



Sub Regional Training Course on Sampling Methods for Producing Core Data Items for Agricultural and Rural Suva, FIJI 2018

Anne Tangimetua - CISO, MFEM
Tavake Manuel - MOA
Victor - Mataora - MOA

Geographic

- ▶ The Cook Islands is a nation in the South Pacific, with political links to New Zealand.
- ▶ Its 15 islands are scattered over a vast area.
- ▶ The largest island, Rarotonga, is home to rugged mountains and Avarua, the national capital.
- ▶ Population: 17, 459 (2016)
- ▶ Total Land Area: 236 km²
- ▶ Land Use: Agricultural land - 8.4%, arable land - 4.2%, permanent crops - 4.2%, Forest - 64.6%, others - 27%
- ▶ GDP by sector - Agriculture 5.1%, Industry 12.7%, Services 82.1%





Household Income and Expenditure Survey



Standard HIES Method

- 12 month period to cover seasonality of events (income, expenditure, fruits...)
- Questionnaires developed by SPC in line with international household survey standard (e.g. section 1.2 labour force section recommended by ILO)
- International Standard Classification were used e.g COICOP
- data entry happens in the field at the same time of the interview
- Covers private dwelling who live in the CK for more than 12 months/ intend to stay more than 12 months
- HIES staff organised in teams of 3
- Round is a 3 week period, 10 households



Sample design

Table 1: sample allocation – Cook Island HIES 2015/16

	# households 2011 census	Distribution (%)	Proportional allocation of the sample (hhs)	Final allocation of the sample (hhs)	Coverage (%)
1. Rarotonga	3,154	72%	577	320	10%
2. Southern Group	939	21%	172	320	34%
3. Northern Group	279	7%	51	160	57%
Cook Islands	4,372	100%	800	800	18%

Table 2: sample limitation – Cook Island HIES 2015/16

	# households 2011 census	# households included in the selection	# households excluded of the selection	% of household excluded
1. Rarotonga	3,154	3,154	0	0%
2. Southern Group	939	789	150	16%
3. Northern Group	279	179	100	36%
Cook Islands	4,372	100%	250	6%

Table 2 shows that in total 6% of the households in Rarotonga are excluded from the sampling selection, but looking at the Northern group, more than a third of the households are excluded (36%)



Sample Design

Table 3: classification of the outer islands according to the activities

	Rural 1	Rural 2	
2. Southern Group	AITUTAKI	MANGAIA ATIU MAUKE MITIARO	
	3. Northern group	MANIHIKI	PUKAPUKA PENRHYN RAKAHANGA NASSAU PALMERSTON

51% of the households in the Southern Group live in Aitutaki (rural 1), and 49% are spread over the rest of the group (rural 2). In the Northern Group, Manihiki (rural 1) is made of 28% of the households in this group, the rest rural2 of Northern Group is scattered across the 5 other islands..

Table 4: allocation of the sample per island group

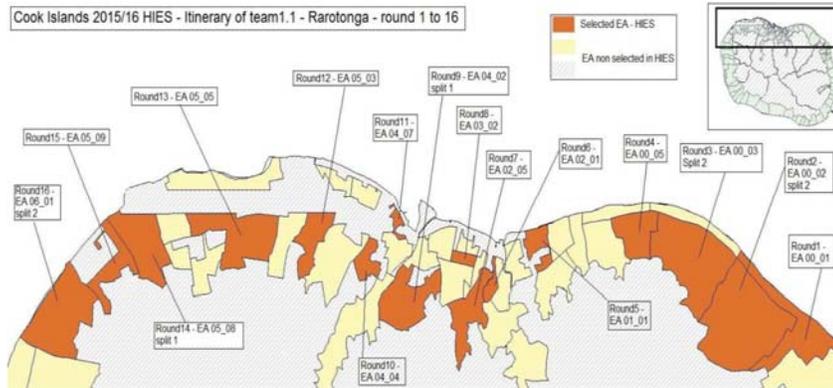
	Urban	Rural1	Rural2	Total
Census 201 (#hhs)				
1. Rarotonga	3,154	0	0	3,154
2. Southern group	0	482	457	939
3. Northern group	0	78	201	279
Total	3,154	560	658	4,372
% distribution of hhs				
1. Rarotonga	100%	0%	0%	100%
2. Southern group	0%	51%	49%	100%
3. Northern group	0%	28%	72%	100%
Total	72%	13%	15%	100%
Sample allocation (#hhs)				
1. Rarotonga	320	0	0	320
2. Southern group	0	164	156	320
3. Northern group	0	45	115	160
Total	320	209	271	800
# rounds				
1. Rarotonga	32	0	0	32
2. Southern group	0	16	16	32
3. Northern group	0	5	11	16
Total	32	21	27	80
Final sample size (#hhs)				
1. Rarotonga	320	0	0	320
2. Southern group	0	160	160	320
3. Northern group	0	50	110	160
Total	320	210	270	800



