

September 2, 2024

News and notes

Before going on to discuss the geology and geopolitics of [Fiji](#), here are some news items I thought were interesting.

Happy Labour Day



- It's [Labor Day in the United States](#) and [Canada](#), enjoy your day off from work.

Labor Day 3-cent 1956 Issue U.S. Stamp

Credit: Designed by [Victor S. McCloskey, Jr.](#) for the [U.S. Postal Service](#) **public domain**

Geopolitics

- Nationalism and resource wars: [Medvedev believes he knows why Kiev wants Donbass](#).
- China / USA rivalry for access to minerals: [US sees bipartisan backing for Africa critical minerals plan](#).
- Conflict escalation: [US military open to escorting Philippine ships in the South China Sea, senior admiral says](#).
- Video: [Geopolitics of the Mexican Cartels](#).
- [China Poised To Cut Off US Military From Key Mineral As America's Own Reserves Lay Buried Under Red Tape](#).

Research and News

- **Free (!!!)** geology books on the [OreZone Readers and Experts Telegram Channel](#).
- Banded iron formations: [Ocean mixing timescale through time and implications for the origin of iron formations](#).
- [Late Palaeozoic structural evolution of the Patch Bank Ridge and Utsira High, northern North Sea](#)
- [Enhanced mud retention as an autogenic mechanism for sustained delta growth: Insight from records of the Lafourche subdelta of the Mississippi River](#).
- [Solid Earth forcing of Mesozoic oceanic anoxic events](#).
- Geological history: [The marine biodiversity impact of the Late Miocene Mediterranean salinity crisis](#); Phys.org summary [here](#); related article in [The Conversation](#).

- Bad science: [Chain retraction: how to stop bad science propagating through the literature.](#)
- Oceanography: [Sing Like Fish – an appreciation of the glorious biological soundscape of the oceans.](#)
- Video: [Important Details Emerge About The Origin of Dinosaur Killing Asteroid.](#)
- The latest *New Mexico Earth Matters* from the New Mexico Bureau of Geology & Mineral Resources is [here](#); focus is on the mineral [Smithsonite](#).
- [The meaning of the Anthropocene: why it matters even without a formal geological definition](#); Phys.org summary [here](#).
- Plate tectonics: [Subducted carbon weakens the forearc mantle wedge in a warm subduction zone.](#)
- Geological vandalism: [Two men indicted for allegedly damaging ancient rock formations at Lake Mead.](#)
- Diamonds: [Rift-induced disruption of cratonic keels drives kimberlite volcanism](#); Phys.org summary [here](#).

Geophysics

- [Anisotropic structure at shallow depths across the Japan Trench.](#)
- [Seismic low-velocity equatorial torus in the Earth's outer core: Evidence from the late-coda correlation wavefield](#); Phys.org summary [here](#).
- [Palaeogeography and 3D variability of a dynamically uplifted shelf: Observations from seismic stratigraphy of the Palaeocene East Shetland Platform.](#)
- [Upwelling of melt-depleted mantle under Iceland.](#)

Paleontology

- Paleontology and geochemistry: [New insights on Late Pliensbachian-Early Toarcian seawater chemistry based on belemnite rostra element content.](#)
- [Endocranial development in non-avian dinosaurs reveals an ontogenetic brain trajectory distinct from extant archosaurs.](#)
- [Matching dinosaur footprints found on opposite sides of the Atlantic Ocean.](#)

Mining and Energy

- Reservoir engineering: [Optimizing gas lift for enhanced recovery in the Asmari formation: a case study of Abu Ghirab field in Southeastern Iraq.](#)
- Geraldton ON: [Massive open-pit gold mine opens in northwestern Ontario.](#)
- [Philippines: Record number of applications received for oil, gas, natural hydrogen exploration](#)

- [Shell to cut hundreds of jobs in oil and gas exploration operations.](#)
- Oil exploration activity down in the [USA](#) and [Canada](#).
- Newfoundland: [St. Lawrence is heating up as fluorspar mining set to return to Burin Peninsula town.](#)
- [Ecuador Begins Shutting Oil Wells in the Amazon.](#)
- British Columbia: [Gold rush of the 1800s could be repeated in Vernon with new mine.](#)
- Diamond mine, Northwest Territories: [With closure imminent, Diavik sets out what's left to do.](#)
- [Chinese gold company produced over 68,000 ounces in first six months of this year in Guyana.](#)
- [Wyoming coal heavyweights double down on out-of-state metallurgic mines.](#)
- [Burkina Faso nationalizes two gold mines mired in legal dispute.](#)

