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SAMOA LANDS AND TITLES – A SUSTAINABLE FRAMEWORK FROM A MARKETERS VIEW

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Abstract

The COVID-19 pandemic has almost shaken the fact that some people think that resources, including the food system in the Pacific, may be vulnerable in terms of self-sustaining even with extensive impacts, including the acceleration in the number of COVID-19 cases verified in some of the most reliable countries of the world in terms of trade. Key performance measures have been tact for Samoa and certainly, it affected remittances, international trade, and especially, the tourism industry which thus impacting on Samoa regarding it's food systems and other means of support. In a worst-case scenario, prioritizing what is meant as necessity, which is basically, access to food, water, and shelter regardless the loss of incomes, for instance, to pay for the next level of needs such as cash power and likewise should be considered first. In this paper, we would like to share the fact that by living in the old traditional Samoan way in itemizing its Lands and Titles system of consuming locally produced and harvested fresh foods, not only it will contribute to sustaining Samoa's market economy but will also contribute to bringing about a much healthier Samoa.

Keywords Sustainable market, Samoan way, Pacific, COVID-19 pandemic.

INTRODUCTION

A lot of questions have been raised since the appearance of COVID-19. Not only questions were led to what challenges are now being faced by the global economy but also what impact does that have on local economies as well. And whether COVID-19 gets cured or worsened up, the main focus question should be, would we be able to sustain development. Of course, if there would be a cure to COVID-19, there will still be sometime or gap for convalesce. But for the worst case scenario, if all bonds of international trade and distribution seize completely, would countries of dependency, such as third world countries and developing nations be able to survive on their own? Would they be able to provide for the resources needed for basic economic survival? And basically, would

these countries be able to sustain their own economy? Today, the Pacific Island Countries and Territories (PICTs) are struggling to make sure that COVID-19 does not change into a health crisis. In fact with respect, COVID-19 has already reached 21 countries and territories of the region, more as a set of social, economic and food security issues than as a health crisis. The measures adopted to alleviate this was practiced by starting restrictions on the movement of people within and among countries, have tended to cause severe impacts on their tourism industries, remittances, and international trade. Most of these PICTs are food import and remittance dependent economies (Connell, 2013), and many are heavily reliant on income from tourism (e.g. Fiji, French Polynesia, New Caledonia, Palau, Samoa) (Wood, 2020). The

interruption of tourism is expected to result in substantial losses to economies – forecast scenarios in the range of US\$1–2 billion regionally (Pacific Community, 2020). Such losses are realized across many parts of national economies, including unemployment, business failure, and changed patterns in the production and distribution of food. In addition, reliance on remittances is also high across 11 PICTs, funds transferred from overseas kin account for an average of 9.7% of GDP (Pacific Community, 2020). Some countries have already experienced substantial falls in remittances since the COVID-19 outbreak (Graue, 2020). National food systems in the Pacific region share attributes with those in other Small Island Developing States (SIDS). Much of their fragility is due to geographic remoteness, growing import dependence, and in many places, limited arable land and declining agriculture production. The region experienced a dramatic decline in per capita domestic crop production up to themid-1990s, which has not been recovered. Staple foods, particularly rice and wheat, account for much of the volume of food imported to the region, but nutrient dense and sugary food and beverages are also rising markedly. These trends in the availability of foods over the past half century (Thaman 1982) are reflected in diets which have shifted from being high in locally grown fresh fruits and vegetables, seeds and nuts, lean meat and seafood, to diets high in processed and often imported foods (Thow et al., 2011). Consequently, the triple burden of malnutrition¹ is a large and growing issue in the region (Global Nutrition Report 2018; Hughes and Lawrence 2005; Sievert et al., 2019) and prevalence of diet-related non-communicable diseases are particularly high in PICTs (Anderson, 2013). These trends and events highlight the difficulty of addressing the food security dimensions of the COVID-19 pandemic, in a landscape already challenged by processes and climate shocks that

threaten economies and societies. In the last month, for example, Tropical Cyclone Harold swept through Solomon Islands, Vanuatu, Tonga, and Fiji in the midst of COVID-19 mitigation preparations, destroying houses and crops. The confluence of the cyclone and COVID-19 led to a tragic loss of life in the sea off the island of Malaita in Solomon Islands, as people travelled to their home villages from the capital (Kaukui, 2020).

