



Food and Agriculture Organization
of the United Nations



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DEVELOPMENT OF AGRICULTURAL INFORMATION FOR POLICY

September 2019

SDGs:



Countries:

Fiji

Project Codes:

TCP/FIJ/3503 (Phase I) and TCP/FIJ/3701 (Phase II)

FAO Contribution:

136 000 USD (Phase I) and 49 000 (Phase II)

Duration:

10 December 2015 – 31 December 2017 (Phase I)
11 June 2018 – 31 May 2019 (Phase II)

Contact Info:

FAO Representation in Fiji
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Implementing Partners

Ministry of Agriculture (MoA) and Fiji Bureau of Statistics (FBoS).

Beneficiaries

Government policy makers and policy planners, farmers and exporters.

Country Programming Framework

Priority Area A: Food and income security resilient to the impacts of natural disasters and climate change; Outcome 1: Strengthened policy, legislative, regulatory and strategic planning frameworks.



BACKGROUND

Agriculture plays a critical role in Fiji's development by upholding food and income security, promoting the advancement of communities and offering opportunities in international trade. In 2013, agriculture accounted for 9 percent of Fiji's GDP, with the industry growing by 3.4 percent thanks largely to increased production of sugarcane, yagona, taro and coconut (according to the FBoS). In 2014, an agricultural statistics unit, headed by a trained statistician, was established in the MoA in an effort to improve data collection and analysis in the agriculture sector. This has led to the implementation of an agricultural survey and, consequentially, the identification of capacity building requirements within the MoA regarding the design, implementation and dissemination of the survey, as well as sampling methods. The limited accuracy, collection and dissemination of information on agricultural production makes it difficult for stakeholders, both public and private, to monitor the performance of the agriculture sector, evaluate the impact of public sector interventions and external events (e.g. cyclones) and develop evidence-based policies and strategies for economic growth.

The Government of Fiji has appreciated the need for more consistent and higher quality agricultural data, placing priority on improving the processes of data collection and dissemination. In 2013, through the MoA, the Government formally expressed interest in participating in the FAO-implemented Global Strategy to Improve Agricultural and Rural Statistics, which was to be carried out as a part of the Asia-Pacific Regional Action Plan. In 2014 and 2015, Fiji received an In-depth Country Assessment (IDCA), which identified gaps in knowledge and expertise concerning statistics and laid out key areas for improvement. The project aimed to develop local capacity for the production of reliable and suitable data that can be used to support the development of policy, legislation and regulations, as well as strategic planning in the agriculture sector, with the broader goal of strengthening food security in Fiji.

IMPACT

The long-term impact of the project is the achievement of enhanced food security for the people of Fiji.

ACHIEVEMENT OF RESULTS

Output 1: Agriculture baseline survey disseminated and improved capability of the Ministry of Agriculture to use agriculture statistics in policy development.

Data entry and processing was not fully completed at the time of project closure, leading the Government to not disseminate the results of the survey. The initial assessment of the survey revealed that coverage was poor, requiring the MoA to dedicate time and resources to revisiting districts and carrying out additional interviews with farmers. Nevertheless, both formal and on-the-job training on the use of agricultural data were carried out for staff from the MoA. The training included a sample analysis of the Naitasiri province, which, in the future, needs to be repeated for other districts that are covered by the survey.



Output 2: Sampling frame for ongoing surveys established.

Although the sampling frame can only be fully established once the agriculture baseline data survey has been completed, notable progress was made toward the achievement of this output. By project closure, a listing of farmers was created from the available baseline survey data, the MoA had access to a range of Geographic Information System (GIS) data, which can be linked to the listing of farmers, and a land use mapping project had been initiated. The requirements for the sample frame were clearly established in the publication *Towards a Master Sampling Frame for Fiji* and training on sampling frames was provided to MoA staff. In addition, the sampling frame was linked to the MoA's GIS platform. The project identified that a plan for keeping the sampling frame updated needs to be put in place in order to ensure the quality of the sample selection process for future surveys.

