SAMPLING METHODS AND TECHNIQUES FOR AGRICULTURAL SURVEYS IN SOLOMON ISLANDS

By Douglas Kimi and Franklyn Derek Wasi
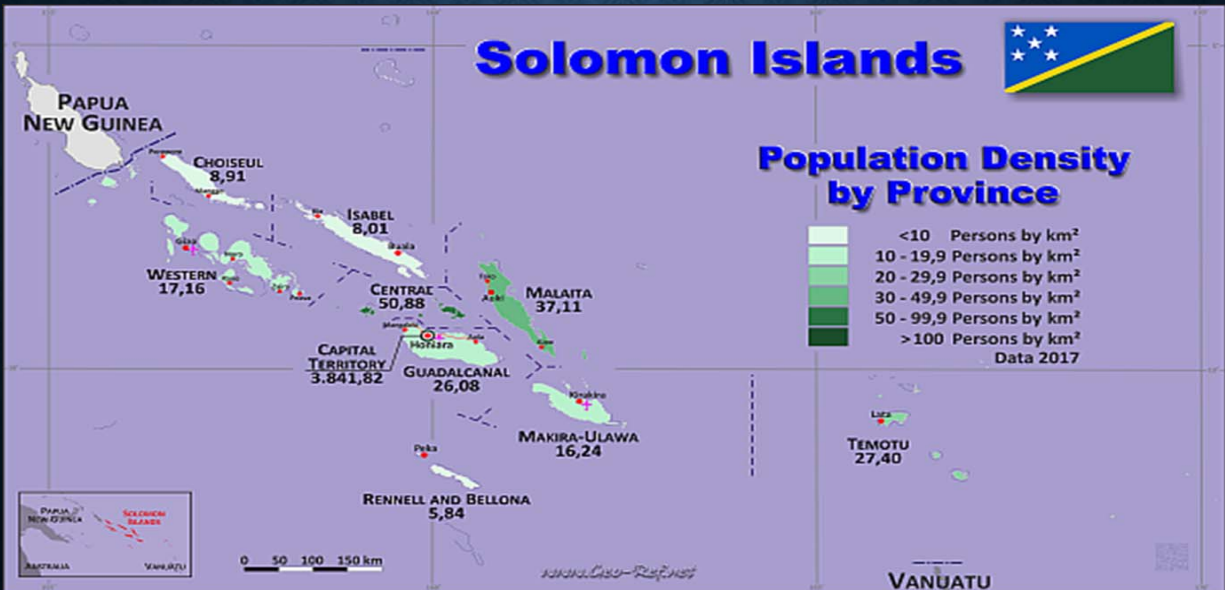
National Statistics Office & Ministry of Agriculture and Livestock

---

OUTLINE

- Map of Solomon Islands
- General background
- Agriculture in Solomon Islands
- Agriculture Study
- AD HOC surveys
- National Agriculture Survey/census
- National Agriculture Survey Design

- National Agriculture Survey - Sampling Design
- Survey Training and Work Plan
- Field Work Procedure
- Selected EAs Maps

MAP OF SOLOMON ISLANDS

GENERAL BACKGROUND

- Solomon Islands is an Island Nation composed of six volcanic islands and over 900 smaller islands (low-lying islands and atolls).

- Located east of Papua New Guinea and northwest of Vanuatu and covering a land area of 28,400 square kilometres (11,000 sq mi).

- Ocean area – 1,340,000 sq km

- Population – 711,660 people (SINSO, 2018 projection)

- Capital city – Honiara

- GDP – 3.4% (2016)

- Languages – 76 languages and three nearly extinct. The official language is English while the common language is Pidgin

- Races – 94.5% Melanesians, 3% Polynesians, 1.2% Micronesians, Asians, Europeans, others

AGRICULTURE IN SOLOMON ISLANDS

- Agriculture activities are;
  - Commercial (Foreign Investor)
    - Oil palm
  - Sub-commercial (Small-holders)
    - Coconut
    - Cocoa
    - Livestock (cattle, piggery, poultry, apiary)
- Subsistence – 85% of the population (rural)
- Demonstrations
  - Piggery, rice & others (Taiwanese Technical Mission)
- GDP (2016)
  - Real GDP – SBD$4,603m
  - Nominal GDP – SBD$8,606m
  - Real GDP Growth – 3.4%

AGRICULTURE IN SOLOMON ISLANDS

Exported;
- Coconut
  - Copra
  - Oil
- Cocoa
  - Dried beans
- Oil Palm (Kernel (dried) & Oil)
- Kava (Grounded and packed)
- Cassava (Frozen)
- Chili
- Honey
- Coffee

