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Fiji, Climate Volatility

The Volatility of the Climate in Fiji

Fiji is a small tropical island country in the South Pacific consisting of more than 300 islands. It's landscape is rugged yet has beautiful coconut palm-lined beaches and clear lagoons. The colorful reefs are a wonderland for snorkeling while the picturesque mountains are breathtaking and make for a vacation hotspot. Not only beautiful, Fiji is also affordable.

Fiji has a current population of 910,395, which is equivalent to 0.01% of the world's population. Of this population, 54.6% is urban and 45.4% is rural (Fiji Population).

The current political setup of Fiji consists of the President as the head of state, with the Prime Minister as the head of government. Fiji's constitution provides for bicameral parliament, which consists of the President, an elected house of representatives with one member, and a nominated senate of 32 members (Renate).

Under the current Fiji government, there are four districts for administration; the central district, based in Nausori, the northern district, based in Labasa, the eastern district, based in Levuka, and the western district, based in Lautoka. Each district has jurisdiction over the provinces that are within its division. There are 14 total provinces, each governed by a council that has an executive head granted by the Fijian Affairs Board. Urban affairs are generally overseen by these councils (Renate).

Although Fiji consists of over 300 islands, there are two main islands. Viti Levu, known as Big Fiji, is comprised of over half the total land area and is home to about three quarters of the population. The other main island is Vanua Levu also referred to as Big Land. With a rainy, tropical climate, both islands are steep and volcanic and are the wettest in the south, east and center and covered in forest and dense vegetation. The western part is drier and covered more in savannah grassland. The crop planting patterns are determined largely by the variations of rainfall in the region. Only 16% of the land is used for arable farming, this being flat fertile land found in valleys, river deltas and on the coastal plains (Oceania).

Agriculture is the single largest sector in the economy employing approximately half of the population. This contributes to about 43% of Fiji's foreign exchange earnings and accounts for nearly 20% of the Gross Domestic Product (GDP). There are two main industries that essentially support the Fiji economy, sugar cane and tourism (New Agriculturists).

In 1997, a severe drought led to a huge drop in output creating an economic crisis. The Fiji Sugar Corporation, which is a government body, makes contracts with growers and processes the sugar cane at its four mills. Sugar cane is mainly grown in the northeastern side of the islands

due to the drier conditions. Approximately 22,500 small-scale farmers cultivate about four to five hectares of sugar, most are Indian Fijians that lease their land from the Mataqali, administered by the Native Land Trust Board. Most farmers have no guarantee of lease renewal as the maximum length of a lease is thirty years. This is a major constraint to agricultural development (New Agriculturists).

The Fiji government has defended agreements such as the Lome Convention Sugar Protocol. This agreement has helped the profitability of the sugar industry where Fiji receives around 23 cents per pound compared to the international price of around 6 cents per pound. This is because the agro-climatic conditions limit the ability to diversify more than one or two products (New Agriculturists). Another major cash crop in Fiji is coconuts, which are grown on estates as well as by smallholders. Coconut is a major source of income for over 40,000 households. Growers are hopeful that the expanding coconut oil skin cream industry will boost their earnings (New Agriculturists). Most households in Fiji have several sources of income. There is typically one main wage earner but fishing and cash crops also help. Coconuts, ginger, bananas, breadfruit and cassava are some of the main cash crops grown in the wet areas. Also, pigs, poultry and cattle, including dairy cattle are the most common livestock in this area. Intermediate rainfall areas are known to grow vegetables, cocoa, passion fruit and maize as well as tobacco, potatoes, sorghum and turmeric. The dry areas are known to grow rice, citrus fruit, pineapples, mangoes, mung bean and pigeonpea. The government has worked hard to promote a greater diversity of cash crops for exports. Ginger has been the most successful. It has a high labor need. Fresh fruits such as pineapple, papaya and mango are sold to Japan and New Zealand must go through a new quarantine treatment facility at Nadi airport, which has boosted exports from Fiji. Europe and Australia also receive one thousand tons of exports such as bananas, mango and guava purees. Sustainable forest management is a key importance for the rural community as more than half of Fiji's land is covered by forest. Hardwood plantations and a logging industry can bring benefits to the depressed rural communities. Fiji has one of the most valuable mahogany plantations in the world, which is now ready to harvest. Some of Fiji's fisheries have suffered from overexploitation and pollution. Some may still have good development prospects and it is estimated that seaweed and tuna could bring \$200 million per year in exports (New Agriculturists).

Fiji has had huge political and ethnic tensions that has damaged investment and growth. In May of 2000, the nationalist coup led to a 70% fall in tourist numbers. Fiji is located 1300 miles northeast of New Zealand in the South Pacific Ocean. Its islands are mountains formed from volcanic activity. But Fiji is known most for its crystal clear water and coral reefs that draw thousands of tourists yearly.

Life in Fiji revolves around the family and the interests of the family. The average household in Fiji averages 5 family members but it is very common to have multigenerational households. The primary breadwinner of the family is the man and the woman runs the household by supervising all others and disciplining the children. The senior couple heads the household. The children live with their family past the age of independence and after marriage, the daughter-in-law moves in with her husband's family. In Fiji, the women are less powerful than men but they are considered

to be more precious and delicate and are protected by the men. They are not expected to work full-time and are given less physical jobs and decision-making power around the house (Fijian Culture).

Homes on Vita Levu Fiji are built of concrete blocks and wood and to have running water and electricity. Local materials are used to build homes on the smaller islands. Western style homes are a sign of prosperity. There approximately 90,110 rural homes and 94,125 urban homes in Fiji. There is little electricity in some of the remote regions, so kerosene or benzene lanterns are common (Fijians). You may have heard about Fiji Water, the pure, square bottled water, which is sold in nearly every supermarket in the US and some shops in Europe. This water is obtained and bottled in Fiji, but only 53% of the people who live in Fiji have access to clean water.