Output 3: Improved collection of reliable production information.

Prior to the project, the IDCA identified that Fiji did not possess a consistent methodology for gathering agricultural and rural statistics. The methodology and questionnaire for collecting production information was established, with a decision being made to move directly to Computer-assisted Personal Interviewing (CAPI). A pilot for the production survey was carried out in November 2017 and in early 2018. The CAPI system was developed for processing information but no output system was established during the project. The MoA deferred the full distribution of the production survey until after the agriculture census set to take place in 2020. This was done to allow for revision and eventual modification of the production survey following the census.

Output 4: Improved collection of reliable domestic market price and volume information.

Three missions were carried out by a Technical Cooperation among Developing Countries (TCDC) consultant to assess the methods being used for the collection of market price and volume information. Several recommendations were made to the MoA that aim to improve the collection of relevant information. The MoA's statistics unit and AgTrade unit, along with the FBoS, informally agreed upon how to best implement these recommendations. An information document was prepared for the MoA but a formal agreement on the implementation of these recommendations still needed to be reached. The new market survey methodology was successfully tested and was expected to be implemented during the following financial year in Fiji.

IMPLEMENTATION OF WORK PLAN

The implementation of project activities deviated from the originally scheduled work plan. Although the project was approved in December 2015, work only began months later because of several factors, including cyclone Winston (February 2016), the changing priorities of beneficiaries and the contract breaks arising from the annual renewal of contracts for MoA staff. Subsequently, a second phase of the project was approved and implemented.

FOLLOW-UP FOR GOVERNMENT ATTENTION

One of the critical areas for follow-up attention is ensuring that the listing of farmers is continually updated so that the sampling frame remains reliable for future surveys. The agriculture census and production survey offer opportunities to collect updated information. Following the agriculture census scheduled for 2020, the production survey is expected to be implemented according to the recommendations established in the document titled *Fiji Agriculture Production Survey – Review of 2017 Pilot and Proposals for National Implementation*. Finally, it is recommended that the MoA and FBoS formally reach an agreement on how to implement the recommended changes to the methods used for collecting information on domestic market prices and volume. Once an agreement is reached, regular market surveys will become a possibility.

SUSTAINABILITY

1. Capacity development

Agriculture statistics staff were trained throughout the course of the project and developed a stronger understanding of statistical methods. One of the challenges looking forward, however, will be in retaining trained staff members as the majority of agriculture statistics staff do not hold permanent contracts within the MoA.

The project was carried out in conjunction with Pacific Community (SPC) and an additional Memorandum of Understanding (MoU) was developed between the MoA and SPC to support related activities for the development of agriculture statistics. Continued cooperation with SPC divisions will help ensure the sustainability of the project.



2. Gender equality

Men and women equally benefited from project activities and the participation of women in agriculture is a part of the data collection and analysis process developed under the project.

3. Environmental sustainability

Analysis of the data collected from the production and market surveys will assess the environmental impact and sustainability of agricultural practices in Fiji.

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

Although it was not a primary area targeted by the project, the data collected from the production and market surveys will aid the development of approaches to improving the right to food and decent work.

5. Technological sustainability

The project was designed and implemented in a manner that was inclusive of a wide range of agriculture stakeholders. The project introduced the use of CAPI for the collection of agricultural data, which can continue being used in the future. Further work will need to be carried out, however, to support the development of a comprehensive system for agricultural statistics and, more specifically, the implementation of the agriculture census in 2020.

