1,351,493	225,858,271
Female	53,026,367	2,199,300	5,197,170	10,811,006	18,018,582	-110,223	89,142,203
Age group							
18–59 years	148,933,896	4,068,068	10,532,200	26,122,350	43,913,373	-855,108	232,714,779
60+ years	47,060,862	2,363,124	8,206,543	9,497,139	15,764,634	-606,608	82,285,695
Disability status							
With disability	22,957,801	65,256	2,423,163	4,595,051	6,572,472	-178,675	36,435,068
Without disability	173,036,957	6,365,937	16,315,580	31,024,438	53,105,535	-1,283,041	278,565,405
HH per capita expenditure quintile							
Lowest	34,833,590	254,574	2,252,806	5,792,018	9,374,092	-318,838	52,188,242
2	36,940,070	1,889,328	2,477,915	6,543,302	11,160,592	-365,464	58,645,743
3	31,295,556	681,258	2,632,083	6,223,765	11,968,104	-156,522	52,644,245
4	37,642,219	716,499	2,819,395	8,186,576	12,955,492	-316,131	62,004,049
Highest	55,283,323	2,889,534	8,556,543	8,873,827	14,219,727	-304,761	89,518,194
Urban–Rural							
Urban	147,264,631	6,382,438	17,011,278	22,843,333	49,628,263	-1,139,817	241,990,127
Rural	48,730,127	48,755	1,727,464	12,776,156	10,049,744	-321,899	73,010,347
Total	195,994,758	6,431,193	18,738,742	35,619,489	59,678,007	-1,461,716	315,000,473

Table 96: Average annual household income, by PACCOI division (US$)

	Employm ent income	Property income	Transfer income	Gifts, remittances	Imputed rent	Intermediate exp	Total
Strata							
Majuro	13,813	362	1,581	2,169	4,599	-131	22,395
Kwajalein	10,372	1,235	1,245	1,520	3,681	-2	18,050
Rural 1	12,447	0	316	1,786	1,501	-43	16,006
Rural 2	10,996	40	499	3,075	3,037	-39	17,608
Rural 3	12,136	13	1,178	7,612	5,016	-77	25,879
Rural 4	14,940	12	359	3,410	2,710	-129	21,302
Sex							
Male	13,555	401	1,284	2,352	3,950	-128	21,414
Female	12,046	500	1,181	2,456	4,093	-25	20,250
Age group							
18–59 years	13,323	364	942	2,337	3,928	-76	20,817
60+ years	12,480	627	2,176	2,518	4,180	-161	21,821
Disability status							
With disability	14,128	40	1,491	2,828	4,045	-110	22,422
Without disability	12,986	478	1,224	2,328	3,985	-96	20,905
HH per capita expenditure quintile							
Lowest	11,650	85	753	1,937	3,135	-107	17,454
2	12,289	629	824	2,177	3,713	-122	19,510
3	10,505	229	884	2,089	4,017	-53	17,672
4	12,606	240	944	2,742	4,339	-106	20,765
Highest	18,502	967	2,864	2,970	4,759	-102	29,959
Urban–Rural							
Urban	13,016	564	1,504	2,019	4,386	-101	21,389
Rural	13,402	13	475	3,514	2,764	-89	20,080
Total	**13,110**	**430**	**1,253**	**2,383**	**3,992**	**-98**	**21,070**

Table 97: Annual average per capita income, by PACCOI division (US$)

	Employment income	Property income	Transfer income	Gifts, remittances	Imputed rent	Intermediate exp	Total
Strata							
Majuro	3,955	104	453	621	1,317	-37	6,413
Kwajalein	2,609	311	313	382	926	0	4,540
Rural 1	4,173	0	106	599	503	-14	5,366
Rural 2	3,029	11	137	847	837	-11	4,851
Rural 3	3,206	4	311	2,011	1,325	-20	6,836
Rural 4	3,603	3	87	822	654	-31	5,137
Sex							
Male	5,286	156	501	917	1,540	-50	8,351
Female	1,939	80	190	395	659	-4	3,260
Age group							
18–59 years	4,811	131	340	844	1,419	-28	7,518
60+ years	9,158	460	1,597	1,848	3,068	-118	16,013
Disability status							
With disability	12,208	35	1,288	2,443	3,495	-95	19,374
Without disability	3,592	132	339	644	1,103	-27	5,783
HH per capita expenditure quintile							
Lowest	3,193	23	206	531	859	-29	4,783
2	3,380	173	227	599	1,021	-33	5,367
3	2,891	63	243	575	1,106	-14	4,864
4	3,460	66	259	752	1,191	-29	5,699
Highest	5,097	266	789	818	1,311	-28	8,253
Urban–Rural							
Urban	3,611	157	417	560	1,217	-28	5,934
Rural	3,580	4	127	939	738	-24	5,364
Total	3,604	118	345	655	1,097	-27	5,792

Table 98: Total annual household income, by PACCOI group (US$)

