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TITLE: Pacific Food Guide

Why a Pacific Food Guide?

Food Guides. Food guides are dynamic nutrition education tools¹ that serve as “encyclopedias of food.” Food guides are critical resources for those designing programs and nutrition education materials, as well as for those who want to know more about food. Science-based advice featured in food guides often includes food and nutrient recommendations, identification of foods consumed by the target population, and nutrient content of those foods². Since 1916, the US Department of Agriculture (USDA) has published food guides with as few as four to as many as 12 food groups. These groups changed little over the years, and included some combination of dairy, protein, grain, vegetables, fruit, and added energy-rich foods (fats, oils, and sugars)¹. Food guides often provide portion recommendations as a number or range of volumetric servings (e.g., cups) to be eaten daily.

The US Dietary Guidelines. In the United States (US), the Dietary Guidelines for Americans (DGA) serve as the basis of US nutrition policy and are updated every five years. A variety of icons have been used to represent the recommendations given in the DGAs. For example, in 2011 the MyPlate³ icon replaced MyPyramid as the primary nutrition education tool for promoting healthy eating. DGA presents information in both scientific

language (e.g., limit consumption of saturated fat) and as food-based recommendations, sometimes including graphics and icons of food groups⁴.

Other guidelines. Other countries and areas including but not limited to Singapore, Canada, Finland, Greece, Australia, and the South Pacific have their own guidelines^{5,6}. Agencies such as the United Nations Food and Agriculture Organization (FAO) and the World Health Organization (WHO) recommend Food-Based Dietary Guidelines that are consumer friendly depicting familiar and accessible foods rather than lists of nutrient recommendations^{7,8}. Developers of guidelines and icons have increasingly included foods familiar to ethnic and minority groups.

No specific guidelines exist for the US Affiliated Pacific Region (US Pacific). The US Affiliated Pacific region (US Pacific) includes the state of Hawai'i, the US territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands. In addition, the US Pacific includes the independent countries of the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau who are in a Compact of Free Association with the US government and are here referred to as the Freely Associated States of Micronesia (See Figure 1). These states have access to many US domestic programs. The unique relationship that all these jurisdictions have with the US has been outlined in another publication¹⁵. They are all part of the Land Grant system¹⁶, one of the few unifying institutions across the Pacific Region. In addition, American Samoa, CNMI, Guam, and Hawai'i participate in WIC¹⁷, EFNEP¹⁸, and SNAP¹⁸.

Two distinct dietary guideline systems are used in the US Pacific, the current edition of the DGA and a regional set, the Secretariat for the Pacific Community (SPC) dietary guidelines⁶. The 2010 DGA which featured a five food group system (fruit, vegetable, protein, grains, and dairy) together with the MyPlate icon³ is used in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Expanded Food and

Nutrition Education Program (EFNEP), and the Supplemental Nutrition Assistance Program (SNAP).

Concurrently, public health and health promotion programs use the SPC which reflects foods of the region in a three food group system (body building, energy, and protective foods)⁶. These two very different approaches to food group classification makes it challenging to convey dietary information to people in the US Pacific. The Children's Healthy Living Program (CHL), established in 2011 as a partnership between the remote islands of the US Pacific and Alaska, is a community-based approach to preventing childhood obesity in the US Pacific⁹. It identified a need for an up-to-date comprehensive resource describing Pacific Island foods for use in training and culturally relevant nutrition education materials.^{10,11} More information about this USDA funded initiative is available at <http://www.chl-pacific.org>

This paper describes the Pacific Food Guide developed for use in an expansive underserved region that is covered by more ocean than land (Figure 1). The purpose of this paper is to describe the development of the Pacific Guide and its use in a college-level introductory nutrition course taught in the US Pacific. Background information, not readily available, about the people and food practices of the remote, underserved populations of the US Pacific also is provided.

The Pacific Food Guide.