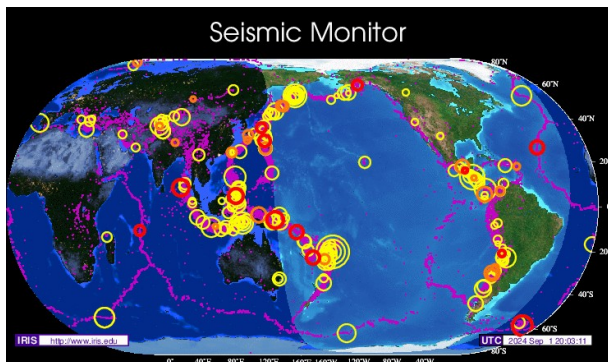
Environmental Geology and Hydrogeology

- Remediation: [Atlantic Mining faces \\$60m cleanup bond deadline amid court battle with Nova Scotia.](#)
- [This abandoned Alabama coal plant is poisoning the groundwater—but its owners don't seem to care.](#)

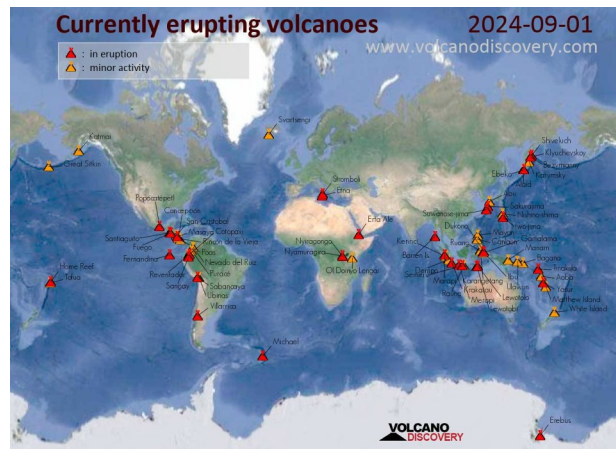
Glaciers and Climate Change

- [Extreme summer temperature anomalies over Greenland largely result from clear-sky radiation and circulation anomalies](#); Phys.org summary [here](#).
- [Glacier-preserved Tibetan Plateau viral community probably linked to warm-cold climate variations](#); Yale Environment 360 summary [here](#).

Volcanoes, Earthquakes and Geohazards



[Seismic Monitor](#)



[Active Volcano Map](#)

Volcanoes

- United States Geological Survey (USGS) Volcano Watch: Introducing the [Island of Hawai‘i Interagency Operations Plan for Volcanic Eruptions](#).
- USGS Yellowstone Volcano Observatory: [Hydrothermal explosions—a worldwide phenomena](#).
- [Smithsonian / USGS Weekly Volcanic Activity Report](#).
- Volcano tourism in Kamchatka: [Seventeen bodies found after tourist helicopter crashes near volcano](#).
- Philippines: [Taal volcano emits voluminous toxic gas, ‘vog’ reappears](#); related story [here](#).
- [The 10 most dangerous volcanoes in the Pacific Northwest](#).
- Iceland, video from Isak Finnbogason: [26.8.24 Day 5 drone footage from the new volcano eruption in Iceland, live stream highlights](#).

Earthquakes

- [Euro-Mediterranean Seismological Centre \(EMSC\)](#).
- [Earthquakes Monitoring Live Worldwide](#).
- [Montreal jolted by M3.8 earthquake – small by historical standards](#); USGS summary [here](#); the Geological Survey of Canada [puts the magnitude at 4.6 MN](#).
- Interactive map of active faults in Greece [here](#), related story [here](#).
- Video on 1988 earthquake in Australia: [The Huge Magnitude 6.7 Northern Territory Earthquake](#).
- Earthquake research: [Abnormal low-magnitude seismicity preceding large-magnitude earthquakes](#); Interesting Engineering summary [here](#).
- [M5.4 earthquake shakes Portugal](#); EMSC summary [here](#).

Upcoming Events

- [Lloyminster Heavy Oil Show September 11-12](#); Pipeline Online summary [here](#).
- [NGWA’s Hydrogeology of States Webinar Series: Louisiana, September 18, 2024. Online 1-2 p.m. ET](#).
- [GeoFutures: Planetary Geoscience Conference](#), 14-15 November 2024, hybrid meeting.
- [Groundwater Week 2024](#), December 10-12 in Las Vegas, Nevada.
- [Copper to the World Conference, Tuesday 26 – Wednesday 27 August 2025](#), in Adelaide, Australia; report on 2024 conference [here](#).
- [List of geoscience events in 2025 from the International Union of Geological Sciences](#).