Household Selection

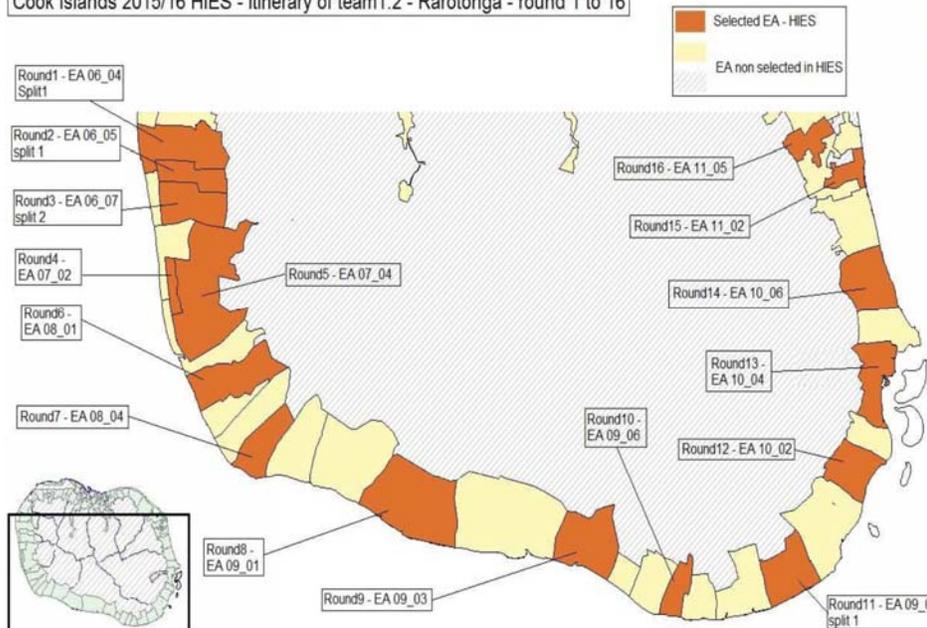
- Households are randomly selected within the selected islands presented in the sample design.
- The selection process is different according to the island.
- 10 interviews, 5 reserved household.
- 2 Stage sampling, 78 EAs

Cook Islands 2015/16 HIES - Itinerary of team1.1 - Rarotonga - round 1 to 16



Household Selection

Cook Islands 2015/16 HIES - itinerary of team1.2 - Rarotonga - round 1 to 16





Recommendation

- ▶ To acquire basic data on the farm household economy and agricultural management in order to provide basic information for agricultural policy-making and the improvement of agricultural management;
- ▶ aims to give the necessary tools for the production of various farm household economy indicators such as farm household expenditures and working hours, etc.



Census Survey



Sampling Method

The 2011 Agriculture Census was a complete enumeration conducted jointly with the 2011 Census of Population and Dwellings.



Rationale

- Sampling Frame for households actively engaged in agriculture activities were not available.
- Resources, budgets, staff, transport available to Population Census could be used for Agriculture census.
- Less burden on the households



Plans for Improvements

Agriculture Census to be conducted every 10 years still utilising the Population Census but recruit separate interviewers



AgINTEL Survey



AGRICULTURE SURVEY

- ▶ Agriculture Census and AgINTEL
- ▶ Agriculture census carried out on a 10 year basis, last census in 2011, next census likely in 2021.
- ▶ During the Agriculture Census survey, there was no random selection taken - all household partake in the survey.
- ▶ Population Census is used to filter or determine households for Agriculture Census, given that not all households are actively engaged.
- ▶ Type of data collecting taken are Face to face interview, questionnaires (pen & paper).
- ▶ The approach adopted to the data collection was to have two separate teams of supervisors and enumerators, one for the CoPD and another for the CoA.



AGRICULTURE CENSUS SURVEY

Level of Agricultural Activities of the Household

- ▶ No agricultural, subsistence, subsistence and commercial, commercial

Crop production data

- ▶ Land use, Land size, Type of crops, etc

Livestock data

- ▶ Farm size, No. of animals, etc
- ▶ Pigs, poultry, cattles, ducks etc



AgINTEL Survey

Data collection

- ▶ Rarotonga survey carried out on a fortnightly basis (2 weeks)
- ▶ Southern group island (5) survey carried out on a Quarterly basis.
- ▶ Data collected by MoA
- ▶ Type of data collected - type of crops (fruits, vegetables, rootcrops, herbs, etc), quantities, weights, units/items, price.

Approach and Purpose

- ▶ Food production and Food security
- ▶ To capture market produce (supply), identify gaps, strength and weaknesses in crop production, because its evidence base data.



CONSTRAINT

- ▶ Giving false data;
- ▶ Understanding why data is collected;
- ▶ Don't bother or not in support in sharing information;
- ▶ Under staff to collect data;
- ▶ Time consuming, poor communication, transport facilities;
- ▶ No subsistence in data collecting;



PLANS TO IMPROVEMENT

Base on the current data collecting is more focus toward the “Market” output (supply).

For improvement:

- Shift data collecting toward “Holding” and identify gaps (supply and demand), opportunities, etc.
- Later stages will shift data collecting toward “Enterprise” and identify gaps (supply).
- ▶ Identifying and prioritizes future work needed to improve the agricultural statistics system;
- ▶ Enable target farmers to develop sustainable statistical systems for production and dissemination of accurate and timely agricultural and rural statistics, comparable over time and across;
- ▶ Propose for future work in capacity development.



Thank you