The Guide

The Guide is available at: <https://sites.google.com/a/hawaii.edu/pacificfoodways/home/PacificFoodGuide>

Figure 2 provides an example of an entry in the Pacific Guide. The Pacific Guide presents over 100 traditional and regionally-sourced foods, omitting imported and highly processed foods such as canned meats and chips that have Nutrition Facts labels on them. The foods are organized into three general categories based on where they can be found: Walks along the Ground (e.g. animals like coconut crab, chickens, and pig); Chosen

from the Sea (e.g., seafood like fish, seaweed, and crustaceans); Grown from the Ground (e.g., plant foods like taro, coconut, and breadfruit). Unfortunately nutrient composition data are unavailable for 60 foods included in the Pacific Guide. The lack of nutrient composition data for so many foods (Table 1) creates a challenge for researchers as well as nutrition educators and registered dietitians serving the people of the US Pacific.

The Guide is arranged to reflect the relationship between food systems and ecology, descriptions of the food¹², and the regional languages, which lend context to food names and food subtypes and ensures that readers can identify a food without knowing its English or scientific name.

Another unique feature of the Pacific Guide is the use of a novel set of “pins” for both the 2010 DGA and MyPlate icon and the SPC dietary guidelines used to easily identify where foods fit into each set of guidelines. As needed these will be modified to reflect any changes in the 2015 DGA. As seen in the breadfruit example (Figure 2), each entry also includes a description and photograph of the food together with selection, storage and preparation information.

Initially the Pacific Guide was designed as a supplement to an online introductory nutrition course and distributed to students in an Adobe Portable Document Format (pdf). It is now available as Access to this resource allowed the instructor to make the instruction more relevant to the students and the clients they intended to serve by using familiar foods like taro and breadfruit rather than legumes such as black beans (not typically found in the Pacific), in discussions about complex carbohydrates in the diet.

Developing the Guide: Assessing Stakeholder Interest in a Pacific Food Guide. Introductory nutrition is taught in most of the 2 and 4 year colleges in the Pacific but there are no textbooks addressing the unique foods and practices of the region. The University of Hawai‘i at Mānoa has the only accredited nutrition program in the region. In 2013, an email survey of recipients of the CHL quarterly newsletter (n= 413 with 43 responding)

agreed (89%) that integrating Pacific content into an introductory nutrition course would be beneficial for the development of a trained nutrition workforce for the Pacific. Students (n=1,738 with 25 responding) who completed the introductory nutrition course between Fall 2011 and Spring 2013 also were surveyed and, of those, 76% indicated benefit. Comments from survey respondents included:

- *We need to start talking about food and culture in regards to a person's sense of place - otherwise it is not relatable*
- *Incorporate Pacific foods into MyPlate/Dietary Guidelines*
- *Ethnic and cultural diversity of the region demands a curriculum, which differs from the typical American/mainland diet, presented in regular nutrition classes*

With this supportive feedback, the “Traditional Food Guide for Alaska Native Cancer Survivors”, used to teach introductory nutrition through the Alaska Rural Nutrition Service¹³ was selected as a model. Additionally, “place-based learning”, which links education to the physical and cultural place of learning, is recognized as an effective way to enhance education in indigenous populations¹⁴. A food guide that reflects the US Pacific’s food system and rich cultural and ethnic diversity could be an important tool for “place-based learning”. The process for developing the Pacific Guide included a review of available resources on the foods of the region to identify traditional and local foods consumed; identification of nutrition facts for food items from the USDA Nutrient Data Laboratory, Hawai’i Foods Database, and the Hawai’i Seafood Council; decision to include foods without composition information (e.g., coconut crab) without a Nutrition Facts label; design of the nutrition facts labels to reflect the macronutrient and micronutrient content using the Genesis® R&D SQL Version 9.9.2.0 Product Development and Labeling Software from ESHA Research; determine serving sizes for foods based on Nutritional Labeling and Education Act (NLEA) standards; creation of unique set of pins to weave together the DGA and SPC dietary guidelines; integration of the unique languages of the US Pacific through inclusion of the traditional names of foods; organize foods into three neutral categories to reflect the unique

ecosystem of the region: “Walks along the Ground” for animals, “Chosen from the sea” for seafood; and “grown from the ground” for plants; write brief descriptions on physical appearance, selection, storage, and preparation. Some foods with similar characteristics were grouped together (e.g., citrus fruits and the parrotfish family). Pictures were identified for each food item using open source and original photographs from the CHL network.

