

SPC

Gap in the figures?

Gap analysis of agricultural statistics in the Pacific region

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This document presents the findings of a preliminary gap analysis of agricultural and rural statistics in the Pacific. It is intended as a background document to inform the design of strategic intervention areas in statistics, for the Pacific Agriculture Policy Project.

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Acronyms

ADB	Asian Development Bank
APCAS	Asia Pacific Commission on Agricultural Statistics
CPI	Consumer Price Index
DHS	Demographic Health Survey
EDD	Economic Development Division (SPC)
EU	European Union
FAO	Food and Agriculture Organisation of the UN
FSM	Federated States of Micronesia
GDP	Gross Domestic Product
GIS	Geographical Information System
HIES	Household Income and Expenditure Surveys
HOPS	Heads of Planning and Statistics (Triennial Regional Conference of Heads of Planning and Statistics)
IdCA	In-depth Country Assessment
LRD	Land Resources Division (SPC)
NMDI	National Minimum Development Indicator
NSDS	National Statistics Development Strategy
NSO	National Statistics Office
NSS	National Statistical System
PAPP	Pacific Agriculture Policy Project
PARIS21	Partnership in Statistics for Development in the 21 st Century
PICT	Pacific Island Countries and Territories
PNG	Papua New Guinea
PRISM	Pacific Regional Information System
PSSC	Programme Statistics Steering Committee
RAP	Regional Action Plan for the Improvement of Rural and Agricultural Statistics in Asia-Pacific
SDD	Statistics for Development Division (SPC)
SOPAC	Pacific Islands Applied GeoScience Commission
SPAR	Strategic Plan for Agriculture and Rural Statistics
SPC	Secretariat of the Pacific Community
TYPSS	Ten Year Pacific Statistics Strategy
UNESCAP	UN Economic and Social Commission for Asia and the Pacific
UNFPA	UN Population Fund
UNSIAP	UN Statistical Institute for Asia Pacific

1. Executive summary

This gap analysis compares the current availability, access, and use, of agricultural statistics in the Pacific against the provision of programmes supporting this area. This is done to identify strategic areas of assistance for the Pacific Agriculture Policy Project (PAPP) which will not duplicate existing work, and which will meet the greatest needs. It is predominantly a desk-based literature review for initial planning purposes and the selection of activities for PAPP implementation will be determined through consultations with stakeholders.

A substantial number of reviews and evaluations have been conducted over the last decade on the state of agricultural statistics in the Pacific and, by and large, the principal findings of these studies have changed only marginally. There appears to be a consensus that the key gaps on the availability of agricultural statistics is in the area of domestic production volumes and value. This is particularly true of household level and subsistence production which is inherently difficult to capture. Data on the trade and prices of agricultural goods is generally more available but a lack of integration of data from biosecurity and relatively few well established market surveys means there is considerable room for improvement. Greater use of technologies (for example satellite imagery) has significantly increased our knowledge on natural resource use and change but nevertheless, gaps in availability remain across all areas of data collection.

The greatest need in regards to agricultural statistics lies not, however, in the *availability* of statistics, but in their accessibility and use. A historic lack of demand at the policy level, and weak capacity to use statistics, are consistently identified as the key challenge. Access to data by regional stakeholders, (while improving) remains challenging with large quantities of information being kept offline in dusty bookshelves.

Major initiatives to address these challenges include the Ten Year Pacific Statistics Strategy (TYPSS) and support provided by the UN Food and Agriculture Organisation (FAO). The TYPSS is a 10 year strategy for statistics, directed by the Heads of Planning and Statistics in the Pacific. It covers technical assistance and capacity building on the collection, use and dissemination of statistics across all sectors with support from the Secretariat of the Pacific Community for delivery. FAO provide support through the Global Strategy to Improve Agricultural and Rural Statistics and through Technical Cooperative Programmes (TCPs) with member countries. The Global Strategy works with countries to establish Strategic Plans for Agricultural and Rural Statistics and the country level TCPs fund a wide range of activities including conducting agricultural and market surveys and food and nutrition analysis.

Despite the availability of support through these initiatives, the need for more and better agricultural statistics is high and gaps exist where PAPP could effectively engage. The areas include:

- Support for the design and implementation of agricultural censuses/surveys (Solomon Islands, FSM, Fiji)
- Establishment or improvement of domestic market surveys (Cook Islands and possibly others)
- Collection of agricultural statistics from other national censuses and surveys (e.g. household income and expenditure surveys and population censuses);
- Targeted capacity building on agricultural statistics;
- Maintenance and establishment of public statistics databases;
- Publications on the state of agriculture in the Pacific for non-specialist audiences;
- Advocacy on the importance of agricultural statistics at regional fora.

2. Introduction

This document presents the findings of a preliminary gap analysis of agricultural and rural statistics in the Pacific. The key objectives of the document are to:

- Provide a baseline of the current condition of agricultural statistics in the region;
- Provide an overview of current initiatives being implemented to improve agricultural statistics;
- Identify gaps in current activities to inform the design of initiatives under the Pacific Agriculture Policy Project (PAPP)

The PAPP is an Intra-ACP project funded by the European Union (EU) that commenced implementation in June 2014. The overall objective of the PAPP is to contribute to the enhancement of Pacific agricultural sectors in eradicating poverty. This will be done by strengthening regional agricultural development strategies; by improving dissemination and adoption of applied agricultural research and technologies; and, by contributing to agricultural enterprise development through improved market linkages. One of the main output areas supporting the development of agricultural strategies will be the support provided to national authorities to improve their systems for collecting agricultural statistical information.

This document begins by providing an overview of the rationale for supporting agricultural statistics and the background of work conducted so far by Pacific governments and regional agencies. Based on this, the document then highlights the key remaining gaps which could provide useful entry points for support by PAPP. In this respect, this document acts as a background document to inform the design and implementation activities on strengthening statistical capacity conducted under the PAPP.

This document is intended only as a guiding tool for initial programme planning, not as a blue print for all agricultural statistics work that will be conducted during the lifetime of the PAPP project.