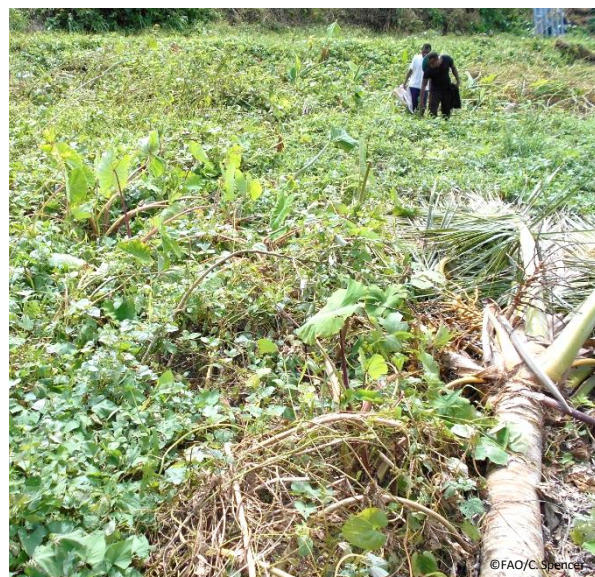
6. Economic sustainability

Technical support, rather than financial support, will be the main concern of the Government of Fiji in its pursuit of improving the system for agriculture data collection and dissemination. However, sufficient funding needs to be directed towards human and information technology resources to maintain the agriculture statistics capacity developed under the project.



DOCUMENTS AND OUTREACH PRODUCTS

- ❑ Towards a Master Sampling Frame for Fiji. H Stott. 14 October 2016. 14 pp.
- ❑ Powerpoint presentation: Sampling Frames for Agriculture Statistics. October 2016.
- ❑ Workshop presentation on data collection and sampling methods. December 2016.
- ❑ 10-part presentation: Basic statistics 5-day course. May 2017.
- ❑ Naitasiri extension officers training. August 2017.
- ❑ Information Paper: For Permanent Secretary, Ministry of Agriculture, Fiji. L Fiti. October 2017. 4 pp.
- ❑ Fiji Agriculture Production Survey – Review of 2017 Pilot and Proposals for National Implementation. H Stott. December 2017. 13 pp.
- ❑ Review of Baseline Survey. H Stott. December 2017. 12 pp.
- ❑ Workshop presentation: Introduction to Statistical Analysis & Presentation Using Excel. December 2017.
- ❑ Workshop presentation: Results of the Naitasiri Province CAPI Trial. December 2017.



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Enhanced food security for the people of Fiji		
Outcome	Strengthened capacity to produce reliable and timely data to support policy, legislative, regulatory and strategic planning frameworks for agriculture.		
	Indicator	1. Increased capacity of the MoA and FBoS to carry out agriculture topic surveys 2. A significant increase in agricultural data available to users 3. Increased capacity of to use agriculture data in policy development	
	Baseline	1. No complete listing of farms or farmers, so no capacity for reliable surveys 2. No up-to-date agriculture statistics are available 3. No agriculture data used in agriculture policy development	
	End Target	1. One sample frame for agricultural survey available 2. Agricultural statistics available for 10% of small and 10% of large farmers 3. At least one policy developed using statistical information	
	Comments and follow-up action to be taken	1. Achieved: A listing of farmers was available and was used as a master frame for the agriculture census scheduled for 2020. Recommendations and trainings for improvement and development were delivered. The resources and time required to process the baseline survey for ensuring coverage and quality were much greater than anticipated, leading to delays. 2. Not achieved: Less progress towards this goal was made than anticipated. All of the risks identified during project formulation affected project implementation and were not able to be fully mitigated. This included (i) reduced availability of statistics staff as a result of Cyclone Winston, (ii) not being able to find suitable local consultants when they were needed and (iii) MoA staff having other priorities or being on contract breaks. In spite of these challenges, some production tables were made available on the MoA's website and some data was available to agriculture sector stakeholders through ad-hoc requests to the MoA's statistics unit. The project focused heavily on data processing for the baseline survey in order to develop a sample frame, which diverted attention away from this goal. The project did not result in increased agricultural data becoming available to users. 3. Achieved: Trainings were delivered and ad-hoc agricultural statistics data was used in the development of the draft MoA strategic development plan. The delivered training sessions included (i) the training on survey design, sampling methods and constructing a master sample frame on 26 April–2 May 2015, which included a presentation to operational directors and senior staff on the production survey and their role in its development and implementation; (ii) the intensive training courses on basic statistics, data analysis and report writing to MoA staff on 21 May–3 June 2017; (iii) the training on data collection for the production survey on 30 August 2017 and (iv) the Improvement of Agriculture Statistics for Policy Results; Data Analysis and Reporting training session on 6–8 August 2017.	
Output 1	Agriculture baseline survey disseminated and improved capability of the Ministry of Agriculture to use agriculture statistics in policy development		
	Indicators	Target	Achieved
Baseline			Partially
Comments	It was expected that the information gathered from the Agriculture Baseline Data Survey would be collected in its entirety, then entered into a database and made available for analysis during the project. However, the initial assessment revealed that coverage was poor and the MoA had to spend a lot of time revisiting districts for validation and carrying out further interviews with farmers. As a consequence, data entry and processing was not fully completed during the project and the MoA decided not to disseminate the results. Although the main use of the survey will be to provide a basis for the sampling frame, some results are expected to be released in the future.		
Activity 1.1	Dissemination and awareness raising for agriculture baseline survey		
	Achieved	No	
	Comments	Data entry and processing was not completed during the project and results were not disseminated.	