	Employee benefits	Primary industry	Exchange	Home rental	Land lease	Social security	Super-annuation, pension	Child support	Alimony	Grants, scholar-ships	Cash gifts, remittances	Cash purchased gifts	Imputed rents – owner	Imputed rents – live for free	Intermediate exp	Total
Strata																
Majuro	116,203,146	3,846,781	40,078	2,329,438	818,123	6,394,449	1,148,075	693,345	5,342,390	171,187	3,780,316	15,081,151	34,570,444	5,414,259	-1,135,276	194,697,906
Kwajalein	25,792,066	1,321,181	61,379		3,234,876	2,553,983	647,312			60,538	1,388,290	2,593,576	9,004,945	638,615	-4,541	47,292,220
Rural 1	4,618,817	6,264,600	69,871			235,365				42,599	371,360	1,200,195	773,285	547,268	-38,057	14,085,304
Rural 2	2,387,020	3,329,282	67,768		20,865	251,882		5,216		5,216	244,842	1,372,829	1,357,838	239,822	-20,676	9,261,904
Rural 3	4,178,398	1,548,100	1,896		6,333	89,229	438,815	5,293	911	21,878	243,211	3,349,548	1,988,925	378,840	-36,301	12,215,077
Rural 4	8,966,745	16,762,803	534,828		21,557	510,695	47,631	12,781	25,562	34,389	783,981	5,210,190	4,133,319	630,446	-226,865	37,448,062
Sex																
Male	116,056,950	26,269,557	641,883	2,329,438	1,902,455	5,914,710	1,519,937	589,727	5,368,863	148,335	4,616,074	20,192,409	35,622,544	6,036,881	-1,351,493	225,858,271
Female	46,089,241	6,803,190	133,936		2,199,300	4,120,894	761,895	126,908		187,473	2,195,926	8,615,080	16,206,214	1,812,368	-110,223	89,142,203
Age group																
18–59 years	121,003,331	27,313,289	617,276	1,922,299	2,145,769	2,992,479	1,572,854	555,912	5,366,193	44,762	4,874,256	21,248,093	37,493,229	6,420,144	-855,108	232,714,779
60+ years	41,142,861	5,759,458	158,544	407,139	1,955,985	7,043,125	708,978	160,723	2,670	291,046	1,937,744	7,559,396	14,335,528	1,429,105	-606,608	82,285,695
Disability status																
With disability	17,530,895	5,280,577	146,330		65,256	2,062,444	226,694	133,525		500	931,722	3,663,329	6,268,436	304,035	-178,675	36,435,068
Without disability	144,615,296	27,792,170	629,490	2,329,438	4,036,498	7,973,160	2,055,139	583,111	5,368,863	335,308	5,880,278	25,144,160	45,560,321	7,545,214	-1,283,041	278,565,405
HH per capita expenditure quintile																
Lowest	20,990,056	13,536,450	307,084		254,574	1,719,691	338,096	70,445		124,574	1,033,973	4,758,045	8,140,942	1,233,150	-318,838	52,188,242
2	27,367,108	9,415,470	157,492		1,889,328	1,640,461	558,254	261,294		17,907	1,305,864	5,237,438	10,019,987	1,140,605	-365,464	58,645,743
3	25,435,255	5,732,260	128,041	28,034	653,224	2,092,975	334,351	173,978	25,562	5,216	1,348,463	4,875,302	10,124,640	1,843,464	-156,522	52,644,245
4	34,966,186	2,559,473	116,560		716,499	2,089,958	499,809	145,641	2,670	81,316	1,321,226	6,865,350	10,976,915	1,978,577	-316,131	62,004,049
Highest	53,387,586	1,829,094	66,644	2,301,405	588,130	2,492,518	551,322	65,278	5,340,631	106,794	1,802,474	7,071,353	12,566,275	1,653,452	-304,761	89,518,194
Urban–Rural																
Urban	141,995,212	5,167,962	101,457	2,329,438	4,052,999	8,948,432	1,795,386	693,345	5,342,390	231,725	5,168,607	17,674,727	43,575,389	6,052,874	-1,139,817	241,990,127
Rural	20,150,980	27,904,785	674,362		48,755	1,087,172	486,446	23,290	26,473	104,083	1,643,394	11,132,762	8,253,368	1,796,375	-321,899	73,010,347
Total	162,146,191	33,072,747	775,820	2,329,438	4,101,754	10,035,604	2,281,832	716,635	5,368,863	335,808	6,812,000	28,807,489	51,828,758	7,849,249	-1,461,716	315,000,473

Table 99: Average annual household income, by PACCOI group (US$)

	Employee benefits	Primary industry	Exchange	Home rental	Land lease	Social security	Super-annuation, pension	Child support	Alimony	Grants, scholar-ships	Cash gifts, remittances	Cash purchased gifts	Imputed rents – owner	Imputed rents – live for free	Intermediate exp	Total
Strata																
Majuro	13,366	442	5	268	94	736	132	80	614	20	435	1,735	3,976	623	-131	22,395
Kwajalein	9,844	504	23	0	1,235	975	247	0	0	23	530	990	3,437	244	-2	18,050
Rural 1	5,249	7,119	79	0	0	267	0	0	0	48	422	1,364	879	622	-43	16,006
Rural 2	4,538	6,329	129	0	40	479	0	10	0	10	465	2,610	2,581	456	-39	17,608
Rural 3	8,853	3,280	4	0	13	189	930	11	2	46	515	7,097	4,214	803	-77	25,879
Rural 4	5,101	9,535	304	0	12	290	27	7	15	20	446	2,964	2,351	359	-129	21,302
Sex																
Male	11,004	2,491	61	221	180	561	144	56	509	14	438	1,915	3,378	572	-128	21,414
Female	10,470	1,545	30	0	500	936	173	29	0	43	499	1,957	3,682	412	-25	20,250
Age group																
18–59 years	10,824	2,443	55	172	192	268	141	50	480	4	436	1,901	3,354	574	-76	20,817
60+ years	10,910	1,527	42	108	519	1,868	188	43	1	77	514	2,005	3,802	379	-161	21,821
Disability status																
With disability	10,788	3,250	90	0	40	1,269	140	82	0	0	573	2,254	3,857	187	-110	22,422
Without disability	10,853	2,086	47	175	303	598	154	44	403	25	441	1,887	3,419	566	-96	20,905
HH per capita expenditure quintile																
Lowest	7,020	4,527	103	0	85	575	113	24	0	42	346	1,591	2,723	412	-107	17,454
2	9,104	3,132	52	0	629	546	186	87	0	6	434	1,742	3,333	379	-122	19,510
3	8,538	1,924	43	9	219	703	112	58	9	2	453	1,637	3,399	619	-53	17,672
4	11,710	857	39	0	240	700	167	49	1	27	442	2,299	3,676	663	-106	20,765
Highest	17,867	612	22	770	197	834	185	22	1,787	36	603	2,367	4,206	553	-102	29,959
Urban–Rural																
Urban	12,550	457	9	206	358	791	159	61	472	20	457	1,562	3,851	535	-101	21,389
Rural	5,542	7,675	185	0	13	299	134	6	7	29	452	3,062	2,270	494	-89	20,080
Total	10,846	2,212	52	156	274	671	153	48	359	22	456	1,927	3,467	525	-98	21,070