The Traditional Samoan way

Hunting and fishing for fresh food in the early history of Samoan life is all about having a “subsistence abundance” for food consumption (Thaman, 1982). Before Samoa became an independent state, Samoan people mostly ate food they produced themselves from cultivated land or fishing at sea, such as, taro, bananas, yams, breadfruits, poultry and other birds, cattle, pigs and fish and other sea foods. The traditional daily Samoan meal consists of a staple dish (chicken or other birds, fish or other sea foods, pork and beef with a source of starchy serving (taro, yam, breadfruit) to consume the main dish with, with the addition of the lu’au or spinach (coconut cream enfolded in green taro and with heated banana and breadfruit leaves as its outside covering and then baked in the traditional ground oven). There were only two meals allocations a day. The first meal is usually served in the late morning which comprise of the leftover food from the previous evening meal. The second meal serving is served in the evening, usually after their evening worship or prayer with the whole family. In the traditional Samoan family setting, the food was always served first to the chief of the family, and then followed by the rest of the family households, after the chief had finished eating (Kramer 1903; Turner 1884; Grattan 1948; Brewis 2012; Tuvala, 2016). And because of religious affiliation with the culture, the same civilities were extended to pastors and ministers of religion. Before a Samoan family eat,

they always make sure foods have been served to their village pastor's house before the food is served amongst them. And even today, such practice is still done by many Samoan families to their church ministers even if they do not live in a village setting anymore. Also for a Samoan family living in a village setting, there is almost certainty that they are ensured staple foods supply. One of the responsibilities of the village council, consist of chiefly titled men (Alii and Faipules) was to make sure there is excess of food supply for the village or district. The same village council organized the work of the untitled men of the village in cultivating the lands connected to their family heritage, in terms of customary privileges, into subsistence farming in planting crops, such as taros, yams, bananas, breadfruit, coconuts and raising pigs and chickens, at which with perfect understanding, all was done organically. Another type of Samoan food that was carefully cultivated was the breadfruit biscuit made from unripened breadfruit. In the past, and after cyclones which may destroy most of the crops, breadfruit as one of the important staple food was said to be processed and stored for times of famine as a result. Little quarries where dug up and these left over green, unripe breadfruit will be stored in and covered with leaves for days until it's fermented and could be retrieved and baked in biscuit -liked shapes for consumption. The arrowroot was another nurtured plant in those days which acted as a source of starch for formulating a variety of traditional Samoan dishes. In addition, was the coconut palm tree which provided not only food and drink but means for building houses, tools, mats, weapons, fishing gear, fuel, toys, and equipment, (Grattan, 1948; Tuvale, 2016). Besides coconut juice, there was almost no sugar in the traditional Samoan diet. Interestingly, in a very labour-intensive process a sweet substance was obtained for drinks by baking the roots of the ti plant (Hinkle, 2007). Samoa was also said to have