September 2, 2024

Geology and the Fate of Societies – Fiji



Figure 1a – Fiji

Credit: [CIA World Factbook](#), public domain



Figure 1b – Location of Fiji

Credit: [CIA World Factbook](#), public domain

An [archipelago](#) in the [South Pacific Ocean](#), [The Republic of Fiji](#) is considered part of the cultural area called [Melanesia](#) and the geopolitical realm of [Oceania](#). It lies approximately 2000 kilometres (km) north-northeast of [New Zealand](#) and consists of more than 330 islands and 500 small islets. Only 110 of the islands are permanently inhabited. The government of Fiji is a [unitary parliamentary republic](#); the President is [Wiliame Katonivere](#); the Prime Minister is [Sitiveni Rabuka](#); and their legislature is their [Parliament](#). The Capital and largest city in Fiji is [Suva](#) (pop. 185,913).

According to the [Central Intelligence Agency](#)'s (CIA) [World Factbook on Fiji](#), the total land area of the Fiji Archipelago is 18,274 square kilometres (km²), with no significant interior water bodies. Also according to the World Factbook, 951,611 people live in Fiji; approximately 70% of the population lives on the island of [Viti Levu](#) and roughly half of the population lives in urban areas. Of the approximately 952 thousand people who live in Fiji, 56.8% are [Indigenous Fijian, iTaukei](#). Of the remainder, 37.5% are [Indo-Fijian](#), i.e. the descendants people from [South Asia](#), 1.2% are ethnic [Rotuman](#), and the other 4.5% are a mixed bunch including [European](#), [part European](#), other [Pacific Islanders](#), and [Chinese](#). The official languages spoken in Fiji are [English](#), [iTaukei](#), and [Fiji Hindi](#); the [Rotuman language](#) is also recognized as official on the islands where the Rotuman people predominate. In terms of religion, 64.4% of the population are [Christian](#) broken down by 34.6% [Methodist](#), 10.4% other Christian, 9.1% [Roman Catholic](#), 5.7% [Assembly of God](#), 3.9% [Seventh Day Adventist](#), and 0.8% [Anglican](#). Of the remaining, 27.9% are [Hindu](#), 6.3% are [Muslim](#), 0.3% are [Sikh](#), and 1.1% are none or other. In terms of education, 99.1% are literate; although not compulsory, more than 85 percent of the children between the ages of 6 and 13 attend primary school. As far as economic prosperity, the per capita [GDP](#) in Fiji is \$16,563; the [Gini](#)

[index](#) is 36.4; and the [HDI](#) is 0.729. The main industries in Fiji are tourism, sugar processing, clothing, copra, gold, silver, and forestry.

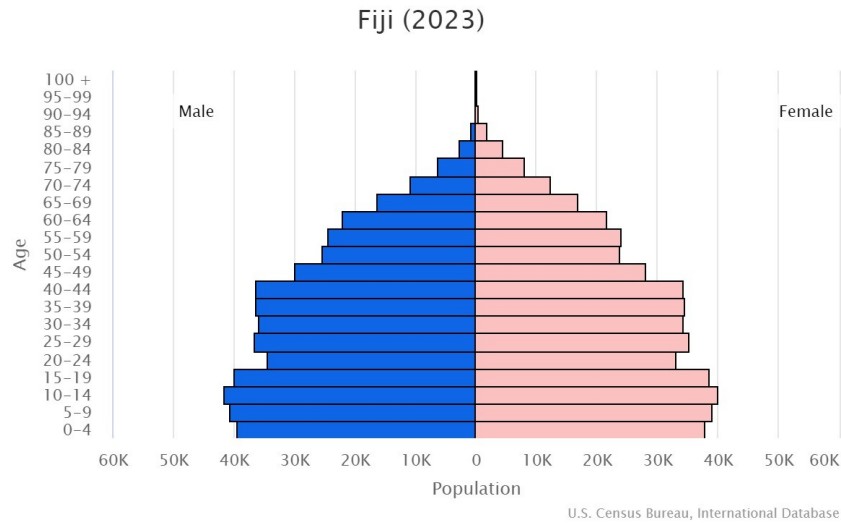


Figure 2 – Demographic Profile, Fiji
Credit: U.S. Census Bureau, International Database, public domain

The [demographics of Fiji](#) show a fairly stable population with about 1/4 of the population under 14 years of age and about 66% of the population between 14 and 65. There are more men than women in Fiji, a function of out-migration. The total fertility rate is 2.23 births per woman, the annual growth rate is 0.4%, and the life expectancy is 74.5 years.

