



THE INDEPENDENT STATE OF PAPUA NEW GUINEA: PEOPLE & CUISINE



The information presented here has been drawn from a combination of primary sources (interviews with ethnic Papua New Guinean women in Brisbane, Gold Coast & Townsville) and from secondary sources. It has been reviewed for consistency by members of the Queensland PNG community to ensure that information presented is accurate.

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Table of Contents

1	Background	5
1.1	History ^[1]	5
1.2	Regions	6
1.3	Climate	6
1.4	Population	6
1.5	Urban vs. Rural populations.....	6
1.6	Living conditions	7
1.7	Ethnicity.....	7
1.8	Religion	7
1.9	Language.....	7
1.10	Household Size	7
1.11	Human Development Index.....	7
1.12	Education.....	7
1.13	Health Indicators	8
1.14	Agriculture ^[7]	8
1.15	Significant Dates ^[8]	8
1.16	Other Traditional Festivities:	8
1.17	Population in Australia	8
2	Traditional Foods and Cooking in PNG	9
2.1	Factors thought to influence food practices and intake	9
2.2	Common Foods.....	10
2.3	Regional Variations.....	10
2.4	Sources of Food	10
2.5	Cooking Methods	10
2.6	Access to Clean Water	11
2.7	Access to Modern Appliances	11
2.8	Eating Style	11
2.9	Frequency of Meals	11
2.10	Main Meal.....	12
2.11	Cooking For Special Events.....	12
2.12	Betel Nut.....	12
2.13	Meal Preparation Responsibilities.....	13
3	Food Habits in Australia.....	13
3.1	Breakfast.....	13
3.2	Lunch	13

3.3	Main Meal.....	13
3.4	Take Away Habits:	14
3.5	Snacks	14
3.6	Alternate foods (Staple substitutions).....	14
3.7	Common Drinks	14
3.8	Cooking Methods	14
3.9	Alcohol & Other Stimulants	14
3.10	Adaptations to the Australian Way of Eating.....	14
3.11	Shopping for Traditional Foods in Queensland	15
4	Food and Care in Older Age	15
4.1	Food in Older Age	15
4.2	Food Preparation Methods for an Older Person	15
4.3	Usage of Aged Care Services	16
4.4	Non-Residential Food Service for Aged Care.....	16
4.5	Residential Food Service for Aged Care:	16
5	Health and Nutrition Education.....	16
5.1	What is Health?	16
5.2	What Is Healthy Eating?	17
6	PNG Community Organisations in Australia	17
7	Recipes.....	17
7.1	Coastal/Island Region Style Cooking	17
8	References	21
9	Appendix A: Commonly Consumed PNG Foods.....	22

1 Background

1.1 History^[1]

The first Europeans arrived in Papua New Guinea (PNG) early in the 16th century although little was known of PNG inhabitants until the late 19th century when it was settled by the Germans and the British. In 1945-46 the *Papua New Guinea Provincial Administration Act* combined the southern coastal region of Papua and adjacent islands and New Guinea to the north into a single administrative union. Australia governed PNG from 1902 to 1975 when PNG gained independence.

Location & terrain: Papua New Guinea (PNG) is located in the South Pacific Ocean in the Melanesia group of the Pacific Islands^[1]. It constitutes the eastern half of the island of New Guinea and approximately 600 surrounding islands (Figure 1), covering 462,840 km²^[1]. The terrain is mainly mountainous in the central core with coastal lowlands and foothills. The western part of New Guinea Island is the territory of Indonesia.

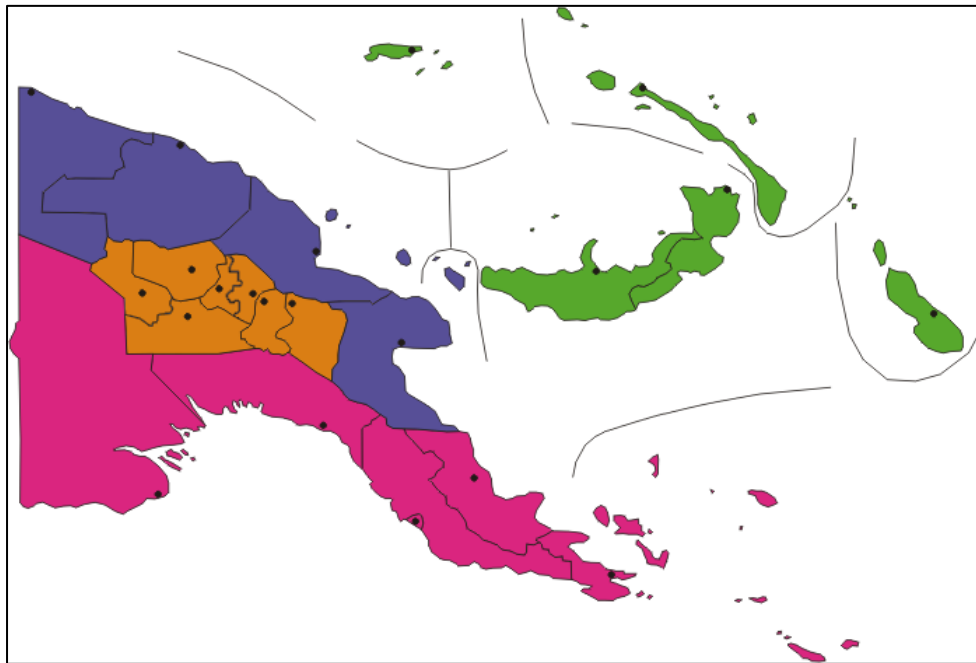
Figure 1: Map of the Independent State of Papua New Guinea^[1]



1.2 Regions

PNG can be divided into four distinct regions: Highlands region, Islands region, Momase region and Papua region^[2]. Refer Figure 2. Regional foods and living conditions vary significantly between regions.

