Food and Agriculture Organization of the United Nations

SOLOMON ISLANDS NATIONAL AGRICULTURE LIVELIHOOD SURVEY

April 2020

SDGs:	
Countries:	Solomon Islands
Project Codes:	TCP/SOI/3602
FAO Contribution	USD 202 000
Duration:	27 October 2016 – 26 October 2019
Contact Info:	FAO Representation in Solomon Islands SAP-SRC@fao.org

Implementing Partners

Ministry of Agriculture and Livestock (MAL), Solomon Islands National Statistics Office (NSO), the Pacific Community (SPC).

Beneficiaries

Government policy-makers and planners; NGOs; exporters; and farmers.

Country Programming Framework (CPF) Outputs

Priority Area A: Food and nutrition security resilient to impacts of disasters and climate change
Outcome 1: Strengthened policy, legislative, regulatory and strategic planning frameworks for food and nutrition security
Output 1.1: Strengthened capacity for agriculture data collection and analysis.

Background

The vast majority of households in Solomon Islands are involved in agricultural and livestock-raising activities, and most households also participate in fishing activities. These sectors are, therefore, extremely important in this nation, which comprises six large and 986 small islands.
An agriculture survey was carried out in Solomon Islands in 1986 – 87, but another had not been conducted since then. This lack of up-to-date data meant that the Government had to rely on ad hoc or anecdotal evidence and was unable to design appropriate policies or meaningful plans for agriculture in the country.
Agriculture, fisheries and livestock were named as priority areas for sustainable economic growth in the National Development Strategy (NDS), which was contained in the 2016 – 2035 policy statement of the Democratic Coalition for Change (DCC). It was also noted in the new NDS that analysis and reporting on the previous strategy (2011 – 2020) was hampered by the lack of reliable data.

This TCP project was formulated to fill this gap in data by designing and implementing the Solomon Islands National Agriculture Livelihood Survey (SINALS). Support was to be provided in the following five areas: (i) the design of a methodological base for the SINALS; (ii) capacity development of national Government staff to conduct the survey and analyse the results; (iii) the generation of reliable structural data on agriculture, livestock, fishing and forestry for planning, policy formulation, strategy development and food security; (iv) the analysis and dissemination of the data; and (v) the creation of a strategy to develop a system of food and agriculture statistics.
Project implementation was led by the Solomon Islands National Statistics Office (NSO) in collaboration with the Ministry of Agriculture and Livestock (MAL)). Technical support, as well as supervisory and advisory services were provided by a team from FAO, in partnership with the Pacific Community (SPC).

Impact

It is expected that the data collected and the report produced under this project will lead to the development of evidence-based policies for agriculture, livestock and fisheries in Solomon Islands, which is an important step towards improving food security and nutrition.

Achievement of results

The project led to the production of a survey report that updated the data on agriculture, livestock and fisheries in Solomon Islands. Through the use of the data, decision-makers will be able to create plans and policies appropriate for the modern contexts of these sectors. The survey was conducted from the second week of August 2017 to the first week of October of the same year. The reference period was twelve months prior to the survey period, unless otherwise indicated. The survey report was published in November 2019, and it is available here: https://bit.ly/39salwk.

The aim of the first Output was to develop a sound methodological base for the survey. First, a plan was prepared. The 2009 population census was utilized as the frame, and a two-stage sampling procedure was created as a means of selecting households for the SINALS. Data collection methods and processes were developed. The survey questionnaire was also developed, as was an instruction manual for enumerators. The survey followed the guidelines of the World Programme for the Census of Agriculture 2020 (WCA 2020); however, it was also designed to be consistent with national practices, while maintaining its comparability across regions and nations.

