

Initiatives to improve collection and analysis of household food consumption data

Presentation to the UN CEAG open hybrid seminar
14 October 2022

Michael K. Sharp and Nathalie Troubat

Acknowledgement:

World Bank through IDA project P169122

and the

Australian Government through ACIAR project FIS 2018/155



How do we define food consumed away from home in HCES?

Food **prepared and consumed outside** the dwelling by each member of the household

- Food and beverages consumed at bar, restaurant, street food vendor, church, school or work canteen are considered as food consumed away from home
- Food prepared in the dwelling and consumed outside the dwelling are NOT treated as foods consumed away from home (for instance lunch box) – this consumption is part of the food purchased to be consumed by the household
- Foods prepared outside the dwelling and consumed in the house are NOT considered as foods consumed away from home (for instance a frozen pizza bought in the supermarket and consumed in the house) – this food is part of the in-house food consumption (purchased food) even if it was prepared outside



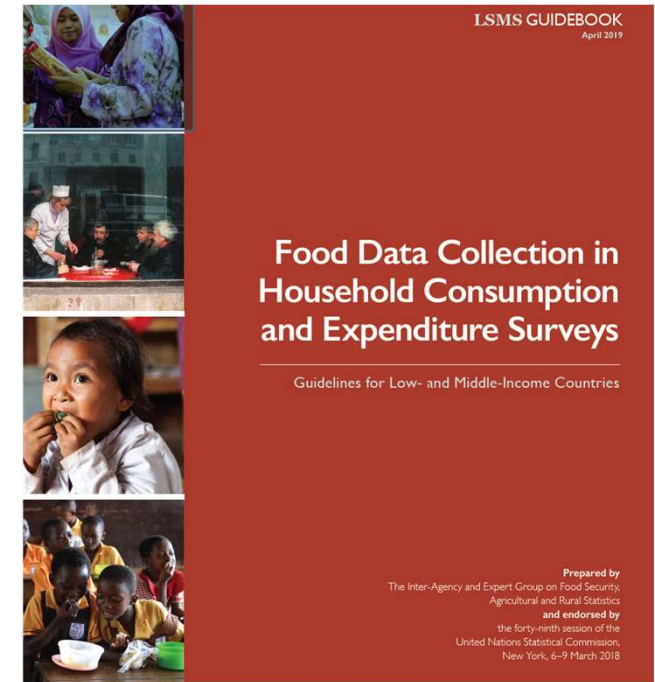
Issues with food consumed away from home

- Food consumed away from home is not always known by the household member who is answering the survey
- Difficult to capture the quantity of a meal consumed away from home
- Usually foods consumed away from home consist of composite meals, the ingredients of which are not always known
- Collecting food consumed away from home asking respondent to report only on total amount spent at restaurant under estimate AFH