Table 100: Average annual per capita income, by PACCOI group (US$)

	Employee benefits	Primary industry	Exchange	Home rental	Land lease	Social security	Super-annuation, pension	Child support	Alimony	Grants, scholar-ships	Cash gifts, remittances	Cash purchased gifts	Imputed rents – owner	Imputed rents – live for free	Intermediate exp	Total
Strata																
Majuro	3,827	127	1	77	27	211	38	23	176	6	125	497	1,139	178	-37	6,413
Kwajalein	2,476	127	6	0	311	245	62	0	0	6	133	249	864	61	0	4,540
Rural 1	1,760	2,386	27	0	0	90	0	0	0	16	141	457	295	208	-14	5,366
Rural 2	1,250	1,744	35	0	11	132	0	3	0	3	128	719	711	126	-11	4,851
Rural 3	2,338	866	1	0	4	50	246	3	1	12	136	1,874	1,113	212	-20	6,836
Rural 4	1,230	2,300	73	0	3	70	7	2	4	5	108	715	567	86	-31	5,137
Sex																
Male	4,291	971	24	86	70	219	56	22	199	5	171	747	1,317	223	-50	8,351
Female	1,686	249	5	0	80	151	28	5	0	7	80	315	593	66	-4	3,260
Age group																
18–59 years	3,909	882	20	62	69	97	51	18	173	1	157	686	1,211	207	-28	7,518
60+ years	8,006	1,121	31	79	381	1,371	138	31	1	57	377	1,471	2,790	278	-118	16,013
Disability status																
With disability	9,322	2,808	78	0	35	1,097	121	71	0	0	495	1,948	3,333	162	-95	19,374
Without disability	3,002	577	13	48	84	166	43	12	111	7	122	522	946	157	-27	5,783
HH per capita expenditure quintile																
Lowest	1,924	1,241	28	0	23	158	31	6	0	11	95	436	746	113	-29	4,783
2	2,504	862	14	0	173	150	51	24	0	2	119	479	917	104	-33	5,367
3	2,350	530	12	3	60	193	31	16	2	0	125	450	935	170	-14	4,864
4	3,214	235	11	0	66	192	46	13	0	7	121	631	1,009	182	-29	5,699
Highest	4,922	169	6	212	54	230	51	6	492	10	166	652	1,159	152	-28	8,253
Urban–Rural																
Urban	3,482	127	2	57	99	219	44	17	131	6	127	433	1,069	148	-28	5,934
Rural	1,481	2,050	50	0	4	80	36	2	2	8	121	818	606	132	-24	5,364
Total	2,981	608	14	43	75	185	42	13	99	6	125	530	953	144	-27	5,792

Table 101: Total average and median household income, and average and median per capita income from employee benefits (PACCOI group 11)

	Total	Average HH	Annual average per capita	Total	Average HH	Median HH	Average per capita	Monthly median per capita
Strata								
Majuro	116,203,146	13,366	3,827	9,683,595	1,114	760	319	176
Kwajalein	25,792,066	9,844	2,476	2,149,339	820	617	206	147
Rural 1	4,618,817	5,249	1,760	384,901	437	326	147	66
Rural 2	2,387,020	4,538	1,250	198,918	378	109	104	54
Rural 3	4,178,398	8,853	2,338	348,200	738	424	195	101
Rural 4	8,966,745	5,101	1,230	747,229	425	90	103	30
Sex								
Male	116,056,950	11,004	4,291	9,671,412	917	600	358	136
Female	46,089,241	10,470	1,686	3,840,770	873	595	140	139
Age group								
15–17 years								
18–59 years	121,003,331	10,824	3,909	10,083,611	902	625	326	152
60+ years	41,142,861	10,910	8,006	3,428,572	909	391	667	108
Disability status								
With disability	17,530,895	10,788	9,322	1,460,908	899	543	777	114
Without disability	144,615,296	10,853	3,002	12,051,275	904	600	250	146
HH per capita expenditure quintile								
Lowest	20,990,056	7,020	1,924	1,749,171	585	435	160	86
2	27,367,108	9,104	2,504	2,280,592	759	541	209	125
3	25,435,255	8,538	2,350	2,119,605	712	402	196	167
4	34,966,186	11,710	3,214	2,913,849	976	613	268	284
Highest	53,387,586	17,867	4,922	4,448,965	1,489	913	410	724
Urban-Rural								
Urban	141,995,212	12,550	3,482	11,832,934	1,046	693	290	165
Rural	20,150,980	5,542	1,481	1,679,248	462	148	123	49
Total	162,146,191	10,846	2,981	13,512,183	904	597	248	136

Table 102: Total annual household income from employment activities (PACCOI group 11)

