Enhancing evidence-based decision making for sustainable agriculture sector development in Pacific Islands Countries

FAO Expert Consultation Workshop

Nadi, Fiji

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REPORT

Sub-regional Office for the Pacific Islands

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Acknowledgements

AAACP	All ACP Agriculture Commodities Programme funded by the EU
ACIAR	Australian Centre for International Agriculture Research
ACP	Africa, Caribbean, Pacific
CPI	Consumer Price Index
DHS	Demographic Health Survey
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FAOSTAT	FAO Statistics website http://faostat.fao.org/default.aspx
FBS	Food Balance Sheet
FSM	Federated States of Micronesia
GIS	Geographic Information System
GPS	Global Positioning System
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Society for Technical Cooperation)
HH	Household
HIES	Household Income and Expenditure Survey
HS	Harmonised System
MAFFF	Ministry of Agriculture Forestry, Fisheries and Food (Tonga)
MDG	Millennium Development Goal
NCDs	Non Communicable Diseases
NSO	National Statistics Office
NTB	Non-Tariff Barrier (to trade)
OCO	Oceana Customs Organisation
PICTS	Pacific Island Countries and Territories
SPC	Secretariat of the Pacific Community
SUA	Supply and Utilisation Account
WCO	World Customs Organisation

Background

A major challenge in developing and monitoring appropriate policy interventions in support of agriculture sector development in the Pacific region is accessing reliable data. Data on food production, marketing and trade is either absent or very weak and frequently there are conflicting data sets recorded by different sources. A particularly chronic problem is the general unavailability of data on smallholder production for subsistence or for sale in local markets, which means that an important part of a country's food supply and of agriculture's contribution to rural activity is poorly accounted for. To strengthen policy processes, improving timely agriculture data collection, systematization and reporting is therefore a high priority regional need. Furthermore, a better understanding of the contribution of agriculture to the economy of Pacific island countries would not only assist in policy formulation, but also create greater recognition of agriculture's crucial role in maintaining an economic base, social protection, food security and resilience in the face of economic and weather related shocks.

The Pacific Island countries are highly vulnerable to global food and commodity price fluctuations due to their heavy reliance on food imports and on primary exports. The recent food and fuel price surges raised the policy challenges associated with reducing poverty, ensuring food security, and maintaining macroeconomic stability. Extreme price volatility now evident in global markets can be even more insidious, raising uncertainty and undermining strategic planning. How to increase benefits from closer integration with the global economy, while minimizing the potential risks remains a crucial policy challenge for the region. But currently many Pacific Island Countries lack the capacity to produce and report the data necessary to monitor national trends in agricultural production and also the role played by the domestic agriculture sector (local food and labour markets) in mitigating external shocks and maintaining food security. Improving the capacity to produce and report critical data would facilitate the monitoring of policy measures to deal with increased volatility and strengthen the basis for sound decision making.

Meeting Summary

The meeting was attended by 19 participants and an additional participant made a skype presentation from his home base in Apia. Included in the group were FAO technical staff from the Sub-regional Office for the Pacific Islands (SAP) and from Rome, representatives of the regional technical agency – Secretariat of the Pacific Community, country representatives from Ministries of Agriculture and National Statistics offices, private sector consultants and the Head of the Coordination Unit for the EU funded All ACP Commodities Programme (AAACP) from Brussels (participants list is attached at Annex 2).

FAO SAP has recently implemented a data scoping study in five Pacific countries. The objective was to undertake an assessment and diagnostic review of current data sources and gaps and to initiate the development of a framework and methodology to strengthen availability, analysis and use of critical data in policy processes related to the role of agriculture in terms of employment, income generation and food security.

At this consultation workshop findings from this study were critically reviewed and preparations were initiated to implement a series of case studies (with funding support by the EU AAACP) that will, in addressing selected policy issues, demonstrate the importance of developing and maintaining systems of domestic market data collection and use.

The specific workshop objectives were:
1. To introduce the concept of evidence based decision making in the context of policy process in support of smallholder based agriculture development
2. To assess the agriculture data that decision-makers need and compare with what is currently available
3. To define minimum core agriculture data and indicators which are both useful and realistic for Pacific Island Countries given the available human and financial resources.
4. To develop a programme for a series domestic market studies intended to (i) improve domestic market data for policy decision making and (ii) demonstrate the value of this data

Overview of Workshop Sessions

The meeting was run in an informal manner in order to encourage participation and a frank exchange of views. Dr. Vili Fuavao (FAO Sub-Regional Representative for the Pacific) opened the meeting and chaired the sessions of the meeting.

Dr Jamie Morrison (FAO Rome) provided the rationale for moving towards greater use of evidence based policy making to minimise the risks of policy failure. The types of choices facing policy makers (where to focus support, the type of support to provide, and the mechanisms through which to provide it) were discussed in the context of the policy cycle. The presentation argued that at each stage of the policy cycle, the data requirements differ and provided examples of the types of questions that could be better informed through the improved availability and use of data.

The policy cycle
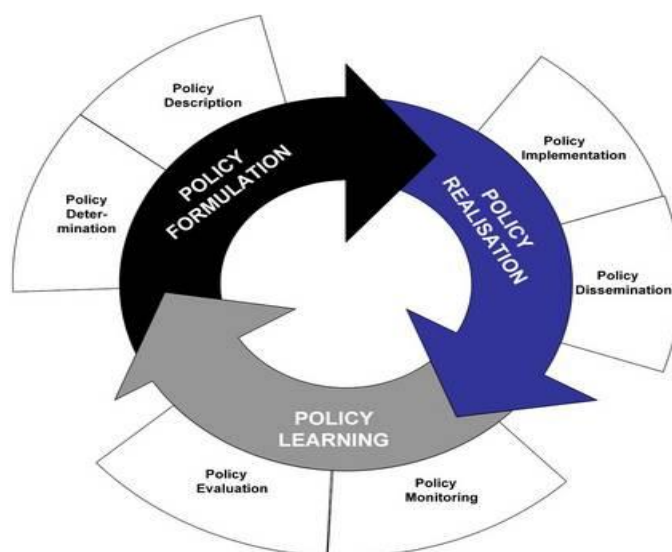
The presentation concluded by raising a series of issues for further consideration, such as the trade-offs that must be made between the choice of methodologies for data collection and analysis and the resources available in terms of funding, human capacity and time.

Following an introduction and overview of evidence-based policy, **Session 1** focused on what the current situation is regarding collection and use of agriculture data in the region. The session included a presentation and review of findings from a recent data scoping study in five Pacific Island

Countries[1] to assess the capacity to produce, report and use data/information necessary for agriculture policy formation and monitoring and an overview of the recently established SPC Trade Statistics Database.

The Regional Data Scoping Study

Presentation by Steve Rogers

Agriculture is of importance in most Pacific Island Countries for economic development (food production/domestic sales, exports and downstream processing), for subsistence food production and for social cohesion and resilience. Recently there also appears to be some increased interest amongst development partners to support the sector. Therefore being able to make informed decisions about how to facilitate sector development and how to monitor interventions would seem to be a high priority. But despite the importance of the agriculture sector serious weaknesses in agricultural statistics still appear to persist.

"The only value of data is when a good decision is made from using it; all other activities and processes just contribute to costs!"

A previous scoping study (Access and Use of Agricultural Statistics in the Pacific implemented by Peter Walton in 2002 on behalf of SPC and ACIAR) identified some specific problems which included:

•Statistics are not current.
•Data are inaccurate
•Informal activities (the subsistence and semi-subsistence sector) are underrepresented.
•There is little information on processing and manufacturing (value adding).
•There is a lack of skills to use the available statistical information effectively.
•The importance of the role of agricultural statistics in effective decision-making is not reflected in the organization and management of agricultural statistics within institutions.