Geology

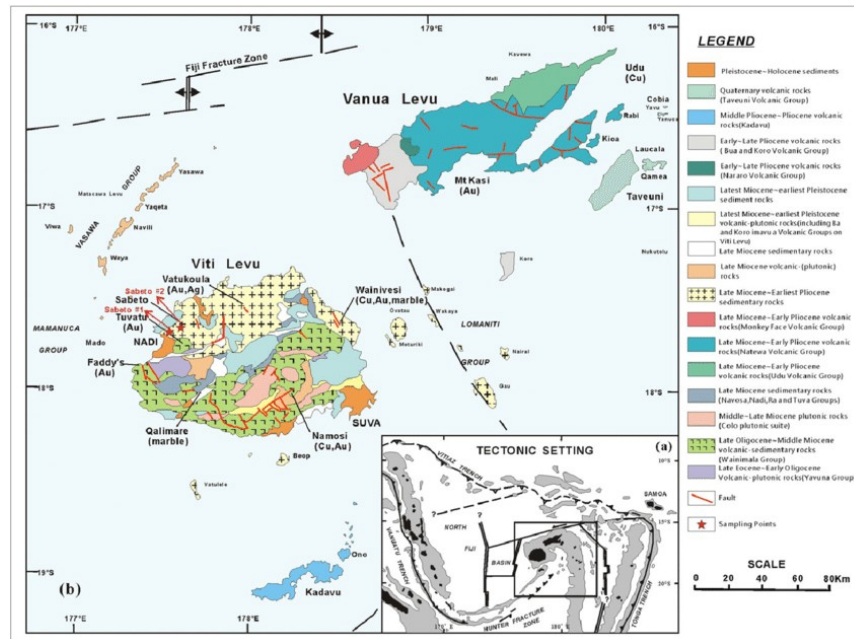


Figure 3 – Tectonic Setting of Fiji
Credit: Figure 1 in Sun et al, 2017

As shown in Figure 3, above, the Fiji Archipelago is situated within a complex boundary zone between the [Pacific](#) and [Indo-Australian](#) tectonic plates. The boundary zone includes active and inactive [back-arc basins](#), [island arcs](#), [mid-ocean ridges](#), [transform faults](#), and [subduction zones](#). The two subduction zones are the [Tonga–Kermadec Trench](#), where the Pacific Plate is subducting under the Indo-Australian Plate, and the [Vanuatu Trench](#), where the Indo-Australian lithosphere of the [South Fiji Basin](#) is being subducted beneath the [North Fiji Basin](#).