3. Methodology

This document is based principally on a literature review of agricultural statistics in the region. The literature review includes regional plans and programmes on agricultural statistics by Pacific island governments and development partners, specific studies on the status of agricultural statistics in the region and presentations made at relevant conferences and events. Since it is based principally on a literature review it is possible that some aspects are out of date and require revision. Where possible, the review has been augmented by consultations with key informants¹ in order to provide as much up-to-date information on the current assistance being provided as possible. Unfortunately, it was not possible to consult many Pacific Island governments directly due to resource constraints.

4. Why are agricultural statistics important?

The Pacific has approximately 11 million people, nearly 8 million of which live in rural areas (73%).² The extent of commercial agriculture varies widely across the Pacific but rural populations are nearly universally reliant on subsistence production to support their livelihoods and general well-being. Agriculture provides a vital source

¹ For example, Tim Martyn (Policy Officer, FAO Sub-Regional Office for the Pacific); Gerald Haberkorn (Director of SPC's Statistics for Development Division); and, Margarita Guerrero (Director for the UN Statistical Institute for Asia and the Pacific).

² Data from SPC SDD population data sheet 2013 and according to the latest population census data.

of employment and income, it provides food and it is also an important source of traditional medicine and cultural goods (Taylor et al, upcoming).

Furthermore, Pacific island countries are generally highly vulnerable to global food and commodity price fluctuations. Small internal markets and high freight costs means that global food and price surges are felt keenly by Pacific islanders (FAO, 2010). The vulnerability of Pacific countries is compounded by climate change which is threatening the viability of traditional food production systems and the health of reefs and soil resources.

The importance of agriculture for Pacific livelihoods and the vulnerability of Pacific islanders to food insecurity and climate change constitute the key driver behind the need for agricultural statistics. New data requirements are rapidly emerging: countries need to understand how population growth, demand for natural resources, competing uses of food crops, and the effects of extreme weather and climate change, affect food security, poverty and well-being (FAO, 2012).

Despite these growing requirements, many Pacific islands do not collect and analyse sufficient data to make evidence-based policy decisions. Data on food production, marketing and trade is either weak or absent. A particular problem is data on smallholder production for subsistence or for sale in local markets (FAO, 2010). Without an accurate picture of subsistence or smallholder production it is hard to know the impact of agriculture on the livelihoods of the majority of the population, much less its changing role in light of climate change.

Equally, the vulnerability of Pacific islands to food and fuel price shocks requires governments to understand the reaction of domestic producers to changing international prices and the access of domestic consumers to food. Without recording the quantity and value of domestic production it is impossible to know the impact of food price increases on households' food security.

Commitments by Pacific islands to the Millennium Development Goals (and subsequently the Sustainable Development Goals), as well as national and regional development strategies, requires greater monitoring of key indicators. The capacity of Pacific islands to collect and analyse appropriate data does, however, vary. Small Islands are often hampered in their capacity to collect statistics by limited human resources, high staff turnover and tight budgets. Larger countries with access to more resources are still challenged by the inherent difficulties of collecting agricultural statistics since agriculture is largely an informal activity in the Pacific.

Requirements for agricultural statistics also vary depending on the role the sector plays in the national economy. For example, countries with high levels of agricultural production require more information on livestock numbers, the quantity and value of crops being produced and the efficiency of yields. Smaller islands with less agriculture will have more need for information on the prices of imported food, the role of food gardens on households' nutrition and changing access to natural resources such as forests and reefs.

Within the Pacific, agricultural statistics are important at the national and regional level and solutions to their collection and analysis are both national and regional. The Pacific Plan recognises the importance of statistics and data and includes them as one of the 14 key outputs. The production of statistics is largely a national concern but many solutions to the problems they highlight are better solved regionally. Trade negotiations, agreements on the use of shared natural resources and agreements on bulk buying of fuel require regionally comparable information. Capacity gaps can be filled in a cost effective manner through the production of regional public goods such as shared methodologies for research and public databases.

The provision of agricultural and rural statistics which are appropriate for the countries needs and comparable across the region are, therefore, vital. They will inform the monitoring and implementation of Pacific island countries objectives on improving food security, protecting livelihoods of rural populations and ensuring green growth.

5. What is the current state of agricultural statistics?

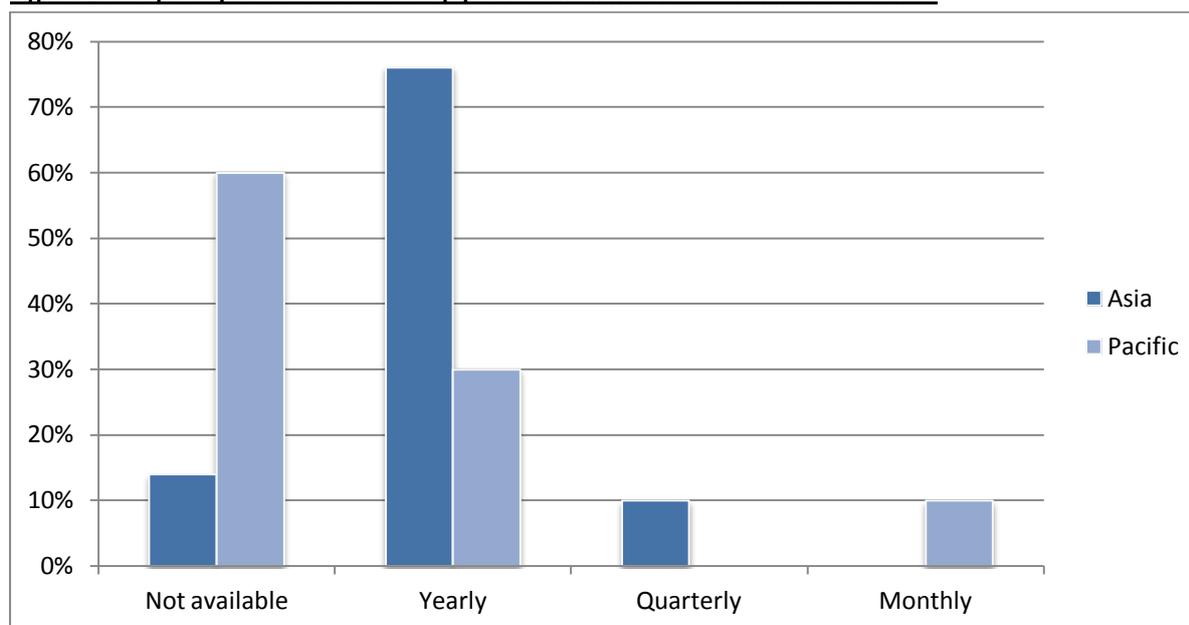
5.1. Availability and frequency of agricultural statistics

5.1.1. Crop production and yields

In 2010 the Asia-Pacific Regional Office of the Food and Agriculture Organisation (FAO) undertook a detailed meta-analysis of the coverage of agricultural statistics in the Pacific region, compared to coverage in Asia (Castaño, 2010). The analysis was conducted based on answers provided by 10 Pacific islands to a questionnaire.