	Cash	In-kind	Total
Strata			
Majuro	110,533,414	5,669,731	116,203,146
Kwajalein	25,420,749	371,317	25,792,066
Rural 1	4,618,817		4,618,817
Rural 2	2,385,977	1,043	2,387,020
Rural 3	3,527,085	651,313	4,178,398
Rural 4	8,961,717	5,027	8,966,745
Sex			
Male	110,258,767	5,798,183	116,056,950
Female	45,188,992	900,249	46,089,241
Age group			
18–59 years	117,025,749	3,977,581	121,003,331
60+ years	38,422,010	2,720,851	41,142,861
Disability status			
With disability	16,341,767	1,189,128	17,530,895
Without disability	139,105,992	5,509,304	144,615,296
HH per capita expenditure quintile			
Lowest	20,371,345	618,712	20,990,056
2	27,107,424	259,684	27,367,108
3	25,160,368	274,887	25,435,255
4	33,986,144	980,041	34,966,186
Highest	48,822,477	4,565,108	53,387,586
Urban–Rural			
Urban	135,954,163	6,041,048	141,995,212
Rural	19,493,596	657,384	20,150,980
Total	155,447,759	6,698,432	162,146,191

Table 103: Average annual household income from employment activities (PACCOI group 11)

	Cash	In-kind	Total
Strata			
Majuro	12,714	652	13,366
Kwajalein	9,703	142	9,844
Rural 1	5,249	0	5,249
Rural 2	4,536	2	4,538
Rural 3	7,473	1,380	8,853
Rural 4	5,098	3	5,101
Sex			
Male	10,454	550	11,004
Female	10,266	205	10,470
Age group			
18–59 years	10,468	356	10,824
60+ years	10,189	722	10,910
Disability status			
With disability	10,056	732	10,788
Without disability	10,439	413	10,853
HH per capita expenditure quintile			
Lowest	6,813	207	7,020
2	9,018	86	9,104
3	8,446	92	8,538
4	11,382	328	11,710
Highest	16,340	1,528	17,867
Urban–Rural			
Urban	12,016	534	12,550
Rural	5,361	181	5,542
Total	**10,398**	**448**	**10,846**

Table 104: Average annual per capita income from employment activities (PACCOI group 11)

	Cash	In-kind	Total
Strata			
Majuro	3,641	187	3,827
Kwajalein	2,440	36	2,476
Rural 1	1,760	0	1,760
Rural 2	1,250	1	1,250
Rural 3	1,974	364	2,338
Rural 4	1,229	1	1,230
Sex			
Male	4,077	214	4,291
Female	1,653	33	1,686
Age group			
18–59 years	3,780	128	3,909
60+ years	7,477	529	8,006
Disability status			
With disability	8,690	632	9,322
Without disability	2,888	114	3,002
HH per capita expenditure quintile			
Lowest	1,867	57	1,924
2	2,481	24	2,504
3	2,324	25	2,350
4	3,124	90	3,214
Highest	4,501	421	4,922
Urban–Rural			
Urban	3,334	148	3,482
Rural	1,432	48	1,481
Total	**2,858**	**123**	**2,981**

Table 105: Total annual household income from Primary Income (PACCOI group 13), by income source

	Cash	Home production	Exchange	Total
Strata				
Majuro	2,184,473	1,662,308		3,846,781
Kwajalein	1,039,187	275,245	6,749	1,321,181
Rural 1	5,319,125	924,129	21,346	6,264,600
Rural 2	2,541,651	757,334	30,297	3,329,282
Rural 3	993,116	554,984		1,548,100
Rural 4	12,078,738	4,549,634	134,431	16,762,803
Sex				
Male	19,085,992	7,030,977	152,588	26,269,557
Female	5,070,297	1,692,657	40,235	6,803,190
Age group				
18–59 years	20,281,815	6,943,823	87,652	27,313,289
60+ years	3,874,474	1,779,811	105,172	5,759,458
Disability status				
With disability	4,051,880	1,159,954	68,743	5,280,577
Without disability	20,104,409	7,563,680	124,081	27,792,170
HH per capita expenditure quintile				
Lowest	10,981,899	2,422,516	132,036	13,536,450
2	6,783,765	2,617,678	14,026	9,415,470
3	4,063,032	1,628,020	41,208	5,732,260
4	1,407,840	1,146,079	5,554	2,559,473
Highest	919,753	909,341		1,829,094
Urban–Rural				
Urban	3,223,660	1,937,553	6,749	5,167,962
Rural	20,932,629	6,786,081	186,075	27,904,785
Total	24,156,289	8,723,634	192,824	33,072,747

Table 106: Average annual household income from Primary Income (PACCOI group 13), by income source

	Cash	Home production	Exchange	Total
Strata				
Majuro	251	191		442
Kwajalein	397	105	3	504
Rural 1	6,044	1,050	24	7,119
Rural 2	4,832	1,440	58	6,329
Rural 3	2,104	1,176		3,280
Rural 4	6,871	2,588	76	9,535
Sex				
Male	1,810	667	14	2,491
Female	1,152	385	9	1,545
Age group				
18–59 years	1,814	621	8	2,443
60+ years	1,027	472	28	1,527
Disability status				
With disability	2,493	714	42	3,250
Without disability	1,509	568	9	2,086
HH per capita expenditure quintile				
Lowest	3,673	810	44	4,527
2	2,257	871	5	3,132
3	1,364	546	14	1,924
4	471	384	2	857
Highest	308	304		612
Urban–Rural				
Urban	285	171	1	457
Rural	5,757	1,866	51	7,675
Total	1,616	584	13	2,212

Table 107: Average annual per capita income from Primary Income (PACCOI group 13), by income source