An underlying theme of the findings was that agricultural statistics and their management are not accorded the importance considered appropriate within the Pacific region. In most institutions, effective management of statistics is not a priority (as evidenced by resource allocations); very generally Walton's findings still hold true some nine years later. However there are some areas of improvement, but there are also some areas where things seem to have remained the same or even got worse!

While it's possible from such regional studies to draw some common conclusions & recommendations –the significant differences in the areas of needs, challenges and capacities across countries must also be recognized.

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[1] To date the study has included Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu and will also include Federated States of Micronesia in the near future.

Components of data (evidence-based) systems

Content Capture → Compilation processing → Access → Analysis → Dissemination → Use

Relative focus of capacity building effort
But use drives demand which drives supply!
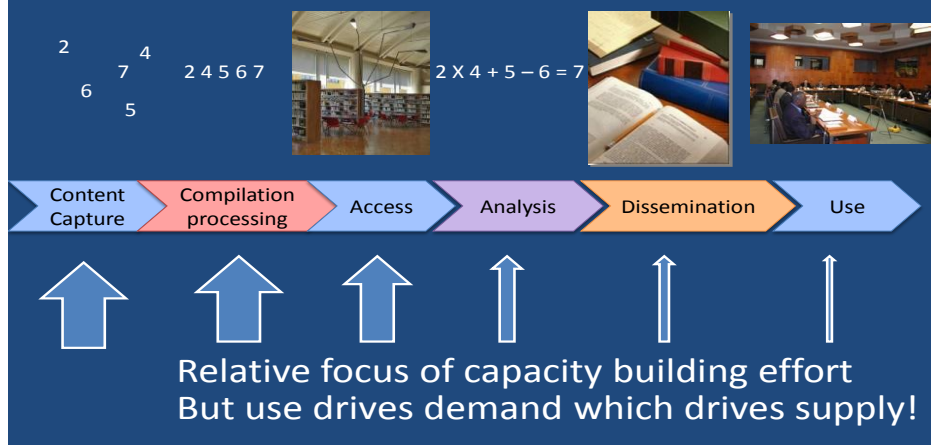
Although three countries in the survey have a tradition of collecting agricultural statistics, they have by and large not developed structured national agricultural statistics system with well defined objectives and a strategic direction (Samoa, Vanuatu, Tonga). Whilst some countries have not undertaken a census of agriculture in recent past (or ever) nor have they undertook agricultural surveys on a regular basis (Solomon Islands, Kiribati, and Federated States of Micronesia).

Recent and planned census and surveys

Country	Ag. Census	Ag. Survey	Population Census	HIES	DHS	Domestic market Survey
Kiribati	None	Baseline survey 2010	2005;2010	1996; 2006; 2011	2010	none
FSM	None	?	1994;2000	1998; 2005[2]		none
Samoa	1999; 2009[1]	surveys 2000;2002; 2004;2005	2001;2006; 2011	1997;2002; 2008[3]	2000; 2009[1]	Weekly central market
Solomon I.	1986?	?	1999; 2009/10	2005/6; 2011	2006/7	Ad hoc (project)
Tonga	2001	?	1996;2006; 2011	2000/01; 2009/10	2011	Weekly central roadside Vavau
Vanuatu	1993; 2007	1990;1991; 1992	1999;2009	2006	?	none

[1]Report anticipated in 2010; [2]Report published 2007; [3]Report published 2010

Some basic data and sources

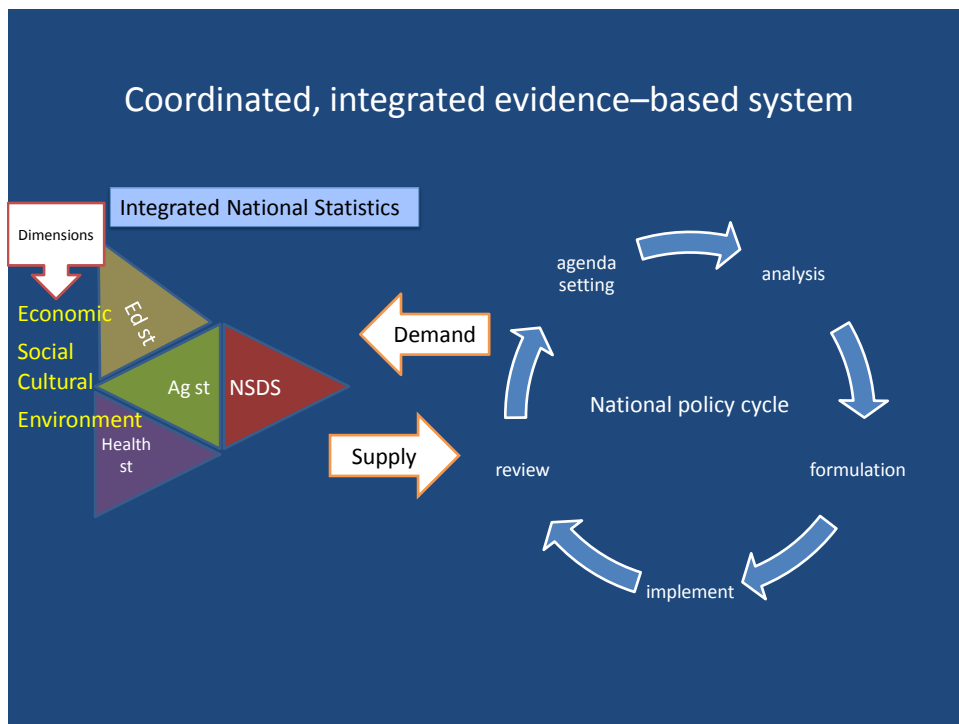|	
Production	Industry figures, Market boards, imputed from census
Area planted	Ag census / surveys/GPS-GIS
Yield	Crop cuts/surveys; research trials
Inputs (labour, capital, fertilizer, pesticides etc.)	Ag census/survey
Exports	Customs data/quarantine data
Imports	Customs
Producer prices	Domestic market surveys
Consumer prices	CPI survey
Number of agricultural workers	Ag census; Population census; labour force survey
Sales of farm produce (commercialisation)	Ag census/surveys; HIES
Changes in land use.	Ag census; land surveys, GIS
GDP and value added by agriculture	National accounts (doesn't always account for subsistence); HIES
Public spending on agriculture and on agricultural subsidies	National Budget (ODA?)
Public spending on infrastructure in rural areas	National Budget (ODA?)
Rural household income	HIES
Number of rural poor	Analysis of HIES

General access to statistics in the region has much improved with development of SPC/PRISM supported national websites, but these sites have limited information on basic agriculture statistics. Agriculture statistics are often in departmental/project reports and files and not easily accessible. Whilst the low response rates to FAO questionnaires from Pacific countries limit the quality/ availability of data on FAOSTAT.

The general lack of analysis of agricultural statistics calls into question the relevance of these statistics to the policy process. Only a few countries have dedicated policy/planning capacity in the Agriculture Ministry (e.g. Samoa, Tonga), but they have limited activity in data analysis and dissemination. Furthermore, demand for data from national political level is generally low, with Ministries of Finance, Trade and Central Banks currently being the main demanders of data. Whereas the most significant demand is from the regional and international level (technical agencies, International Finance Institutions, and development partners)

The main conclusions are that lack of priority (demand and use), lack of resources and capacity still prevail in the region. While merchandise trade data (imports and exports) are generally available and improving, data on production, labour markets, market prices and functionality and household characteristics is still weak or absent. The meeting considered that probably too much emphasis is being put on international comparisons (MDGs etc.) driven by international agencies and not enough on national uses of data and its role and value for policy reforms.