had few native fruits, whereas other tropical fruits such as the popular mangos and pineapples and some varieties, were among the colonial introductions. In the Samoan traditional diet and what was said to have included in the main meals dish by way of other birds and other seafood, we often referred to pigeons and other variety of fish, such as crabs, lobsters, crayfish, seaweed, and a large array of other marine organisms were fished or gathered from reefs. Pigeons in particular were more popular for meals than chickens, especially in the months of September and October of every year, when the pigeons were believed to have just put on fat in their bodies (Kramer, 1903). On the other hand, turtles also known as the 'sacred fish' was only touched for food, only upon from a special discretion of the highest chiefs (Turner 1884; Kramer 1903; Grattan 1948; Tuvale, 2016). The traditional method of cooking used a ground oven in which rocks were heated in a fire until they turned lava red, after which food items were placed on them and covered with banana and breadfruit leaves. Food was always part of a traditional ritual and in ceremonial activities as part of gifts exchanging for births, marriages, funerals, bestowal of chiefly titles, and the reception of visitors (Turner 1884; Kramer, 1903). In the case of visiting parties, food was also prepared in welcoming ceremonies for guests in the Samoan culture. For example, when guests arrived, a special ceremonial food presentation was made in the form of a sua or a ta'alolo. Traditionally, it comes in two parts; first is called the sua talisua (first meal) consisting of a green drinking coconut (vailolo), a cooked chicken (moepi'ilima), and a wrap of cooked taro or breadfruit (fa'avevela). The second step is called a suata'i which is a gift of food for the guests to take with them when they leave, consisting of a whole cooked pig and a fine mat (ietoga). A ta'alolo is a larger form of the sua and is presented if the guests are from a chiefly family and accompanied by their

whole village. The sua is still presented to honour important guests in Samoa today, but the content of the gift has been transformed completely. The coconut has been replaced by a can of soda; a 3lb tin of corned beef replaces the chicken; a box of biscuits for the wrap of taro; and a whole box of corned beef or tinned-fish has replaced the pig. Food was also made present when village councils punished a transgressor with fines for not keeping village laws. According to one study, they described an example of a village fine consisting of two large pigs and one hundred taro (Kramer, 1903). This custom is still practiced today but the fine is more likely to include cash and now likely to be paid in boxes of canned-food, and take-away food items from restaurants. Variations of these traditions live on today among Samoans in Samoa, As McLennan described, "food is not simply a source of energy, but also a means of building and maintaining social relationships, and reinforcing community cohesion" (McLennan, 2014).

Despite the fact that land is at the core of everything connected in the Samoan way (fa'aSamoa)-culture, titles, language, family (aiga) and people, it has a symbolic and cultural value that cannot be assessed by economic terms alone (Corrin and Lawasia, 2008). According to the Samoa Bureau of Statistics (2017), the population of Samoa, in total, was about 195,979, living in about 330 villages along the coastal of the islands. Samoa is comprised of two main islands, Upolu and Savai'i and two smaller inhabited islands of Manono and Apolima. The lands stretch over kilometres of about 200 in length covering a total land area of about 2,800 square kilometres. The social traditions and cultural affiliations are very strong in the Samoan society and is typically based on the extended family (aiga) system. In general, each family is headed by a matai or holder of a chief /traditional title name, whose responsibility is taking care of all the family's affairs relatively to lands and titles.

Then he represents the family to the village council of matai (fono) that controls village order as well as organizing the village. The council of matai (fono) also directs the village in terms of development and particularly the use of customary land. Of the total land area of Samoa, 81 percent of land is customary owned, 15 percent is owned by the government of Samoa and 4 percent is freehold land. Traditionally, customary land is handed down by historical claims and by family genealogy and lineage. Sometimes the utilization of the customary lands has to go through an agreement among all members of the extended family (aiga) who are the beneficial owners. In other words, if one is connected to the extended family one may be entitled to a right to utilize the lands without costs, as long as one contributes fairly to others.