Activity 1.2	Capacity building in use of agriculture data		
	Achieved	Yes	
	Comments	Formal and on-the-job training were delivered. A sample analysis of the Naitasiri province and a suggested list of tables were developed with the MoA. It was recommended that the analysis be repeated for all provinces that were assessed and covered by the survey because the information is very useful for regional agriculture officers.	
Output 2	Sampling frame for ongoing surveys established		
	Indicators	Target	Achieved
			Yes
Baseline			
Comments	<p>Since processing of the Agriculture Baseline Data Survey was not completed during the project, the sampling frame was not fully established. There were, however, several steps being taken towards the creation of a master sampling frame:</p> <ul style="list-style-type: none">– The baseline survey provides a listing of farmers that forms a basis for the sample frame.– The MoA has a range of GIS data from government sources that can be linked to the listing of farmers.– A land use mapping project had been started at the time of project closure. <p>To ensure that the listing is a reliable sampling frame in the long term, a methodology for keeping it updated needs to be implemented. Despite the delay, the listing of farmers appears to be a strong basis for future survey sample selection, provided that a plan is implemented for ensuring that it remains updated.</p>		
Activity 2.1	Clarify sample frame requirements		
	Achieved	Yes	
	Comments	The document titled Towards a Master Sampling Frame for Fiji sets out what is needed to develop a master sampling frame for Fiji. Training on sampling frames and their use was carried out for MoA staff.	
Activity 2.2	Use baseline survey data to help develop the sample frame		
	Achieved	Yes	
	Comments	Baseline survey data was used for the development of a sample frame for the pilot production survey.	
Activity 2.3	Link the frame to the geographic information system (GIS) platform		
	Achieved	Yes	
	Comments	The sampling frame was linked to the GIS platform of the MoA.	
Activity 2.4	Updating processes developed to meet survey needs		
	Achieved	Partially	
	Comments	Follow up is recommended as part of the implementation of the agriculture census and the production survey.	
Output 3	Improved collection of reliable production information		
	Indicators	Target	Achieved
			Partially
Baseline			
Comments	<p>During the IDCA of the National System of Agricultural and Rural Statistics in Fiji (2016), which was performed as part of the Global Strategy to Improve Agricultural and Rural Statistics, a lack of confidence in Fiji's agriculture production statistics was identified. The assessment highlighted that data was mostly aggregated from the administrative reporting by the Extension Officer and that there was no consistent methodology for collecting information.</p> <p>The additional pressure of having to revisit districts for the baseline survey caused delays within the MoA in starting work related to production information. A decision was made to move directly to CAPI. The MoA developed an agreement with the Secretariat of the Pacific Community for South-South Support to deliver the system, which negated the need for a CSPro consultant under the project. Data collection using CAPI was piloted in November 2017 and in early 2018, but the national survey was deferred until after the agriculture census. The document titled Fiji Agriculture Production Survey – Review of 2017 Pilot and Proposals for National Implementation sets out the details and recommendations for the implementation of the national survey.</p>		
Activity 3.1	Evaluate existing ongoing surveys and requirements		
	Achieved	Yes	
	Comments	This was achieved through the IDCA Report for Agriculture and Rural Statistics in Fiji (2016), which was produced under the Global Strategy to Improve Agricultural and Rural Statistics.	