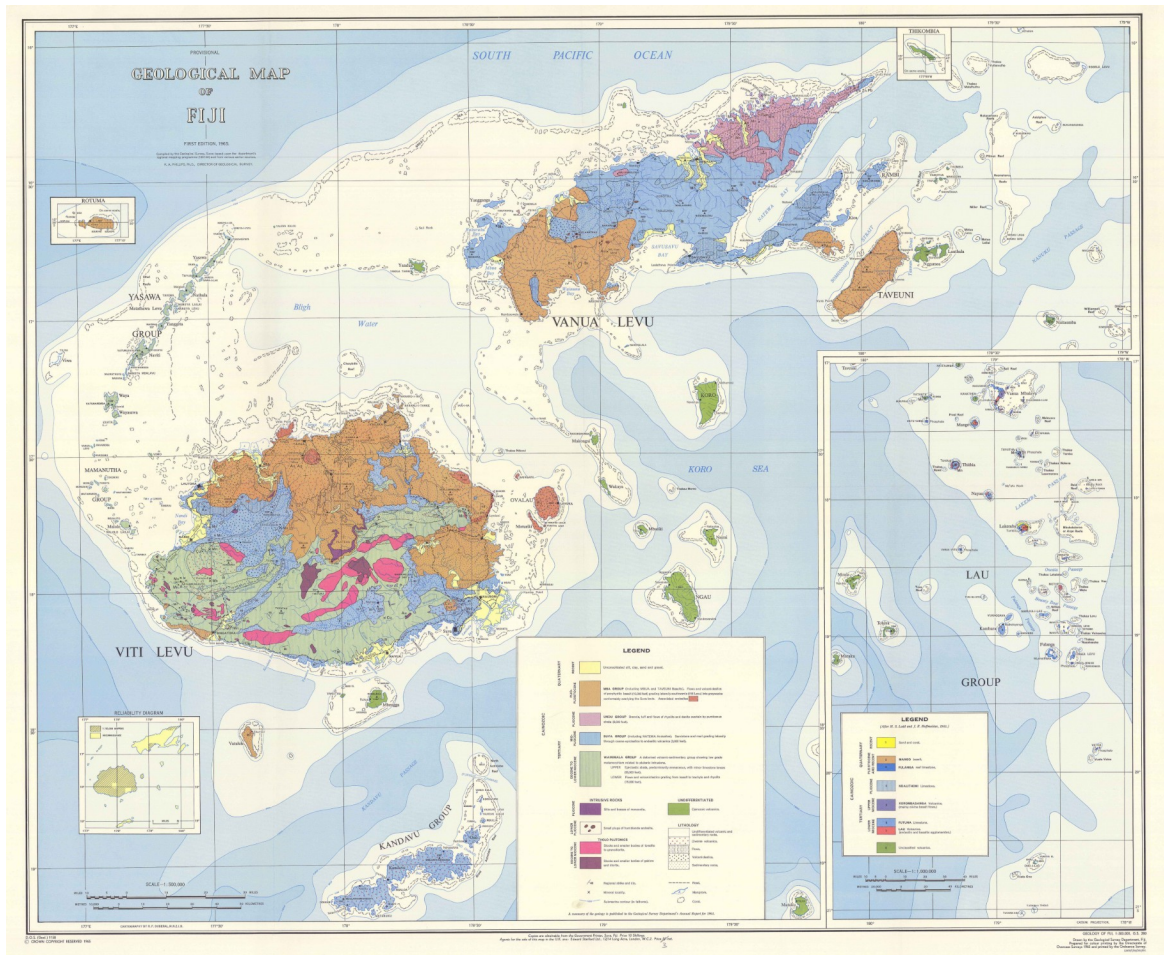


Figure 4 – Geology of Fiji
Credit: [European Soil Data Centre \(ESDAC\)](#), public domain

The [tectonic movements that eventually formed the Fiji Archipelago](#) began during the [Eocene Epoch](#). As a result, the geology of Fiji consists mostly of volcanic rocks, as shown on Figure 4. The main divisions of these deposits are, from youngest to oldest:

[Holocene](#)

- unconsolidated [silt](#), [clay](#), [sand](#) and [gravel](#)
- sand and [coral](#)

[Pleistocene](#) to Holocene

- Mango Formation, [basalt](#)

- Fulanga Formation: reef [limestone](#)

[Pliocene](#) to Pleistocene

- MBA Group (includes MBUS and Taveuni Basalts): volcanic flow deposits, [volcaniclastic porphyritic basalts](#), grades laterally into [greywacke](#) that conformably overlies the Suva Group, includes associated [andesites](#), ~3,050 m thick

Pliocene

- Ndalithoni Formation: limestone
- Undu Group: [breccia](#), [tuff](#), with [rhyolite](#) and [dacite](#) flows overlain by [pumice](#) deposits, ~2440 m thick

[Miocene](#) to Pliocene

- Suva Group (includes the Natewa Andesites): [sandstone](#) and [marl](#) grading laterally through coarse epiclastic to andesitic volcanics, about 914 m thick

[Upper Miocene](#)

- Korombasanga Formation: volcanics, mostly [olivine basalt](#) flows

[Lower Miocene](#)

- Futuna limestone
- Lau volcanics: andesite and basalt agglomerates

Eocene to Lower Miocene

- Wainimala Group: deformed volcanic-sedimentary group showing low grade metamorphism related to plutonic intrusions, divided into two sections:
 - Upper Wainimala: [epiclastic](#) strata, predominately [arenaceous](#), with minor limestone lenses, ~7,620 m thick
 - Lower Wainimala: volcanic flows and volcaniclastic deposits grading from basalt to [trachyte](#) and rhyolite, ~4570 m thick

There are also Pliocene aged [monzonite](#) sill and boss [intrusions](#); Lower Pliocene plug intrusions of [hornblende andesite](#) and Eocene to Lower Miocene plutonic stock intrusions of [tonalite](#) – [granodiorite](#), [diorite](#), and [gabbro](#).