Introducing the Pacific Guide into an introductory nutrition course. The Guide was first released in Fall 2013 where students enrolled in the introductory nutrition at the University of Hawai‘i at Mānoa reported the resource was applicable and useful. One student wrote “I enjoy the topics that book [Guide] covers. It’s something I can use and apply to my diet.” Reviewers from the CHL Pacific network and to other experts in the field suggested incorporating more cultural context, more specific details on the foods from certain islands, and further technical development (e.g., photo improvement) of the Pacific Guide. The second edition has been used to teach three introductory nutrition courses in the 2014 – 2015 academic year at the University of Hawai‘i at Mānoa and

Next Steps. The Guide will continue to evolve to incorporate current dietary recommendations, such as the 2015 US Dietary Guidelines, and to include new information on frequently consumed foods in the region and their nutrient composition, as that information becomes available. This resource was developed with extramural funding, and options for sustainability include publishing the Guide as a printed book, an eBook, or an online database. It is expected that the guide also be used outside the US Pacific for those teaching courses on cultural practices of foods, cultural competency, and community nutrition. The Pacific Guide also has

application for working with Pacific Islander populations in the clinical and community/public health settings, both within and outside of the US Pacific.

Background on the US Affiliated Pacific Region (US Pacific)

For those outside the Pacific region it is important to put the Pacific Guide in context.

The Region's People. The US Pacific is diverse, with indigenous ethnicities including the natives of Hawai'i (Native Hawaiian) and American Samoa (Samoan) of Polynesian ancestry, and the natives of the Federated States of Micronesia (such as Pohnpeian, Chuukese, Yapese, Kosraean), Palau (Palauan), Republic of the Marshall Islands (Marshallese), Guam (Chamorro) and the Commonwealth of the Northern Mariana Islands (Chamorro) of Micronesian ancestry. Native Hawaiians and other Pacific Islanders constitute 1.2 million people (0.4%) of the total US population in 2010¹⁹. The predominant non-indigenous racial/ethnic groups include non-Hispanic whites and Asians²⁰. Mixing (e.g., Pacific Islander and Asian groups) and migration of ethnic populations in the Pacific Region is widespread^{21,22}.

The indigenous food system. Prior to first contact with people from outside the Pacific, the food systems of Pacific Island peoples reflected the islands' unique ecosystems and environments. The islands relied on the ocean's bounty²³; however, other types of food, either indigenous or from canoe transport origin²⁴, were available depending on the islands' endemic resources. For example, the high volcanic islands of Hawai'i supported an integrated agricultural system referred to as the ahupua'a (land division/watershed)²⁵ while the island of Pohnpei in the Federated State of Micronesia depended on agroforestry²⁶. In contrast, the atoll environment of the Republic of the Marshall Islands had food crops capable of growing in sandy soils, such as pandanus and coconut²⁷. Division of food production by gender, distinguishing food between genders, and special food rules were common practices^{25,28,29}.

The role of food in Pacific Islanders' traditional life. Despite the vast size of the Pacific, the Pacific Islands were composed of great canoe voyaging societies that regularly traveled the Pacific Ocean prior to first contact with Westerners²⁴ lending to the sharing of similar food practices across Pacific Island cultures. For example, nature was believed to be the ultimate source of life, as both a spiritual and physical place; humanity and nature were intertwined²⁸. Life was structured around fishing, planting and harvesting/gathering crops. Food was essential for survival and central to creating and maintaining social relationships. Food was shared among family, friends and the community—a reciprocal practice²⁹. Food was used to demonstrate respect for guests, elders, chiefs, and males, as well as for social prestige³⁰. Occasions for food sharing brought together different sections of the community, with the preparation and eating of food having an important symbolic function²⁸. Feasts were and remain a prominent part of Pacific life today²⁵.

Despite the region's ethnic diversity, Pacific Islanders consumed many of the same land-based foods such as taro, yam, breadfruit, cassava, sweet potato, banana, plantain, pandanus, and arrowroot. Each ethnic group had a preferred starchy staple food such as taro, breadfruit, or yam, which contain many micronutrients³¹ but required cooking to remove toxic substances or irritants. Meat, such as chicken or pig, or seafood was served with starchy foods to create a meal²⁸.