	Cash	Home production	Exchange	Total
Strata				
Majuro	72	55		127
Kwajalein	100	26	1	127
Rural 1	2,026	352	8	2,386
Rural 2	1,331	397	16	1,744
Rural 3	556	311		866
Rural 4	1,657	624	18	2,300
Sex				
Male	706	260	6	971
Female	185	62	1	249
Age group				
18–59 years	655	224	3	882
60+ years	754	346	20	1,121
Disability status				
With disability	2,155	617	37	2,808
Without disability	417	157	3	577
HH per capita expenditure quintile				
Lowest	1,007	222	12	1,241
2	621	240	1	862
3	375	150	4	530
4	129	105	1	235
Highest	85	84		169
Urban–Rural				
Urban	79	48	0	127
Rural	1,538	499	14	2,050
Total	**444**	**160**	**4**	**608**

Table 108: Total household, average and median household, and average and median per capita income from primary income (PACCOI group 13)

	Total monthly income	Average monthly hh income	Median monthly hh income	Average monthly per capita income	Median monthly per capita income
Strata					
Majuro	320,565	37	0	11	0
Kwajalein	110,098	42	0	11	0
Rural 1	522,050	593	354	199	108
Rural 2	277,440	527	204	145	86
Rural 3	129,008	273	87	72	22
Rural 4	1,396,900	795	485	192	117
Sex					
Male	2,189,130	208	0	81	0
Female	566,933	129	0	21	0
Age group					
15–17 years					
18–59 years	2,276,107	204	0	74	0
60+ years	479,955	127	0	93	0
Disability status					
With disability	440,048	271	0	234	0
Without disability	2,316,014	174	0	48	0
HH per capita expenditure quintile					
Lowest	1,128,038	377	43	103	7
2	784,623	261	0	72	0
3	477,688	160	0	44	0
4	213,289	71	0	20	0
Highest	152,425	51	0	14	0
Urban–Rural					
Urban	430,664	38	0	11	0
Rural	2,325,399	640	293	171	99
Total	**2,756,062**	**184**	**0**	**51**	**0**

Table 109: Total annual household income from primary income (PACCOI group 13), by class

	Cash – crops	Subsistence – crops	Cash – fisheries	Subsistence – fisheries	Cash – livestock, aquaculture	Subsistence – livestock, aquaculture	Cash – handicraft	Subsistence – handicraft	Exchange – crops	Total
Strata										
Majuro	712,589	790,295	840,305	520,866	138,325		470,027	351,148	23,228	3,846,781
Kwajalein	1,029,151	104,198		112,841		5,261	10,036	52,944	6,749	1,321,181
Rural 1	3,786,531	441,257	783,973	363,235	139,826	36,585	608,795	83,052	21,346	6,264,600
Rural 2	2,046,441	313,918	233,912	222,841	4,590	29,919	251,700	190,656	35,305	3,329,282
Rural 3	663,900	129,951	15,490	131,806	23,918	33,614	289,170	259,613	638	1,548,100
Rural 4	10,552,865	2,140,155	319,002	1,291,263	93,506	478,958	1,093,938	639,257	153,859	16,762,803
Sex										
Male	14,822,629	2,965,201	2,005,999	2,242,506	379,434	517,759	1,829,629	1,305,511	200,889	26,269,557
Female	3,968,848	954,573	186,682	400,347	20,732	66,578	894,036	271,159	40,235	6,803,190
Age group										
18–59 years	16,002,762	3,136,169	1,861,217	2,217,646	343,933	526,698	2,039,428	1,063,310	122,127	27,313,289
60+ years	2,788,716	783,605	331,464	425,207	56,233	57,640	684,236	513,359	118,998	5,759,458
Disability status										
With disability	3,346,763	518,297	335,470	380,761	68,168	69,087	299,435	191,809	70,788	5,280,577
Without disability	15,444,715	3,401,477	1,857,211	2,262,092	331,998	515,251	2,424,230	1,384,860	170,337	27,792,170
HH per capita expenditure quintile										
Lowest	8,897,180	1,018,593	513,793	870,820	120,848	109,876	1,418,670	423,226	163,443	13,536,450
2	4,889,295	1,271,182	1,140,354	748,656	110,046	189,501	632,824	408,340	25,274	9,415,470
3	3,234,092	641,456	377,561	488,962	55,282	233,829	390,452	263,773	46,854	5,732,260
4	935,575	600,488	160,973	260,545	46,664	30,873	264,627	254,173	5,554	2,559,473
Highest	835,336	388,055		273,869	67,325	20,260	17,092	227,157		1,829,094
Urban–Rural										
Urban	1,741,740	894,493	840,305	633,707	138,325	5,261	480,062	404,091	29,977	5,167,962
Rural	17,049,737	3,025,281	1,352,376	2,009,146	261,841	579,077	2,243,602	1,172,578	211,148	27,904,785
Total	18,791,478	3,919,774	2,192,681	2,642,853	400,166	584,338	2,723,664	1,576,669	241,125	33,072,747

Table 110: Average annual household income from primary income (PACCOI group 13), by class

	Cash – crops	Subsistence – crops	Cash – fisheries	Subsistence – fisheries	Cash – livestock, aquaculture	Subsistence – livestock, aquaculture	Cash – handicraft	Subsistence – handicraft	Exchange – crops	Total
Strata										
Majuro	82	91	97	60	16	0	54	40	3	442
Kwajalein	393	40	0	43	0	2	4	20	3	504
Rural 1	4,303	501	891	413	159	42	692	94	24	7,119
Rural 2	3,891	597	445	424	9	57	479	362	67	6,329
Rural 3	1,407	275	33	279	51	71	613	550	1	3,280
Rural 4	6,003	1,217	181	735	53	272	622	364	88	9,535
Sex										
Male	1,405	281	190	213	36	49	173	124	19	2,491
Female	902	217	42	91	5	15	203	62	9	1,545
Age group										
18–59 years	1,432	281	166	198	31	47	182	95	11	2,443
60+ years	740	208	88	113	15	15	181	136	32	1,527
Disability status										
With disability	2,060	319	206	234	42	43	184	118	44	3,250
Without disability	1,159	255	139	170	25	39	182	104	13	2,086
HH per capita expenditure quintile										
Lowest	2,976	341	172	291	40	37	474	142	55	4,527
2	1,627	423	379	249	37	63	211	136	8	3,132
3	1,086	215	127	164	19	78	131	89	16	1,924
4	313	201	54	87	16	10	89	85	2	857
Highest	280	130	0	92	23	7	6	76		612
Urban–Rural										
Urban	154	79	74	56	12	0	42	36	3	457
Rural	4,689	832	372	553	72	159	617	322	58	7,675
Total	1,257	262	147	177	27	39	182	105	16	2,212