"It's perhaps not what data (statistics) to collect or how to collect them that is the priority issue – but rather what use to make of them that returns the cost of collection!"

The lack of analysis and *value adding* of agriculture data represents a serious weakness if policy making is to improve, and nationally driven data collection and management is to improve in a sustainable way. What is needed is an integrated evidence-based system where data supply and demand is coordinated.

Some suggested ways foreword included:

1. Demonstrating the use and value ($) of data for decision makers.
2. More attention on analysis and dissemination of policy relevant information – capacity building focus in this area.
3. Adding Policy Value through integrating core data needs in a National Strategic Way (through multi-topic surveys); either a modular approach or one purposely designed multi-topic survey.
4. Strengthening the policy process (we talk about evidence based policy, but many countries don't have a sector policy!)
5. Use of domestic market data to measure the pulse of national agriculture production and commercialisation and impact of both domestic and external factors on this?
6. Demonstrate use of data for private sector investment decisions (cost benefit, farm budgets, gross margin, and marketing decisions).

Trade Statistics and Capacity Building in the Pacific

Presentation by Tim Martyn and Rajhnael Deo

It is important to focus on capacity building for trade statistics because trade data is an important source of information for informing policy and policy-makers for trade negotiations, for private sector investment decisions, and monitoring economic impacts of trade policies and development agency decisions. However the Pacific region suffers from a paucity of quality and quantity of trade data. National Statistics Offices(NSO) in the Pacific struggle to collect data from customs, and to manage under-resourced systems for collating, validating and disseminating data NSO struggle under the burden of requests for information from development partners, consultants and national stakeholders.

As a consequence the Pacific is a region where accurate data is generally not easily available. Therefore, FAO and SPC sought to address this, starting in 2007. FAO provided SPC with a database

and statistician position. SPC committed to collate and improve trade data, and return it to partner Pacific countries. FAO and SPC also provided 3 regional capacity building workshops to participating countries.

The process for improving trade data included developing a relationship (legal and informal) with NSO across region. The Initial focus was on the 14 Pacific countries: Cook Islands, Fiji Islands, Kiribati, Marshall Islands, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu, FSM, Nauru, Palau. But currently now work with 11 of these countries. In 2009, SPC decided to independently fund the project, and further, to move to design and launch a publically searchable on-line database.

The website www.pacifictradestatistics.com   is a publically accessible resource, searchable by non-experts, covering all traded products. The data is collected at a HS Code (2002) 6-digit level and includes value and volume data. The database has a 'Predictatext' function. Data is currently available at 6-digit and 4-digit level. Minor changes are still being made and more data is yet to be uploaded.

The quality of data inputs will largely determine the quality of trade data outputs in this region. Therefore SPC is working with Oceania Customs Organization (OCO) to discuss ways in which Custom offices can be supported in providing better quality data to their colleagues in statistics offices and harmonizing their recording of important traded products in the region. Currently the HS-2002 classification does not capture some commodities that are important for Pacific Island trade. OCO and SPC have identified some priority products (taro, yams, breadfruit, nonu, etc) and have lobbied the WCO. Now some changes are scheduled for HS-2012.

It is hoped that this project will contribute significantly to improved analysis and decision making at national and regional level and that it shows that with the right mix of resources and dedication, we can improve the quality of data. However, to get sustainable improvements, it will be necessary to address both the 'supply' and 'demand' sides of the equation.   Collection and use of trade and

agricultural data in policy-making is currently pretty rudimentary and there is a need to better use the data we already have.

Session 2 focused on improving the policy relevance and value of data and covered food balance sheets, multi-topic surveys such as the Household Income and Expenditure Survey (HIES) and a purposely designed multi-topic survey in Federated States of Micronesia (FSM) to set a baseline for food security and climate change.

Food Balance Sheets

Presentation by Dirk Schulz

Supply and utilization accounts (SUAs) are time series data dealing with statistics on: Supply (production, imports and stock changes) and Utilization (exports, seed, feed, waste, industrial use, food, and other use) which are kept physically together to allow the matching of food availability with food use.

A comprehensive approach is being adopted because it is more meaningful than to deal separately with individual statistical series, such as those of production and trade. Establishing links between data series and dealing with flows and matrices rather than individual sets of data, allow deeper analysis and thus more policy value can be achieved. But the approach demands that the statistics of any single commodity have to be traced all the way from production and utilization to final consumption
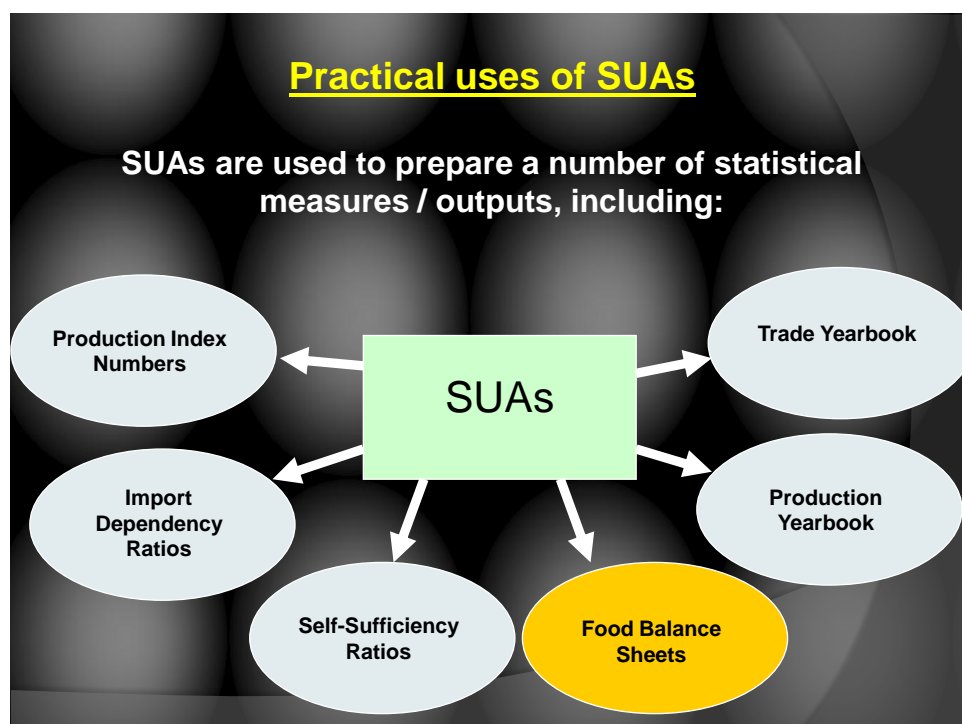
Food Balance Sheets (FBS) are derived from SUAs, but include additional variables (population figures and nutrition factors etc.). They allow display of per capita food supply for all food products and calories, proteins and fat per person and per day.