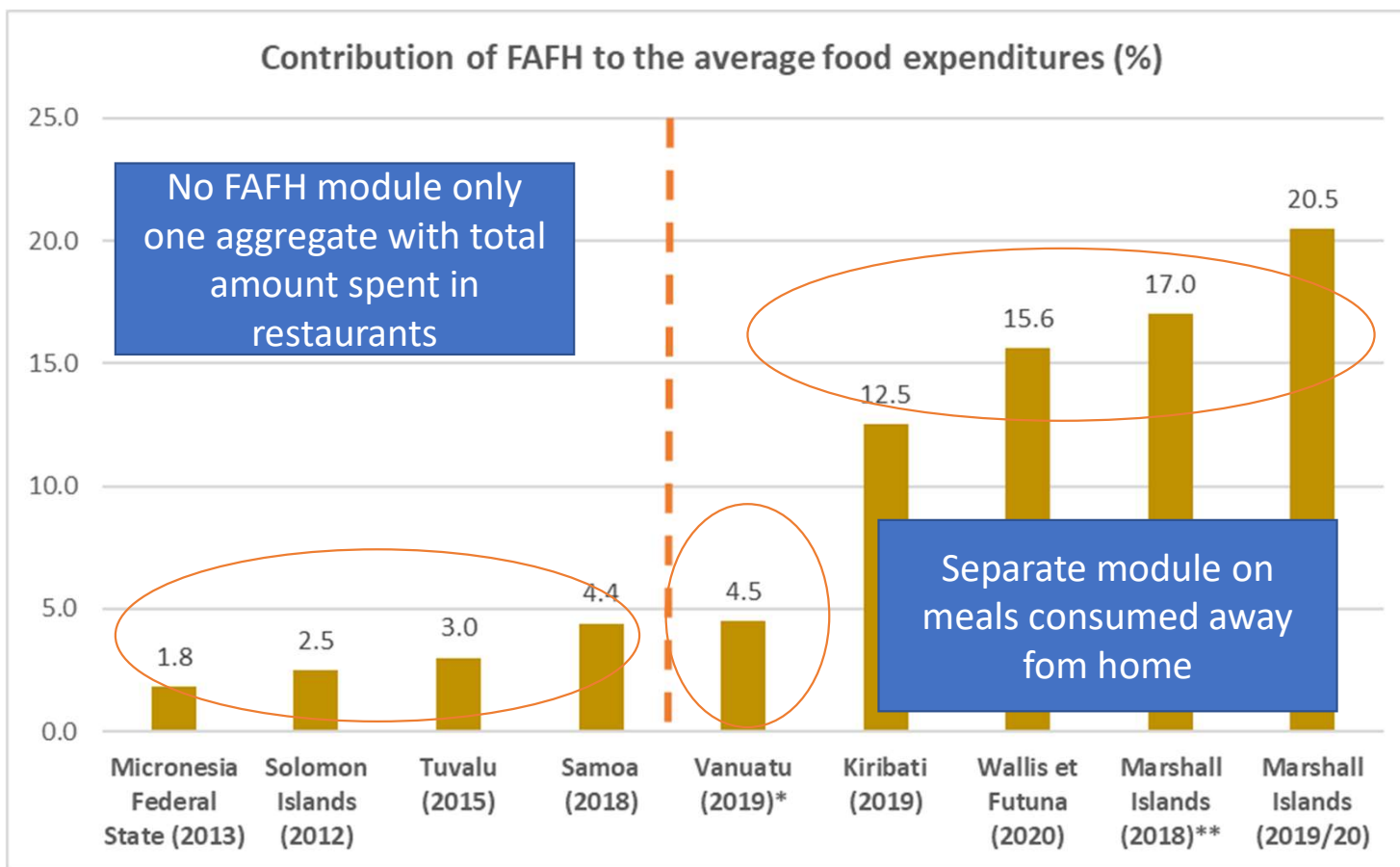


WB/FAO recommendations to better capture FAFH in HCES

- Data collection should preferably be done at the **individual level (proxy respondent in case of children)**
- A **separate** module should be designed based on a clear definition of food away from home (see previous slide)
- Data collection should be organized around **meal events**, including snacks and drinks
- At a minimum, surveys should collect information on the **value of all meals** consumed during a meal event away from home (breakfast, lunch, dinner, snacks or drinks)
- The meal events list should be adapted to the local context
- Surveys should use the **same reference period** for food away from home as what is used in the food consumed at home module



Pacific experience in implementing FAO/WB recommendation



Compared to past practice the amount spent on food consumed away from home seems to be better captured since the adoption of the WB/FAO guidelines in the PICS

Red line denotes old method to the left (no FAFH module) and new method (with individual FAFH module) to the right

* More than 10% in the urban province of Shefa

** Survey experiment in Marshall Islands (average of all arms)

How to estimate the amount of calories consumed away from home?



It is relatively easy to collect the amount of money spent to consume food away from home but how can we estimate the amount of calories or nutrients ?

Two options:

We can use **indirect** methods based on the amount spent on meals consumed at home (current approach)

We can use a **direct** method:

For that we need to collect information on:

- All the dishes consumed by each member of a household during a period
- The weight and composition of the dishes
- The composition of the dishes to estimate the nutrient content