Table 111: Average annual per capita income from primary income (PACCOI group 13), by class

	Cash – crops	Subsistence – crops	Cash – fisheries	Subsistence – fisheries	Cash – livestock, aquaculture	Subsistence – livestock, aquaculture	Cash – handicraft	Subsistence – handicraft	Exchange – crops	Total
Strata										
Majuro	23	26	28	17	5	0	15	12	1	127
Kwajalein	99	10	0	11	0	1	1	5	1	127
Rural 1	1,442	168	299	138	53	14	232	32	8	2,386
Rural 2	1,072	164	123	117	2	16	132	100	18	1,744
Rural 3	372	73	9	74	13	19	162	145	0	866
Rural 4	1,448	294	44	177	13	66	150	88	21	2,300
Sex										
Male	548	110	74	83	14	19	68	48	7	971
Female	145	35	7	15	1	2	33	10	1	249
Age group										
18–59 years	517	101	60	72	11	17	66	34	4	882
60+ years	543	152	65	83	11	11	133	100	23	1,121
Disability status										
With disability	1,780	276	178	202	36	37	159	102	38	2,808
Without disability	321	71	39	47	7	11	50	29	4	577
HH per capita expenditure quintile										
Lowest	815	93	47	80	11	10	130	39	15	1,241
2	447	116	104	69	10	17	58	37	2	862
3	299	59	35	45	5	22	36	24	4	530
4	86	55	15	24	4	3	24	23	1	235
Highest	77	36	0	25	6	2	2	21		169
Urban–Rural										
Urban	43	22	21	16	3	0	12	10	1	127
Rural	1,253	222	99	148	19	43	165	86	16	2,050
Total	**346**	**72**	**40**	**49**	**7**	**11**	**50**	**29**	**4**	**608**

Table 112: Total annual income, by PACCOI class

	Strata						Sex of main respondent		Age group		HH with person with disability	
	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years	With disability	Without disability
Employment income												
Cash income from employers	110,533,414	25,420,749	4,618,817	2,385,977	3,527,085	8,961,717	110,258,767	45,188,992	117,025,749	38,422,010	16,341,767	139,105,992
In-kind income from employers	5,669,731	371,317		1,043	651,313	5,027	5,798,183	900,249	3,977,581	2,720,851	1,189,128	5,509,304
Cash from agricultural crops	712,589	1,029,151	3,786,531	2,046,441	663,900	10,552,865	14,822,629	3,968,848	16,002,762	2,788,716	3,346,763	15,444,715
Subsistence from agricultural crops	790,295	104,198	441,257	313,918	129,951	2,140,155	2,965,201	954,573	3,136,169	783,605	518,297	3,401,477
Cash from fisheries	840,305		783,973	233,912	15,490	319,002	2,005,999	186,682	1,861,217	331,464	335,470	1,857,211
Subsistence from fisheries	520,866	112,841	363,235	222,841	131,806	1,291,263	2,242,506	400,347	2,217,646	425,207	380,761	2,262,092
Cash from livestock & aquaculture	138,325		139,826	4,590	23,918	93,506	379,434	20,732	343,933	56,233	68,168	331,998
Subsistence from livestock & aquaculture		5,261	36,585	29,919	33,614	478,958	517,759	66,578	526,698	57,640	69,087	515,251
Cash from handicrafts	470,027	10,036	608,795	251,700	289,170	1,093,938	1,829,629	894,036	2,039,428	684,236	299,435	2,424,230
Subsistence from handicrafts	351,148	52,944	83,052	190,656	259,613	639,257	1,305,511	271,159	1,063,310	513,359	191,809	1,384,860
Barter from agricultural crops	23,228	6,749	21,346	35,305	638	153,859	200,889	40,235	122,127	118,998	70,788	170,337
Barter from fisheries	15,662	54,364	2,034	6,898		205,570	260,886	23,641	248,158	36,370	67,100	217,428
Barter from livestock & aquaculture	20,830	7,015	4,276	29,980	1,472	128,999	125,516	67,056	138,701	53,871	15,160	177,412
Barter from handicrafts	3,587		63,561	30,889	424	200,259	255,481	43,239	230,418	68,303	64,070	234,650
Property income												
Home rental	2,329,438						2,329,438		1,922,299	407,139		2,329,438
Land lease	818,123	3,234,876		20,865	6,333	21,557	1,902,455	2,199,300	2,145,769	1,955,985	65,256	4,036,498
Transfer income												
Social security, pension	6,394,449	2,553,983	235,365	251,882	89,229	510,695	5,914,710	4,120,894	2,992,479	7,043,125	2,062,444	7,973,160
Four atolls/ 177 pay	1,148,075	647,312			438,815	47,631	1,519,937	761,895	1,572,854	708,978	226,694	2,055,139
Grants, scholarships	693,345			5,216	5,293	12,781	589,727	126,908	555,912	160,723	133,525	583,111
Insurance claim	5,342,390				911	25,562	5,368,863		5,366,193	2,670		5,368,863
Other transfer income	171,187	60,538	42,599	5,216	21,878	34,389	148,335	187,473	44,762	291,046	500	335,308
Gifts and remittances												
Cash gifts/remittances received	3,780,316	1,388,290	371,360	244,842	243,211	783,981	4,616,074	2,195,926	4,874,256	1,937,744	931,722	5,880,278
Gift received	15,081,151	2,593,576	1,200,195	1,372,829	3,349,548	5,210,190	20,192,409	8,615,080	21,248,093	7,559,396	3,663,329	25,144,160
Imputed rent												
Imputed rent of owner occupied HHs	34,570,444	9,004,945	773,285	1,357,838	1,988,925	4,133,319	35,622,544	16,206,214	37,493,229	14,335,528	6,268,436	45,560,321
Imputed rent – live in dwelling for free	5,414,259	638,615	547,268	239,822	378,840	630,446	6,036,881	1,812,368	6,420,144	1,429,105	304,035	7,545,214
Intermediate expenditure												
Agriculture	-133	-1,698	-251	-74	-62	-1,564	-3,517	-265	-1,833	-1,950	-28	-3,754
Fisheries	-976,320		-6,533	-8,681	-13,852	-160,994	-1,141,754	-24,625	-643,421	-522,959	-143,738	-1,022,642
Livestock	-49,866	-2,242			-540	-409	-37,624	-15,433	-46,661	-6,396	-6,788	-46,269
Handicraft	-108,957	-600	-31,273	-11,921	-21,847	-63,898	-168,597	-69,900	-163,193	-75,303	-28,121	-210,376