Food Balance Sheets

	Production 1000 t	Import 1000 t	Stock Variation 1000 t	Export 1000 t	Domestic supply 1000 t	Feed 1000 t	Seed 1000 t	Processing 1000 t	Food 1000 t	Food supply quantity kg/capita/yr	Food supply kcal/cap/day	Protein supply quantity g/cap/day	Fat supply quantity g/cap/day
Cereals													
Starchy Roots													
Sugar-crops													
Pulses													
Tree-nuts													
Oil-crops													
Vege. Oils													
Vegetables													
Fruits													
Meat													
Animal Fats													
Milk													
Fish, Seafood													

Domestic Supply
Production
+ Import
+ Stock
- Export

Domestic Usage
Feed
Seed
Processing
Other use
Food

Food Supply
Food Quantity (t / kg)
Dietary Energy (kcal)
Protein (g)
Fat (g)
Micronutrients (mg)

Food Balance Sheets enable detailed examination of the food and agricultural situation in a country and show overall trends in the national food supply, including how much have been imported and how much comes from own production. They also show the changes in types & amount of food consumed and adequacy in relation to human nutritional requirements. This provides a sound basis for the policy analysis and decision-making needed to ensure food security. They also provide the data basis for reporting progress on MDG 1 (Indicator: Proportion of population below minimum level of dietary energy consumption).

However the accuracy of the FBS depends on the reliability of underlying basic statistics, supply and utilization of foods and nutritive value data of various foods and population statistics. Currently incompleteness and inaccuracy of basic data tend to be the main problems. Even where the statistics are available, they are not always reliable. Also FBS give no indication of differences that exist between different population groups or seasonal variations in the total food supply.

Use of Multipurpose Surveys

Presentation by Marita Manley

Multi-purpose surveys (HIES, DHS, census, employment, informal sector) capture a lot of useful information but data often is not used to its full extent for policy development, planning, and resource allocation.

Surveys such as the HIES are useful because they are regularly conducted in many countries (now target about every 5 years) and are seen as a high priority by government and donors. They are used to rebase CPI, calculate poverty incidence, employment rates etc. In the larger countries around 5% population sampled, whilst in small countries up to 30% of population are sampled.

Different components (food diaries, household characteristics, and income and expenditure schedules) can be used for validating each other and they can be used for validation of other data

sources – e.g. Food Balance Sheets, food and nutrition surveys etc. They can also provide a basis for indicators of:

- Employment in agriculture (subsistence, paid, agribusiness)
- Dietary habits and nutritional indicators
- Proxies for domestic production and trade
- Land use (and land use change)

They are also used for making cross country comparisons.

Cross-country comparisons
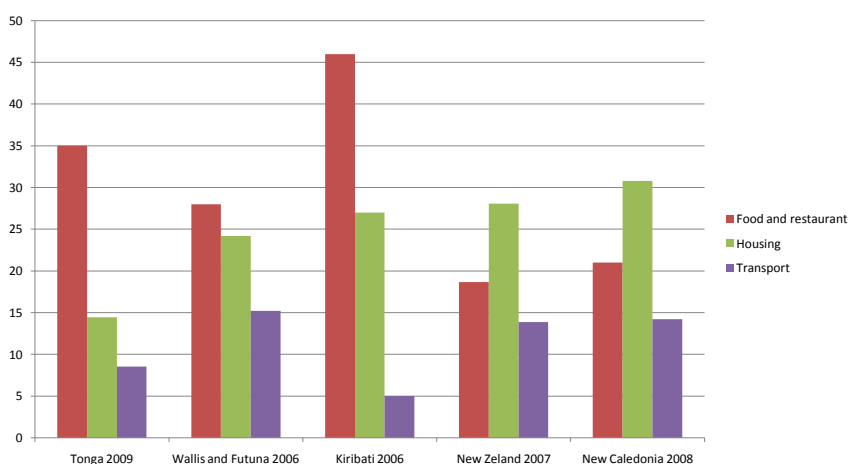
Sources: HIES 2006: Wallis and Futuna – Kiribati. 2007: New-Zealand .2008: New Caledonia 2009: Tonga

They also may be used to assess the amount of food products households are purchasing, home producing and home consuming and provide proxy measures for indicators such as: subsistence production as a percentage of household income; sales of own produce as a percentage of income; and range of contribution of home production.

Opportunities exist to form strategic partnerships (statistics-agriculture) at the national and regional level which are mutually beneficial and to standardise questions across different surveys to make data from different surveys comparable whilst allowing adapting and harmonising questions where necessary.

Ms. Manley also included in her presentation some discussion on monitoring climate change impacts and importance of collecting baseline data to assess future impacts and inform adaptation strategies. She cautioned on the use of dubious data which could result in significant costs because of poor strategic decisions made based on misinformation.

Vulnerability and Adaptation Survey for Federated States of Micronesia

Presentation by Sosiua Halavatau

The survey was to establish a baseline and identify vulnerable groups with respect to food security and the impact of climate change. This was a multi-topic survey that covered the following areas; demographics (including migration), household and housing, health, income and time use, land access and use, food availability and imported foods. The survey painted a picture of the current situation, but vulnerability is about the future!

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Vulnerability in Food

| Vulnerability (Outcome) | = | Exposure to Risk | + | Inability to manage Risks |

Three main categories of risk:
1. Food security status indicators
2. Indicators of degree of exposure to risk
3. Indicators of ability to manage these risks at different levels
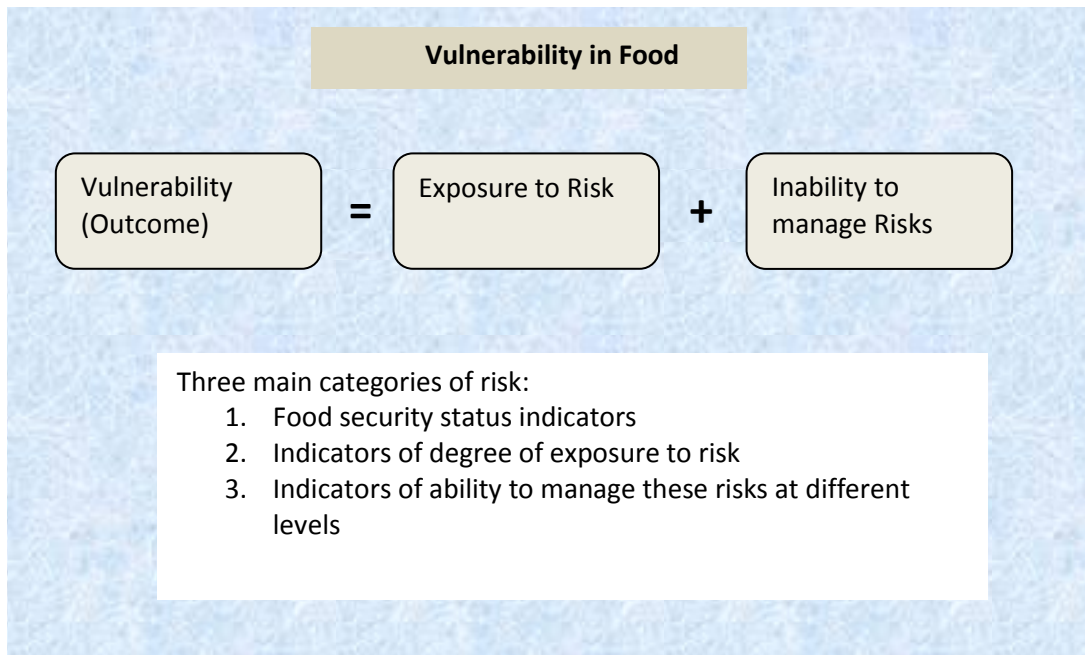
Identifying appropriate indicators to measure uncertain future events is highly challenging. A vulnerability indicator helps understand the probability of food insecurity. A good indicator should alert decision-makers to a problem before it gets too difficult to fix. Food availability indicators include domestic production, food imports and National Food Balance Sheets. Access indicators include home production, access to land and income. Food consumption indicators can include dietary diversity, perceptions of food sufficiency and security and number of meals per day.