A few references for further reading:

Sun, Guozheng & Xu, W.L. & Wang, Zhiwei & Guo, Peng & Liu, Shu-Wen. (2017). *Petrogenesis of Cenozoic shoshonitic rocks in Fiji: Constraints from mineral and whole-rock geochemistry*. Geological Journal. 53. 10.1002/gj.3109. <http://dx.doi.org/10.1002/gj.3109>

Neall V.E., Trewick SA. (2008) *The age and origin of the Pacific islands: a geological overview*. Philos Trans R Soc Lond B Biol Sci. 2008 Oct 27;363(1508):3293-308. [doi: 10.1098/rstb.2008.0119](https://doi.org/10.1098/rstb.2008.0119). PMID: 18768382; PMCID: PMC2607379.

Foye, W.G. (1917). *The Geology of the Fiji Islands*, <https://doi.org/10.1073/pnas.3.4.305>

Resources

Agriculture and Fishing



Figure 5 – Farm Land West of Mt. Korobaba, Fiji

Credit: [catlin.wolfard](#), [Creative Commons Attribution-Share Alike 3.0 Unported](#) license

According to the CIA World Fact, agricultural uses 23.3% of the land in Fiji (9% [arable land](#), 4.7% [permanent crops](#), 9.6% permanent [pasture](#)). Of the remainder, forests cover 55.7% of the land and 21% is something other, such as unused land and urban areas.

Farming in Fiji is a mixture of [subsistence](#) and [commercial agriculture](#). Subsistence agriculture accounts for 18% of the country's GDP and employs some 70% of the labour force. The largest product grown in Fiji is [sugarcane](#); other crops grown in the Fiji Archipelago include: [coconuts](#), [copra](#), [ginger](#), [cassava](#), [bananas](#), [rice](#), [sweet potatoes](#), [taro](#), [pickling cucumbers](#), [kava](#), [pineapples](#), and [plantains](#). Livestock raised in Fiji includes [cattle](#), [pigs](#), and [goats](#).



Figure 6 – Fish Farming in Fiji

Credit: [Australian Dept. of Foreign Affairs and Trade](#), [Creative Commons Attribution 2.0 Generic](#) license

Fishing in Fiji includes commercial marine fishing, subsistence marine and freshwater fishing, aquaculture (fish farming) and [sport fishing](#). Commercially harvested marine species include [tuna](#) ([albacore](#), [bigeye](#), and [yellowfin](#)), and [swordfish](#), [marlins](#), [mahi-mahi](#), [wahoo](#), and various kinds of sharks. In the offshore subsistence fishery, a wide variety of fishes are caught including: [emperor breams](#), [grouper](#), [trevallies](#), [snappers](#), [mulletts](#), tunas, [surgeonfishes](#), [parrotfishes](#), and [barracudas](#) together with [bivalve molluscs](#), [sea cucumbers](#), [prawns](#), [lobsters](#), and [octopus](#). Freshwater fishery harvests include freshwater clams ([Batissa violacea](#)), [eels](#), various species of freshwater crustaceans, and introduced fish such as [tilapia](#) and [carps](#). Aquaculture species include: [pearl oysters](#), tilapia, freshwater and brackish water [shrimps](#).

Overall statistics on food production in Fiji from the [United Nations Food and Agriculture Organization](#) (FAO) can be found [here](#). Statistics on fish production from the FAO can be found [here](#). Select indicators from the FAO on food production in Fiji can be found [here](#); the FAO indicate that moderate or severe food insecurity affects 29.2% of the population. In the years [2019-2021](#) in Fiji, agricultural exports were 58.3% of \$868.9 million or \$506.6 million and agricultural imports for the same period were worth \$387.0 million.

Forestry



Figure 7 – Forests of Fiji

Credit: [Jason Baker](#), [Creative Commons Attribution 2.0 Generic](#) license

Forests in Fiji cover about 55.7% of the land and the forestry sector is a major employer with timber being Fiji's third-largest export commodity. Forests in Fiji are harvested for export timber, local building materials and charcoal production. Statistics on forestry production in Fiji can be found [here](#).

The [moist tropical forests of Fiji](#) are typically divided into three main divisions:

- Lowland rain forest is found on areas below 400 meters elevation on all the smaller islands, and in the southeast-facing lowlands of Viti Levu and Vanua Levu; common trees include common trees include [Degeneria vitiensis](#), [Pandanus joskei](#), [Myristica macrantha](#), [Endiandra gillespiei](#),

[*Agathis macrophylla*](#), [*Calophyllum vitiense*](#), [*Canarium vitiense*](#), [*Calophyllum neo-ebudicum*](#), [*Syzygium spp.*](#), [*Garcinia myrtifolia*](#).

