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Samoa, Factor 6: Sustainable Agriculture

### **Samoa: Sustaining Agriculture**

Samoa is located south of the Pacific Ocean and has a beautiful landscape. The people who live there have a very generous spirit. The Samoan Islands is divided politically into its own independent nation. Samoa is an independent country and an ally to the United States. The population is estimated to be around 214,000. Samoans have a tropical environment consisting of high amounts of rainfall. The average humidity is 80%. One of the main islands, Savai'i, is mainly rural and has a small population. The capital is Apia located on Upolo. The main language Samoans speak is Samoan. Samoans do speak other languages like Tahitian, and Tonga. English is a language that is also utilized, however it is rarely spoken by rural Samoans. The religions include all forms of Christianity.

The holidays that Samoans celebrate are on the Christian calendar. Samoa has a prime minister, Tuilaepa Aiono Sailele Malielegaoi. A prime minister is the most senior minister of cabinet in the executive branch of government, often in a parliamentary or semi-presidential system. In many systems, the prime minister selects and may dismiss other members of the cabinet, and allocates posts to members within the government. They are elected by a popular vote every four years. They have two legislative bodies which are the senate of eighteen chiefs and the house of representatives. Samoa has police enforcing the laws, an attorney, and the high court which is nine judges including the chief of justice. Samoans can enlist in the military, a popular career field. They have to leave Samoa for training aid.

Samoa has its own form of cricket called killikiti, and its own international women and men's cricket teams. Samoans are very interested in watching different sports. Many Samoans travel the world to go and play sports but are still native to their country. There are many Samoan athletes. Some like; Olo Brown, Fritz Lee, David Tua, Dwayne "The Rock" Johnson, and many more. They make fine mats which is a symbol of wealth and prosperity. Now they are given mostly as gifts at special occasions.

The Samoans main thing is family. A typical family of Samoa is large in size. The typical size is two parents and they would have two or more children. The average household size of a family is four people. The family would get up and go to work or school. They have school until 2:00 pm. After that they will go home in the evenings and socialize, play sports, and relax. On weekends and during free time the family will spend time with each other.

Weekends include time for gardening and collect food. The crops Samoans use or grow are taro, chicken, coconuts, bananas, taamu, bread fruits, sugar cane, yams, manioc, and various fruits (Gale, 2007). Pork is saved for ceremonial occasions. Coconut is not eaten in Samoa; it is considered a sign of poverty. Their favorite beverage to drink is koko Samoa. King koko Samoa is a drink that has 100% cocoa beans and no additives. Some of the rarest cacao is found in the pacific region. (King koko Samoa, 2014) There are all types of markets to shop in Samoa. The Fugalei fresh produce market is in Apia. They give some samples of their fruits from tropical to bananas and pumpkins. There is a fish market also in Apia that has many varieties. They have this rare type of gizzards with a sea cucumber flavor.

International press services say that, "Samoan rural families that farm gathered crops and produce to help support a local women's business agency." (IPS,2014) Samoan rural families need more economic opportunities to make a better living. The country's population of 190,372 support themselves mainly by subsistence and smallholder agriculture. In the island's rich volcanic soil many farmers grow taro, yams,

bananas, cocoa and coconuts. Faaolasa Toilolo Sione has worked on Samoan soil for over 40 years. Approximately the country's population of 190,372 support themselves mainly by subsistence and smallholder agriculture. In the island's rich volcanic soil Sione grows taro, yams, bananas, cocoa and coconuts. He sells these crops at a market in the nearby town of Salelologa and from a stall located on the roadside in front of his home.

Sione's livelihood significantly prospered after he began working with WIBDI in 2012 to produce certified organic virgin coconut oil for international buyers. Now Sione employs four to five workers in the organic oil-processing site on his farm, which is adding value to his coconut harvest. He produces 80 buckets, each 19 liters, of coconut oil per month, which brings in a monthly income of about 12,000 tala (5,076 dollars). "Organic farming is not easy, but there are a lot of benefits," Sione said. "I have more knowledge about good farming practices and a regular weekly income, which helps send the children to school and support my extended family."

Samoa's education system starts from primary school which is elementary to middle school ages 6 to 13. It's literacy rate is an estimated at 97%. At ages 14-18, students then move into secondary, or high school. The Samoan government controls all secondary schools where the medium is English just like the primary education. Last there is Tertiary which is considered further education.

The employment wages are really low in Samoa. The lowest wage is only four dollars an hour. It is a tight wage that someone can barely survive on. With jobs that most people know as high paying jobs, like doctors, only receive on average five dollars.

Major issues will affect sustainable farming and the community if the American Samoans decades ahead. The main reasons are the climate changes, pollution, and limited supply of local resources. With climate changing average rainfall crop production is affected. Climate hazards will affect agriculture through; heat stress on plants, changes in soil moisture and temperature, loss of soil fertility through erosion of topsoil, less water available for crop production, changes in height of water table, salinization of freshwater aquifer, and loss of land through sea level rise.