Findings from the meta-analysis indicated that the majority of Pacific islands do not have crop and livestock production statistics available. Six out of the 10 countries in the analysis reported having no crop production or livestock production statistics available. Three countries reported annual crop production data and one reported collecting monthly crop data. Four countries collect annual production on livestock. Figure 1 below summarises this analysis and indicates the differences between Pacific crop production statistics compared with data collection in Asia. Comparatively, the Pacific region's crop production statistics are not as extensive as those of the Asia region.

Figure 1: Frequency of collection of crop production statistics in Asia and the Pacific



Source: Castaño 2010

Other areas where large gaps occur include the use and cost of inputs such as fertilisers or irrigation. For example, only one Pacific country reported collecting agricultural input prices and only two collect data on irrigation (water use).

Countries which do have agricultural production data, typically gained it through agricultural censuses and surveys and some estimation. Agricultural censuses and surveys are a good source of production data, and often the only source of information on the use of irrigation, but these tend to be conducted once every 10 years, if at all.

In countries like Fiji and Samoa, agricultural census data is supplemented by data collected either by agricultural extension officers or through regular smaller surveys. Samoa in particular attempts to conduct a

small agricultural surveys every five years in the intervening period between censuses. Table 1 below shows the dates of the last three agricultural censuses for a few Pacific island countries.

Table 1: Dates of the agricultural censuses for Pacific Islands³

Country	Most recent Ag Census	Previous Ag Census	Previous Ag Census
Cook Islands	2011	2000	1988
Fiji	2009	1991	1978
FSM	1960's	n/a	n/a
Kiribati	n/a	n/a	n/a
PNG	1963	n/a	n/a
Samoa	2009	1999	1989
Solomon Islands	1990	n/a	n/a
Tonga	2014 (ongoing)	2001	1985
Tuvalu	n/a	n/a	n/a
Vanuatu	2007	1993	1983

n/a- not applicable/doesn't exist

The table indicates that Kiribati and Tuvalu have never conducted an agriculture census or survey. Tuvalu has tentatively planned to conduct an agriculture and fisheries survey in 2016 but the status of this needs to be confirmed. For the Federation States of Micronesia (FSM) and Papua New Guinea (PNG) the last agriculture census was conducted in the 1960's. Agriculture is hugely important for the livelihoods of most of the 7 million people in PNG hence an agriculture census could be hugely beneficial in terms of informing national development. An agriculture census has been tentatively scheduled for PNG but again further information is required on the status of this.⁴

For FSM, they have submitted a request to the FAO for support to conduct an agricultural census or survey. A similar situation exists for the Solomon Islands. The last census was conducted in 1990⁵ and the government has asked for assistance from the FAO to conduct a new agricultural survey: given the importance of the sector for national development, this will be extremely beneficial.

Other countries such as the Cook Islands, Vanuatu and Tonga have conducted agricultural censuses roughly every decade (varying according to the funding and political situations of the time).

Work by SPC's Statistics for Development Division (SDD) on revising Household Income and Expenditure Surveys (HIESs) within the Pacific means that HIESs are emerging as a potential new source of data on agricultural production, albeit it with some limitations. The diary module, a two week log of all food purchased or grown, in particular could potentially be used to estimate household level production which is consumed by the household, sold or given away to other households. This approach has been trialled in Nauru⁶ and further modifications to the survey design could strengthen this element.

5.1.2. Trade and prices

Economic statistics (e.g. consumer prices, Gross Domestic Product (GDP) and trade statistics) on agriculture are generally much more widely available than production statistics.

Pacific countries have widely adopted the Harmonized Commodity Description and Coding System for trade. Eight of the 10 countries in the 2010 FAO meta-analysis reported collecting volume and value data on imports and exports on an annual basis and one on a monthly basis. The situation has also improved since the time of

³ Compiled by author from various sources

⁴ Survey timetable on SDD website

⁵ Sources actually differ on whether the Solomon Islands have conducted a survey in the past, this requires further clarification.

that analysis, but there remain issues with consistency and quality. For smaller islands, a lot of agricultural products are traded informally and so quarantine data from airports and ports needs to be integrated into the data provided by customs.

All countries compile a regular (monthly or quarterly) Consumer Price Index (CPI) but only Tonga, Fiji and Samoa have an established domestic market survey for providing regular data for the CPI (Rogers & Morrison, 2011)

A recent study by FAO in the Cook Islands, "Linking farmers to markets: Realising opportunities for locally produced food on domestic and tourist markets in the Cook Islands" (2014) identified institutionalisation of a regular domestic market survey as a key priority for the government. The Ministry of Agriculture actually highlighted the need for a market survey to SPC in 2012 during a visit of the Land Resource Division's Resource Economist on agricultural statistics⁷.

Vanuatu has also highlighted establishment of a domestic market survey as a key priority and is getting support for this from the FAO. Many countries in the Pacific are interested in increasing domestic production for domestic consumption in order to reduce their vulnerability to international food and fuel price hikes. Without knowing the current supply of food domestically it is extremely difficult for the countries to establish appropriate strategies to reduce these vulnerabilities

Market surveys are also an important source of information for estimating and monitoring agriculture's contribution to GDP. Samoa already uses domestic market surveys for this purpose and Vanuatu is intending to establish this. All Pacific islands compile annual GDP estimates and Fiji is moving towards quarterly compilation currently.