Food's role in the Pacific Islands after Western Contact. Travelers from outside the US Pacific arrived from as early as the 1500s in the Mariana Archipelago³² to the 1700s in American Samoa³³ and Hawai'i³². Missionaries were among the first outsiders to establish a permanent presence³⁴, followed soon after by the development of plantations and other industries which led to an influx of Filipinos, Chinese, Japanese and others seeking work as laborers³⁵ and introducing new foods and practices. Although cultural food practices generally remained intact, imported foods including rice, flour, canned meat, and other canned goods were incorporated into the diet³⁶.

The non-communicable disease (NCD) epidemic in the islands. The US Pacific has some of the highest rates for obesity-related, non-communicable disease in the world^{15,37}, which has led to a state of emergency being declared by the Pacific Island Health Officers Association³⁸. In addition, the region has a low proportion of health professionals trained in NCD prevention, one component of WHO's 2013-2020 Global Action Plan to prevent and control non-communicable diseases (NCD)³⁹. An unhealthy diet is one of the major contributors to NCD development making nutrition training especially important for the region. There are no Registered Dietitian Nutritionists in the FAS, only five in the in the Commonwealth of the Northern Mariana Islands, 10 in Guam and 363 in Hawaii⁴⁰.

Summary

The Pacific Guide will enhance the ability of nutrition and extension educators, public health and other health professionals to prepare culturally appropriate food and nutrition materials for children and adults of the US Pacific both living in the region and on the mainland. This is especially urgent since Pacific Island people suffer from some of the worst diet-related health disparities that can be prevented or managed, in part with lifestyle change. Incorporating the Pacific Guide into instruction of introductory nutrition classes across the region is one strategy to make the material more student centered. Dietitians and other health care professionals working in clinical settings can more appropriately recommend dietary strategies using foods that are affordable, accessible and preferred by Pacific Island peoples.

Table 1. Foods consumed by adults and children in the US Pacific that lack food composition information.

Guide Category: Walks along the Ground		
Food Category	Scientific Classification	Traditional Name(s)
Crab		
- Coconut Crab	<i>Birgus latro</i>	Chamorro – ayuyu / Chuukese – amwatang / Kosraean – aci / Marshallese – chaninway / Palauan – ketat / Pohnpeian – emp / Samoan – ūū / Yapese – yaffi
- Land Crab	<i>Johngarthia lagostoma</i>	Chamorro – panglao / Chuukese – nipwei / Hawaiian – pāpa’i / Kosraean – acing / Marshallese – baru / Palauan – rekung / Pohnpeian – poru; rokmw / Samoan – pa’a / Yapese – ragumwu
Dog	<i>Canis lupus familiaris</i>	Chuukese – konak / Hawaiian – ‘ilio / Kosraean – kosro / Marshallese – kidu / Palauan – bilis / Pohnpeian – kidi / Samoan – maile / Yapese – gelagiu
Fruit Bat	<i>Pteropus mariannus</i>	Chamorro – fanihi / Chuukese – peute / Hawaiian – pe’a / Kosraean – fak / Palauan – olik / Pohnpeian – pwehk / Samoan – pe’a / Yapese – paiu sheiu
Guide Category: Chosen from the Sea		
Food Category	Scientific Classification	Traditional Name(s)
Brown ribbon weed	<i>Dictyota</i> spp	Palauan – char
Crocodile	<i>Crocodylus porosus</i>	Hawaiian – mo’o nui / Palauan – ius / Yapese – gaushe
Curly fishing line	<i>Chaetomorpha</i>	Palauan – char
Emperor		
- Blackspot	<i>Lethrinus harak</i>	Chamorro – mafute’ / Kosraean – srinac / Marshallese – rijun / Palauan – itotech; itoch / Samoan – floa-vai / Yapese – ligerigeri; uule
- Orangefin	<i>Lethrinus erythracanthus</i>	Chamorro – lililok mañagu / Kosraean – srinkap / Marshallese – berak / Palauan – menges / Pohnpeian – kadek mwei toantoal / Samoan – filoa-apamumu / Yapese – orbwile
- Yellowlip	<i>Lethrinus xanthochilus</i>	
- Yellowstripe	<i>Lethrinus obsoletus</i>	Chamorro – mafute’ / Kosraean – ik sruasra / Palauan – udech / Pohnpeian – kadek / Samoan – tolai / Yapese – sagurppiye
Flower limu	<i>Laurencia</i>	Hawaiian – limu pe’epe’e / Palauan – char
Glassweed	<i>Scinaia</i>	Palauan – char