Changes in rainfall patterns, temperature and wind direction could result in the establishment and emergence of new pests and diseases threatening agriculture & food security. In 1993, Samoa had an outbreak of taro leaf blight. For sixteen years they tried to breed a disease resistant crops. FAO assists member countries in integrating climate change into national agriculture, forestry, and fisheries sector policies, and food security programs. They also help support countries in developing and implementing priorities and NAPAs.

Samoans have shallow soil and forest resources are declining. There are limited resources in farming so the Samoans are using their resources efficiently. Only 27 percent of Samoans have non-agricultural employment. That is the lowest percentage in a Polynesian country (Stanley, 2015). The present day of farming is just starting. With erosion and cyclones, the island needs sustainable farming. Farming in this country is improving as time goes on but gets worse if there are more disasters then there has to be a plan, which is many things like aquaponics and hydroponics.

Sustainable farming would benefit the country because of the supplies that Samoa has now. It can give them more food resources to live a healthier and a better life, also it can benefit anyone from sources of income to foreign exchange as well and everyone can do this. Major issues would be the population growth rising, erosion, cyclones, and there could be volcanic activity at any moment. With these issues added to other issues including deforestation, poaching, untreated water supplies, and also acidification of the soil. This affects the entire ecosystem on the island.

To have a stronger local food source, more people need to join the farming workforce. The more produce you grow you can increase the local markets within the island. Next is educating the youth and upcoming farmers on the values and the nutritional value of the produce. Ways to be a sustainable farm is properly using the environment, and recycling. Instead of wasting, Samoan people can compost to keep food growing as well. Composting is taking the food waste and leaves, also known as green waste and waiting for that to compose and breakdown. Composting can give nutrients to create new plants and crops. This also benefits women because they too help with the crops and being caretakers. This could help them also be earning an extra income with them growing and producing the crops as well (United Nations 2015).

The Samoan government has already has conducted a plan to help the agricultural field. They first used surveys to help get an understanding in what they need to develop a plan. Although the government has contributed to the agricultural field they haven't regulated or enforced the framework to guide the sustainable farming. They say that, "the availability and quality of agricultural statistics has declined over the years and is one of the key challenges now facing the sector. Decisions about aid and/or investment efforts to foster agricultural growth need to be based on sound information on land use, factors of the lack of an overarching national sector plan that provides a coherent policy, legal and agricultural production, and the prevailing economic and social situation faced by producers. (Government of Samoa, 2011)

Funding now in Samoa is limited, the data's becoming outdated. The Samoan government hasn't had a consensus on farming since 2005 and it has been 11 years since that data has been released. With it being a different time period things have changed since then.

Solutions for sustainable farming in Samoa would be to help learn benefits and finding new ways to help their agriculture to stay maintained when growing. Practices to do this is covering up crops to keep the soil away from erosion and use safe chemicals so it can still kill pest but still is safe. Food security and rights for the food is another thing also. Kids can learn to eat healthy but still have delicious food by growing safe foods. Logging practices would also be a great thing to fix the forest and fishing resources.

The role of the Government is to educate the community in sustainable agriculture. Some of this could be to understand the nature and importance of sustainable agriculture, or to understand ways in which different agricultural practices can alter the environment either positively or negatively, also the role of the Government is to help find extra jobs in sustainable agriculture. To do this the Government can make ads and pamphlets on this. The role of any family not wasting food. What they should do is to use the waste they do have and make compost to grow food anywhere. Ways to do this is a video from different schools or PSA's that have known this to help learn. "They need to strengthen policy, legal, regulatory and strategic planning framework for sustainable agriculture development; to improve national self-reliance in food production and nutritional security; and to enhance private sector capacity in improving agricultural productivity, value adding and marketing; and ensure sustainable adaptation and management of agriculture resources." (Government of Samoa, 2011)

In conclusion, Samoa is facing some serious problems facing how farming is sustained, the climate changing to improve upon sustainable farming Samoa would be learn how to sustain plants when growing or logging practices. To log it is to keep a record on what you are researching and or experimenting on. So if you are farming you want to make sure you know everything that is going on with your plants. The Natural Resources Management and Environment Department says "however, farmers in the two study sites are facing problems such as a lack of planting materials, especially for taro, a lack of resources, and pests and diseases". (FAO, 2005) These same problems also confront farmers in the four villages that took part in the PRA. However, advisory officers have not received sufficient agricultural training to enable them to solve the problems. In order to ensure a continuing supply of professionally trained people

in agriculture, Samoa and donor agencies should provide scholarship programs for students of agriculture and related sciences. It is very important to have a sustained environment to have more resources. The Food and Agriculture Organization of the United Nations Rome says that, "Female extension officers work well with female farmers, of whom there are increasing numbers. The use of female advisory officers will also encourage women to increase their contribution to the agriculture sector. It is recommended that the government address the issue of gender equality throughout all of its operations in order to encourage women to become advisory officers. In addition, women should be given more opportunities to pursue higher education in agriculture-related subject areas". (Food and Agriculture Organization of the United Nations Rome, 1997) To develop sustainable farming you need help finding the right resources to learn and do the right thing. It is important to inform and teach these practices because if not Samoa's people will still have crops that are horrible to feed or give to the people.

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