Figure 2: Regions of PNG^[3]



1.3 Climate

The climate is tropical and monsoon season is December to March in the northwest and from May to October in the Southeast. .

1.4 Population

6.7 million people (2010)^[1]

1.5 Urban vs. Rural populations

Whilst there has been an urban drift towards living in larger cities since the 1990's, the majority of the population still lives rurally with just 13% living in an urban area^[4]. This urban migration has lead to the rise of social problems, ethnic disputes, crime, pressure on public utilities, slum/squatter settlements and the spread of HIV/AIDS^[1].

1.6 Living conditions

As noted above, urban living conditions are often poor due to infrastructure pressures and social problems^[1]. Those living in inland regions continue to live in primitive conditions without access to modern conveniences, running water, health and education services or electricity. Transport to and between many villages is hindered due to limited road networks, rugged and often impassable terrain. This lack of access to services has been associated with the high levels of rural poverty seen in these areas^[5], and also with the endurance of traditional/cultural practices including those relating to food.

1.7 Ethnicity

PNG has one of the most ethnically diverse populations in the world^[1, 6]. Ethnic groups include the Melanesian, Papuan, Negrito, Micronesian and Polynesian^[7].

1.8 Religion

Based on the 2000 PNG Census, most Papua New Guineans are Christians, with major religions including Catholic, Evangelical Lutheran, United Church, Seventh-Day Adventist, Pentecostal, Evangelical Alliance, Anglican, Baptist, Other Protestant, Bahai and Indigenous beliefs or other^[4].

1.9 Language

There are three official languages including English, Tok Pisin (Pidgen) and Hiri Motu and at least 830 Indigenous languages^[1, 6]. Melanesian Pidgin is the lingua franca but English is widely spoken^[1].

1.10 Household Size

Traditionally, extended families live in the one house and there is a strong culture of younger family members caring for their elders^[8]. Elders are respected and as such provide a 'leading voice' for the family, giving guidance and advice for decisions, adjudicating at ceremonies and handling disputes or disagreements.

1.11 Human Development Index

The Human Development Index combines indicators related to life expectancy, educational attainment and income to provide a useful comparison between countries - PNG 0.466^[9] compared with Australia 0.929^[10].

1.12 Education

There are nine years of compulsory education from the age of six^[11]. The literacy rate is 60.9%^[12].

1.13 Health Indicators

The infant mortality rate is 52/1000. Life expectancy for males is 62 years and 65 years for females^[1]. In 2008, 15.2% of the population had raised blood glucose levels and 21% have raised blood pressure. 12% of males and 20% of females were classified as obese. Communicable disease remains the highest contributor to mortality^[13]. The AIDS virus is now an epidemic.

1.14 Agriculture^[7]

Modern agriculture comprises just over 30% of PNG's Gross Domestic Product (GDP) with major products being coffee, cocoa, coconut, palm oil, timber, tea and vanilla^[1]. Traditional agriculture includes palm fruit oil, bananas, coconuts, coffee, cocoa, tea, sugarcane, rubber, sweet potatoes, chickens, pigs, cattle, sheep and goats. Indigenous food crops include sago, sugarcane, banana, yam, and breadfruit. Immigrants to PNG were responsible for introducing taro and pigs. Sweet potato (now a staple) and corn arrived from the Americas. Foods introduced after European contact include tapioca, peanuts, a range of vegetables and fruits, cattle, deer and wheat. The Asian influence is seen in the introduction of rice and soybeans.

1.15 Significant Dates^[8]

- **1st January - New Year's Day:** A day for celebration.
- **Good Friday and Easter Sunday:** Some people fast before Good Friday. Following a church service, a feast may occur but no meat is served. On Easter Sunday a feast usually occurs after a church service.
- **16th September - Independence Day:** Celebrates that day in 1975 when PNG attained independence from Australia. This event is widely celebrated and as many PNG people are very patriotic, this is a very important and symbolic day. 'Sing-sing', the largest and oldest large song and dance festival is held on this day at Goroka in the Eastern Highlands.
- **25th December – Christmas:** Church is usually attended and time spent with family, and the exchange of gifts.
- **26th December - Boxing Day:** Celebrated with family and friends and there may be singing.
- As an ex-territory of Australia, PNG continues to uphold many Australian traditions and celebrations, including the following of sporting events such as rugby league.

1.16 Other Traditional Festivities:

Mount Hagen Culture Show in the Western Highland Province is well known and smaller gatherings between neighboring groups are common. Such festivities may be organized at harvest time.

1.17 Population in Australia

Prior to PNG's independence from Australia in 1975, Papua New Guineans were awarded equal citizenship rights within Australia^[14] and Australian citizens were free to travel to and live and work in PNG, as PNG was formally part of Australia. Upon implementation of the Constitution of the Independent State of Papua New Guinea, indigenous Papua New Guineans were no longer permitted to hold dual citizenship for both PNG and

Australia, and under the PNG Independence Act of 1975 they were awarded citizenship of the new Independent State of PNG regardless of their place of residency^[14]. Whilst many Papua New Guineans were no longer considered Australian citizens or permanent residents, some ethnic Papuan New Guineans were. Papua New Guineans who held titles to ancestral lands had to retain their PNG citizenship and, in some cases, it was mandatory for those that were residing in Australia to return to PNG to retain land ownership through participating in their local traditions and customs.