The use of market information systems which are accessible to a broader range of stakeholders, for example online or via SMS, are extremely limited. In the Solomon Islands, work began in 2012 to develop the Solomon Islands Information for Agriculture and Rural Development project which would bring together information systems on geographical, climatic, social, economic etc. data to inform decision making. Further research is required to establish the current status of this project. A system was also designed in Fiji⁸ for registering farmers and disseminating information on climate and crop prices through SMS but this is currently undergoing a redesign. Apart from these examples, few other initiatives on market information systems were revealed through this review.

5.1.3. Land use

Data on land use for agricultural purposes is typically gained through agricultural censuses. Further information on land resources can also often be found in Ministries of Land, or land registries. Most countries in the Pacific have soil maps and topography information but this is often quite outdated with a large number of soil maps having been conducted in the 1970's.

Gains have been made in the last few years, however, principally due to the increase in the use of Geographical Information Systems (GIS). Work conducted by land use and planning ministries, often in partnership with the geoscience division of SPC (SOPAC) has considerably enhanced the availability of maps of natural resources of Pacific islands. Satellite images have been captured for Fiji, the Solomon Islands, Tuvalu, FSM and Kiribati (SOPAC, 2013). In some cases the images have been used to conduct vegetation and forest cover maps. The maps have been used to estimate numbers of tree crops such as coconut palms and can be used to find the area of land covered by forest, grassland and permanent structures. Land cover/use

⁷ The author of this document in a previous job position.

⁸ The system was called Fiji Makete. <http://fijimakete.com.fj/index.php>

information is also available through the Pacific Catastrophe Risk Assessment and Financing Initiative, a joint initiative of SPC, the World Bank, ADB and others.⁹

SPC's Land Resources Division has also started working with GIS data for Fiji to add additional data to provide a comprehensive land use capability map. Analysis of the data is extremely resource intensive and data from these sources should not be expected to be available in the near future. Nevertheless, GIS data over the course of the next decade, will grow exponentially and will become a reliable additional source of data on resource use.

5.1.4. Rural population

There is relatively good coverage of statistics on rural population in terms of size, occupation and income sources. This data is typically gained through population censuses, labour force surveys and HIESs. According to the meta-analysis, information on rural services such as access to infrastructure and credit are, much less available. Only one country reported having statistics available on this. SDD does however have location data for schools, dispensaries, roads, airfields etc. for many PICTs. In 2015 this information will be moved to a new platform (Geoclip).¹⁰

5.1.5. Food consumption

Only two countries reported collecting annual data on calories consumed. Responsibility for gathering data on food consumption is often the domain of the Ministries of Health although there has been greater attention, both globally and within the Pacific, on the use of household surveys such as the HIES in supplying information on this.

HIES surveys conducted in the region, including the revised surveys supported by SDD, contain a two week diary which collect information on the expenditure of households on all food items. With sufficient support, the HIESs could be used to help improve information on household level food consumption.

5.2. Access and use of agricultural statistics

5.2.1. Demand at policy level

Demand for agricultural statistics at policy level is low. A study of six Pacific islands (Rogers, 2010) found that generally policy development is based on perception rather than evidence. This is despite the recognised importance of the agriculture sector as the main source of livelihoods for Pacific populations. Another study conducted by the Asia Pacific Commission on Agricultural Statistics in 2012 (APCAS, 2012) found that the top five constraints for agricultural statistics in the Pacific were:

- Level of demand for statistics;
- Appreciation at political level in the Government for statistics;
- Support at political level in the Government for statistics;
- Number of professional staff at headquarters; and,
- Technical skills of available statistical staff.

Lack of demand for agricultural statistics amongst policy makers constitutes three of the top five constraints. This is highly inconsistent with increasingly voiced concerns in the Pacific on issues such as food security and the impact of climate change on sustainable livelihoods.

Interest in resolving this situation varies from country to country. In Samoa for example, the government has shown a strong commitment to improving agricultural statistics. In Samoa's Agriculture Sector Plan 2011-2015

⁹ For more information see <http://pcrafi.sopac.org/>

¹⁰ Information will be provided for 8 Pacific islands initially on this platform.

the investment in reliable and timely agriculture statistics “is as a matter of highest priority”. They make a point of emphasising the need for agricultural statistics to provide performance indicators for their Agriculture Sector Plan: “if we cannot measure, we cannot manage”. In Vanuatu’s Productive Sector Policy 2012-2017 they also make the establishment of core indicators for tracking the progress of the plan as one of its specific objectives.

In other countries, the importance of agricultural statistics is recognised but few resources are available. For example, the Minister for Agriculture and Livestock in the Solomon Islands recognises that agricultural statistics are a priority area but has no budget allocated to it and no dedicated staff. In the Solomon Islands, demand for statistics is generally driven by donors more than the government or private sector (Rogers, 2010).

A lack of demand at high levels in government has led, in many cases, to increasing challenges of national capacity in the collection and analysis of data.

5.2.2. Capacity of agricultural statistics analysis

Capacity at national level for the analysis of agricultural statistics is generally low across the Pacific. In combination with a poor supply of agricultural data and limited demand from policy makers, this has undermined sustainable improvement in agriculture data systems in the Pacific region. Data quality is driven by demand by policy makers but this demand cannot be generated without a high quality of relevant data being analysed and disseminated (Rogers & Morrison, 2011).

Following the mid-term review of Phase One (2011-2014) of the Ten Year Pacific Statistics Strategy (TYPSS) (See section 5.2), which recommended more consolidated efforts to strengthen national capacity in data analysis and dissemination, the 2013 Heads of Planning and Statistics (HOPS) meeting for the Pacific concurred with this recommendation. This now features prominently as a core strategic objective of TYPSS Phase two (2015-2017). Taking on greater roles in advocating for the use of statistics should in turn also help generate additional resources required to increase frequency of quality data collection.

Capacity to do this for most countries is, however, extremely constrained. The collection and analysis of agricultural statistics is traditionally seen as the domain of the Ministry of Agriculture but only a few countries have dedicated policy or planning units. Fiji, Samoa, Tonga and the Solomon Islands have units for policy and planning with the Ministry of Agriculture but the capacity for data analysis amongst these units varies widely (Rogers, 2010).