Not exported ;
- Potato, Yam
- Betel nut (*Areca nut*) & betel (*Piper betle*)
- Fruits and vegetables
- Beef, Pork
- Chicken, Eggs
- Rice
- Most Spices (ginger, turmeric, vanilla, cardamon, black pepper)
- Other crops

AGRICULTURE STUDY

Since 1974 to 1989

- A series of Agricultural related study targeting small holders were conducted in selected regions
- Records withheld in MAL Information Unit for internal use

AD HOC SURVEYS

- Livestock data (Beef cattle, poultry, piggery, honey, etc.)
- Cocoa and coconut farms/projects
- Natural Disaster recovery surveys
- Other Crops

- Surveys were carried out only when needs arise. E.g. Assessment for recovery of farms affected by Flash-flood in 2014.
- Other information were obtained from reports/administrative record

NATIONAL AGRICULTURE SURVEY/CENSUS

- Census on Commercial Farms 2018

- National Agriculture Survey 2017

- Objectives:
  - To cover household agriculture, fisheries and livestock production and capacity
  - In addition, climate change, food security, Market and price

- The survey was coordinated and implemented by the NSO

- The Census on Commercial farms, the list of farms was supplied by MAL

- The field officers/enumerators were MAL Agriculture Extension officers

NATIONAL AGRICUTURE SURVEY DESIGN

- The design confirm National and Provincial reporting domain.

- This design was similar to the Solomon Islands HIES 2012/13

- Malaita and Temotu - Outer Islands are excluded from the survey

- A total of 176 EAs and 4,224 households was selected for survey

Scenario 2 - Provincial	
Choiseul	384
Western	576
Isabel	384
Central	384
Renbel	192
Guadalcanal	576
Malaita	576
Makira	384
Temotu	384
Honiara	384
National	4,224

NATIONAL AGRICULTURE SAMPLING PROCEDURE

➢ Two stage stratified sampling procedure was adopted for survey.

➢ Each of the ten provinces including Honiara is treated as separate stratum in order to provide estimates for the provinces.

➢ In the first stage, selection of EA using probability proportional to size

➢ In the second stage, a hhs listing procedure was done and hhs selection of systematic random sampling.

➢ 30 hhs were selected for each EA with a work load of 24 hhs, an over-sampling of 6 hhs to cater for replacement of vacant hhs

➢ A total of 176 EAs and 4,224 households was selected for survey.
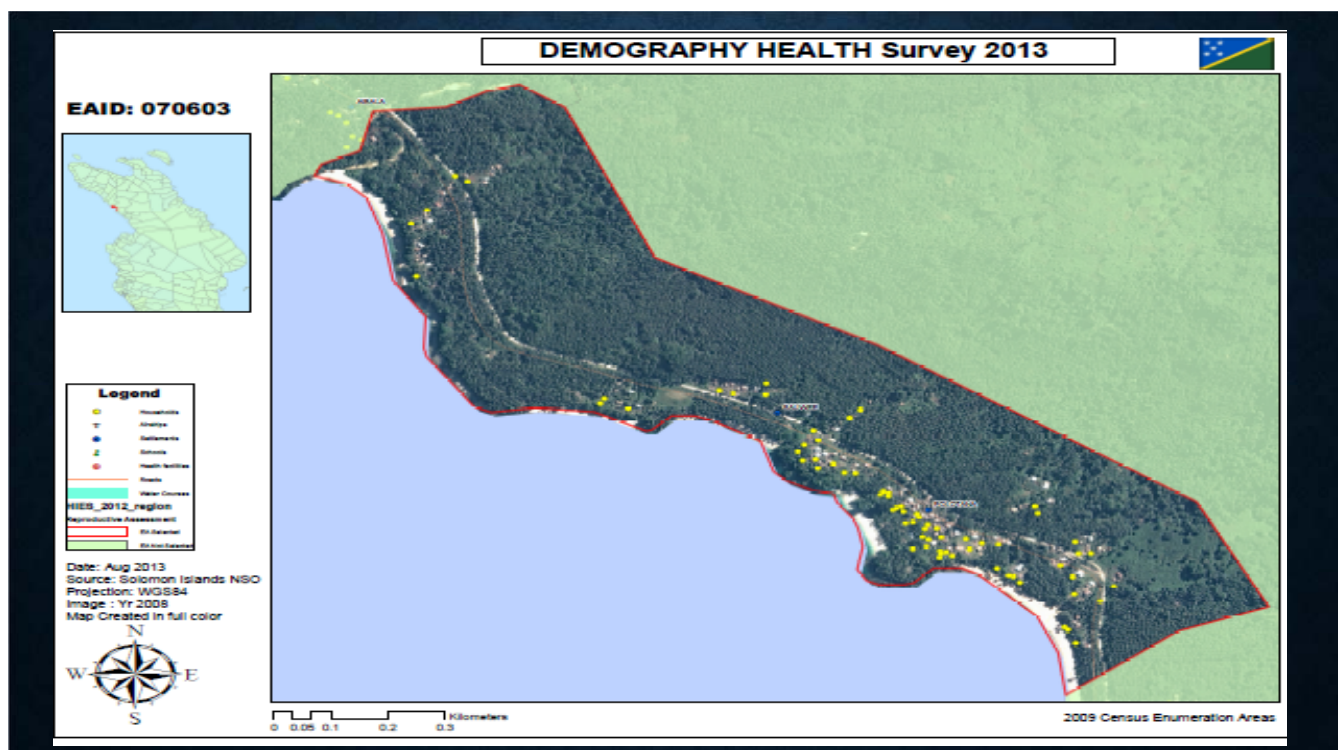
SURVEY TRAINING AND WORK PLAN