A Subsistence Abundance

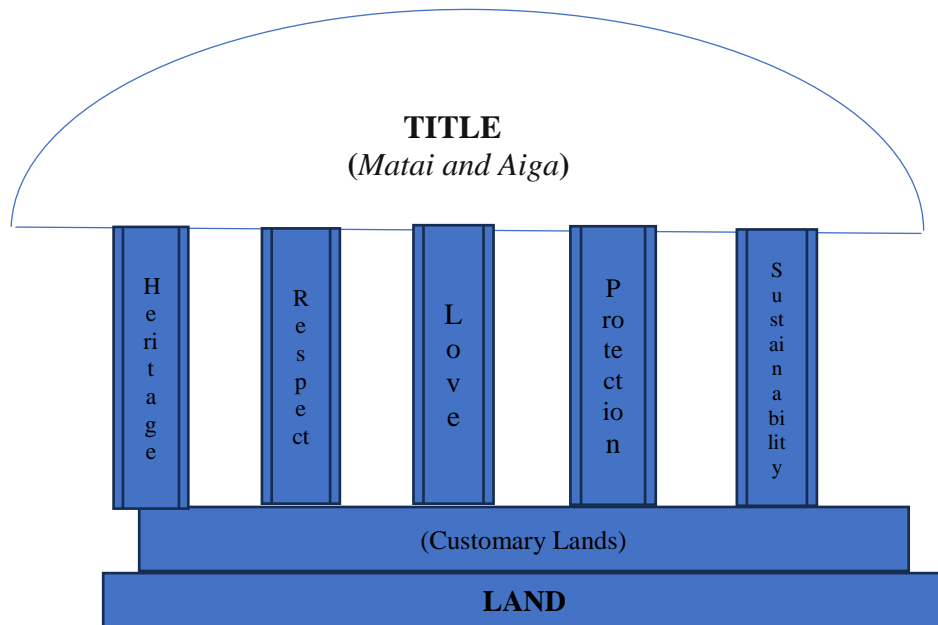
Throughout the world of business and economic activities, unique styles of entrepreneurship can be created, when particular indigenous society's cultures are entrenched together with their social aspects. In the Pacific Island country of Samoa, the Samoan way of life and culture (fa'aSamoa) is intricately interwoven with rural entrepreneurial activity (Cahn, 2008). Cahn concluded that at where fa'aSamoa blended successfully with the micro-entrepreneurial activity, an 'indigenous' form of enterprise had developed, and the success and sustainability of the micro-enterprise was enhanced. On the other hand, the research showed that tensions between fa'aSamoa and introduced business systems of the micro-enterprise could jeopardize micro-enterprise success and sustainability (Cahn, 2008). And while customary land guarantees ownership rights to all Samoans, sometimes it may be difficult to get agreement from all the different parties involved at any one time, when it comes to customary land development. Whenever development is affiliated with customary land, disputes will habitually arise

delaying progress, sometimes for extended periods of time. While knowledge of customary land boundaries handed down by word of mouth are known to family members the pule is often uncertain (Taule'alo, T., Fong, S., & Setefano, P., 2002). And because of the faa-Samoa (Samoan way) and its robust connections to traditional institutions like the aiga, (family) matai (chiefly titled men) and fono (village council) has served as security and a general sense of political stability. This, in turn provides an ongoing back up of the present land tenure, dominated by customary land ownership. Samoans as a group are therefore supportive of the present land system although there have been rumblings by individuals of the need for reforms to ensure that the system serves the national interest generally and the beneficial owners' in particular (Taule'alo, T., Fong, S., & Setefano, P., 2002). The fact that in the real Samoan tradition and culture, and it does not matter wherever a Samoan person may be, he or she always has a Samoan Chiefly family name and village they belong to (faasinomaga). On the other hand, there are always validated reasons for rural and urban drifts, due to seeking for a better education opportunity and employment security of entitling to ease monies through salaries in catering for the westernized style of living in the city or its suburbs. On the other hand, it could be vice versa, at where at hand, the COVID-19 is becoming a macro economic crisis. Employment in town and especially in the tourism related industry, job opportunities have been vacated or laid off, is another reason why someone may want to move back into the community or village based life. Some Samoans even though they live in the city or elsewhere apart from his village of belonging (faasinomaga), they still contribute to village Chiefs councils meetings (monotaga) in

supporting his family or his chiefly title being represented in the village council. And wherever a Samoan may be, it is always a Samoan proverb and belief, that someday he or she will always come back to visit or stay in his or her village of belonging (e lele le toloa i fea, ae ma'au lava i le vai – translated: wherever the swan bird fly's, it will always come back to the puddle of water). After all, living in Samoa is all about communal support.