This situation is also compounded by what is often a lack of an integrated statistical system for agricultural statistics across government departments. In most countries the National Statistics Office have the legal mandate for data collection in their country and are responsible for the collection and analysis of agricultural data through national censuses and surveys (i.e. population, HIES, DHS), market surveys and national accounts. More detailed information on production figures, use of inputs, production prices etc. is often the preserve of the Ministry of Agriculture through agricultural censuses or administrative data. Data sharing between these agencies is, however, often extremely limited. This leads to silos of information, lack of triangulation of data sources and little dissemination of results beyond the immediate stakeholders of the agencies.

5.2.3. Public access to agricultural statistics

Public access to agricultural statistics is generally weak across the Pacific which undermines the generation of good quality evidence based agriculture policy. This is in contrast to the availability of economic statistics which is generally provided through NSO websites. The accessibility of agricultural statistics is largely determined by the overall capacity of the agricultural statistics system’s agencies (i.e. the NSOs and Ministry of Agriculture) and data sharing between these agencies.

Over the last few years, SDD has provided support to NSOs across the Pacific to establish statistical websites which they own and update themselves. This work has significantly increased access of the general public to statistical information.

While the NSO websites are generally up-to-date, agricultural statistics are often not found there. Agricultural statistics are often held by the Ministries of Agriculture. Many PICTs do not have regularly updated websites for the Ministry of Agriculture and even fewer post regular agricultural data on them. The Ministry of Agriculture in Fiji stands out as it posts regular 'market watch' publications on its website with market prices for key crops but even in Fiji it is often necessary to email the Ministry directly to get the latest data. Typically, agriculture data that is generated is not available online and is often located only in departmental/project reports and files which are not easily accessible (Rogers, 2010).

Through the work of SDD and SPC's Land Resources Division (LRD), agricultural statistical indicators are now available on SDD's Pacific Regional Information System (PRISM) website for National Minimum Development Indicators (NMDIs). There are currently 11 indicators for 15 Pacific island countries covering indicators on the importance of agriculture for households, the national economy and natural resources. Data for these indicators is collected through a mixture of online research and in country data collection. The availability and frequency of data of the NMDIs reflects the general capacity of the country's statistical systems and the frequency of relevant censuses and surveys.

6. What is being done?

This section provides an overview of the main agricultural and rural statistics initiatives being organised in the Pacific region. These activities are principally those conducted under the Regional Action Plan for the Improvement of Rural and Agricultural Statistics in Asia-Pacific (RAP); those conducted under the Ten Year Pacific Statistics Strategy 2010-2020 and those conducted under the FAO Pacific Multi Country Partnership Framework 2013-2017.

6.1. Regional Action Plan for the Improvement of Rural and Agricultural Statistics in Asia-Pacific

International work on supporting the improvement of agricultural and rural statistics is coordinated through the 'Global Strategy to Improve Agricultural and Rural Statistics'. The strategy was produced by the UN, FAO and the World Bank through consultation with national statistical institutes, ministries of agriculture and regional and international organisations in order to address emerging issues such as food security, the rise of biofuels and global challenges to the environment. The Global Strategy has three pillars:

- Establishment of a minimum set of core data that all countries will collect;
- Integration of agriculture into national statistical systems;
- Governance and statistical capacity building to improve the sustainability of the agricultural statistics systems.

In order to help operationalize the strategy at a regional level an 'Asia Pacific Regional Action Plan to Improve Agricultural and Rural Statistics 2013-2017' (RAP) was initiated by the UN Economic and Social Commission for Asia and the Pacific. The RAP was finalised in partnership with the Asian Development Bank (ADB) and FAO following extensive country consultations. The framework for the RAP has the same three pillars as the global strategy. Technical assistance, training, and research are highlighted as the three modalities for supporting the

pillars. In addition, it includes a component on advocacy in order to build support in the region for the improvement of agricultural statistics, which was considered critical to ensuring the success of the other initiatives.

Since its establishment the RAP has endorsed eight countries for implementation, two of which are in the Pacific (Samoa and Fiji). By 2017 it is intended that 20 countries in the Pacific region will have been included. A workplan for activities in 2014 has been established and agreed upon. Key activities anticipated to be achieved in the Pacific in 2014 include:

- Design of agricultural statistics training;
- Strengthening capacity of regional training institutions to deliver training on agricultural statistics;
- Improving national statistical systems on the production of agricultural data, statistics and core indicators;
- In-depth Country Assessments in Samoa and Fiji leading to Strategic Plans for Agriculture and Rural Statistics (SPARs).

6.1.1. Strategic Plans for Agriculture and Rural Statistics (SPARs)

Specific country activities to be conducted under the RAP will be guided through the establishment of Strategic Plans for Agriculture and Rural Statistics (SPARs). In-depth country assessments (IdCAs) are first conducted in country in preparation for a full SPARs. The FAO has been the lead agency in progressing this work.

As pilot countries in the Pacific, Fiji and Samoa have both received initial technical consultations for their IdCAs. Support for agricultural censuses, inclusion of an agricultural module in other national surveys and provision of capacity building are three main areas for intervention in Samoa (FAO, 2014). Similar areas are anticipated for Fiji following the first technical consultation with the addition of support to the Ministry of Agriculture for the collection of better quality administrative data. The IdCAs for each country should help reveal areas for potential collaboration with programmes like PAPP.

6.1.2. Training on agricultural statistics

UNSIAP is the lead agency within the RAP for capacity building activities in Asia-Pacific. Their main work areas are:

- Producing tools for skills and training needs assessment;
- Producing training curricula, modules and e-learning tools on: core agricultural and rural statistics and indicators and basic statistical methods for agricultural and rural statistics;
- Strengthening capacity of national and regional training institutions through establishment of a training network and training-of-trainers; and,
- Improving competencies of national statistical systems through application of training and skills assessment tools and provision of focused training on basic statistical methods for production of agricultural data, statistics and core collections.