Table 112: Total annual income, by PACCOI class (cont')

	HH per capita expenditure quintile					Urban–Rural		
	Lowest	2	3	4	Highest	Urban	Rural	National
Employment income								
Cash income from employers	20,371,345	27,107,424	25,160,368	33,986,144	48,822,477	135,954,163	19,493,596	155,447,759
In-kind income from employers	618,712	259,684	274,887	980,041	4,565,108	6,041,048	657,384	6,698,432
Cash from agricultural crops	8,897,180	4,889,295	3,234,092	935,575	835,336	1,741,740	17,049,737	18,791,478
Subsistence from agricultural crops	1,018,593	1,271,182	641,456	600,488	388,055	894,493	3,025,281	3,919,774
Cash from fisheries	513,793	1,140,354	377,561	160,973		840,305	1,352,376	2,192,681
Subsistence from fisheries	870,820	748,656	488,962	260,545	273,869	633,707	2,009,146	2,642,853
Cash from livestock & aquaculture	120,848	110,046	55,282	46,664	67,325	138,325	261,841	400,166
Subsistence from livestock & aquaculture	109,876	189,501	233,829	30,873	20,260	5,261	579,077	584,338
Cash from handicrafts	1,418,670	632,824	390,452	264,627	17,092	480,062	2,243,602	2,723,664
Subsistence from handicrafts	423,226	408,340	263,773	254,173	227,157	404,091	1,172,578	1,576,669
Barter from agricultural crops	163,443	25,274	46,854	5,554		29,977	211,148	241,125
Barter from fisheries	53,313	102,329	21,256	40,986	66,644	70,026	214,502	284,528
Barter from livestock & aquaculture	103,219	28,213	29,558	31,582		27,845	164,727	192,572
Barter from handicrafts	150,552	26,950	77,227	43,991		3,587	295,134	298,720
Property income								
Home rental			28,034		2,301,405	2,329,438		2,329,438
Land lease	254,574	1,889,328	653,224	716,499	588,130	4,052,999	48,755	4,101,754
Transfer income								
Social security, pension	1,719,691	1,640,461	2,092,975	2,089,958	2,492,518	8,948,432	1,087,172	10,035,604
Four atolls/ 177 pay	338,096	558,254	334,351	499,809	551,322	1,795,386	486,446	2,281,832
Grants, scholarships	70,445	261,294	173,978	145,641	65,278	693,345	23,290	716,635
Insurance claim			25,562	2,670	5,340,631	5,342,390	26,473	5,368,863
Other transfer income	124,574	17,907	5,216	81,316	106,794	231,725	104,083	335,808
Gifts and remittances								
Cash gifts/remittances received	1,033,973	1,305,864	1,348,463	1,321,226	1,802,474	5,168,607	1,643,394	6,812,000
Gift received	4,758,045	5,237,438	4,875,302	6,865,350	7,071,353	17,674,727	11,132,762	28,807,489
Imputed rent								
Imputed rent of owner occupied HHs	8,140,942	10,019,987	10,124,640	10,976,915	12,566,275	43,575,389	8,253,368	51,828,758
Imputed rent – live in dwelling for free	1,233,150	1,140,605	1,843,464	1,978,577	1,653,452	6,052,874	1,796,375	7,849,249
Intermediate expenditure								
Agriculture	-306	-352	-2,588	-443	-92	-1,832	-1,951	-3,782
Fisheries	-184,483	-261,185	-129,070	-301,657	-289,985	-976,320	-190,060	-1,166,380
Livestock	-24,382	-9,170	-2,150	-2,670	-14,684	-52,108	-949	-53,057
Handicraft	-109,666	-94,757	-22,714	-11,360		-109,557	-128,940	-238,497