Thus to have started with this transition and considering the protocol saying, 'prevention is better than cure,' as according to the Samoa stimulus package 2019 included the allocation for the Ministry of Agriculture to raise local produce; \$3.5million has been allocated to the Ministry of Agriculture and Fisheries. It is Government's intention that local agricultural and fishing developments will be intensified to support food security. A portion of this assistance has been allocated for equipment and consumables required by the Scientific Research Organisation of Samoa in the commercialization of some of our local value added agricultural processes like breadfruit flour, coconut oil, avocado margarine and others to substitute imports (Budget, Stimulus Package, 2020). In addition to this special budget allocation to the Ministry of Agriculture and Fisheries, they started awareness and food security programs for the public to be assisted by. Giving out bundles of variety of crops, eatable plants such as cabbages of all sorts and different plant seeds for free, was the Ministry of Agriculture and Fisheries' new initiative assisting and educating the public to plant again and make plantations, to start cultivating the land for subsistence supporting of the family or for self-reliance.

Samoa Lands and Titles Framework



Like the Fale Samoa, Samoan Hut above, represented by its roof with the Titled men and Women in a typical Samoan family or aiga with the pillars or posts representing the connection the roof – Titled to Land representing the foundation of the hut to explain the framework behind it and how it connects to the early civilization of the Samoan people and traditions as earlier explained. The Lands and Titles court was originally established in 1903 under the German colonial administration as a Land Commission. It was continued under the New Zealand colonial administration, and formally became a court of record in 1934, though it was not renamed until 1937 (Aiono 2009). The Land and Titles Courts have special jurisdiction on Samoan customs and usage matters relating to matai titles and customary lands. But that was its case on the other hand.

From a perspective of a marketer, it was a system that was well established that would only cater for what was explained, but as well for the future, for

the unknown, for the unexpected, basically, it is a contingency plan. A risk management plan. A plan to keep sustainability and somehow can initiate development. Such development can lead to more development of small and medium enterprises, cultivating other products such as breadfruit and manioca plantations for changing it to flour raw materials, investing in growing sweet potatoes and umala for exports targeting the Asian markets as well and on top of all if all family member build into a strong family bond, they can all be ion oneness in cultivating their customary lands for a large family development.

A Lead to Modern Problems

In a way of moving forward, modernization has brought to the world quite an impact. With the changes the world has brought about in terms of modernization, including the speed in technology, it is almost like a requirement for every country to keep up with – its language, procedures, processes and practices. This has far brought the world to a lot of improvements by way of developments in

transportation, communications, logistics, trading and many. A rapid change from traditional ways to today's modern lifestyle. However, such modernization has also a lot of lapse and imperfections caused as well, which also led to some discovered problems. Such problems, especially, for PIC such as Samoa would be the reliance on imports and tourism, international trades, remittances, resources- capital investments and human capacity building, reliance on foreign aid programs and projects for assistance, and so forth. Neo-colonialism and its control of power. And now, conspiracies which led to this pandemic, the COVID19 and other health and non-health related issues and challenges altogether.

Colonial interventions brought changing patterns of food production, distribution and consumption to Samoa. Foreign lifestyle like, such as food and clothing and many others was introduced to the Samoans in the mid-19th century in the trade with foreign ships (Tcherkezoff 2008). For example pigs, coconuts and fresh water were exchanged for barrels of brined beef, canned pea soup and clothing materials. These became highly prestigious, as it is likely that they were given to the chiefs. Today, these food items and clothing are still prized among most Samoans in their modern form of povi masima (salt beef) and pisupo (canned corned beef) and 'ie lavalava (cloth that wraps around) (Ullman, 1962). While it is unlikely that these items were consumed in great amounts in the past, as the economy of Samoa became monetized they became accessible to all and affordable to most, leading a trend towards a diet characterized by a heavy intake of imported foods (Hawley et al, 2015; DiBello et al, 2009; Seiden, et al 2012). Once isolated, the Samoan islands are now the centre of a global network of families. Its geographical and political boundaries have been infused by global ideas of development and economic growth, rising incomes, and freedom to