The presenter concluded that FSM is vulnerable to food security and climate change impacts in the following ways:
- Food availability including production
- Food access
- Food consumption (including over consumption and unhealthy diet as there is already a trend of obesity and NCDs)

Session 3 went on to consider core agriculture data and indicators. The session commenced with a plenary brainstorming to identify key roles of the agriculture sector and priority policy issues and strategies to address these.

Using the outcomes of this brainstorming session two working groups went on to define core data and indicators using the following steps:

1. Identify the main roles of the agriculture sector in your chosen country.
2. Identify the key indicators to measure the performance of these roles and the data needed and the frequency it would be desirable to measure.
3. Identify if this data is currently measured and the source.
4. Repeat this exercise by identifying priority sector development issues, strategies or programmes to address these.
5. Repeat steps 1. & 2
6. Construct a table of chosen priority indicators, data and sources along the lines depicted in the example below.

Core Data Vanuatu

Role/Issue/ goal	Indicator	Data	Currently measured	Source	Priority
Food production	Staple Crop production	Area planted Annual yield	No	Agricultural surveys GPS Crop cuts Research trials Farmers estimates Market surveys	High

The groups had a lively discussion and were able to prepare a consolidated table (shown below), but this was not finalized due to time constraint and there remained some confusion between data required and sources.

Role/Issue/Goal	Indicator	Data	Currently measured	Source	Priority
Food Production	Staple crop production (*also livestock & fish*)	Area planted Annual yield	no	Agriculture surveys GPS, crop cuts, research trials, farmers estimates, market surveys	High
Food Exports	Volume and value of food exports	Trade statisitcs	Yes (not always)	Customs, quarantine, private sector	High

Role/Issue/Goal	Indicator	Data	Currently measured	Source	Priority
				industry, marketing authorities	
Food Imports	Volume and value of food imports vs. local food, nutritional value, food energy, tariffs & NTBs, Health Status	Trade data, trade + market data, FBS, National Tariff Schedule, Biosecurity Acts, Other Policies	Yes (but not sufficient)	Customs, NSO, Ag. Ministry-quarantine, Health Ministry, Trade Ministry	High
Labour (ag. Sector)	Number of people and time spent farming (formal and informal)	Ag. Census, Ag. Survey, HIES, Labour market Survey, Provident Fund records	Yes (but not regular/frequently or sufficient detail	Ag. Ministry, NSO, Labour Ministry	High
Livelihoods	Cash income, consumption of own production, gifts given and received, number of gardens, number of livestock	HIES, Ag. Census, Population Census, Ag. surveys	Yes (but not regular enough or detailed enough)	Ag Ministry, NSO	High
Land	Arable land total and proportion of total land area, land tenure and access, Land gradient,	Ag. Census, Land surveys, soil maps, Population Census, Land Registration/Tenure Authority, GIS remote sensing, Land Court records	Yes (but not sufficient)	Dep of Lands, Land Tenure Authorities	High
Marketing	Not completed				
National Economic Growth	Not completed				

The plenary also raised the following points of discussion:
- At what aggregation should data on production and sales be collected and made available in the data sets?
- How should production be measured? Because of the difficulties faced with assessing production in smallholder mixed farming systems could we use proxies such as market sales and trade? To what extent can data on yields be derived where crop cutting etc is not practicable?

- It is important to measure volume and value for trade data both on primary and value added product
- Recognising the general weaknesses associated with trade data derived from Customs administrative records, might Quarantine be in a better position to provide more reliable data, or at least use this for triangulation.

This session concluded with a presentation by Alick Nyasulu (SPC) on progress on the development of a Minimum National Development Indicator Database for PICTs comprising of a common core set of statistics across key sectors which is being undertaken with leadership from SPC.

Tracking development progress in Pacific Island countries and territories

Presentation by Alick Nyasulu

The purpose of the presentation is to update on SPC's progress in developing a system to assist PICTs in the regular monitoring and reporting of development progress against national and international development targets, including the MDGs.

Amongst the challenges faced by PICTs in tracking development progress is the need to increase political commitment backed by tangible improvements in the implementation of support mechanisms to enable regular monitoring of progress. The importance of this challenge is illustrated in a widespread lack of domestic demand for (regular) development statistics, absence of regular policy and development progress monitoring at national level (including requirements to do so) and lack of regular interaction between producers and users of statistics (to ensure match between what's available and what is needed).

SPC contribution to improved development monitoring is through pursuit of two initiatives:
1. Develop a core set of development indicators across key sectors – which have become better known as a ***Minimum National Development Indicator*** Dataset.
2. Develop and pilot a monitoring system to allow tracking of development progress in real-time, on the basis of the collection and compilation of high-quality statistics.

Indicators chosen for this dataset should have the following characteristics:

- **have a purpose** (tell a story)
- **be important** (not just to those wishing to tell the story, but more so to those, about whom and to whom the story is told)
- **be linked to national/regional/international policy framework**
  (in terms of priority, ideally to all three; if no one demonstrably wants this information, it seems pretty pointless to collect it)
- **be measurable** (quantifiable, affordable/sustainable; regularly)

Sector (130)	Thematic Indicators
Agriculture and Forestry (12)	Economics: labor market (HH income), Macro-level Land use (incl. degradation, loss of biodiversity) Food/nutrition
Fisheries and Aquaculture (10)	Economics: labor market (HH income), Macro-level Sustainable livelihoods / food security issues
Health (37)	Mortality, Morbidity Maternal Health, Sexual/Reproductive Health Nutrition, Environmental, Health Systems

Human Development (27)
   Gender (11)
   Youth (7)
   Cultural practice (9)
	Gender equality: macro; education, labor force, socio-cultural
	Education and labor force, macro
	Culture and language competency, living culture, driving culture

Population and Development (29)	Population-Demography, Socio-economic (poverty, well-being) Economic Development, Labor Force, Education Access to services, Community Development

Transport and Communication (15)
   Maritime (4)
   Information/Communication (11)
	Compliance, employment, security, services provision
	Internet/computer access and use, mobile phone, systems

The working draft of the suggested indicators for agriculture and forestry are shown at Annex 3. The plenary commented on these and those that are highlighted were ones that were seen to be common with those discussed by the working groups in this workshop.

The presentation re-affirmed the need for relevant, timely and complete data to provide leaders and policy makers with a basis for evidence-based policy decisions in relation to both MDG commitments and national sustainable development strategies.

Session 4 on Domestic Market Data commenced with two presentations; the first by Jamie Morrison highlighted the policy value of domestic market data and this was followed by a case study example of market analysis for food import substitution development in Fiji presented by Tim Martyn.

Value of Domestic Market Data for Smallholder Based Agricultural Development

Presentation by Jamie Morrison

The purpose of the presentation is to help make a case for improved understanding of the sub-optimal performance and constraints to smallholder based agricultural development and to highlight key market data requirements to enhance understanding and improve policy support. Also to suggest an approach to identification of domestic market data needs.

Currently sub-optimal performance of smallholder agriculture is visible (but largely anecdotal) at various levels such as: production (reflected in low marketable yields and poor agricultural practices); marketing (indicated by low volumes, inconsistent quality, high price spreads and limited participation by smallholders); and trade (reflected in a growing reliance on food imports and limited range/volume of exports in increasingly competitive markets).