The direct method is very difficult to implement

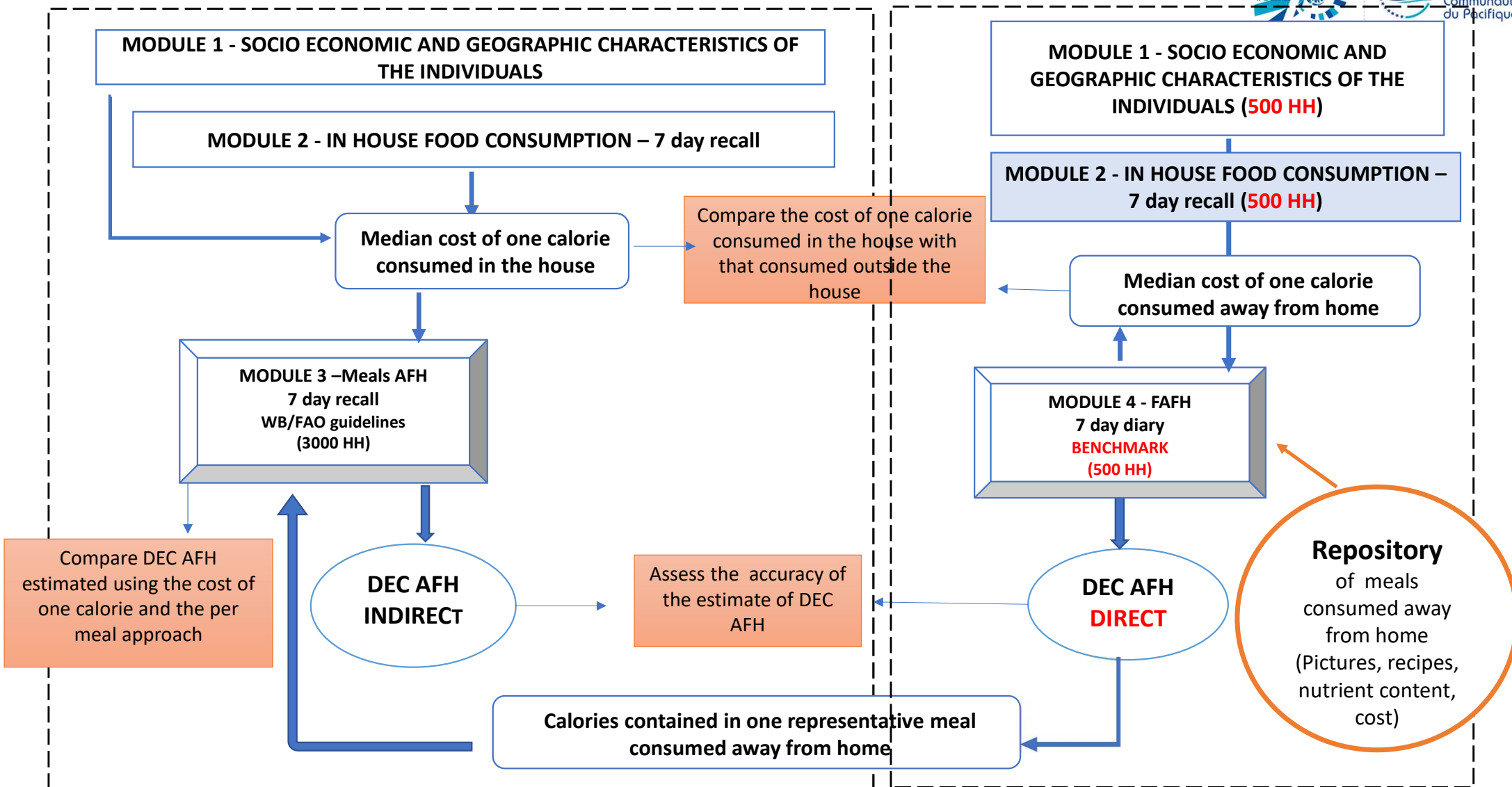


The SPC/SBS FAFH experiment



- Assess the WB/FAO approach based on the average cost of one calorie consumed in the house;
- Propose alternative methods to collect food away from home in a more comprehensive and cost-effective way.
- The survey experiment has been designed for countries that will conduct a HCES according to the WB/FAO guidelines, and which hence include:
 - a 7-day recall module to collect information on in-house consumption;
 - a 7-day recall module to collect number of meals consumed away from home, by meal event.
- The experiment is implemented in Samoa in collaboration with the Samoa Bureau of Statistics (SBS) and will be part of the 2023 HIES
- It will be conducted on a sample of **500** nationally representative households in addition to the **3860** nationally representative households selected for the HIES

SPC/SBS – Survey experiment



How will we obtain the direct estimate of nutrients consumed Away From Home used as benchmark in our experiment ?

Repository of meals consumed away from home

We will build a food atlas of all the possible meals that can be consumed away from home in Samoa (in bars, restaurants, on the street, at Church, during ceremonies etc..)

We will estimate the nutrient content for one portion of that meal

We will link the food atlas to the database that contains all the nutrient content of the meal

We will conduct a survey asking individuals to identify in the repository the meal that he/she consumed away from home and the portion of that meal

How to build the Away from home meals database?