choose how to spend these incomes in order to survive in a "globalized world" (McLennan 2014). For instance, the transformation of the labor market produces an increasing number of high status, well paid sedentary jobs, and office based. The increasing reliance on imported materials and food items and more sedentary jobs as developing countries entered the global economy and people have moved away from subsistence farming and fishing to live and work in urban areas (Ulijaszek, 2006). Missionaries changed gender roles of food preparation (Schoeffel 1979). Young people; mainly males, were once the sole providers and food handlers in the family and the village. However, in the 19th century missionaries encouraged new roles for young women, taught in the mission girls' schools, which they considered more feminine and appropriate for Christian families. This included sewing and cooking using stoves and pots instead of the Samoan umu. The new method of cooking contributed towards changing Samoan lifestyle and food preference, introducing dishes now considered to be 'Samoan' foods such as dumplings (kopai) and steamed pudding (puligi), as well as fried foods. Chinese plantation workers also brought new dishes and style to Samoa, which are now also considered essentially Samoan clothing and dishes such as Chinese noodles (sapasui). Those who worked on plantations in the colonial era were fed with rations which included beef, flour and rice. Meleisea's (1980) interviews with Melanesian labour recruits on government plantations revealed that one of the attractions of plantation life in Samoa was the food, particularly the meat they were given. New dishes assimilated into Samoan relied on imported ingredients such as flour, sugar, salt, cooking oil, noodles, rice, soy sauce, and beef. The Second World War had a big impact on Samoan tastes and preferences (Blair 2018; Schoeffel 1987). Samoa was occupied by thousands of American marines in 1943-4 who

brought with them an abundance of food and drinks, apparels that were previously unknown or very scarce, such as Spam, canned spaghetti, liquor, carbonated drinks, working boots and shoes and many. Over time, as imported foods became cheaper and more available, and as increasing numbers of Samoans gained access to a cash income, imported foods became normal parts as the daily diet for families. A study of Samoan traditional healers report that they have long affirmed a view that imported food items are the cause of ill health in modern Samoans (MacPherson 1990). After 150 years of exposure to the industrialised West, the Samoan lifestyle has been substantially changed, but not its cultural practices; new food items such as salted-beef and bread were incorporated into exchange over a century ago, beginning with visiting ships, missionaries and traders. However, it is also important to appreciate the influence of the concurrent increase in technologies on the reduction in the amount of physical effort spent on food production. For instance, increasing availability of convenience foods and clothing items which require no direct energy expenditure on the part of the consumer. Another is the increasing use of new agricultural technologies, such as chainsaws and chemical sprays and sprayers which have reduced the amount of physical effort required to produce a given amount of food. Furthermore, the recent explosion in private vehicle ownership, like for instance in Samoa, means that many activities which formerly involved expenditure of physical effort no longer require this effort. Farmers who once walked to plantations can now drive and food which was formerly carried from point of production to point of consumption can now be transported from plantations in vehicles.

CONCLUSION

Thus, what has been shared above is not only one

would say or refer to as 'a life learning experience' but a system if one wants to apply for living or survival, it is all worth it. It would not hurt to give up what was called the western life style, but should be concerned as to what to prioritize. Personally, reserving for subsistence abundant of or having easy access to food and water and a decent roof for covering and spare clothes, should not be of a bad start. Try to save as much cash by liquidating some unnecessary assets or belongings through garage sales or similar, at where prices are breakeven or made cheaper and affordable. As the famous proverb says, 'something that one person considers worthless may be considered valuable by someone else.' If one cannot live in a village due to other circumstances such as owning a freehold land elsewhere can still be part of the village by always contributing to village matters in order to create strong bonds and ties with village chiefs and councils. By finding a person's roots back in the village is always a welcome in open arms as that is what the Samoan culture as well is all about. – Families-(aiga). Customary land covers about 80% of Samoa. There is always land that is uncultivated; it is just that one's intention should not be all about to him or her-self, but how one contributes in supporting everyone else as well. Therefore, this means that a person can still live and continuing doing business but in accordance to their means.