According to the 2006 Australian Census there were approximately 24,000 Papua New Guinean individuals residing in Australia, of which 12,590 lived in Queensland^[15]. In 2006, within Queensland, half of the Papua New Guinean population lived in Brisbane (6703 people), 1426 people in Cairns and 971 people on the Gold Coast^[15]. The PNG community makes up the largest Pacific Island group in Cairns, Queensland^[16]. Australian Census data on PNG-born people may not be representative of the actual ethnic PNG population due to the high percentage of people who are children of Australians who were residing and working in PNG prior to PNG independence^[6].

2 Traditional Foods and Cooking in PNG

Please refer to Appendix A for a list of common PNG foods.

The role of living, location and conditions: Where ethnic Papua New Guineans live has a considerable impact on their diets, nutrition outcomes and food preparation techniques. Urban Papua New Guineans may have access to electricity, gas and other modern conveniences whereas a large proportion of those living in rural areas and remote villages continue to live a very traditional lifestyle. The traditional lifestyle involves living in huts, practicing subsistence farming, hunting for game, fishing and gathering wild fruits and vegetables. In these areas it is also usual to cook food directly over hot coals, in pots over open fires, or in ground ovens (mumu's). When cash is available, food such as rice, canned fish and canned meat may also be purchased to supplement the diet. Eighty-five percent of ethnic Papua New Guineans are engaged in subsistence agriculture^[4].

2.1 Factors thought to influence food practices and intake

- Living location and its accessibility, topography, soil and climate
- Economic status
- Degree of adoption of 'Western' vs. traditional lifestyle
- Access to government assistance.

2.2 Common Foods

Staples of the traditional PNG diet include fish, seafood, sago, sweet potato (kaukau), taro, taro leaf, cassava, cassava leaf, breadfruit, edible leafy greens (kumu), coconut and fruits. The traditional meat is pork, which is often eaten on special occasions. It is also a form of currency, with a number of pigs an individual, family or clan owns determining their wealth and status in the community. Coconut milk is the predominant liquid cooking medium but was traditionally used only in coastal regions^[17]. Snacks usually comprise fresh fruits, nuts and berries.

2.3 Regional Variations

There are distinct regional variations in cuisine, especially between the highlands regions and the coastal regions. Coastal regions traditionally use coconut milk/cream as a cooking liquid whilst those from the Highlands regions do not. Whilst access to fish and seafood is lower in the Highlands compared with the Coastal regions, the Highlands' rich, fertile soils produce green vegetables, root vegetables and support game animals which form a significant part of the Highland people's diets. The soil in Coastal regions is not as fertile and therefore the major nutrition sources are coconut and sago palms, as well as fish and seafood. In the Gulf region, meat is often not available and therefore the diet consists largely of coconut and vegetables.

2.4 Sources of Food

- ***Westernised/modern/urban lifestyle:*** Papua New Guineans who are more affluent or employed may have adequate income to purchase food rather than relying on subsistence agriculture. In urban areas imported food products are available for those with money to purchase and fresh local produce may be purchased daily from the markets.
- ***Traditional/village/primitive lifestyle:*** People living a traditional lifestyle tend to eat traditional foods. Men hunt for meat and fish, gather firewood and women are responsible for gathering the edible greens, fruit, seafood and starchy components of the meal, such as yams and taro from their gardens and sago from their family plots. In remote areas where there is minimal outside influence and no commerce or job prospects bartering food is a common practice.

2.5 Cooking Methods

- ***Westernised/modern/urban lifestyle:*** When electricity or gas is available, cooking may take place on a western-style stove or on a portable gas stove.
- ***Traditional/village/primitive lifestyle:*** Food may be cooked directly over an open fire, in a pot over an open fire, in ground ovens (mumu's – see below) or when available, over a portable gas stove. Frying food is not traditional as oil is not readily available.

2.6 Access to Clean Water

Access to treated/safe drinking water is greater in urban areas (87% of households) compared to rural areas (33% of households)^[18]. In village areas, where people still live primitively with no electricity or running water, rain water is sometimes collected in tanks or large drums. Some villages have access to natural spring drinking water which they fetch daily.

2.7 Access to Modern Appliances

In the past, food was cooked in clay pots over an open fire, but this custom died out generations ago, now when pots and pans and other cooking utensils are often used. As noted above, in urban areas, those in Western-style houses may have electric stoves.

2.8 Eating Style

- ***Westernised/modern/urban lifestyle:*** Eating utensils such as those used in the west may be used, but elders and children may continue to eat with their hands. Many people sit on chairs at tables to eat whereas elders may prefer to sit on the floor to eat.
- ***Traditional/village/primitive lifestyle:*** Communal eating is an integral part of PNG society and, at mealtimes, food is shared amongst neighboring households. Sharing of food and not overeating are considered important social conduct^[8]. Whilst modern utensils are used to a certain extent it is very common for people to eat with their hands. Meals are eaten sitting around the fireplace in the centre of the hut. A hierarchy exists relating to the distribution of food. For example, it is customary for males, father/head of the household, firstborn male, firstborn female, then other members in order of age, to be served first and also receive larger portions. Guests and VIPs are also given preferential treatment. Whilst men and women eat together, men and boys go first. The mother gets the least or goes without if needed.