The survey was designed to cover a wide variety of topics, including agriculture holding, household demographics, sub-sector engagement, land parcels and use, food and commercial cropping, agricultural practices and services, livestock raising, aquaculture, fisheries, forestry, handicrafts, labour, machinery and equipment, income and loans, and food security and climatic/disaster impacts. The survey's data entry system, which allowed for the data to be entered almost simultaneously as they were collected in the field, also included embedded consistency checks to mitigate irregularities.

A sample of 4 224 households was selected. In the event that some of those originally chosen were unable or unwilling to take the survey, additional households were also selected.

Twenty-two teams of three enumerators and one supervisor each were established. A pilot test was then carried out in three Enumeration Areas (EAs), and the results were utilized to revise and finalize the questionnaire and instruction manual.

Output 2 sought to build the capacities of Government staff from the MAL and NSO to collect, process, and analyse the data. The first phase of this consisted of a Training of Trainers

(ToT) session in May 2017, which strengthened the capacities of staff members from the MAL and NSO. The second phase provided training to the enumerators and supervisors on each team, with the sessions being led by the trainers who had benefitted from the ToT sessions. These activities provided extensive training on concepts, definitions and procedures of data collection, and were complemented by field visits, in order to provide trainees with hands-on experience. Training was also provided for supervisors on data entry software (CSPro7.0 and Stata).

Capacity building activities on data analysis, use and dissemination targeted approximately 16 representatives from the NSO and MAL. Per the original project design, these Government representatives were meant to carry out the actual survey data analysis; however, the Government decided to enlist consultants from World Bank for this task instead. That being said, the skills the Government representatives acquired during the training sessions assisted them in presenting the results of the survey during the official launch of the report and dissemination workshop, and these skills are expected to serve them well in any subsequent analysis and use of the SINALS data.

Under Output 3, the data were collected in all nine provinces of Solomon Islands over the course of several weeks. As mentioned above, the survey took place from the second week of August to the first week of October 2017. Data entry and cleaning were done primarily in the field. The data sets were examined for inconsistencies and outliers, and then tabulated. The data were processed using the above-mentioned software (CSPro 7.0 and Stata). As stated above, the survey report was completed and disseminated in November 2019. Two-hundred copies of the report were printed and distributed at a final workshop, which also took place in November 2019.

Implementation of work plan

Two no-cost extensions and a rephasing were approved, and all activities were implemented within the allocated budget.

Output 2 was only partially achieved, owing to the above-mentioned decision that the Government made to have the data analysis performed by consultants from World Bank rather than local actors. All other Outputs and Activities as laid out in the original work plan were achieved.

The data collection and processing was completed in early 2018. However, the Government requested additional data cleaning with the application of different imputation methods. For this reason, the data analysis was deferred, which caused subsequent delays in the drafting of the final report, and in holding the dissemination workshop.

The risks identified as the project was being formulated did not impact implementation. The first possible risk was that adequate resources would not be secured by the NSO and MAL; however, this was mitigated by collaboration among project leaders and Government agencies to ensure that top priority was given to planning the survey and collecting the data. The potential for issues with the governance of funds was also included as a possible risk, but it did not prove to be one.

It was foreseen that the NSO and MAL may not have had enough staff members to dedicate to conducting the survey, or that the staff members assigned to carry it out may not have had the knowledge and skills to do so. Thanks to collaboration among the survey design expert, the national consultant, and the SPC, as well as the capacity development sessions for local staff, these factors did not prove to pose any risks to project implementation.

Finding an accurate frame for the survey was considered to be a possible risk; however, this was mitigated by the use of the 2009 population census. Identifying national consultants was seen to be a possible risk as well. Thanks to the early involvement of FAO SAP, this did not prove to be an issue.

Natural disasters, such as cyclones, or political disruptions, may have caused delays in implementation, or they may have stopped the survey from being carried out entirely. Several mitigation measures were put into place to prevent these possible occurrences from impacting the project. The first was timing the survey so that it fell outside of cyclone season. If another natural disaster had occurred, the timeframe would have been adjusted. Finally, all files, records, systems and related information were backed up on the Government server in the event that project activities were interrupted.