Table 113: Percentage of households reporting income, by PACCOI class

	Strata						Sex of main respondant		Age group		HH with person with disability	
	Majuro	Kwajalein	Rural 1	Rural 2	Rural 3	Rural 4	Male	Female	18–59 years	60+ years	With disability	Without disability
Employment income												
Cash income from employers	78%	83%	71%	58%	74%	60%	77%	72%	79%	65%	77%	75%
In-kind income from employers	12%	11%	0%	2%	16%	1%	11%	7%	11%	8%	9%	10%
Cash from agricultural crops	2%	4%	71%	32%	14%	61%	16%	12%	16%	11%	19%	14%
Subsistence from agricultural crops	15%	6%	97%	76%	50%	91%	32%	27%	30%	30%	33%	30%
Cash from fisheries	2%	0%	11%	22%	2%	10%	4%	2%	4%	3%	4%	4%
Subsistence from fisheries	9%	7%	57%	48%	30%	59%	23%	11%	20%	16%	16%	20%
Cash from livestock & aquaculture	2%	0%	43%	10%	14%	16%	8%	3%	7%	6%	15%	5%
Subsistence from livestock & aquaculture	0%	1%	11%	10%	10%	22%	5%	2%	4%	3%	4%	4%
Cash from handicrafts	4%	0%	37%	30%	14%	35%	11%	9%	10%	11%	15%	10%
Subsistence from handicrafts	11%	3%	49%	60%	60%	72%	25%	16%	21%	24%	26%	22%
Barter from agricultural crops	0%	1%	9%	12%	1%	17%	4%	2%	2%	7%	7%	3%
Barter from fisheries	0%	2%	0%	4%	0%	16%	3%	2%	2%	4%	5%	2%
Barter from livestock & aquaculture	0%	0%	0%	12%	1%	10%	2%	2%	2%	2%	2%	2%
Barter from handicrafts	0%	0%	20%	8%	1%	18%	4%	3%	4%	4%	12%	3%
Property income												
Home rental	2%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%	1%
Land lease	2%	22%	0%	2%	2%	2%	5%	7%	6%	4%	4%	6%
Transfer income												
Social security, pension	22%	23%	14%	16%	7%	11%	15%	31%	9%	52%	34%	18%
Four atolls/ 177 pay	8%	16%	0%	0%	78%	4%	11%	10%	10%	12%	8%	11%
Grants, scholarships	3%	0%	0%	2%	1%	0%	2%	2%	2%	2%	3%	2%
Insurance claim	1%	0%	0%	0%	1%	0%	1%	0%	1%	0%	0%	1%
Other transfer income	2%	3%	6%	4%	2%	3%	2%	4%	1%	7%	0%	3%
Gifts and remittances												
Cash gifts/remittances received	37%	69%	31%	50%	47%	59%	43%	51%	43%	52%	53%	44%
Gift received	92%	98%	100%	98%	100%	98%	94%	96%	95%	95%	98%	94%
Imputed rent												
Imputed rent of owner occupied HHs	76%	91%	63%	80%	74%	87%	78%	83%	78%	82%	87%	79%
Imputed rent – live in dwelling for free	16%	7%	37%	20%	25%	13%	17%	13%	17%	13%	8%	17%
Intermediate expenditure												
Agriculture	2%	1%	26%	10%	8%	22%	6%	5%	6%	6%	2%	6%
Fisheries	4%	0%	6%	8%	7%	8%	5%	3%	4%	3%	5%	4%
Livestock	2%	0%	0%	0%	0%	1%	1%	1%	1%	1%	2%	1%
Handicraft	4%	0%	23%	14%	7%	12%	6%	5%	5%	7%	8%	5%

Table 113: Percentage of households reporting income, by PACCOI class (cont')

	HH per capita expenditure quintile					Urban–Rural		National
	Lowest	2	3	4	Highest	Urban	Rural	
Employment income								
Cash income from employers	74%	78%	67%	80%	80%	79%	64%	76%
In-kind income from employers	4%	5%	4%	14%	23%	12%	3%	10%
Cash from agricultural crops	34%	18%	13%	7%	3%	3%	53%	15%
Subsistence from agricultural crops	47%	35%	34%	21%	15%	13%	85%	30%
Cash from fisheries	6%	7%	3%	1%	0%	1%	11%	4%
Subsistence from fisheries	31%	25%	16%	13%	11%	8%	53%	19%
Cash from livestock & aquaculture	12%	7%	8%	3%	2%	2%	21%	6%
Subsistence from livestock & aquaculture	6%	6%	6%	1%	1%	0%	16%	4%
Cash from handicrafts	24%	15%	6%	6%	0%	3%	32%	10%
Subsistence from handicrafts	29%	24%	23%	18%	16%	9%	63%	22%
Barter from agricultural crops	7%	3%	6%	1%	0%	0%	12%	3%
Barter from fisheries	4%	4%	3%	1%	1%	1%	9%	3%
Barter from livestock & aquaculture	4%	2%	2%	1%	0%	0%	7%	2%
Barter from handicrafts	9%	2%	6%	2%	0%	0%	15%	4%
Property income								
Home rental	0%	0%	1%	0%	4%	1%	0%	1%
Land lease	4%	8%	5%	7%	3%	7%	2%	6%
Transfer income								
Social security, pension	19%	17%	18%	21%	23%	22%	12%	20%
Four atolls/ 177 pay	11%	11%	7%	11%	12%	10%	12%	11%
Grants, scholarships	2%	4%	2%	2%	1%	3%	1%	2%
Insurance claim	0%	0%	0%	0%	2%	1%	0%	1%
Other transfer income	5%	1%	1%	2%	4%	2%	4%	2%
Gifts and remittances								
Cash gifts/remittances received	47%	48%	42%	48%	41%	44%	50%	45%
Gift received	94%	97%	96%	95%	92%	94%	99%	95%
Imputed rent								
Imputed rent of owner occupied HHs	84%	86%	80%	78%	69%	80%	78%	79%
Imputed rent – live in dwelling for free	16%	13%	18%	20%	13%	14%	22%	16%
Intermediate expenditure								
Agriculture	7%	10%	6%	2%	3%	1%	19%	6%
Fisheries	9%	5%	2%	3%	2%	3%	7%	4%
Livestock	2%	2%	2%	0%	1%	2%	1%	1%
Handicraft	12%	9%	3%	3%	0%	3%	14%	6%

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