2.9 Frequency of Meals

- ***Westernised/modern/urban lifestyle:*** Three meals a day.
- ***Traditional/village/primitive lifestyle:*** Two meals per day are eaten as people are away from their homes during the day, tending to animals, hunting and foraging for food in the forest. Food is prepared daily and snacks such as raw cucumber, raw sugarcane, fruits and berries serve as snacks throughout the day. The morning meal often consists of cooked foods such as corn or sweet potato (kaukau) that are cooked over hot coals. The evening meal is the main meal.

2.10 Main Meal

- **Coastal/Island Regions:** Both morning and evening meals contained similar foods. Eating starchy foods such as rice, root vegetables or possibly fried sago in the morning was common, and still is for those who continue with traditional work, as this is digested slowly to lead to satiation over the day. These are often served with meat if it is available. A similar meal is eaten at dinner.
- **Highlands/Inland Regions:** The main meal is eaten in the evening and consists of cooked food such as green vegetables, gourd vegetables, starchy vegetables such as tapioca, kaukau and meat which are boiled in pots or in traditional bamboo^[19].

2.11 Cooking For Special Events

- Different regions and islands have different special foods.
- In coastal/island regions, foods for special events often consist of the same foods that are usually available and eaten but they are prepared in different ways. For example, on special occasions, taro will be pounded, which involves more preparation, before being mixed with coconut oil.
- Pork and taro are considered to be special foods used in ceremonies in some PNG regions. These may have been exchanged between families from different tribes from neighbouring villages.
- Mumus (steam cooking in a ground oven) are generally prepared at special celebrations however, sometimes a family may have a mumu on occasion when food is plentiful.
- A mumu can take up a full day from beginning to end and it involves a lot of work and preparation.
- In the highlands/inland region, mumu's are prepared for special occasions. Although women predominantly do the cooking, a mumu is a much larger scale form of preparing and cooking, and often requires the cooperation of other adult family members, where men collect the stones, prepare the firewood, heat the stones, and kill and prepare the animal, while the women collect, wash and prepare the food ready for placing in the mumu^[19].
- At big feasts, extended families and close friends share the same mumu to cook their food. When the food, and the meat in particular, is ready, it is allocated according to social customs as noted above in 'eating style'.
- Coconut oil (more commonly used in coastal/island regions) is very special – used only on special occasions.
- Yams – in some parts of PNG these are used as a special food eg in marriage, death. Some cultures within PNG celebrate harvest festivals of yams, such as on Manus Island and the Trobriand Islands.

2.12 Betel Nut

Betel Nut is often chewed after being mixed with white lime powder and wrapped in a great leaf. It is an addictive stimulant that has been linked to certain health problems, that is chewed by Papua New Guineans as a social past time. Increasingly though, this practice is becoming less socially acceptable.

In coastal/island regions, the chewing of Betel Nut is associated with meal time where older people enjoy them after meals. It is likened to tobacco chewing and is viewed as a welcoming thing to do. A visitor to a home is often presented with a glass of water and a Betel Nut.

2.13 Meal Preparation Responsibilities

- **Westernised/modern/urban lifestyle:** Women make daily trips to the open/wet markets to source fresh produce. Supermarkets may also be used. Women prepare the meals. The husband is usually the breadwinner however when both work, domestic assistance ('house meri' or 'house boy') is usually hired to carry out domestic chores and sometimes prepare meals.
- **Traditional/'village'/primitive lifestyle:** Women then to gather fruits, vegetables and small firewood. Foods may be gathered from the wild (eg 'mareta' (red or edible seeds of pandanas plants growing wild), wild ferns, wichetti grubs, frogs, berries, fruits and edible plants and flowers) or from crops grown in clan/family plots. They also care for small children and smaller domesticated animals. Men gather large firewood, hunt and care for larger animals such as pigs or cows (if wealthy enough to own any). Women do most of the cooking but men assist on special occasions.

3 Food Habits in Australia

In Australia, traditional PNG foods are not always available. Whilst some are available, eg sweet potato (kaukau) and bananas, there is not the same degree of variety in Australia that is available in PNG. Some PNG families grow their own traditional foods to compensate. In some areas of Australia there are markets that supply a greater range of traditional PNG food.

Many PNG people involved in this research made efforts to continue to follow a diet that is similar to the traditional diets that they followed back in PNG. This includes a great focus on having freshly grown and harvested, organic vegetables (often grown in their own yard) as a major component of the diet.

3.1 Breakfast

Typical foods may include: boiled bananas (plantains), taro or sweet potato, sago (Coastal/island regions)^[8]. In Australia, cereal and toast is now also commonly consumed for breakfast by ethnic Papua New Guineans.

3.2 Lunch

Not traditionally eaten but in Australia could be leftovers, sandwiches or takeaway foods.

3.3 Main Meal

Dinner is the main meal and will often include a starchy food (eg cooking bananas, sweet potato, taro, yam), a meat (usually pork or chicken), or fish (Coastal/island regions) and green vegetables.

3.4 Take Away Habits:

Variable. Some PNG people residing in Australia rarely eat out or eat take-away food, tending to rely on the traditional foods that they have grown or sourced. For younger people of PNG heritage, take-away food is a more common choice.

3.5 Snacks

Whilst traditional snacks may include fruit, nuts, or sago (coastal/island regions) in Australia, this now includes the full range of snack foods.

3.6 Alternate foods (Staple substitutions)

Asian vegetables are similar to some PNG vegetables and are therefore used as a substitute in Australia. Rice is now a staple in PNG however Asian-style noodles are now also consumed for variety.