The final risk was the possibility of inaccurate information being collected regarding off-season crops. This was mitigated by conducting the survey when most crops were in season or had just been harvested.

Follow-up for government attention

Further analysis of the collected data should be carried out. The analysis should be cross-sectional and include a wider scope.

It is also recommended that a programme of surveys on agriculture be planned in a ten-year cycle. Data collection could occur for each topic at regular intervals, and it could be adjusted according to need. The sampling strategy should be formulated so as to allow for the accommodation of ad hoc data collection as needed. This approach would be cost-effective, owing to the fact that the total cost of the data collection would be distributed over a long period, and the essential items would be collected and updated every year.

Finally, more technical and financial support is required to ensure the continuity of both human and information technology (IT) resources to maintain and develop the field of agriculture statistics in the country.

Sustainability

1. Capacity development

The MAL and NSO staff had their capacity to undertake surveys and analyse results strengthened. The knowledge and experience gained was useful in the preparation of the population census in 2019 and is also expected to be useful for the National Agriculture Census in 2022.

The project was designed and carried out in partnership with the SPC. Cooperation with the SPC divisions working in the area was very helpful and should continue.

A separate MoU between the SPC and the MAL was developed in conjunction with this TCP project to support related activities for the development of agriculture statistics through an in-kind donation.

2. Gender equality

The questionnaire addressed women's participation in agriculture. An analysis of this information was included in the survey report. Women and men participated equally in all project activities and capacity building initiatives.

3. Environmental sustainability

Monitoring the environmental sustainability of agricultural practices was a key question, and data were collected on this issue.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

The data generated will help to develop the potential for decent work. The Government can utilize it to build an evidence-based value chain and a respective employment policy.

5. Technological sustainability

The data-processing software, designed on CSPro, which is open source, contributed to the capacity building of national specialists. Further developments will be needed to support a comprehensive agricultural statistics system, to be determined through the National Statistics Development Strategy (NSDS). The National Agriculture Census 2022 will require external support. For this reason, the farmers listing/sample frame should be properly maintained using the Population and Housing Census 2019, and it should be regularly updated for the 2022 census and further surveys.

6. Economic sustainability

While funding for the statistics advisory facility is provided by the Government of Australia through the SPC, the Government of Solomon Islands would benefit from further technical and financial support to develop the agriculture statistics sector.

Documents and outreach products

Documents

- ❑ Computation of the sampling weights. B. Giri. & B. Buffiere. 7 pp.
- ❑ Concepts and Terms used in SINALS 2017. B. Giri. 2017. 13 pp.
- ❑ Dealing Non-response/Missing Cases. B. Giri. 2 pp.
- ❑ Instructions Manual for Field Staff. Honiara, Solomon Islands, 2017. 84 pp.
- ❑ Issues and Recommendations on the integration of SINALS 2017 and Big Farms Survey Data.
- ❑ B. Giri. 2 pp.
- ❑ Methodological report on National Agriculture Survey. B. Giri. 2018. 6 pp.
- ❑ Note on Sampling Design for SINALS 2017. B. Buffiere. 7 pp.
- ❑ Note on Validation of Quantitative Data. B. Giri. 2018. 4 pp.
- ❑ Report on National Agricultural Survey 2017. NSO, Ministry of Finance and Treasury, & MAL in collaboration with FAO and the World Bank. Honiara, Solomon Islands. 200 pp.
- ❑ Report on the pilot survey. NSO. 13 pp.
- ❑ SINALS Questionnaire.
- ❑ Statistical validation of FIES data. A. Sattar. 2018. 4 pp.
- ❑ Tabulation Plan. B. Giri. 2017.

Outreach Products

- ❑ National Agriculture Survey Training Program. 2017. 10 pp.
- ❑ SINALS Dissemination Training Workshop (Power point presentation). D. Brereton. Honiara, Solomon Islands, 2019. 114 slides.

ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	**Improved Food Security and Nutrition (FSN) evidence-based policies developed for the agriculture, livestock and fishery sectors in Solomon Islands**	
Outcome	Public, private and international sector decision-makers and planners use reliable, timely data on the primary production sector for planning and policy development	
	Indicator	Agricultural data are collected and properly set for analysis.
	Baseline	Outdated survey.
	End Target	Survey report published by June 2018.
	Comments and follow-up action to be taken	Achieved: Yes The survey report was published in November 2019 and is available at: https://bit.ly/39salwk.

Output 1	A sound methodological base for Agriculture Survey developed		
	Indicators	Target	Achieved
			Yes
Baseline			
Comments	The survey was designed to target agricultural households and their land holdings. A two-stage stratified sampling procedure was applied to select the sample households for the survey. The 2009 population census was used as a frame for sampling households for the SINALS. A survey questionnaire and manual were developed. The concepts and definitions used in this survey closely followed the recommendations of the WCA 2020, whilst maintaining consistency with national practices, as well as regional and international comparability. The content of the survey was broad, covering sections on: (i) agriculture holding; (ii) household demographics; (iii) sub-sector engagement; (iv) land parcels and use; (v) food and commercial cropping; (vi) agricultural practices and services; (vii) livestock raising; (viii) aquaculture; (ix) fisheries; (x) forestry; (xi) handicrafts; (xii) labour; (xiii) machinery and equipment; (xiv) income and loans; and (xv) food security and climatic/disaster impacts. The Government should put a decennial programme of surveys on agriculture into place. The collection of data on different modules can be rotated at regular intervals, depending on data requirements and frequency of change. The sampling strategy can also be formulated in such a manner that it enables a highly flexible approach to accommodating any ad hoc data collection. It would be cost-effective in the sense that the total cost of data collection is distributed over a long period, and the essential items required for the frame are collected and updated every year in the process. Importantly, the survey should provide a wider scope of longitudinal and cross-sectional data analysis across different modules of information.		

Activity 1.1	Agricultural survey plan prepared	
	Achieved	Yes
	Comments	The field work of SINALS 2017 was undertaken from the second week of August 2017 to the first week of October 2017. The twelve months prior to the survey date was, in general, used as the reference period for most of the data items in the 2017 survey. However, the reference period for some of the items was different from the one specified above, which were indicated separately in each data item in the questionnaire.
Activity 1.2	**Data collection methods and processes developed**	
	Achieved	Yes
	Comments	All data were collected by a group of trained enumerators and supervisors that directly interviewed the eligible members of the farm households. The data in the survey were collected using standardized structured questionnaires guided by the Instructions Manual to Field Staff, which gave detailed concepts, definitions and procedures for the collection of each item. The draft questionnaires and instruction manual were prepared on the basis of the recommendations of the MAL's meetings and discussions. The questionnaires and instruction manual were then revised and finalized based on the results of the pilot test. The Instructions Manual to Field Staff was supplemented with guidelines to coordinate with team supervisors to improve data quality in the field. The data entry was done almost simultaneously in the field. A set of consistency checks were embedded in the data entry layout to facilitate the identification of inconsistencies in the field and to validate the data, if needed, through verification in the field itself.