The reasons for this under performance are complex and differ in importance but there is currently little evidence to rank the relative importance of these. Factors could include:

- limited market intelligence and lack of up to date quality data on which to base marketing strategies and decisions
- small scale and poor functionality of domestic input and output markets
- weak coordination of chain actors
- Inappropriate government interventions...

Furthermore smallholders are a very heterogeneous group in many dimensions including in the market led pathways open to them.

The presentation went on to look at multiple pathways to commercialization and how to measure impact from different pathways at the household, rural economy and macroeconomic levels and data needs to assess this. Examples of market data collection (volume and price data in central and roadside markets) in Samoa and Tonga were provided as examples of data collection in two countries (Samoa and Tonga).

The pathways followed by smallholders would be influenced by various factors such as:
- Initial conditions (smallholder characteristics, production and home consumption: propensity to supply)
- Constraints to market/chain participation (functionality and access)
- Policy interventions (at different levels)
- Value Chain Development initiatives (single/multiple actor, aggregation and/or service provision)

Pathways to commercialization:
interventions
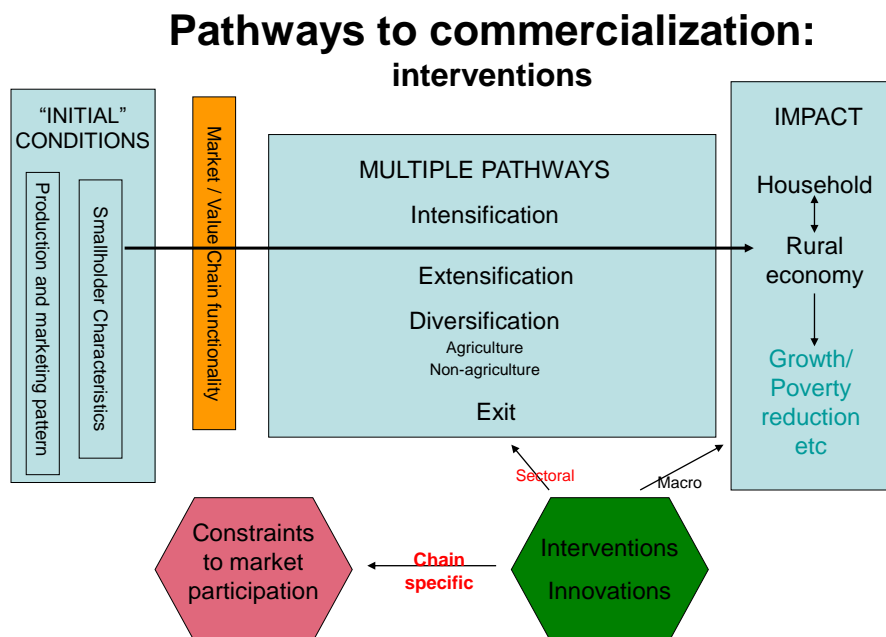
Improved evidence (data) is required on all the above factors and this will require prioritizing the data needs.

Market analysis for food import substitution development: evidence from Fiji

Presentation by Tim Martyn

This presentation provided a demonstration of the contribution data analysis, combined with qualitative inquiry, can make to developing effective policy responses.

Using data sources such as:
- Local food prices 2001-09 from Fiji's municipal markets
- Import prices from the Pacific Trade Statistics Database
- FBS food availability
- 100 interviews with Fiji Tourism Industry informants
- Two studies of Fijian consumer preferences

Tim was able to analyse the potential for import substitution and propose some reasons why this was not happening despite availability and price competitiveness of locally produced products on the domestic market.

Key findings were that there are significant seasonal fluctuations in the price of goods sold at local markets, particularly vegetables and this makes local vegetables far cheaper than imports during certain months. Also whilst the price of root crops has increased over 2001-09, this has not been by as much as the price of imported staples (rice, wheat). Yet price isn't as important to target consumers (tourism and urban dwellers) as quality, service, convenience and value for money and therefore effective food import substitution needs also to tackle these non-price issues.

Tim concluded that prices and statistics can tell us a lot, but they need to be complemented by qualitative information from other 'silos' or programme areas, if we are going to get the whole picture –which is what we need to develop effective policy!

Following these two introductory presentations country representatives made short presentations to overview the situation on data collection on domestic markets in Vanuatu, Kiribati, Tonga and Samoa.

An Overview of the Domestic Market Situation in Vanuatu

Presentation by Joshua Mael and Peter Toa

Vanuatu has an open market economy with tax revenues either zero or near to and is thus quite susceptible to market forces. Furthermore, capacity constraints limit ability to formulate and enforce necessary regulations arising from reform programmes. Vanuatu is collecting household data (through a HIES being implemented in 2010) which also included question for Ni-Vanuatu well-being. Which can be linked to the 2010 HIES and 2009 Population census. Vanuatu also has recently conducted an Agriculture Census 2007 (but this lacks quantity data), however, formal market information is generally lacking. An informal sector survey that is in the pipeline will cover 2 municipal markets, plus ad hoc marketing in Shefa province. A system has been earlier designed for a quarterly market survey but this has not been implemented because of lack of resources. Some other *ad hoc* market surveys have been implemented.

The presenters concluded that market surveys and market information is one area that has been neglected despite its crucial importance to farmers, policy makers and consumers.

An Overview of the Domestic Market Situation in Kiribati

Presentation by Tianeti Beenna

There is a general lack of data and what is available is scattered and difficult to access. It is often outdated and not validated. Data on produce coming to South Tarawa from the outer island is not collected and the only source of information would be records on the freight levy refund that is paid to traders transporting their produce. The freight levy is a government initiative to encourage marketing of agriculture products (banana, pawpaw and leafy vegetables) and also extended to handicrafts from the outer islands. It provides a reclaimable subsidy of 50% of air freight costs and

100% of sea freight costs. Its purpose is to encourage farmers to grow such crops for sale and to earn income in rural areas. It is also a way to help feed the growing population in South Tarawa and keep food prices at a reasonable and affordable level for urban consumers.

The presenter concluded that there is a need for reliable data and to get this will require improved staff skills and appropriate tools to collect and store data and the involvement of key stakeholders.

An Overview of Domestic Market Data in Tonga

Presentation by Elisaia Ika

There are three main domestic markets in Tonga; Talamahu Market, Fanga'ihesi Market and 'Utukalongalu Market (in Vavau)

These were the main outlet of domestic agricultural production for Tonga until the unrest in 2006 when traders started operating at roadside markets.

In past years, MAFFF published a Quarterly Market Report based on activity only at the Talamahu Market. Responsibility for data collection has been shared by the Statistics Department and MAFFF. This report contained information on average weights, prices and total supplies (monthly and quarterly)

In 2009 data collection was extended to include 'Utukalongalu Market in Vavau and road side market data which is published quarterly in the Domestic Market Survey Report. This report is disseminated to interested parties such as; National Reserve Bank of Tonga, Ministry of Finance, Statistic Department, Tonga Development Bank, Talamahu Market, and MAFFF(Policy & Planning Section). The MAFFF uses the Talamahu Market report for compilation of Gross Margin for all agricultural crops, inclusion in the MAFFF Annual Report and to assess farmer's market activity as a basis for support letters for farmers to obtain credit facilities. (e.g. VISA Application).

The Market Survey is done daily for each respective quarter and is performed to acquire the following information and data:
  i.   Monthly and quarterly average weights in kilograms of the common trade units of each produce sold at the market.
  ii.   Monthly and total quarterly supplies of agricultural produce in common trade units and in tons.
  iii. Monthly and quarterly average prices of agricultural produce sold in the market in prices per common trade unit and in price per kilograms.