- Montane rain forests are found on windy slopes from 400 to 600 meters elevation where temperatures are 4° to 6° C cooler than in the coastal lowlands; common trees include: [*Agathis vitiensis*](#), [*Podocarpus spp.*](#), [*Calophyllum vitiense*](#), [*Endospermum macrophyllum*](#), [*Myristica castaneifolia*](#), [*Didymocheton spp.*](#), and [*Metrosideros vitiensi*](#).
- The cloud forests occur between 600 and 900 meters elevation on the larger Fijian islands and on Futuna; typical trees include: tree ferns ([*Cyathea spp.*](#)), [*Epicharis gillespieana*](#), [*Hernandia moerenhoutiana*](#), [*Fagraea spp.*](#), [*Syzygium spp.*](#), and [*Macaranga seemanii*](#).

Mineral Resources



**Figure 8 – Tellurium-quartz-pyrite Hydrothermal Vein from the [Emperor Deposit](#), Fiji
Credit: [James St. John](#), [Creative Commons Attribution 2.0 Generic](#) license**

According to the [USGS, the mineral industry](#) is of minor importance to Fiji's economy, representing less than 1% of the country's GDP. Minerals produced include bauxite, gold, and silver. Industrial mineral production includes cement and crushed stone. The USGS summary on the mineral industry of Fiji is found [here](#).

Mines and production facilities include:

- Bauxite was produced until [July 2024](#) at the Nawailevu Mine, Lekutu, Bua Province ([Xinfa Aurum Explorations Ltd.](#)).
- Gold and silver are produced at the [Vatukoula Mine, Ba Province](#).
- Cement is produced at the [Tengy Cement Factory](#) in Lami, Rewa Province.
- Crushed stone is produced at [Saru Quarry](#), Lautoka, Ba Province and at the [Waimanu Quarry](#), Rewa Province, both of which are operated by [Flame Tree Developments \(Fiji\) Limited](#).

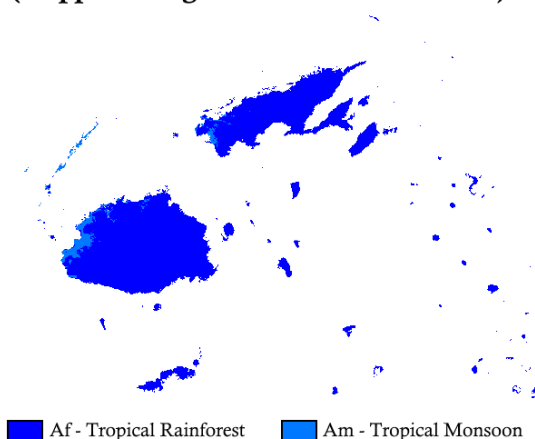
The [Mindat site on Fiji](#) lists 11 mineral occurrence sites on the islands:

- [Undu mine \("Udu mine"\), Nukundamu, Vanua Levu, Fiji](#); mine, 27 mineral species & varietal names listed.
- [Emperor Mine, Vatukoula, Vatukoula Gold Field \(Tavua Gold Field\), Viti Levu, Fiji](#); mine, 56 mineral species & varietal names listed.
- [Vatukoula Gold Field \(Tavua Gold Field\), Viti Levu, Fiji](#); active ore field, 57 mineral species & varietal names listed.
- [Waya Island, Yasawa Archipelago, Ba, Viti Levu, Fiji](#); island, 5 mineral species & varietal names listed.
- [Mango Island, Lau Islands, Fiji](#); island, 4 mineral species & varietal names listed.
- [Nasinu Village, Viti Levu, Fiji](#); village, 1 mineral species & varietal names listed.
- [Viti Levu, Fiji](#); island.
- [Vanua Levu, Fiji](#); island.
- [Tuvatu Mine, Navilawa, Viti Levu, Fiji](#); mine, 83 mineral species & varietal names listed.
- [Mount Kasi Mine, Yanawai Goldfield, Wailevu, Vanua Levu, Fiji](#); min, 25 mineral species & varietal names listed.
- [Kingston Mine, Navilawa, Viti Levu, Fiji](#); active mine, 13 mineral species & varietal names listed.