Activity 1.3	Preparation for survey enumeration and processing completed	
	Achieved	Yes
	Comments	A nationally representative sample of 4 224 households was ultimately selected for survey. The selection was increased by 25% in case replacements were necessary (i.e. refusal, household not available, etc.). Twenty-two teams were formed for data collection in the field, and each team consisted of three enumerators and one supervisor. Each team spent one week in an EA. On the first day, all households and farming households were listed and 30 were selected. Twenty-four of the households were then surveyed over the remaining four days of the week. The data entry was done by the team supervisors in the field. The comprehensive consistency checks in the data entry layout facilitated the identification of inconsistencies in the field. The soft data that were received by NSO headquarters was largely cleaned in the field. The data sets were then examined for coverage, consistency with other sources (for certain important items) and outliers before being tabulated according to a tabulation plan that had been formulated prior to conducting the survey. The processing of data and computation was done using mainly the CSPro7.0 data processing package and Stata for the external validation and calculation of weight parameters.
Activity 1.4	**Pilot test and use of results to refine plan and processes completed**	
	Achieved	Yes
	Comments	A group of 23 staff members from the NSO and the MAL carried out a pilot test in three EAs (one peri-urban and two rural areas) from 8 – 10 May 2017. All survey instruments and processes were revised and finalized based on the results of the pilot test.

Output 2	Capacity of MAL and NSO national staff to analyse the survey results strengthened		
	Indicators	Target	Achieved
			Partially
Baseline			
Comments	Approximately 16 representatives from NSO and MAL attended a training workshop on data analysis and dissemination. Data collection and processing was completed in early 2018. However, the Government requested further data cleaning through the application of different imputation methods. Therefore, the data analysis was deferred until a more detailed data validation could be undertaken. The initial design of the TCP project included the training and involvement of local actors in the survey data analysis; however, the Government ultimately decided to have consultants from World Bank analyse the data.		

Activity 2.1	Data collection and processing capacity strengthened	
	Achieved	Yes
	Comments	Field operations included training supervisors and enumerators on data collection and supervision. There were two levels of training, and they were organized separately. In the first level, a training of trainers (ToT) session was carried out in May 2017, which included staff members from the NSO and MAL. The second level, which took place in July 2017, consisted of a training session for enumerators and team supervisors and was conducted over the course of two weeks. Attention was paid to ensure the uniformity of information and instructions. All field officials, including the trainers and supervisors at all levels, were trained extensively on concepts, definitions and procedures of data collection. The training sessions were coupled with field visit to allow for hands-on experience in survey data collection. The last two to three days of the sessions provided training on the use of data entry software for supervisors, imparted by an IT expert.
Activity 2.2	Capacity in analysis and use of agriculture data strengthened	
	Achieved	Partially
	Comments	About 16 representatives from the NSO and MAL attended a training workshop on data analysis and dissemination in August 2019. The acquired skills proved useful in presenting the results of the survey during the official launch and dissemination workshop for the survey report. It is envisioned that these skills will be useful for further analysis and use of the SINALS data.

Output 3	Survey collection and database system that produces sound, reliable structural agriculture data for planning, policy formulation, strategy development and food security developed		
	Indicators	Target	Achieved
			Yes
Baseline			
Comments	The data were collected, processed and analysed. The survey report was officially launched on 14 November 2019. An article about its release can be found here: https://bit.ly/2wMoOWH The report contains facts on agricultural development and challenges faced by farmers nationwide, capturing key benchmark data and information on agriculture and related sub-sector activities such as fisheries, aquaculture and forestry across all nine provinces. The information is available to support evidence-based policies and plans, not only in agriculture, but also in other sectors, including for the national development strategy.		
Activity 3.1	Data collection and processing completed		
	Achieved	Yes	
	Comments	The survey was undertaken from August to October 2017 in all nine provinces of Solomon Islands, including the capital, Honiara. The data were entered into a database, and initial estimates were produced in early 2018. Further editing and data cleaning occurred through to late 2018.	
Activity 3.2	Data and information summarized; output products completed		
	Achieved	Yes	
	Comments	Work on the SINALS report continued through 2019 with the assistance of the World Bank and FAO. The report was launched and disseminated in November 2019.	
Activity 3.3	Agricultural survey data and reports disseminated widely		
	Achieved	Yes	
	Comments	The project supported the printing of 200 copies of the report and the organization of the dissemination workshop which, due to the delays discussed above, took place in November 2019.	

Partnerships and Outreach
For more information, please contact: Reporting@fao.org

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