REFERENCE

1. Aiono-Le Tagaloa, Fanaafi Makerita (2009). The land and titles court of Samoa, 1903 - 2008 : 'continuity amid change' (PDF) (PhD). University of Otago. Retrieved 15 August 2021.
2. Anderson, Ian. (2013). The Economic Costs of Noncommunicable Diseases in the Pacific Islands : A Rapid Stocktake of the Situation in Samoa, Tonga, and Vanuatu. Health, Nutrition, and Population (HNP) discussion paper; World Bank, Washington, DC. © World Bank.

- <https://openknowledge.worldbank.org/handle/10986/17851> License: CC BY 3.0 IGO.”
3. Blair, J. (2018). A problem in paradise. Yale Public Health Magazine. Yale University. <https://medicine.yale.edu/news-article/16525/>
 4. Brewis, A. A., & Wutich, A. (2012). “Explicit versus implicit fat-stigma.” American journal of human biology: the official journal of the Human Biology Council, 24(3): 332–338. <https://doi.org/10.1002/ajhb.22233>.
 5. Budget Address by Samoa Minister of Finance on COVID-19 Stimulus Package By Press Release, April 7, 2020
 6. Connell, J. (2013). Islands at risk? Environments, economies and contemporary change: Edward Elgar publishing.
 7. Corrin J. Lawasia J. (2008). Land, Law and the Faa-Samoa. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/lawasiaj9&div=7&id=&page=->
 8. DiBello, J. R., McGarvey, S. T., Kraft, P., Goldberg, R., Campos, H., Quested, C., Laumoli, T. S., & Baylin, A. (2009). “Dietary patterns are associated with metabolic syndrome in adult Samoans”. The Journal of nutrition, 139(10): 1933–1943. <https://doi.org/10.3945/jn.109.107888>.
 9. Global Nutrition Report (2018). Appendix 3: Countries with significant multiple forms of malnutrition. <https://globalnutritionreport.org/reports/global-nutrition-report-2018/appendix-3-countries-significant-multiple-forms-malnutrition/>.
 10. Grattan, F.J.H. (1948). An introduction to Samoan custom. Wellington: The University of Victoria.
 11. Graue, C. (2020). Families in Samoa struggle as seasonal workers can't send money home. In A. R. Australia (Ed.), Pacific Beat.
 12. Hawley, N., & McGarvey, S. T. (2015). Obesity and diabetes in Pacific Islanders: The current burden and the need for urgent action. Current Diabetes Reports 15 (5): 594.
 13. Hinkle, A. (2007). “Population Structure of Pacific Cordyline fruticosa (Laxmanniaceae) with Implications for Human Settlement of Polynesia”. American Journal of Botany, 94(5): 828-839. www.jstor.org/stable/27733245 (accessed 3 August 2020).
 14. Hughes, R., & Lawrence, M. (2005). Review article: Globalisation, food and health in Pacific Island countries. Asia Pacific Journal of Clinical Nutrition, 14(4), 298–306.
 15. Kaukui, I. (2020). MV Taimareho: Sea tragedy.
 16. Kramer, A. (1903). Die Samoa-Inseln. Stuttgart, E. Schweizerbartsche Verlagsbuchhandlung. Lin, S., Naseri, T., Linhart, C., Morrell, S., Taylor, R., McGarvey, S. T., Magliano, D. J., & Zimmet, P. 2016. Trends in diabetes and obesity in Samoa over 35 years, 1978-2013. Diabetic Medicine 34(5): 654-661, doi:10.1111/dme.13197
 17. Macpherson, C., & Macpherson, L. (1990). Samoan Medical Belief and Practice. Auckland University Press, Auckland, New Zealand.
 18. McLennan S. M. et al. (2014). Elemental geochemistry of sedimentary rocks in Yellowknife Bay. Gale crater, Mars. Science. 343.
 19. Meleisea. M. (1980). O Tama Uli: Melanesians in Samoa. Institute of Pacific Studies: University of the South Pacific, Suva.
 20. Miranda Cahn (2008) Indigenous entrepreneurship, culture and micro-