3.7 Common Drinks

Common drinks include water, tea, coffee, soft drinks and/or cordials. Recently those from PNG have been consuming more soft drink, especially children.

3.8 Cooking Methods

Cooking traditional foods is done in similar ways as in PNG – that is, by boiling as a stew or soup, or oven roasting.

3.9 Alcohol & Other Stimulants

Young people of PNG heritage more often consume alcohol than older PNG people. Similarly, young people are also more often now chewing Betel Nut and smoking. Betel Nut is commonly chewed. The Betel Nut is combined with lime and chewed as a mild stimulant. In coastal/island regions, the offering of Betel Nut by the host is considered to be polite.

3.10 Adaptations to the Australian Way of Eating

Meals may now include a midday meal. There is concern that in Australia, PNG people have started to eat too much processed food. However, some people from PNG attempt to maintain a dietary intake that is close to that which they had back in PNG by including traditional vegetables such as taro, cassava, sweet potato, bananas, aibika and garden-grown produce, etc.

3.11 Shopping for Traditional Foods in Queensland

Access to PNG or similar Pacific Island foods is greater in Townsville, as many traditional foods are imported to Townsville from Fiji. Many PNG families are growing their own bananas, green leafy vegetables and cassava. In other parts of the country, much of it is only available in frozen forms. Rusty's Market in Cairns is a source of traditional PNG vegetables and other fresh foods. Markets at Woodridge and Townsville sell traditional PNG foods. However, they are expensive and not consistently available.

4 Food and Care in Older Age

It is important to highlight that the region from which a Papua New Guinean comes from in PNG plays a large role in determining which foods are preferred and acceptable.

4.1 Food in Older Age

It is common for older people from PNG to be offered certain special foods such as soups, made from fresh home-grown foods (or fresh vegetables), as this can help them eat when appetite is poor, provide fluid for hydration and require minimal chewing. Popular foods include taro, cooking bananas (plantains), aibika (with or without meat), cassava, fish soup (coastal/island region only) (not with coconut cream). Those from the Highlands regions are likely to prefer plain, boiled food served dry such as green vegetables, sweet potato (kaukau), corn, taro, pumpkin, fruits such as banana, passion fruit, paw paw and mango, raw cucumber and most meats (eg chicken, pork, lamb). Highlanders do not customarily take foods with added richness or sweetness such as coconut cream, nor do they commonly eat sago, fish or large amounts of milk. Older Highlanders are careful to avoid certain 'runny' green vegetables that are associated with diarrhea. Foods to eat with tea or coffee include plain bread or scones.

It may also be the perception that to stray from the traditional foods upon which one was raised can in fact be damaging to health. It is believed that older people prefer to have these kinds of 'comfort' foods as often as possible and miss them if they are not available. Having them available may help prevent homesickness.

It is important for older people to have something to attract them to eat the food that is in front of them and they often do not like non-traditional foods. For example, if meat stew is served with taro or kaukau, then it is more likely that the meat stew will be eaten. Soups for older people (especially those from coastal/island regions) are very common and can be used to pour over other foods to help soften these.

4.2 Food Preparation Methods for an Older Person

1. Plain boiled sweet potato (kaukau), potato, taro, tapioca, pumpkin - all cooked until soft. Sometimes they may wish to drink the juice from the pot as a soup
2. Plain boiled green vegetables

3. Plain boiled corn – a knife would be needed to shave the corn kernels onto a plate – older people cannot bite into corn from the husk with their teeth – or if the corn is cooked with the husks intact, after cooking, you can smash it with a meal cleaver to soften it, then they can eat it off the husk
4. Plain boiled chicken, beef, pork or lamb or sautéed (very well done)
5. Plain rice mixed with canned fish or canned meat
6. Plain bread or scones with tea or coffee (usu. no milk) and sweetened with sugar
7. Sweet potato (kaukau), potato, taro, tapioca & pumpkin cooked as is (or cut into portions) with skin intact in an oven until soft. The skin can then be peeled off by hand and served. Sometimes the pumpkin may be left with the skin on and a spoon used to shell flesh out
8. Plain cucumber and tomato with some salt, most fruits (avoid guava, as this may cause stomach upsets).
9. Avoid providing too many dairy products, as people of Melanesian ethnicity may be (mildly) intolerant

4.3 Usage of Aged Care Services

It is not common for older PNG people living in Australia to access aged care services such as HACC. Traditionally, family members are relied upon to provide care to the aged.

4.4 Non-Residential Food Service for Aged Care

If providing a food service to a PNG Australian outside of an aged care facility, it is important to consider their cultural food preferences. Lunch and/or dinner are important meals at which to include culturally appropriate foods such as fresh vegetables. Fruit is also an important inclusion.

4.5 Residential Food Service for Aged Care:

Traditional foods for breakfast and dinner are important for PNG people living in residential care. Lunch may be a lighter meal. It is very important to include adequate amounts of green, leafy vegetables in the diet to support wellbeing.

5 Health and Nutrition Education

5.1 What is Health?

Health can be conceptualised in many different ways. PNG Australians may conceptualise health as being associated with:

- Looking after oneself
- Eating healthy foods
- Being physically active
- Maintaining strong social connections
- Maintaining a religious faith.

For more detailed information on PNG-born people's attitudes towards health, death and dying and a summary, please refer to Diversicare's Papua New Guinean Cultural Profile available at:
http://www.diversicare.com.au/upl_files/file_17.pdf.