Web scraping

Focus group discussions



Crowd sourcing



Away from home meals database
(repository of pictures of all the meals consumed away from home + nutrient content)



Food establishment survey



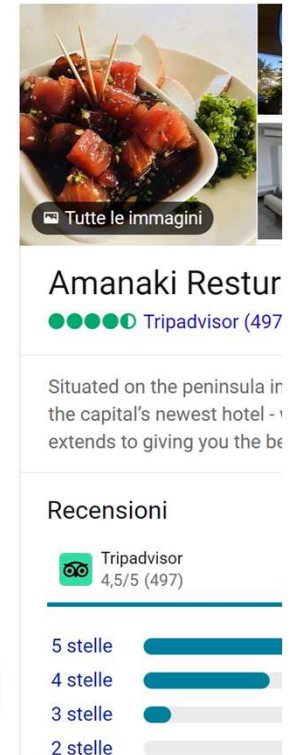
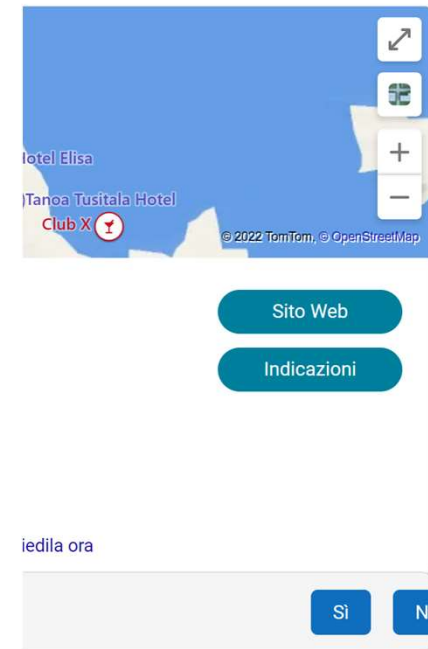
1. Web scrapping

Sources of data collected:

- Food establishment locators: tripadvisor, booking, hotel
- Restaurant websites
- Blogs, You tube

Use of this information:

- Get familiar with traditional foods consumed in Samoa
- Establish the list of main meals that can be found in food establishments
- Establish the list of main places of consumption



2. Focus group discussions

Process:

22 June 2022

Around 30 people from different horizon (SBS, granma, students, catering, health, church)

Objective:

- Obtain exhaustive information on consumer habits related to food away from home

Modalities:

- People break in group and discuss issues related to food away from home consumption patterns in Samoa
- Plenary session during which the results of the group discussions are reported

Use of the information

- Ensure we have an exhaustive account of all sources of food away from home consumption
- Better understanding of food away from home consumption habits in Samoa
- Finalize the sample design for the food establishment survey
- Help in designing some activities of the project



3. Crowd sourcing



Process:

- Created [flyers](#) to inform individuals about the initiative
- Developed a CAPI questionnaire (and QR code) for individuals to upload picture and text
- 156 responses (92 complete responses)

Information collected:

- Pictures of the meal people consumed
- Place of consumption
- Main meals consumed away from home
- Places of consumption

Use of this information:

- Help in prioritizing meals consumed away from home



SNAP YOUR MEAAI FOR A CHANCE TO WIN 100 TALA



SNAP YOUR MEAAI aims to collect information on the foods Samoans are usually eating outside of their house, such as in a restaurant, to'ona'i, roadside market or a cafe. This will help us understand what Samoans eat to improve the health of your community

TO TAKE PART, YOU WILL BE ASKED TO FILL A **5** MINUTE SURVEY.



For the survey, you will be asked to take pictures of your meal and to provide a little information about the meal.

Only photos and information related to meals eaten out (not at your home), such as at restaurants and cafés or shared gathering such as to'ona'i, birthdays, weddings will be considered for this initiative.



The meal can be on form of a buffet or a single serve. In case of a buffet, please take a photo of the table with all the dishes visible and take a second photo of your plate.

If the meal is just for you, take a photo of each dish and beverage you had.



SNAP YOUR MEAAI FOR A CHANCE TO WIN 100 TALA



When taking the photo, ensure there is good light and all the foods and beverages in the meal can be seen. A spoon, fork, cup or bottle placed next to the plate helps to know the size of the meal.

A raffle will be organized with a prize of 100 Tala awarded to 3 respondents randomly selected at the end of the campaign.

You want to be part of it? The campaign will run until 8th September 2022, so don't miss out. To participate, scan the QR code with your smart phone:



CAN'T SCAN?
COMPLETE THE SURVEY HERE:
<https://t.ly/nbcw>

SNAP YOUR MEAAI™ IS A NATIONAL INITIATIVE LAUNCHED BY SAMOA BUREAU OF STATISTICS (SBS) IN COLLABORATION WITH THE PACIFIC COMMUNITY (SPC) TO PROMOTE HEALTHY DIETS IN SAMOA.