As part of this mandate, an organisational meeting of the Network for the Coordination of Statistical Training in the Asia & Pacific Region took place on the 2-5th of September 2014. The main objective of the meeting was for the network to design a work programme for 2014-2015; and in particular design a trainer of trainers course for applying core skills frameworks and training needs assessment tools at the country level.

Representatives from the NSOs of Fiji and Samoa attended with support from UNSIAP and PAPP.¹¹ The principal outcome of the meeting was the production of a draft concept note by PAPP for capacity building work in Fiji and Samoa which might be used to pilot a curriculum for the wider Pacific region.

6.2. Ten Year Pacific Statistics Strategy 2010-2020

The overall guiding framework for work on Statistics in the Pacific is the TYPSS 2010-2020. The plan grew from a growing awareness of the role and importance of statistics which was kick-started through the development of the Pacific Plan in 2006 and also work conducted internationally by the Partnership in Statistics for Development in the 21st Century (PARIS21).¹²

In 2007 a Pacific regional statistical benchmarking study was conducted which led to recommendations which eventually led to the development of the TYPSS in 2010. The emphasis of the TYPSS is to employ regional solutions to address national statistical development challenges, including addressing statistical demands and priorities across national statistical systems (NSS). TYPSS is a regional strategy which complements national level processes.

TYPSS is coordinated by a Pacific Statistics Steering Committee (PSSC). SPC's Statistics for Development Division (SDD) is the Secretariat of the PSSC which is otherwise comprised of six heads of Pacific Islands NSOs, three directors of National Planning agencies and key financial and technical partners. The PSSC reports back to the Regional Conference of Heads of Planning and Statistics (HOPS) which meets every three years.

The TYPSS has four main areas of synergy with the 'Global Strategy to Improve Agricultural and Rural Statistics'. These areas are:¹³

- Collection of a core set of Agriculture, Forestry and Fisheries indicators through the National Minimum Development Indicators database;
- Assisting countries to integrate agricultural and rural statistics into their National Statistics Development Strategies (NSDS);
- Develop core agricultural/forestry/fisheries statistics modules/questions for inclusion in regular household surveys (focus is currently on Household Income and Expenditure Surveys);
- Advocacy with Pacific island NSOs to include agricultural questions into population censuses in the upcoming 2020 round.

6.2.1. Agricultural National Minimum Development Indicators

The agricultural national minimum development indicators (NMDIs) are published on SPC's PRISM website. They are intended to facilitate the monitoring and evaluation of agriculture sector strategies by providing insights into the importance of agriculture at the household level, for the national economy and in relation to natural resources. The indicators are updated periodically, principally through conducting visits by SPC staff to the countries to collect the relevant data. A review of the metadata for the indicators and an analysis to

¹¹ This activity was identified early on as important opportunity for supporting the on-going initiative on regional agricultural statistics training hence PAPP support was provided.

¹² PARIS 21 was founded by the UN, EC, OECD, IMF and World Bank in response to growing international calls for a greater focus on building global statistics capacities in order to support effective economic and social development. The principal tool of PARIS 21 is the development of national statistical systems (NSSs) through the development of National Strategies for the Development of Statistics (NSDS).

¹³ Taken from a presentation by Gerald Haberkorn, Director for the Statistics for Development Programme on the TYPSS at a meeting 'Meeting of Resource Partners in Support of the Implementation of the Global Strategy to Improve Agricultural and Rural Statistics', 28 October 2011, Rome, Italy

improve more sustainable processes for data collection is expected to be included in the TYPSS Phase Two (2015-2017). This work is anticipated to be supported by PAPP.

6.2.2. National Statistics Development Strategies

An NSDS is expected to provide a country with a strategy for developing statistical capacity across the entire NSS. It should provide a vision for where the NSS should be in five to 10 years' time and sets milestones for getting there. The NSDS acts as a central framework for coordinating assistance across the national NSS as well as external assistance to ensure the countries statistical needs are met. Globally PARIS 21 is supporting the development of NSDSs. In the Pacific, PARIS 21 is working with SPC's SDD.

Samoa is the first country to have finalised its NSDS in 2012, with draft designs completed by Vanuatu and the Cook Islands, and Tonga nearing completion of its design. Papua New Guinea and the Solomon Islands are at various stages of completing their sectoral assessments. Paris21 and SPC are committed to assisting these countries in completing their designs in 2015, with a further seven countries having requested to participate in this process during TYPSS Phase-2.

6.2.3. Inclusion of agricultural questions in household surveys and censuses

In order to increase the frequency of collection of agricultural data, the coverage of agriculture in household income and expenditure surveys (HIES) and into population censuses will be strengthened. SDD has done considerable work on the creation of a multi-component HIES survey which will provide a common questionnaire for Pacific countries but with modules which can be removed or enhanced. This will result in the Pacific having regionally comparable data (supporting the development of regional analysis and comparison tools) which nevertheless meets countries more particular requirements. Agricultural questions have been included in HIES questionnaires trialled in Nauru, the Solomon Islands, FSM and Palau. This has enabled data on the importance of agriculture for household livelihoods to be collected although work is ongoing to finalise the format. Ideally, greater information on basic household production can also be obtained.

In 2012, SDD and FAO organised a workshop on 'Linking Population and Housing with Agriculture Censuses' in collaboration with the UNFPA and PARIS 21. The main objective was to bring together government statisticians and ministries of agriculture to discuss the use of integrated population and housing and agriculture censuses in their countries. The workshop gave Pacific islands an opportunity to discuss their current methods of collecting agricultural statistics and highlight opportunities and challenges for greater linking of agricultural censuses and population censuses in the upcoming round. It is anticipated that FAO and SDD will continue to provide support for countries to integrate agricultural questions into the upcoming round of population censuses.

6.2.4. Other complimentary initiatives

Two other work streams supported by SDD provide additional complementarities. This is work on the development of food security indicators and collaboration on establishment of a Pacific Trade Database. In 2012, SDD initiated work on establishing a list of suitable indicators for multi-sectoral food security. This was done in response to the Framework for Action "Towards a Food Secure Pacific 2010-2015" which outlines establishment of a food security information system as a core theme. Further engagement in refining the list of indicators to make them suitable for policy makers in the Pacific could be an important area of work going forward (Martyn & Fink, 2014).