5.2 What Is Healthy Eating?

PNG Australians may conceptualise healthy eating in a range of ways. For example, for some it may include:

- Eating freshly grown, organic food from the garden (i.e. home-grown produce)
- Continuing to eat foods that are traditionally eaten in PNG rather than eating many of the fast food/convenience foods that are readily available in Australia
- Plainly cooked food rather than food enriched by sauces, spices or additives (Highlands region)
- Unprocessed foods such as raw food or fresh vegetables, fresh rather than processed/modified food in cans and packets.
- Home style cooking rather than restaurant style cooking.

6 PNG Community Organisations in Australia

Cairns and Region Multicultural Group - <http://www.carma.org.au/>

Pacific Communities Council Far North Queensland - <http://www.pccfnq.org.au/>

Papua Niugini Friendship Group (Townsville) – Ph: (07) 4778 2882 Contact: Mrs. Fide Bale

Queensland – Papua New Guinea Association (Townsville) – Ph: (07) 4723 9531 Contact: Mr Abel English

Townsville Papua New Guinea Logohu (Townsville) – Ph: (07) 4778 2615 Contact: Maggie Baison

(07) 3206 0358 Cultural Group (Brisbane) – Brisbane Consulate General– Administrator – Esther Hamer

7 Recipes

7.1 Coastal/Island Region Style Cooking

MuMu – Pig and vegetables roasted in a ground oven

- Dig a hole in the ground that is large enough to accommodate hot stones and all the food that is to be cooked in it
- Layer the pit with large stones.
- Build a fire over the stones so as to heat them thoroughly.
- Remove some of the hot stones, leaving a layer of stones at the bottom of the pit.
- Cover the stones with leaves such as banana leaves.
- Place foods such as yams, sweet potato, and taro on the leaves.
- Wrap a whole, cleaned pig in leaves and place on top.
- In coastal areas, coconut milk/cream may be added to the food
- Cover with hot stones.
- Cover stones with dirt to insulate the underground oven.

- Cooking the pig may take up to 12 hours (depending on size of pig).
- Dig up pig and vegetables, unwrap if necessary
- Serve as part of a celebratory or ceremonial meal.

Mumu – Pig and vegetables roasted in a domestic oven

This recipe enables the preparation of a mumu-style meal in a domestic oven, rather than in a ground oven.

- Place mumu ingredients into a domestic oven
- Meat and green vegetables are cooked in a roasting pan
- Kaukau and pumpkin are placed as they are in the oven or wrapped in aluminium foil (similar to Western style baked potatoes).

Pumpkin Tips or Sweet Potato Tops

- Select young shoots that have crisp stems and young leaves
- Remove any tough leaves and the thick, lower part of the stems
- Remove strings from pumpkin tips (optional, but often preferred)
- Boil in coconut cream or add to mumus
- To prepare in a Western manner: cook in boiling, salted water and serve with butter or olive oil.

Adapted from: <http://www.pngbuai.com/600technology/cookery/page8-cooking-png.pdf>

Chicken and greens in coconut milk

Ingredients:

- 2 ½ lbs chicken cut into serving pieces
- 2 tsp oil
- 1 ½ cups coconut cream
- 1 ½ lbs greens (spinach, bok choy, watercress, etc)
- 1 medium size squash
- 2 cloves garlic, crushed
- 1 small piece ginger, finely chopped

Preparation:

- Remove the skin from the chicken and lightly brown chicken in the oil with 1 clove of the garlic
- Add approximately ½ cup of coconut cream and the remaining garlic. Simmer for approximately 10 minutes.
- Skin and cut the squash into cubes and add to chicken. Simmer for approximately 5 more minutes.
- Add the greens and let simmer for about 15 more minutes.
- Serve over rice
- Enjoy! (This is the most important part)

Coastal/island regions meal combinations

- Taro, sago and sweet potato are combined with green leaves and meat to prepare a meal
- Raw fish ‘cooked’ in lime juice and coconut cream
- Screw pine fruit cut into sections and boiled to accompany pork, greens or other vegetables
- Fish soup/chicken soup – made based on water with the protein source, shallots, tomato, ginger and curry leaves.
- Sweet potato, cassava, aibika, pork, taro – boiled together with chuhe and coconut cream
- Banana, tomato, shallots, beans, coconut milk cooked together

Highlands/Inlands Region style cooking^[19]

Mumu

Process:

1. Dig a medium sized, shallow, circular hole in the ground
2. Place firewood across the pit to form a platform
3. Place medium sized stones on the platform
4. Light fire and monitor carefully until the stones are heated to an extremely high temperature
5. Lay the hot stones evenly in the base of the hollow and up the sides of the hole creating a ground oven and remove excess firewood and embers
6. Place banana leaves and ‘kunai’ grass over the stones
7. Place a variety of food such as green vegetables, edible ferns, gourd vegetables, corn, cooking bananas, kaukau, fresh meat such as pork (often times killed especially for the mumu) and anything else that is available - mostly whole and in large chunks - on the banana leaves. Place larger vegetables and meat requiring a longer time to cook such as whole pumpkin and sides of pork on the bottom first and layer other foods about two or three times
8. Place a couple of sticks horizontally poking out of ground
9. Cover food in banana leaves and kunai grass, placing a hessian bag or two over the top to help keep the heat/steam in, then completely cover back up with the soil that was dug up. Sometimes another hessian bag or corrugated iron piece may be placed over the top to keep the heat in as much as possible
10. Remove the two sticks and pour a cup of water down the outlets to create steam from the rocks inside the ground oven
11. Leave for 2-3 hours to cook by steam
12. Remove the hessian bag and/or corrugated iron piece and spread over the ground beside the oven
13. Using shovels, carefully remove the dirt and place it away from the vicinity of the oven
14. Remove the banana leaves that are directly in contact with the soil and place far away as well
15. Place the ‘clean’ leaves on the hessian and/or corrugated iron sheet to form a bed
16. Carefully remove food from the oven, place on the bed of leaves

Notes:






- If the mumu is part of a large feast involving extended families and friends, the head male who is hosting the mumu either takes the food out of the oven, or oversees the distribution of the food by announcing who a particular food item is for, and the food is then placed in piles for the different families. Care is taken to ensure the fair and even distribution of the meat.