Comments, complaints and grievances:

Address: Pacific Community (SPC), 95 Promenade Roger Laroque, BP D5 98848 Noumea, New Caledonia

Phone: +687 262000; Fax: +687 263818; Email: spc@spc.int; complaints@spc.int; Web: www.spc.int

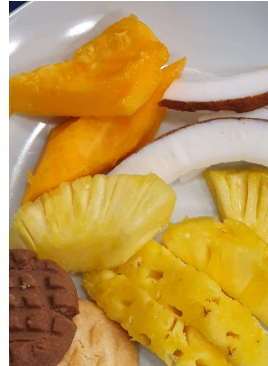


Pacific Community
Communauté du Pacifique





Pacific
Community
Communauté
du Pacifique



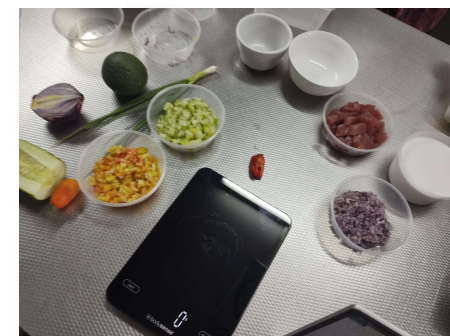
4. Food establishment survey

Process

- From focus group, web scraping, crowd sourcing we established the list of main meals consumed away from home to be in the atlas
- Developed a protocol to collect the data:
 - Resource needed (kitchen, cook, photographer, assistant to weight the meal, nutritionist)
 - Field work:
 - Some meals are cooked from scratch
 - Some meals are bought, weighted and “de-cooked”
 - Some standard meals are only weighted

Information collected

- Picture of the meal in different portions for the food atlas
- Picture of the main measurements
- Weight of different portions of the meal



Away from home meal database

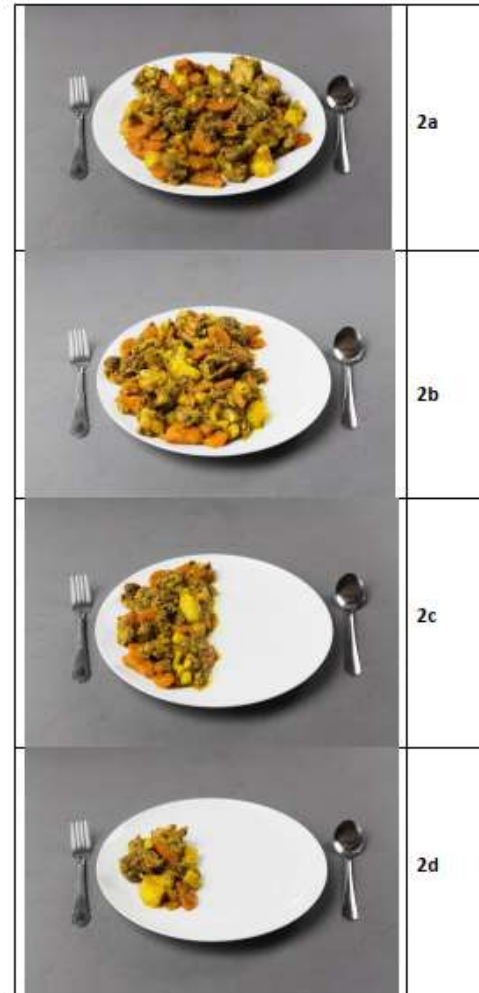
English name	Place	Portion	Portion	Portion	Portion	Portion	Portion
Baked (large) fish in banana leaf (U)	Upolu	147	255	125	76		
Baked breadfruit, pieces, UMU	Upolu	76	139	186	239		
Baked taro, pieces, UMU	Upolu	85	198	290	360		
Banana cake	Upolu	98	157	358	800		
Beef soup	Upolu	90	202	318	415		
Biscuit with corned beef	Upolu	49	100	151	200		
Bongo	Upolu	21	43	67	111	11	12
Bun	Upolu	109	199	308			
Cheese omelette with ham, etc, on	Upolu	13	89	359			
Cheese toastie	Upolu	54	105	165			

English name	Place	Standard portion
Palolo, bread	Upolu	120
Bacon and eggs	Upolu	199
Bacon and eggs - only bacon	Upolu	42
Bacon and eggs - only eggs	Upolu	157
Baked breadfruit, whole, UMU	Upolu	732
Bananas, UMU	Upolu	242
BBQ - 1 chicken + 1 sausage + cucumber	Upolu	200
BBQ - 1 chicken + 1 turkey tail + 1 sausage + cucumber 1	Upolu	165
BBQ - 1 chicken + 1 turkey tail + 1 sausage + cucumber 2	Upolu	266
BBQ - 1 turkey tail + 1 sausages + cucumber	Upolu	142
BBQ - 2 chicken + 1 turkey tail + 2 sausages + cucumber	Upolu	528
BBQ - 2 chicken + 1 turkey tail + cucumber	Upolu	356
Beef soup	Upolu	
Bongo, regular size	Upolu	200
Bongo small chicken flavoured	Upolu	20
Bowl noodle soup	Upolu	320
Breaded sausage	Upolu	84
Cheese omelette with ham, etc, only toast	Upolu	51