• Training was held in Honiara for 2 weeks for teams from the provinces.

• Training was on;
  • Survey methodology (household selection)
  • Questionnaire
  • Data quality
  • Data entry
  • Use of GPS

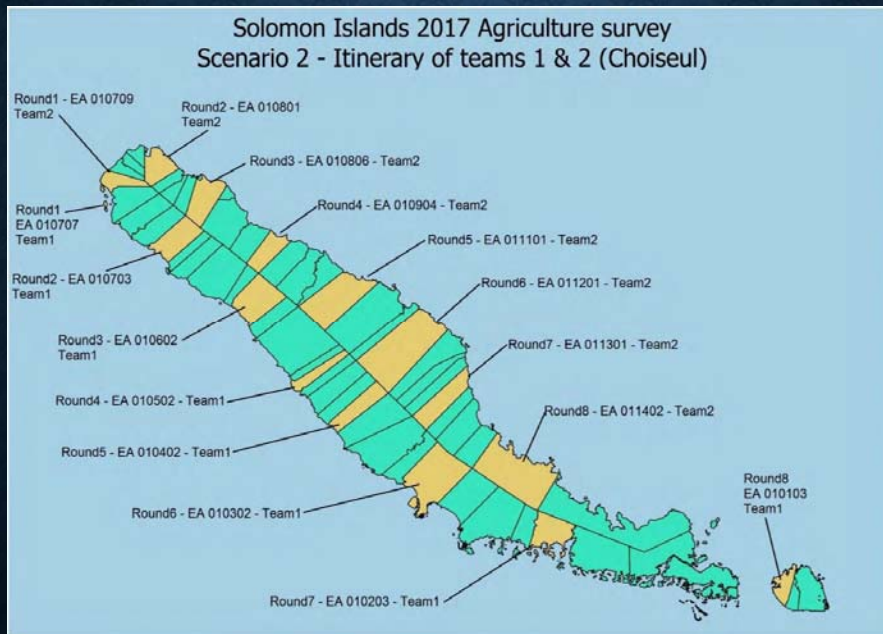|	2016						2017										
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Questionnaire design																		
Survey manual																		
Questionnaire printing																		
Pilot test																		
Data entry program																		
Recruitment																		
Survey training																		
Field operation																		
Data cleaning / processing																		
Report and analysis																		
Data and report release																		

FIELD PROCEDURES

1. There are a total of 22 teams of 4 field officers per team.

    - 1 field Supervisor and 3 field interviewers (enumerators)

2. Each team to complete EA workload of 24 Hhs in one week

3. Each teams were given field work plan plus logistical equipment and Maps to move according to team survey plan

4. Data entry is done in the field by the supervisor

5. One NSO staff is allocated to each province to do field work M&E and report back to NSO

6. Weekly/Fortnightly technical/stakeholders meetings were organized by NSO for Update

7. The survey was completed successfully in 2 months

SELECTED EAS - CHOISUEL PROVINCE

Solomon Islands 2017 Agriculture survey
Scenario 2 - Itinerary of teams 1 & 2 (Choiseul)

Round1 - EA 010709 Team2
Round2 - EA 010801 Team2
Round3 - EA 010806 - Team2
Round4 - EA 010904 - Team2
Round5 - EA 011101 - Team2
Round6 - EA 011201 - Team2
Round7 - EA 011301 - Team2
Round8 - EA 011402 - Team2
Round8 EA 010103 Team1

Round1 EA 010707 Team1
Round2 - EA 010703 Team1
Round3 - EA 010602 Team1
Round4 - EA 010502 - Team1
Round5 - EA 010402 - Team1
Round6 - EA 010302 - Team1
Round7 - EA 010203 - Team1

THANK YOU