- Only when the general consensus is that the food is evenly distributed will each family then bring their own dishes and collect the food.
- Everyone gathers around the mumu and eats the food by hand. The younger people and children hold out their hands covered by banana leaf 'plates' (like napkins) and their fathers or mothers place different portions of food on them after they cut the portions up with a knife.
- The excess food is then taken to individual huts to be consumed over the next few days (note there is no refrigeration).
- It is impolite for people not participating in the mumu or uninvited guests to be in the vicinity of the mumu.
- If the hosts and families so desire, they will call out each person they wish to share some food with, and only then will that person come up to the mumu to receive the food.
- Sometimes, those from very poor, or broken homes or an orphaned child is called upon and presented with some food. Although they may be the last to be called, they are not forgotten, as people do their best to share the food around to as many people as they can afford.
- Food is highly respected and cherished, and almost never wasted or treated with disrespect. What someone does not want to eat is gifted to another.



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9 Appendix A: Commonly Consumed PNG Foods

<i>Starches/Carbohydrates</i>	<i>Cooking methods/Notes</i>
<p>Sweet potato (kau kau) & yam</p>  <p>Image Source: http://www.vegetables.co.nz/select_a_vegetable/kumara.php</p>	<p>Boiled, roasted. May roast sweet potato in hot ashes. (Coastal/island regions) – may be eaten with coconut milk. There are many different varieties available in PNG.</p>
<p>Sago</p>  <p>Image Source: http://en.wikipedia.org/wiki/Sago</p>	<p>Staple in lowlands & islands, not readily available in highlands</p>
<p>Taro</p>  <p>Image Source: http://www.foodsubs.com/Tubers.html</p>	<p>Favourite food of PNG people. Boiled or roasted</p>
<p>Rice</p>	<p>Coastal/island regions – may be boiled with coconut milk</p>
<p>Sago bread</p>	<p>Coastal/island regions - Made from sago flour, served with coconut milk or as a biscuit</p>
<p>Bread</p>	<p>Wheat bread has been introduced into PNG</p>
<p>Plantain / Cooking Bananas</p>  <p>Image Source: http://www.foodsubs.com/Fruittroex.html</p>	<p>Coastal/island regions - Boiled or roasted, may be boiled in coconut milk</p>
<p>Cassava tuber (tapioca)</p>  <p>Image Source: http://www.foodsubs.com/Tubers.html</p>	<p>Cooked like a potato or grated and make into a tapioca cake. Poisonous when eaten raw. In Australia generally only available processed (tapioca pearls).</p>





Vegetables	Cooking methods/Notes
<p>Aibika and other green leafy vegetables (kumu) eg kumu mosong, fan kumu</p>  <p>Image Source: http://permaculturepathways.blogspot.com.au/2009_04_01_archive.html</p>	<ul style="list-style-type: none"> • Aibika turns slimy when cooked. • Coastal regions may steam Aibika in coconut milk lightly so it retains some crunch. • Older people prefer Aibika cooked until soft. • Modern cooking style for Aibika includes addition of ginger, salt and pepper, chicken stock, garlic and chilli.
<p>Cassava leaves</p>  <p>Image Source: http://cookingwithoutborders.wordpress.com/2011/12/09/dont-leave-cassava-leaves/</p>	Boiled
<p>Sweet potato leaves</p>  <p>Image Source: http://sydney.foodconnect.com.au/resources/recipes/seasonal-guide-veg/sweet-potato-leaves/</p>	Boiled
<p>Pumpkin leaves & tendrils</p>  <p>Image Source: http://doing-it-naturally.blogspot.com.au/2012/03/pumkin-leaves-recipes.html</p>	Boiled, tough outer stems are peeled
<p>Breadfruit</p>  <p>Image Source: http://www.foodsubs.com/Fruittroex.html</p>	Boiled
<p>Choko shoots or leaves</p>	Boiled

Vegetables	Cooking methods/Notes
<p>Young fern leaves, tree ferns, Highlands ferns, etc.</p>  <p>Image Source: http://en.wikipedia.org/wiki/Diplazium</p>	<p>Often cooked with other traditional vegetables such as pumpkin leaves, used to wrap meat, or boiled/steamed inside a piece of bamboo over hot coals. Not usually eaten on its own, as can be stringy and rather bland in taste.</p>
Mulberry leaves	Introduced. Most likely prepared as for young fern leaves
Corn	Introduced. Boiled, roasted.
Sago mushrooms	Cooked wrapped in leaves as delicate
Alpa	Spinach is used as a substitute
Watercress	
Pumpkin	Coastal region - May be eaten with coconut milk
<p>Snake beans</p>  <p>Image Source: http://www.fruitezy.com.au/index.php?cPath=25_56</p>	Boiled until soft
Ginger leaves	
Chilli leaves	
‘Pit pit’	Highland/inland food – belongs to the family of sugar cane plants, the shoot is eaten rather than the cane. It can be boiled or roasted over hot coals.
English & Asian cabbage	
Tani pingi	Short leafy vegetable
Tomato and tomato leaf	