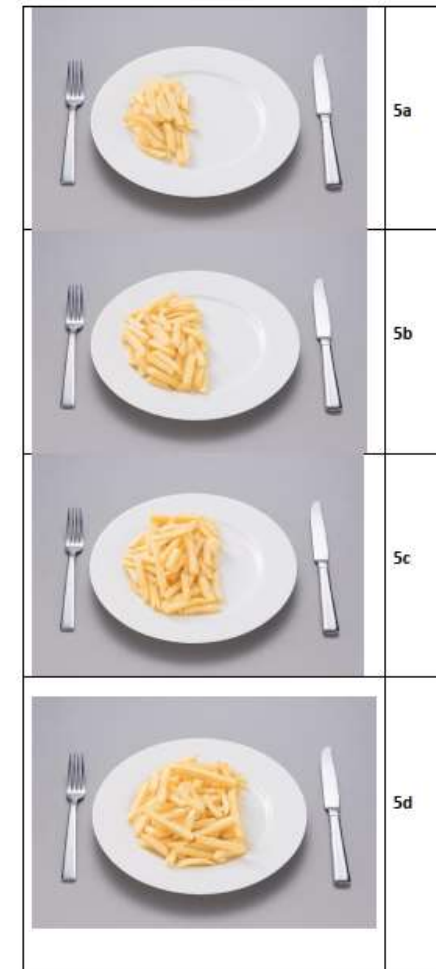
Data collection

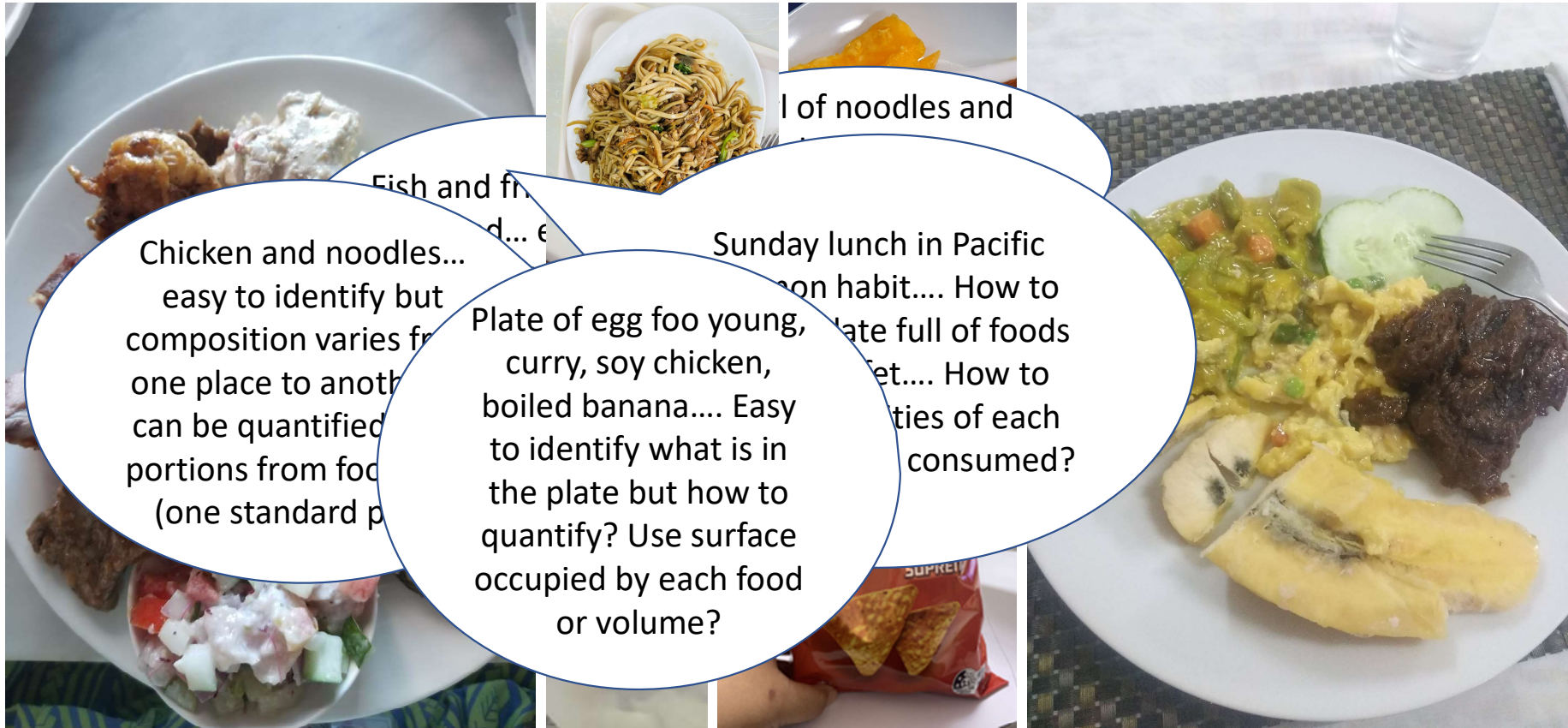
- Individual – each household member
- 7 days
- Respondent will fill a paper diary and will be visited each two days
- Adults older than 12 years will fill the diary
- Child less than 12 – proxy respondent (mother?)
- Access to the food atlas (electronic and/or print out) to
 - Identify the meal when the respondent cannot remember the meal
 - Identify the portion