The people of Fiji typically eat three meals a day. Chili peppers, rice, vegetables, unleavened bread, curries and tea have been adopted from the Indians to the Fijians. While the Indians have adapted to eating cassava and taro and drinking kava. Starches, relishes, and a beverage are commonly found in the Fijian meal. The starch component is usually yams, sweet potatoes, taro or manioc. Bananas, nuts and breadfruit are also on the plate. Manioc has become the most consumed root crop because of its availability and ease to cultivate. Some other common foods you will find in the Fiji meals are canned meat and fish, vegetables boiled in coconut milk, and relishes of meat, seafood and leafy vegetables. Coconut water, fruit juices and water are the most common beverages. The evening meal is very formal. It cannot begin without the male head of the household and is required by all family members. The meal is served on a tablecloth on the floor with the men being served first with the largest portions (Walker).

The education system in Fiji is somewhat like ours where children attend primary school, secondary school and higher education. Education is free in Fiji and 85% of the children between the ages of 6 to 13 attend school where there is a high literacy rate of 91.6%. When a student completes primary school, they are given a certificate to take the Secondary School Examination. Secondary school is for five years and is determined by a competitive exam. Students are then able to follow a three-year course and could receive the Fiji School Leaving Certificate and then attend senior secondary school. They then can go through the next process and take the Form VII examination. Successful completion of this process will gain the student access to higher education (Wynn).

“Unless action is taken soon, climate change will drastically affect our food security and above all, affect different communities in Fiji.” This was pointed out during presentation by the Ministry of Agriculture at the National Platform for Disaster Risk Management and Climate Change workshop underway in Suva. Fiji is experiencing worsening coastal erosion and floods that are due to climate change. “The Ministry established programs to introduce new crops, crop varieties, or technologies that could be adopted to help farmers improve their traditional production systems,” said Mr. Jon Raileabula, the Ministry’s economic planning officer. “Communities need to work together to find the best way to adapt to changing agricultural needs and communities should also work with each other and relevant authorities,” he said. “There are developing ideas to have new varieties of crops with resistance to drought,

salinity, flooding and extreme temperatures“This include traditional varieties e.g. Coco yams (Dalo ni tana), Yams - uvi dina (greater yam), kawai (lesser yam), tivoli (wild yams), Drought tolerant kumala, Salt tolerant root crops,” he said.“We need to promote food security as an important factor in ensuring the resilience of communities to hazards, particularly in areas prone to drought, flood, cyclones and other hazards that can weaken agriculture-based livelihoods,” Mr Timothy Wilcox, the Sub-Regional Coordinator (Pacific) at United Nations Office for Disaster Risk Reduction (Climate Change).Climate changes affecting the island’s ecosystem have threatened the livelihoods of the Fijian people. The effect of saltwater intrusion has destroyed farmland and has forced some communities to move further inland to safer ground due to rising tides and eroding land. Fiji’s most populated island, Viti Levu, sustains damages of about \$52 million per year or 4% of Fiji’s GDP (How Fiji Is Affected).

Water filtrations systems many Fijians live with very little to no clean water. The clean water they do get is in plastic bottles they throw away. With water filtration systems they can reuse glasses reducing their carbon footprints. The pro of this option are more people get clean drinking water whenever they need it. The con of this option is that it will cost a lot to purchase the water filtration systems.

Everyone in the world cuts back on their carbon footprints. It’s not hard doing little things everyday to reduce carbon footprints. Walk more drive less, or to really reduce carbon footprints switch to solar energy or wind energy. The pros of this option are that it may cost less and will have a greater impact the reduction of carbon footprints. The con of this option is it won’t get rid of the weather hurting Fiji but it will stay stagnant and the Fijians can learn to adapt.

Education is the key to everything. Fijians need to have more agriculture education for a better understanding of how to maintain the land which they farm. Demands on the land are increasing which will continue to lower yields and continue the rise of poverty unless the people are taught how to take care of the land.

Sustainable land management skills and planning need to be more important to the people of Fiji. The capability of the soil to produce quality crops sustainability depends on the soil fertility. The high demand for organically grown crops and sustainability of mineral fertilizers makes it more important to look for biological solutions. Countries in the Asia-Pacific region are working together to improve their statistic-gathering and analyses for better production in crop, livestock, fisheries and forestry. This region is vulnerable to the long-term effects of climate change. A large population live in rural areas that rely heavily on agriculture and fisheries for their livelihoods. The Food and Agriculture Organization of the United Nations (FAO), as Secretariat, opened the 27th Session of the [Asia and Pacific Commission on Agricultural Statistics \(APCAS\)](#) in Fiji. The Pacific Island countries agriculture and food needs will be the main focus of the Commission. Agricultural statisticians and experts will review the region’s readiness to produce adequate agricultural statistics to monitor progress towards the 2030 SDG targets. Participants at the meeting were to deliberate on the challenges of meeting unprecedented data demands to monitor the SDG goals in order to achieve food security, reduce hunger, improve nutrition and

build resilience for climate change adaptation, particularly in Small Island Developing States (SIDS). Adding to the many firsts, a landmark Strategic Plan for the Pacific region, prepared jointly by FAO and the [Pacific Community \(SPC\)](#), was launched during the meeting. The Pacific Strategic Plan for Agricultural and Fisheries Statistics (P-SPAFS) is a 10-year plan that aims to guide the development of agriculture, fisheries and rural statistics in the Pacific SIDS for achieving the Sustainable Development Goals.

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