<i>Animal Protein</i>	<i>Cooking methods/Notes</i>
Fish	Coastal/island regions - caught along the coast and may have been bartered traditionally. Inlanders would go to coast to get fish.
Pork	A special meat in the highlands and often used as a dowry.
Seafood	Coastal/island regions - eg prawns, crab
Chicken	Coastal/island regions - cooked in a soup with coconut milk or wrapped in banana leaves and roasted
Sago grub <div data-bbox="152 705 407 892">  </div> <div data-bbox="462 732 682 806"> <p>Image source: http://en.wikipedia.org/wiki/Sago_worm </p> </div>	<p>Coastal/island regions - Boiled/roasted after being fed coconut for one night.</p> <p>Sago grubs are similar to tree grubs found in rotting tree trunks in the Highlands/Inland regions. Boiled or roasted.</p>
Freshwater prawns	Highlands/Inland regions - as these are not exposed to salt in life, they need some salt during cooking or can be quite bland
Freshwater eel	Highlands/Inland regions - prepared like salmon, smoked eel that is often available in Australia is not quite the same.
Snails	(eg green snail) traditional food on Manus Island, now seen as taboo as it is the emblem on the island's flag
Possum (kas kas)	A larger variety than here in Australia
Red meat (beef)	Less readily available but this is increasing
Turtle	Coastal/island regions - cooked in a soup with coconut milk or wrapped in banana leaves and roasted
Cassowary	Farmed
Wallaby	Coastal/island regions - Cooked in a soup with coconut milk or wrapped in banana leaves and roasted
Iguana	Coastal/island regions - Cooked in a soup with coconut milk or wrapped in banana leaves and roasted
Eggs?	Boiled, fried or cooked in coals and shelled.

<i>Animal Protein</i>	<i>Cooking methods/Notes</i>
Processed meats/fish eg spam, corned beef, fish	Not traditionally part of the PNG diet, but most often accompaniment of rice, so is almost a staple when fresh food is unavailable.
Snake	Highlands/Inland regions - sometimes snakes are kept and then eaten when reach maturity. Popular: green tree pythons.
Frog	Highlands/Inland regions - Hunted in creeks and swamps.
Milk	Not traditionally consumed.

<i>Fruit</i>	<i>Cooking methods/Notes</i>
Banana	Many different varieties are available. When ripe it may be boiled in skin until soft.
Carambola (star fruit) <div data-bbox="168 1102 410 1247" data-label="Image"> </div> <div data-bbox="470 1100 695 1178" data-label="Text"> <p>Image source: http://www.foodsubs.com/Fruittro.html</p> </div>	Star fruit have a clean, crisp texture, are easy to use, don't need to be peeled or seeded, and are slow to discolour. Some varieties are sweet, some are sour.
Citrus: Pomelo, Orange, Lemon, Lime	Pomelo is used as a fruit and in savoury meals
Coconut flesh	
Lau Lau (Malayan apple) <div data-bbox="151 1507 428 1713" data-label="Image"> </div> <div data-bbox="457 1535 699 1640" data-label="Text"> <p>Image source: http://mojotrotters.com/2010/07/the-good-and-bad-of-highland-food/</p> </div>	A small bell-shaped berry that is crispy and watery with a very mild watermelon flavour.

Fruit	Cooking methods/Notes
<p>Fijian longan/lychees</p> <div>  <p>Fijian Longan</p>  <p>Lychees</p> <p>Image Source: http://www.foodsubs.com/Fruittroex.html</p> </div>	<p>Longans are very similar to lychees and rambutans.</p> <p>Lychees are about the size of a walnut, with a bumpy red shell encasing white translucent pulp that's similar in texture to a grape. The flavor is sweet, exotic, and very juicy.</p>
Mango	
Mareta	Special pandanus fruit (Highlands)
Pineapple	
<p>Rambutan</p> <div>  <p>Image Source: http://www.foodsubs.com/Fruittroex.html</p> </div>	<p>Similar to lychees and longans, but covered with soft spines. Peel before using.</p>
<p>Tamarind</p> <div>  <p>Image source: http://www.foodsubs.com/Fruittroex.html</p> </div>	Souring agent
Tulip tree	Gulf region - produces a fruit similar to a custard apple.
Watermelons	Introduced fruit
Most tropical fruits that are available here in Australia (excluding stone fruit) are also available in PNG	

<i>Herbs / Spices</i>	<i>Cooking methods/Notes</i>
Ginger	
Lemongrass	
Citrus leaves	
Walagur	Coastal/island regions - Traditionally used with fish
Salt	Coastal/island regions - Traditionally cook in sea water to provide seasoning. Now use manufactured salt instead.
Chilli	
Curry leaves	
Eshallots	

<i>Beverages</i>	<i>Cooking methods/Notes</i>
Coconut water	
Tea	Lemon grass tea, traditional tea
Coffee	
Kava	
Soft drink	Expensive, so not consumed often

<i>Sweets / Oils / Fats</i>	<i>Cooking methods/Notes</i>
Honey	Coastal/island regions - only eaten when available traditionally. May be mixed with fried sago
Coconut cream	Coastal/island regions - as a cooking medium
Coconut oil	Coastal/island regions - traditionally used sparingly as not readily available
Sugarcane	Coastal/island regions - Boiled Highlands/inland region - eaten raw