Table 1. Continued

Food Category	Scientific Classification	Traditional Name(s)
Large wire weed	Callophycus	Palauan – char / Samoan – lima uaea
Little wire weed	Gelidiella	Palauan – char
Maidenhair	Hypnea	Hawaiian – limu huna / Palauan – char
Mangrove Crab	Aratus pisonii	Chamorro – panglao oron; atmangaog / Chuukese – nipwei / Hawaiian – pāpa’i / Kosraean – powac / Marshallese – jebarbar; baru / Palauan – chemang / Pohnpeian – elimoang / Samoan – pa’a / Yapese – ragiumwul liuwen maliile
Mojarras	Gerreidae	Chamorro – guåguas / Marshallese – ilmok / Samoan – matu / Yapese – yengaange
Papery sea bubble	Colpomenia	Palauan – char
Parrotfish		
- Bicolor	Cetoscarus bicolor	Chuukese – marau; uufoor / Marshallese – mera / Palauan – beadl; ngesngis / Pohnpeian – mau; lawi / Samoan – fuga; laea; laea usi / Yapese – usha; yaregulungo
- Bullethead	Chlorurus sordidus	Hawaiian – uhu / Palauan – derbetelloi; butiliang / Samoan – fuga-gutumumu/ figausi; laea-tuavela / Yapese – mwogweimwe
- Filament-fin	Scarus altipinnis	Palauan – udoud ngelel; meskelat / Samoan – laea-sina /
- Gibbus	Chlorurus microrhinos	Palauan – otord; chotord / Samoan – fuga; laea; laea usi / ulumato; galo / Yapese – umwashe
- Humphead	Bolbometopon muricatum	Chamorro – palakse’; låggua; pachak; fohmo; atuhong; / Kosraean – mwesrihk; komokut / Palauan – berdebed; kemedukl / Pohnpeian – kemeik / Yapese – mamile gemasugulu
- Pacific longnose	Hipposcarus longiceps	Chamorro – gualåfi; lågguan diso’; amariyu / Chuukese – aar / Marshallese – ek mouj / Palauan – ngyaoch; bergism / Pohnpeian – mwomw mei / Samoan – ulapokea; laeaulapokea / Yapese – lulef
- Palenose	Scarus psittacus	Hawaiian – uhu / Palauan – mul / Samoan – laeamatapua ‘a / Yapese – gawegawe
- Redlip	Scarus rubroviolaceus	Chuukese – amorochin / Hawaiian – palukaluka / Palauan – melekelattelebt / Pohnpeian – owen serehd / Samoan – laea-mala; laea-mea / Yapese – ngiicha
- Tan-faced	Chlorurus frontalis	Palauan – mellemau /
- Yellowband	Scarus schlegeli	Samoan – fugamatapua ‘a; laea-tusi / Yapese – gawegawe