The data on the volume of supply of each produce, in common trade units are sourced from the daily records of the Talamahu Market and 'Utukalongalu Market. Data on volume of supply for roadside markets are collected by the staff of Policy and Planning Section of MAFFF, every Thursday, Friday and Saturday. During the data collection at the roadside market, supply data for Monday and Tuesday are also collected by asking the vendors to recall in the days of surveys.

A random sample survey is also done every Friday morning at Talamahu and 'Utukalongalu markets. At the survey, random samples of 10 common trade units are weighed, and their respective prices recorded. Price and weight information from the survey is then used to derive the total

volume (metric ton) and value ($TOP) of supply. A random sample survey is also undertaken every Saturday morning at the roadside market which is also used to derive the volume (metric ton)

The main issues and constraints faced are accuracy of data recording, some delay in submission of information from Talamahu Market and 'Utukalongalu Market, and communication with 'Utukalongalu Market (in Vavau island) is time consuming and expensive. For the collection of roadside market data this is only carried out on Thursday, Friday and Saturday and collection of data for Monday to Wednesday is from vendors recall. Also some re-trading of goods is occurring at the roadside markets. Furthermore roadside markets are scattered around the island therefore making it very expensive to reach them to collect the data. There is also little feedback on current use that is being made of the data collected to assess the value of this information to users.

Despite these constraints the presenter concluded that data collected from the 3 main domestic market outlets is important for assessing the status of food security in Tonga. It also highlights the significant importance of collecting agricultural data from roadside markets in Tongatapu and 'Utukalongalu market at Vava'u to get a more complete picture of domestic market activity and it is recommended that Fanga'ihesi market at Ha'apai should also be included in this market report.

An Overview of the Domestic Market Data in Samoa

Presentation by Noataga Edith Taosoga

A regular weekly survey (Fridays) is carried out at the Fugalei Market (the central municipal market in Apia) to collect price and volume data on a range of local agriculture produce (Colocasia taro, Xanthosoma taro, Alocasia [Ta'amu], coconut, breadfruit, yam, head cabbage, Chinese cabbage, cucumber, tomato, pumpkin and taro leaf). The data is compiled and analysed and published in a monthly review report (Fugalei Market Survey Report). Since 2008 the Samoa Bureau of Statistics (the NSO) has been responsible for collecting and publishing this report and copies can be downloaded from the website ***www.sbs.gov.ws*** . Prior to 2008 the survey was the responsibility of the Central Bank of Samoa (CBS) and historical data is kept by them.

Extending the survey to satellite roadside markets and the Savaii market is being considered, but this will depend on resources and an assessment of the volume of produce traded on these markets. The CBS assessed the volume of trade on these markets back in 2007 and found it very small in proportion to the Fugalei market and thus did not consider it worthwhile to extend the survey. However, things may have changed as more trading appears to be occurring at the satellite markets.

We do get requests to add new products into the survey, but these would only be considered if there was a strong justification of the importance of the use of this extra data because of the constraint on our resources.

Summary of workshop deliberations, recommendations and follow up

The workshop agreed that evidence-based decisions (EBDs) based on scientifically respectable evidence gestured accountability and a promise of sound decisions. And EBDs could be contrasted with opinion and perception-based policy decisions, or those driven by ideology, expedience or power.

In considering what data we need to collect, it is important to understand the key roles the agriculture sector fulfils in the countries of the region (recognizing economic, social and

environmental dimensions) and what data we need to assess the performance of these roles. Also thinking about policy priorities and issues can help us identify key data needs. But data is also needed by the private sector to guide investment and marketing decisions and this raises the question of who is driving the agenda for data collection in the region.

The group agreed on the following general conclusions:

- Lack of priority (demand and use), lack of resources and capacity still prevail in countries of the region.
- While merchandise trade data (imports and exports) generally available and improving, data on production, labour markets, market prices and functionality and household characteristics is still weak or absent.
- Probably too much emphasis is being put on international comparisons (MDGs etc.) driven by international agencies and not enough on national uses of data and its role and value for policy reforms.
- The lack of analysis and *value adding* of agriculture data represents a serious weakness if policy making is to improve, and nationally driven data collection and management is to improve in a sustainable way.
- There is a need for strong partnership between NSO, Ag Ministry and other data suppliers and users. Such cooperation is important regarding interpretation of data and also to identify what data to collect.

Whilst capacity building efforts have been directed towards improving collection of agriculture data, fewer efforts have been devoted to improving analysis and use of the data to inform decision making. Recognizing the high cost of data collection it is important to recoup this cost from the improved decisions made.

Some suggestions for a way forward included:

1. Demonstrating the use and value ($) of data for decision makers.
2. More attention on analysis and dissemination of policy relevant information – capacity building focus in this area.
3. Adding *Policy Value* through integrating core data needs in a national strategic way (through multi-topic surveys) - either a modular approach or one purposely designed multi-topic survey.
4. Strengthening the policy process (we talk about evidence based policy, but many countries don't have a sector policy!).
5. Use of domestic market data to measure the pulse of national agriculture production and commercialisation and impact of both domestic and external factors on this?
6. Demonstrate use of data for private sector investment decisions (cost benefit, farm budgets, gross margin, and marketing decisions).

A countries willingness to provide sustained investment in the collection and maintenance of domestic market data for use in support of improved policy making would require decision makers being convinced of the value of this data. Therefore as a follow up action to demonstrate the policy value of domestic market data, FAO (with funding support by the EU AAACP)are commissioning a series of country case studies in which domestic market data will be collected and used to analyse contemporary policy issues. The studies will be used as the basis for a synthesis workshop and associated synthesis report, with the objective of demonstrating the importance of developing and maintaining systems of domestic market data collection and use.

Annex 1:   Meeting Agenda

Day 1: Wednesday 20 October

Time	Topic	Approach	Resource Person
09.00	Opening/Welcome		Vili Fuavao
09.30	Introduction/ Objectives		Steve Rogers
10.00	Evidence-based policy & results-based monitoring	Presentation	Jamie Morrison
10.30	Morning Coffee		
SESSION 1: What's there?			
11.00	Overview Regional Agriculture Data Scoping Study	Presentation	Steve Rogers
12.00	What data should we be collecting?	Plenary discussion	Steve Rogers Jamie Morrison
12.30	Lunch		
13.30	Trade Statistics Data-base	Presentation	Rajhnael Deo & Tim Martyn
Session 2: Improving policy relevance and value of data			
14.00	Food balance Sheets	(virtual)	Dirk Schulz
14.30	Multi-topic Surveys	Presentation and group discussion	Marita Manley
15.30	Afternoon Tea		
16.00	Climate Change and Food Security Survey in FSM	Presentation	Siua Halavatau

Day 2: Thursday 21 October

Time	Topic	Approach	Resource Person
09.00	Recap on Day 1.		Steve Rogers
Session 3: Core Agriculture Data and Indicators			
09.15	Priority policy Issues and data needs	Brainstorming/ Working Group	Jamie Morrison Steve Rogers Tim Martyn
10.00	Morning Coffee		
10.30	Priority policy issues and data needs continued	Brainstorming/ Working Group	
11.30	Summary and recommendations for core data and indicator set	Workimg Group Presentations and Plenary	
12.30	Lunch		
13.30	SPC Minimum Core Data	Presentation	Alick Nyasulu
Session 4: Domestic Market Data			
14.00	Policy value of	Presentation	Jamie Morrison