SDD has also engaged with SPC's LRD and the Economic Development Division (EDD) on the development of a Pacific Trade Database. In 2009 the FAO supported the LRD to establish an online searchable database of agricultural statistics. Due to limitations in the functioning of the database it is no longer online, however, statistics are still being collected and analysed. Plans are underway for a multi-party collaboration between three of SPC's six technical divisions (SDD, LRD and EDD) to expand this database beyond its agricultural focus and become a comprehensive International Trade Database. The objective is to broaden and strengthen

statistical coverage and analytical capacity at country level, to provide countries' and the Pacific Island Forum Secretariat with access to better quality trade statistics and assist their efforts in trade negotiations.

6.3. FAO Pacific Multi Country Partnership Framework 2013-2017

The FAO also has a regional programme of support for agriculture (including statistics and research) for 14 Pacific Islands. The production of statistics for evidence-based policy making is a core theme throughout and in terms of resources allocated to agricultural statistics; this programme is the most significant in the region. The indicative resource estimate for the 14 country programmes is US\$44.2 million, 15% of which is distributed to work on improving policy and strategic planning which involves the bulk of the work on agricultural statistics. There is currently a funding gap of approximately US\$14.6 million¹⁴ for the 14 country programmes. These gaps could provide effective intervention points for collaboration with SPC and the PAPP.

The work conducted in this framework is integrated into the RAP but is broader in its coverage. Agricultural statistics work in particular is anticipated for six Pacific Islands. Activities to be conducted in each country are outlined in the 2013-2017 Pacific Multi-Country Partnership Framework Document and are reflected in the country annexes to accompany this document. The activities reflect country priorities as identified by stakeholder consultation and national development strategies.

In general, activities focus on supporting agriculture and food security surveys and studies, improving agriculture sector data and statistics for reporting minimum development indicators, support for the development of credible food balance sheets and the strengthening of policy analysis, legislations and regulations. Some key activities included in the framework include:

- The completion of an agricultural census for Cook Islands (2013);
- The implementation of an agricultural census in Tonga (2014-15);
- Design of methodology for nutrition analysis from HIES in Samoa and Vanuatu (2014-2015)
- The implementation of an agricultural survey in Samoa (2014-15);
- The implementation of a market survey in Vanuatu (2014-16);
- The implementation of an agricultural survey or census in the Solomon Islands (2015-16);
- The implementation of an agricultural survey or census in FSM (2015-16).

There will also be engagement on 'adding value' work by using the statistics produced by censuses and surveys, for example with the publication of a 'State of Food and Agriculture in the Pacific' report. These products will help build demand and therefore the sustainability of statistics collections.

Some resource gaps in the delivery of the above activities have been identified. Particularly concerning the agricultural censuses in the Solomon Islands, FSM and Fiji. These resource gaps are opportunities for PAPP to partner with the FAO to deliver needs which have already been articulated by Pacific island countries.

Table 2 outlines some of the important events related to agricultural statistics over the last few years as well as upcoming activities.

Table 2: Past and upcoming timeline of important agricultural statistics events

2007	International Statistical Institute Conference on Agricultural Statistics
2008	Working group established for the development of the Global Strategy
2010	Global Strategy for Rural and Agricultural Statistics finalised and endorsed
2012	Consultations begin for a Asia-Pacific Regional Strategy on Rural and Agricultural Statistics
2011	NSDS process began in Vanuatu and Tonga
2012	Samoa NSDS 2011-2021 approved
2012 May	FAO-SPC conference on 'Linking Population and Housing Censuses with Agriculture Censuses'

¹⁴ Figures taken from the April 2013 Pacific Multi-Country 2013-2017 Implementation Plan

2013	Asia-Pacific Regional Action Plan completed
2013	Cook Islands NSDS launched
2013	IdCA for Samoa commenced
2014	IdCA for Fiji commenced
2014	Tonga NSDS workshops commenced
2014 Sep	Organisational meeting of network for Statistical Training
2014 Nov	Meeting of RAP Steering Committee
2014 Nov	CTA conference on agricultural data and knowledge management
2015 Apr	Standards and classification workshop (SPC)
2015*	Planning workshop for 2020 Round of Population and Housing Censuses
2015 May	South West Pacific Ministers for Agriculture Meeting (FAO)
2015 Sep	Heads and Ministers of Agriculture and Forestry Services (HOAFs & MOAFs)
2015 Sep	Pacific Week of Agriculture Show
2016 July	Head of Planning and Statistics meeting

* To be confirmed

7. What are the key areas for PAPP intervention?

The previous two sections provided an overview of both the current status of agricultural statistics in the Pacific and key regional programmes providing support. Based on those sections, and a more detailed country by country analysis,¹⁵ this section draws out key areas for potential PAPP intervention. The previous analysis was based mainly on secondary sources hence further consultation with countries and development partners is required to finalise these areas. Nevertheless, these areas can form the basis for project planning for the initial years of PAPP.

As discussed previously, the overall objective of PAPP is to reduce poverty by supporting regional organisations' capacity to address the development needs of smallholder agriculturists. This is done through three strategic intervention areas: strengthening regional agricultural strategy; supporting the adoption of improved technologies for sustainable agricultural production; and, linking smallholder farmers with markets. Activities on the collection, analysis and dissemination of statistics are a key aspect of the first of these areas. Agricultural statistics can strengthen the evidence base of agricultural strategies to ensure they're addressing the real needs of smallholders and can help establish systems to monitor the effectiveness of projects and programmes.

Key interventions in agricultural statistics focus on increasing the collection and coverage of agricultural statistics, enhancing countries capacity to analyse the data and improving the dissemination of this analysis to policy makers.

Figure 2: Chain of agricultural statistics interventions



7.1. Support national authorities to increase the collection and coverage of agricultural data

¹⁵ Country annexes for the Cook Islands, Fiji, FSM, Kiribati, PNG, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu have been conducted to inform this paper. These are quite detailed and are being finalised prior to inclusion in this document.

Key areas for increasing the collection and coverage of agricultural statistics highlighted in this gap analysis include providing support for establishing new agricultural and market censuses and surveys and also amending existing censuses and surveys to gain greater coverage.