- enterprise in the Pacific Islands: case studies from Samoa, *Entrepreneurship & Regional Development*, 20:1, 1-18, DOI: 10.1080/08985620701552413
21. Pacific Community (2020). Economic and Social Vulnerability to COVID. <https://sdd.spc.int/disasters-data/covid-19>.
22. Samoa Bureau of Statistics (2017). 2016 Census Brief No. 1. Revised version, Population Snapshot and Household Highlights, 30 October 2017. [https://www.sbs.gov.ws/images/sbs-documents/2016-Census-Brief-No_1%20\(Revised%20Version2\).pdf](https://www.sbs.gov.ws/images/sbs-documents/2016-Census-Brief-No_1%20(Revised%20Version2).pdf).
23. Schoeffel, P. and Daws, G. (1987). Rank, gender and politics in ancient Samoa: The genealogy of Salamāsina O Le Tafaiā. *The Journal of Pacific History* 22(4), 174-194.
24. Schoeffel, P. (1979). "Daughters of Sina: A study of gender, status and power in Western Samoa". PhD thesis, Canberra, A.C.T., Australian National University.
25. Seiden, A., Hawley, N.L., Schulz, D., Raifman, S., & McGarvey, S. T. (2012). Long-term trends in food availability, food prices, and obesity in Samoa. *American Journal of Human Biology* 24:286–295.
26. Sievert, K., Lawrence, M., Naika, A., & Baker, P. (2019). Processed foods and nutrition transition in the Pacific: Regional trends, patterns and food system drivers. *Nutrients*, 11(6). <https://doi.org/10.3390/nu11061328>.
27. Taule'alo, T., Fong, S., & Setefano, P. (2002) "Samoa customary lands at the crossroads – some options for sustainable management." Samoan Environment forum, proceedings of the 2002 National Environment Forum 2003 No. 4, 1-7.
28. Tcherkezoff, S. (2008). First contacts in Polynesia: The Samoan Case (1722-1848). Western Misunderstandings about sexuality and divinity. ANU Press: Canberra.
29. Thaman, R. R. (1982). Deterioration of traditional food systems, increasing malnutrition and food dependency in the Pacific Islands. *Journal of food & nutrition*.
30. Thow, A.M., Heywood, P., Schultz, J., Qusted, C., Jan, S., & Colagiuri, S. (2011). Trade and the nutrition transition: Strengthening policy for health in the Pacific. *Ecology of Food and Nutrition*, 50(1), 18–42.
31. Turner, G. (1884). Samoa: A hundred years ago and long before. Suva, Fiji: Institute of Pacific Studies, University of the South Pacific.
32. Tuvale, T. (2016). An account of Samoan history up to 1918: The food supply of the Samoans. Wellington: Va'aomanu Pasifika, Victoria University of Wellington; & NZETC. <http://nzetc.victoria.ac.nz/tm/scholarly/tei-TuvAcco-t1-body1-d29.html>
33. Ulijaszek, S. & Lofink, H. (2006). Obesity in Biocultural Perspective. *Annual Review of Anthropology* 35: 337-360. doi: 10.1146/annurev.anthro.35.081705.123301
34. Ullman, James Ramsey (1962). *Fia Fia: A novel of the South Pacific*. World Publishing.
35. Wood, T. (2020). What will COVID-19 mean for the Pacific: A problem in four parts. *DevPolicyBlog*. Canberra, Australia: Development Policy Centre, Australian National University.