Activity 3.2	Develop methodology, questionnaire and field manuals		
	Achieved	Partially	
	Comments	Mostly achieved. The methodology and CAPI questionnaire were developed but no field manuals were created. The MoA decided to defer the full distribution of the production survey until after the agriculture census. Since all elements of the survey are expected to be revised and renewed at this time, there was no need to develop the manuals immediately.	
Activity 3.3	Pilot for production survey		
	Achieved	Yes	
	Comments	The pilot production survey was carried out in November 2017 and during the first half of 2018.	
Activity 3.4	Develop processing and output system		
	Achieved	Partially	
	Comments	The CAPI system was developed and was being used for processing, but no output system was developed by project closure.	
Activity 3.5	Finalize instruments and systems and implement survey		
	Achieved	No	
	Comments	Survey implementation was deferred until after the agriculture census that is set to take place in 2020.	
Activity 3.6	Pilot CAPI data collection		
	Achieved	Yes	
	Comments	CAPI was used during the Pilot Production Survey.	
Output 4	Improved collection of reliable domestic market price and volume information		
	Indicators	Target	Achieved
			Partially
Baseline			
Comments	Three missions by a TCDC consultant were carried out to assess the processes and data quality for market price and volume data. The MoA was subsequently recommended to: <ul style="list-style-type: none">– consider the transfer of the market survey activities to the statistics unit;– use the FBoS’ data on the prices of agricultural commodities from six markets to compile monthly price trends;– endorse the list of crops to be monitored and extend this to other crop when resources allowed;– consult with the FBoS on the possibility of including other crops in their monthly survey;– collect volume data from the six markets to complement the FBoS data and produce estimates of the volume of selected commodities coming through the markets;– consider extending the survey to other markets not covered by FBoS data collection when resources allowed;– produce and upload monthly summary reports to MoA’s website within two weeks of completion of the reference month. The recommendations were informally agreed upon between the MoA’s statistics and AgTrade units and the FBoS. An information document for the MoA was prepared, however, the recommendations still needed to be formally agreed upon and implemented before further progress can be made.		
Activity 4.1	Evaluate existing ongoing surveys and requirements		
	Achieved	Yes	
	Comments	A consultant assessed the processes and data quality of the surveys.	
Activity 4.2	Develop options for improved collection methodology		
	Achieved	Yes	
	Comments	Recommendations were provided on how to improve and maintain consistent data collection methodology.	
Activity 4.3	Test improved market survey methodology		
	Achieved	Yes	
	Comments	The most recent test was completed in February 2019	
Activity 4.4	Implement new data collection and analysis methodology		
	Achieved	No	
	Comments	At the time of project closure, the statistics unit of the MoA had planned on implementing the new methodology in the following financial year. The delay in implementation can be attributed to the lack of budget allocation under the project, continual changes in project priorities and ad-hoc requirements from the management.	
Activity 4.5	Disseminate the results of new market survey		
	Achieved	No	
	Comments	The template for dissemination was shared. The results had not been distributed at the time of project closure because the MoA had not yet conducted regular surveys.	

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