- **Support for the design and implementation of agricultural censuses/surveys (Solomon Islands, FSM, Fiji)**

Both the Solomon Islands and the FSM have identified the need to conduct an agricultural census or survey. No agricultural census has been conducted in these countries since 1990 and the 1960's respectively, and in the case of the Solomon Islands, the level of agriculture and forestry production in the country warrants investment in collection of detailed production data. Requests by the countries for assistance have been submitted to the FAO and they have demonstrated the ability to provide logistical and personnel support to conduct the censuses. The IdCA conducted under the RAP in Fiji also identified support for an agricultural census as a key piece of support for agricultural statistics. Partnering with the countries and the FAO on this work would be an excellent opportunity to make a significant impact on the quality of agricultural data in the countries concerned.

- **Establishment or improvement of domestic market surveys (Cook Islands and possibly others)**

Domestic market surveys are vital for understanding agriculture's contribution to household food security, national accounts (i.e. GDP and CPI) and also for monitoring the success of programmes to reduce food import dependence. As such, the FAO is currently in the process of improving and expanding the coverage of the domestic market survey in Vanuatu. Lessons from this activity could be applied to other countries in the region with the Cook Islands having also identified the need for a market survey.

- **Integrating agricultural questions into HIES and population census (region wide)**

Incorporation of agricultural questions into the design of standard surveys and censuses such as the HIES or the population census has already begun and is an effective method for increasing the frequency and coverage of agricultural data. For many small island countries, the cost of a stand-alone agricultural survey is prohibitive hence using existing surveys is a relatively cost effective approach to increasing the coverage and frequency of basic agricultural and rural statistics. This has already been trialled with HIES questionnaires in Nauru, the Solomon Islands, FSM and Palau. Ongoing engagement in this area is likely to be highly effective.

- **Household nutrition surveys using HIES (region wide)**

The FAO has already identified the need to support nutrition analysis in Samoa and Vanuatu as part of their country cooperation programmes. If PAPP were to partner with FAO on this work then the methodology could be rolled out to other Pacific islands. If the methodology is based on using the multi-component HIES questionnaire supported by SDD then the methodology could be replicated with all countries that use that questionnaire in a fairly low cost manner providing nutrition analysis which would be comparable across the Pacific. This is another good opportunity for partnering with the FAO to leverage greater analysis and useful data from existing surveys.

7.2. Build the capacity of national governments to use and analyse agricultural statistics

- **Targeted capacity building on agricultural statistics that supports other activities and regional initiatives**

Both UNSIAP and the FAO provide capacity strengthening for agricultural statistics in the region. PAPP should not duplicate this work but could complement these activities through the provision of targeted capacity strengthening based on countries articulated needs.

For example, initial consultations undertaken in Fiji suggest that supporting the Ministry of Agriculture to train agricultural extension officers on their role in the collection of agricultural statistics might help improve the quality of crop and livestock production estimates. Support for agricultural censuses in the Solomon Islands and FSM could also include training on the production of key agricultural indicators as part of support for final analysis and reporting writing.

Ideally, a common area for capacity building would be identified which could be applied across a number of countries. One such area may be support for the production of the agricultural NMDIs/other agricultural datasets. This would have the benefit of additionally encouraging greater ownership of countries of the NMDIs and boost the ability of countries to continue updating the indicators after the end of the PAPP.

7.3. Adding value through advocacy and knowledge products

Raising the profile and highlighting the importance of agricultural statistics for national development planning is clearly central to ensuring work on agricultural statistics is sustainable and effective. If policy makers are aware of what statistics are available and how they can be used for supporting decision making, demand will grow and resources will be assigned, which will in turn improve the quality of the statistics and continue to increase their demand.

Effective advocacy can be supported through the production of publications which communicate the importance of agriculture for Pacific livelihoods and through highlighting the role of agricultural statistics amongst decision makers. Key activities could include:

- **The maintenance and establishment of public statistics databases**

A core piece of work under TYPSS is the updating and upgrading of the NMDIs. These indicators are designed to provide countries with regionally applicable and regionally comparable data on key agricultural indicators such as agriculture's contribution to GDP, household income from agriculture and area of land under agricultural cultivation.

In addition to updating the agricultural NMDIs, additional databases could be established. There is considerable opportunity to work within SPC and with other regional partners on the establishment of core indicators for food security and also to support the establishment of a Pacific agricultural trade database.

- **Publications on the state of agriculture in the Pacific**

As part of SDD's support to countries on HIES a new series of factsheet publications is being trialled. Factsheets focusing specifically on the lessons gained from the HIES on agriculture and food security is an excellent method of disseminating the key messages from HIES. HIES are expected to be conducted in Tuvalu, Tonga and Tokelau in 2015 and a factsheet could be produced following each survey.

Equally, greater collection and coverage of agricultural statistics generated through other activities could be used to enrich the coverage of agricultural statistics in publications such as FAO's 'State of Food and Agriculture' series. Partnering with the FAO on a 'State of Food and Agriculture in the Pacific' would provide an excellent reference point for policy makers which is currently lacking.

- **Advocacy on the importance of agricultural statistics at regional fora**

The first Pacific week of agriculture show is scheduled to be run in 2015 in conjunction with the Heads of Agriculture and Forestry meeting. This is an outstanding opportunity to highlight the importance of agricultural statistics and the impact of work done so far amongst the key stakeholders.

7.4. Sustainability and partnerships

As a general note, the intervention areas identified above are selected with a view to ensuring sustainability. PAPP is a four year project and it is important that it does not displace or duplicate work conducted by other development partners or agencies working in this field. Systems should not be established if there is no budget within the country (or likely to be) to continue to update them once PAPP has ended and there should be an emphasis on establishing projects which are self-sustaining.

In this respect the emphasis has been on collaboration with existing partners (i.e. FAO, UNSIAP), looking at activities which can feasibly be completed within the project lifetime and activities which once established will be managed by an institution other than SPC. The FAO is anticipated to be a principal partner both through the Asia-Pacific RAP and by addressing gaps in the 2013-2017 Pacific Multi Country Partnership Framework.

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