2. Chicken curry



5. French fries







Day of the week:		<input type="checkbox"/> Monday	<input type="checkbox"/> Tuesday	<input type="checkbox"/> Wednesday	<input type="checkbox"/> Thursday	<input type="checkbox"/> Friday	<input type="checkbox"/> Saturday	<input type="checkbox"/> Sunday
<p>Q1. Did you consume some food or beverage outside of your house today?</p>	<p>Q2. What is the name of the food or beverage you consumed today away from home?</p> <p><i>[if you consumed a composite dish such as "chicken chow mein" then write the full name of the dish]</i></p> <p>(complete each row before moving to the next food or beverage)</p>	<p>Q3. Which picture from the food atlas best describes the food you consumed today?</p>	<p>Q4. What was your food or beverage consumed?</p> <p><i>[if your food or beverage is made of various ingredients, list all the ingredients that composed your food or beverage one after the other, order ingredients from the one taking more space to the one taking less space and separate each ingredient with a comma.</i></p> <p><i>For example: if the food you consumed was "fish in taro leaves in coconut cream" then write: fish, taro leaves and coconut cream, if the beverage you consumed was a can of coca cola just write down coca cola]</i></p>	<p>Q5. What was the cooking method of the food?</p> <p><i>[Indicate how the food was cooked that is for instance if it was mainly fried, boiled, baked, cooked using UMU method, or do not write anything if not applicable (for instance raw foods such as sashimi, ice creams, beverages etc)]</i></p>	<p>Q6. Which picture from the food atlas best describes the PORTION of the food you consumed?</p> <p><i>[Indicate the picture that best corresponds to the amount of food you consumed. For instance if you were served a plate of poke but ate only half of the plate, enter the code corresponding to the picture of the half plate of poke]</i></p>	<p>Q7. Which picture from the food atlas best describes the MEASUREMENT UNIT in which you want to report the quantity you consumed?</p> <p><i>[If you cannot find the picture with the portion you consumed, enter the picture corresponding to the measurement in which you want to report the quantity you consumed. For instance if you had one small glass of wine, then enter the picture corresponding to a small glass; if you had three big spoons of coco rice then enter the picture corresponding to the spoon that is closer to the spoon you used to serve the food]</i></p>		
<input type="checkbox"/> Yes --> Q2 <input type="checkbox"/> No --> next day	Don't know <input type="checkbox"/> --> Q3 Enter name: _____ --> Q6	Enter code: ____ --> Q6 Not in the atlas: <input type="checkbox"/> --> Q4			Enter code: _____ --> Q9 Not in the atlas: <input type="checkbox"/> --> Q7	Enter code: _____ --> Q9 Not in the atlas: <input type="checkbox"/> --> Q8		
<input type="checkbox"/> Yes --> Q2 <input type="checkbox"/> No --> next day	Don't know <input type="checkbox"/> --> Q3 Enter name: _____ --> Q6	Enter code: ____ --> Q6 Not in the atlas: <input type="checkbox"/> --> Q4			Enter code: _____ --> Q9 Not in the atlas: <input type="checkbox"/> --> Q7	Enter code: _____ --> Q9 Not in the atlas: <input type="checkbox"/> --> Q8		