Table 1. Continued

Food Category	Scientific Classification	Traditional Name(s)
Rabbitfish		
- Forktail	<i>Siganus argenteus</i>	Chamorro – mañâhak lessô'; hiteng kâhlao / Kosraean – luhluhk; muhlahp; nuesron / Marshallese – muramor / Palauan – meas; kelsebuul; beduut / Samoan – lo; loloa; 'ofe'ofe; malava / Yapese – nnege
- Scribbled	<i>Siganus spinus</i>	Chamorro – mañâhak ha'tang; sesyon / Marshallese – muramor / Palauan – reked; chepsall / Samoan – anefe; pa'ulu
Red sea lettuce	<i>Halymenia</i>	Hawaiian – limu lepe 'ula'ula / Palauan – char / Samoan – a'au
Reindeer limu	<i>Codium</i>	Hawaiian – limu wawae'iole / Palauan – char
Rosy pudding plant	<i>Meristotheca</i>	Palauan – char
Runners & Scads	<i>Carangidae</i>	Hawaiian – akule; halalû; 'ôpelu; kamanu; omaka / Marshallese – bob ere
Rudderfish		
Highfin	<i>Kyphosus cinerascens</i>	Chamorro – guili; guilen puengi / Hawaiian – nenu / Marshallese – bejrok / Palauan – komud; beab / Pohnpeian – keriker; kertakai / Samoan – mata-mutu; mutumutu; nanue / Yapese – reeli
Lowfin	<i>Kyphosus vaigiensis</i>	Chamorro – guili; guilen puengi / Hawaiian – nenu / Palauan – komud; beab / Pohnpeian – keriker; kerlel / Yapese – reeli
Sea fan	<i>Padina</i>	Palauan – char / Samoan – limu ili
Sea lettuce	<i>Ulva</i>	Hawaiian – 'Īlio'ha'a / Palauan – char
Sea moss	<i>Gracilaria</i>	Hawaiian – limu wawa / Palauan – char
Sea oak	<i>Sargassum</i>	Hawaiian – kala / Palauan – char / Samoan – limu vaovao
Slippery cushion	<i>Rosenvingea</i>	Palauan – char
South sea colander	<i>Hydroclathrus</i>	Palauan – char
Spiny leaf	<i>Turbinaria</i>	Palauan – char / Samoan – limu lautalatala

Table 1. Continued

Food Category	Scientific Classification	Traditional Name(s)
Spiny Sea Plant	Acanthophora	Palauan – char / Yapese – laariu
Supreme limu	Asparagopsis	Hawaiian – limu kohu / Kosraean – kohrmwek / Palauan – char / Samoan – limu
Surgeonfish and unicornfish		
- Bluebanded	Acanthurus lineatus	Chamorro – hiyok / Kosraean – kui / Palauan – belai / Pohnpeian – pwulak; wakapw / Samoan – pone; palagi; alogo / Yapese – felange
- Bluespine	Naso unicornis	Chamorro – guåsa; tåtaga / Hawaiian – kala / Kosraean – ik koac, / Palauan – chum / Pohnpeian – pwulangkin / Samoan – pone; palagi; ume-isu / Yapese – giume
- Convict	Acanthurus triostegus	Chamorro – kichu / Hawaiian – manini / Kosraean – lasrfol / Marshallese – kuban / Palauan – chelas / Samoan – pone; palagi; manini / Yapese – limeoniu
- Orangspine	Naso lituratus	Chamorro – hangon / Chuukese – puna / Hawaiian – umaumalei / Kosraean – ik koac / Palauan – cherangle / Pohnpeian – pulangkin / Samoan – pone; palagi; ili'ilia; umelei / Yapese – bwulegalei
- Yellowfin	Acanthurus xantopterus	Chamorro – hugupao dångkolo / Hawaiian – pualu / Kosraean – kuhpaht / Marshallese – kopat / Palauan – mesekuuk / Yapese – yefale
Tender golden weed	Solieria	Palauan – char
Thorn grass	Eucheuma or Kappaphycus	Palauan – char
Trevally		
- Bigeye	Caranx sexfasciatus	Chamorro – i'e'e; tarakitu / Hawaiian – pake ulua / Kosraean – srapsrap; lalot; sra / Marshallese – ikbwij / Palauan – esuuch / Pohnpeian – oarong; adam / Samoan – malaulimatalapo 'a / Yapese – langiuwe; yetame
- Brassy	Caranx papuensis	Chamorro – i'e'e; tarakitu / Palauan – iab / Pohnpeian – oarong pil / Samoan – malauili-sinasama
- Bluefin	Caranx melampygus	Chamorro – i'e'e; tarakitu ⁵ / Hawaiian – 'omilu / Kosraean – srapsrap / Marshallese – lane / Palauan – oruidl / Samoan – atugaloloa; malauli-apamoana
- Giant	Caranx ignobilis	Chamorro – mamulan / Hawaiian – ulua aukea / Kosraean – srapsrap / Palauan – cherobk; chederobk / Samoan – sapo-anae / Yapese – langiuwe; yapwu
- Tubular green weed	Enteromorpha	Hawaiian – limu ele'ele / Palauan – char