Time	Topic	Approach	Resource Person
	domestic market data		
14.30	Market analysis for food import substitution development: the case of Fiji	Presentation	Tim Martyn
15.00	Questions/Discussion	Plenary	
15.30	Afternoon Tea		
16.00	Importance in developing and maintaining domestic market data	Plenary Discussion	Jamie Morrison Steve Rogers

Day 3: Friday 22 October

Time	Topic		
09.00	Recap on Day 2		Tim Martyn
Session 5: Domestic Market Studies			
09.15	Overview of domestic market data availability and needs in PICS	Short presentation from representative form Kiribati, FSM Samoa, Tonga, Vanuatu,	
10.30	Morning Coffee		
11.00	Overview of domestic market data availability and needs in PICS	Short presentation from representative form Kiribati, FSM Samoa, Tonga, Vanuatu,	
11.30	Proposed Domestic Market Studies to be supported by the EU AAACP	Presentation	Jamie Morrison
12.00	Prioritising focus for the studies in four countries	Plenary Discussion	Steve Rogers Jamie Morrison
10.30	Morning Coffee		
12.30	Lunch		
14.00	Summary of workshop deliberations, recommendations and follow up		Steve Rogers
15.00	Workshop Closing		Vili Fuavao

Annex 2:   List of Participants

	Name		Country
1	Vili Fuavao	Vili.Fuavao@fao.org	FAO Samoa
2	Jamie Morrison	Jamie.Morrison@fao.org	FAO Rome
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20	Alick Nyasulu	AlickN@spc.int	SPC Noumea

Indicator	Purpose	Importance	Links to national/regional/international initiatives and strategies	Availability?
Essential				
Proportion of household income from agriculture and forestry activities (disaggregated by income from subsistence and income from sales)	LRD works to strengthen the capacity of agriculture and forestry services to support the livelihoods of people working (paid or subsistence) in these sectors. This indicator measures the contribution of these sectors to livelihoods.	The level of income generated by these activities is a crucial measure of their contribution to people's wellbeing.	MDG 1 (poverty and hunger)	National accounts (contribution to GDP?) HIES (but not available frequently enough)
Number of people (disaggregated by gender and youth, formal and informal) engaged in agriculture and forestry activities	Measure of the contribution of the sector to employment in countries.	Agriculture and forestry are often described as the backbone of the rural economy. Need to confirm this with evidence and monitor changes particularly for young people.	MDG 1 (poverty and hunger) Agriculture and forestry may be the only source of income (subsistence or cash) in certain locations	Census (but not available frequently enough) HIES (but not available frequently enough)
Volume and value of domestic production of agriculture and forestry products	Necessary for measuring the indicator above. Useful for monitoring the relative importance of different commodities and crops to national economies.	Essential for measuring food security. Important in assessing how climate change will impact these sectors. Most of our work centres on assisting governments that help communities with production issues but without this baseline information we cannot gauge objectively where we should prioritise beyond the knowledge of the technical staff and country priorities.	Pacific Plan priorities	Agricultural census (but not available frequently) Can be estimated from HIES (not available frequently enough) Ministry of agriculture and forestry assessments and reports ADB have estimated this for some countries (from national accounts?)
Area of arable, forested, reserved/protected land, as proportion of	Provides an indication of how much land is available for agriculture and forestry. Necessary for monitoring forest cover and rate of deforestation.	Useful to monitor proportion of available land being used for agriculture and forestry purposes.	Links to Pacific Plan Land Management and Conflict Minimisation Initiative Feeds in to monitoring for UNCCD, UNFCCC and UNCBD.	Available for some countries through census information Reports to UNCCD,

				UNFCCC and UNCBD
<mark>total land area and % of arable land used</mark>				
<mark>Volume and value of trade (imports, exports and re exports) of agricultural and forestry products</mark>	LRD has several programmes and projects which work to increase exports of agricultural and forestry commodities. These data captures trends in performance of export commodities and trends in reliance on imports.	Without trade data impossible to monitor performance of programmes contributing to increased trade Essential for measuring food security	Pacific Plan Objective 1	Regional trade stats database being set up by LRD but will continue to have gaps for some countries. Use of partner data for countries that trade almost exclusively with one other country.
<mark>Prices of domestic and international agriculture and forestry commodities</mark>	Prices provide an indication of affordability (imports) or returns (exports). Tracking price movements and in particular large fluctuations which might impact earnings from exports, cost of imports, food security.	Its absence makes it difficult to provide analysis of how movements in prices impact PICTs and food security	Pacific plan priorities	Several countries undertake regular market surveys Consumer councils monitor retail prices (aware of Fiji – more?) International prices available from other agencies
Rate of deforestation	Amount of forest resources cleared / degraded each year	Focus on sustainable forest management and need to monitor impact Necessary for accessing carbon financing for forestry conservation	MDG (7) Pacific Plan 5.19	UNTT FAO Forest Resource Assessment May need satellite imagery which is very expensive
Rate of land degradation (e.g. soil erosion)	Extent of soil nutrients and biomass that are lost each year	We organise capacity building in sustainable land management and can qualitatively monitor success by looking for lower level indicators within target communities (e.g. encroachment of agriculture activities to forest areas, planting on sloping land, planting vetiver grasses on sloping land)	MDG 7 (Environment) UNCCD UNFCCC (carbon emission from land use change)	Reports to UNCCD, UNFCCC Dutch funded project for a few countries Very difficult to measure without comprehensive data on soils, forest cover and ecosystem models
Desirable				
Rate of biodiversity loss	Number of species (crops, trees, animals) being lost each year	Our activities on genetic resource conservation and invasive species contribute to safeguarding biodiversity but detailed information on biodiversity present in different countries inherently difficult to obtain	Convention on Biological Diversity PP 5	Reports to CBD NGOs working in this area collect data on biodiversity In conjunction with SPREP some monitoring of invasive species

		as not all diversity has been recorded yet so impossible to measure rates of loss		
Numbers of people suffering from diet-related diseases (diabetes, obesity, heart disease) (and if possible cost of treating them)	LRD attempting to boost link of agriculture and health. This is important information in making the case that this is vital to spend money on addressing improved nutritional practices	Useful for making the case that additional resource are directed to targeting health training for extension officers.		PHD?
<mark>Contribution of locally grown foods to diets</mark>	FAO Food Balance Sheets methodology preferred. This requires agricultural production data plus trade data and nutritional conversion factors. Alternatively it requires information on diets. It is possible to derive this information from HIES but the result is a % of expenditure spent on imports rather than an absolute measure e.g. in terms of calories	We know from observing diets that there has been a trend away from consuming traditional staples but beyond some estimates derived from HIES we have no objective evidence on which to prioritise activities to promote increased consumption of local produce.		FAO has capacity building resources available to collect the data needed. Trade data, production data Some countries have nutritional surveys (e.g. Fiji).
Diversity of diets	LRD programmes need to link the health agenda to agriculture and forestry. A key strategy is encouraging the production of local, diverse food but we do not currently measure progress on this.	Relates to specific objectives in our strategic plan. Wouldn't be able to report back in its absence.		Information available in HIES but too infrequently May have to rely on focus surveys with target communities.
Level of remittances	Value of income support flowing to households from overseas	Important contributor to food security in some countries. If this information is missing a distorted picture can be presented	Pacific Plan priorities	National accounts World Bank
<mark>Proportion of budget allocation for agriculture and forestry disaggregated by extension services, research, information dissemination etc</mark>	To demonstrate the commitment at government level to these sectors. Leaders talk of highlighting food security but does that translate into additional funds.	Expenditure on agriculture research and extension are vital inputs to the capacities of these ministries to develop these sectors.		National budgets Agriculture and forestry ministry budgets