<p>Q8. In which other unit of measurement would you like to report the quantity?</p>	<p>Q9. What was the quantity you consumed?</p> <p><i>[For portions: number of portions For household measurement: Number of servings. For standard or other units: quantity in unit]</i></p> <p><i>[if the portion identified in Q6 corresponds to the quantity you consumed just enter 1]</i></p>	<p>Q10. Did you consume the food or beverage during:</p>	<p>Q11. Where did you consume the food or beverage?</p>	<p>Q12. Was the meal purchased or received as a gift?'</p>	<p>Q13. How much did you pay for the food or beverage? Or in the case of a gift, how much would you have paid to buy it?</p> <p><i>[If you consumed for free from a buffet, enter only once the total amount in Tala that you would have paid for the food you consumed]</i></p>	<p>Write down any comment you might have about the food you consumed and could not report in the diary</p>
<p><input type="checkbox"/> household measurement (e.g. spoon, bowl, cup, bottle, glass, etc): _____</p> <p><input type="checkbox"/> standard portion (e.g. piece, pack, slice, etc.): _____</p> <p><input type="checkbox"/> standard unit of measurement (gram, liter, etc.): _____</p> <p><input type="checkbox"/> Other: _____</p>		<p><input type="checkbox"/> Breakfast?</p> <p><input type="checkbox"/> Lunch?</p> <p><input type="checkbox"/> Diner?</p> <p><input type="checkbox"/> For snack?</p>	<p><input type="checkbox"/> Restaurant/cafe: _____</p> <p><input type="checkbox"/> Bar/night club: _____</p> <p><input type="checkbox"/> Street stand/Market</p> <p><input type="checkbox"/> School/work canteen</p> <p><input type="checkbox"/> Friends or relatives</p> <p><input type="checkbox"/> Church</p> <p><input type="checkbox"/> Other: _____</p>	<p><input type="checkbox"/> Purchased</p> <p><input type="checkbox"/> Received as gift</p>		
<p><input type="checkbox"/> household measurement (e.g. spoon, bowl, cup, bottle, glass, etc): _____</p> <p><input type="checkbox"/> standard portion (e.g. piece, pack, slice, etc.): _____</p> <p><input type="checkbox"/> standard unit of measurement (gram, liter, etc.): _____</p> <p><input type="checkbox"/> Other: _____</p>		<p><input type="checkbox"/> Breakfast?</p> <p><input type="checkbox"/> Lunch?</p> <p><input type="checkbox"/> Diner?</p> <p><input type="checkbox"/> For snack?</p>	<p><input type="checkbox"/> Restaurant/cafe: _____</p> <p><input type="checkbox"/> Bar/night club: _____</p> <p><input type="checkbox"/> Street stand/Market</p> <p><input type="checkbox"/> School/work canteen</p> <p><input type="checkbox"/> Friends or relatives</p> <p><input type="checkbox"/> Church</p> <p><input type="checkbox"/> Other: _____</p>	<p><input type="checkbox"/> Purchased</p> <p><input type="checkbox"/> Received as gift</p>		
<p><input type="checkbox"/> household measurement (e.g. spoon, bowl, cup, bottle, glass, etc): _____</p> <p><input type="checkbox"/> standard portion (e.g. piece, pack, slice, etc.): _____</p> <p><input type="checkbox"/> standard unit of measurement (gram, liter, etc.): _____</p> <p><input type="checkbox"/> Other: _____</p>		<p><input type="checkbox"/> Breakfast?</p> <p><input type="checkbox"/> Lunch?</p> <p><input type="checkbox"/> Diner?</p> <p><input type="checkbox"/> For snack?</p>	<p><input type="checkbox"/> Restaurant/cafe: _____</p> <p><input type="checkbox"/> Bar/night club: _____</p> <p><input type="checkbox"/> Street stand/Market</p> <p><input type="checkbox"/> School/work canteen</p> <p><input type="checkbox"/> Friends or relatives</p> <p><input type="checkbox"/> Church</p> <p><input type="checkbox"/> Other: _____</p>	<p><input type="checkbox"/> Purchased</p> <p><input type="checkbox"/> Received as gift</p>		



Expected outcomes of the survey experiment

- Assess the current method to estimate calories consumed away from home
- Propose an **innovative** way to collect data in a more comprehensive way
- Develop a set of **region**-specific cost adjustment factors
- Develop a **protocol** to collect FAFH consumption data to be tested in other regions of the world

Michael Sharp

Winston Faingaanuku

Bertrand Buffiere

Toga Raikota

Thank you

Lilianetelani Hennemann

Edith Faaola

Andrea Borlizzi

Solene Bertrand

Phil Bright

Sandra Crispim

Nathalie Troubat

Samoa Bureau of Statistics