Table 1. Continued

Food Category	Scientific Classification	Traditional Name(s)
Wrasse		
- Humphead/ Napoleonfish	Cheilinus undulates	Chamorro – tåsen guåguan; tangison / Kosraean – kuhsruhl / Marshallese – lappo / Palauan – terrid; ngimr; mamel / Pohnpeian – merer; poaros / Samoan – sugale; lalafi; malakea; tagafa / Yapese – maame
- Tripletail	Cheilinus trilobatus	Chamorro – lalacha' māmā'te / Palauan – ngimr / Samoan – sugale; lalafi-matamumu / Yapese – porose

to develop the Pacific Food Guide.

Step	Process	Process and Component Details
1	Review available resources on the foods of the region to identify traditional and local foods consumed	- Included books, booklets, pamphlets, textbooks, and websites
2	Identify nutrition facts for food items to inform how these foods meet nutritional guidelines	<ul style="list-style-type: none"> - Derived using the USDA Nutrient Data Laboratory, Hawai'i Foods Database, and the Hawai'i Seafood Council - Nutrition facts dependent on food availability in food composition databases - Certain foods that lack nutrition composition information (e.g., coconut crab) were left without labels
3	Design nutrition facts labels to reflect the macronutrient and micronutrient content	<ul style="list-style-type: none"> - Used the Genesis® R&D SQL Version 9.9.2.0 Product Development and Labeling Software (commercial grade food composition and nutrient analysis software from Elizabeth Steward Hands and Associates (ESHA) Research) - Serving sizes for foods were based on Nutritional Labeling and Education Act (NLEA) standards
4	Weave together the US Dietary Guidelines and Secretariat for the Pacific Community (SPC) dietary guidelines	<ul style="list-style-type: none"> - Create a unique set of “pins” for both the USDA and SPC guidelines to reflect each organization’s classification of food groups - Assigned each food pins in accordance with both USDA and SPC guidelines
5	Integrate the unique languages of the US Affiliated Pacific Region through inclusion of the traditional names (i.e., language translations) of foods included	<ul style="list-style-type: none"> - Resources included <ul style="list-style-type: none"> o Published literature and available online language dictionaries o Academic, language and cultural experts o Children’s Healthy Living Program network
6	Organize foods into three neutral categories to reflect the unique ecosystem of the region	<ul style="list-style-type: none"> - Three categories: <ul style="list-style-type: none"> o Walks along the Ground (e.g. animals) o Chosen from the Sea (e.g., seafood) o Grown from the Ground (e.g., plants) - Allowed for easier navigation between the USDA and SPC nutrition guidelines
7	Create a template to arrange foods with all details about a single food item presented on one page for easy navigation	<ul style="list-style-type: none"> - Each food item included <ul style="list-style-type: none"> o Scientific name(s), common name in English and translations o Brief descriptions on physical appearance, selection, storage, preparation, and nutrition facts (if available)

- Some foods with similar characteristics were grouped together (e.g., citrus fruits and the parrotfish family)
 - Pictures were identified for each food item using open source and original photographs from the CHL network.
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Figure Headings

Figure 1. Map* of the US Affiliated Pacific Region indicating the locations of American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Hawai'i, Republic of the Marshall Islands, the Republic of Palau, and the contiguous US

Figure 2. Excerpt on a food (breadfruit) from the US Affiliated Pacific Food Guide: A Children's Healthy Living Program Resource for Nutrition in which the scientific name(s), common name in English and translations of a food are presented along with brief information on the physical appearance, selection, storage, preparation, nutrition facts, and nutrition guideline pins* are presented

Figure 3. Excerpt on a food (Supreme Limu) from the US Affiliated Pacific Food Guide: A Children's Healthy Living Program Resource for Nutrition which lacks a nutrition facts label due to a lack of nutrient composition information*

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