While there has been some [evaluation of the petroleum potential](#) for Fiji, and some [exploration in 2012](#), so far no oil or gas deposits have been found.

Climate

Fiji (Köppen–Geiger climate classification)



Fiji has a tropical climate with two main divisions:

- Tropical Rainforest – [Af](#), over most of the archipelago; and
- Tropical monsoon – [Am](#), on the west parts of the archipelago

Fiji looks like a good place to visit and tourism is a [major industry in Fiji](#). The travel advisories ([here](#) and [here](#)) suggest taking normal precautions against petty crime and for inclement weather. Check out [Climates to Travel](#) and [Lonely Planet](#) if you plan to go. Also, keep an eye on the news in case of political instability.

Figure 9 – Köppen-Geiger Climate Classification, Fiji
Credit: [BigBrownMonkey](#), [Creative Commons Attribution-Share Alike 4.0 International license](#)

History and Geopolitics

History, Troubled Islands in the Ocean



Figure 10 – Tahitian Sailing Canoe
Credit: Henry Martin (1803–1865), public domain

The [history of Fiji](#) began with the arrival of [Austronesian](#) sailors who settled the islands around 1,000 BC. Later, [Melanesians](#) settled in the Fiji Archipelago, beginning around the first century AD. Fijians began trading with the [Polynesians](#) of [Tonga](#) and [Samoa](#) and, by about 900 AD, much of Fiji was in the [Tu'i Tongan Empire](#)'s sphere of influence. While the Tongan influence declined after 1200 AD, fairly regular trade with Melanesian brought in various cultural influences to Fiji.

The first European visitor to Fiji was [Abel Tasman](#) in 1643. Later, British explorer [Captain James Cook](#) visited the islands in 1774 and [William Bligh](#) charted and plotted the islands, while escaping the famous [mutiny](#).

European contact in the 1860's Fiji included benign trading relations but also the practice of "[black birding](#)" or enslaving Fijians for sale in the [Dutch East Indies](#). Slavery was [outlawed in the British Empire](#) in 1833 but that didn't stop the practice of kidnapping Fijian as slaves until the British Parliament [specifically outlawed "black birding" in 1872](#).

In 1865, [Warlord Seru Epenisa Cakobau](#) formed the [Confederacy of Independent Kingdoms of Viti](#) by uniting a collection of various tribal groups in the Fijian Archipelago. However, despite various attempts to centralize power, the polity proved to be fragile and in 1874 Cakobau ceded Fiji to the [United Kingdom](#).

The British set up [a colony](#) and suppressed numerous Fijian insurrections, the so called "[Little War](#)" in [Fiji](#). The British also brought in the [Colonial Sugar Refining Company \(Fiji\)](#). The Colonial Sugar Company, in turn, imported more than 60,000 indentured laborers from the British [Raj in India](#). Most of these labourers stayed on after paying off their contracts, much to the annoyance of the native iTaukei (indigenous Fijians), who feared losing their country to the newcomers. Eventually, the Indo-Fijians became the majority of the population in Fiji before the British left in 1970.

Fiji achieved independence in 1970 with [agreements](#) to divide power among the ethnic groups. However, in 1987, [two consecutive coup d'etat by Fijian Army officers](#) resulted in a new constitution where political power was concentrated in the hands of iTaukei. The coups triggered emigration by many Indo-Fijians (particularly skilled workers), making the Indo-Fijians a minority by 1994. By 1997 a [new constitution](#) removed most of the discriminatory policies. Following the 1999 election, [Mahendra Chaudhry](#), an Indo-Fijian became Prime Minister. The peace was short lived and Chaudhry was removed from power in 2000 in [another coup](#). The coup was marked by, among other things, Chaudhry and his cabinet being held hostage by Fijian nationalist gunmen for some eight weeks. The new government led

by [Frank Bainimarama](#) was marked by [mutinies](#) in the Army and a court order to restore the constitution. 2001 saw the election of a new government led by [Laisenia Qarase](#).



Figure 11 – Checkpoint During 2006 Coup d’etat in Fiji

Credit: [catlin.wolfard](#), [Creative Commons Attribution-Share Alike 3.0 Unported](#) license

In 2005, Prime Minister Qarase put forward a bill that would grant pardons to the perpetrators of the 2000 coup. In response Frank Bainimarama launched [another coup in 2006](#) (this is getting repetitive) and appointed himself prime minister in 2007. Despite a [constitutional crisis](#) after the courts declared the 2006 coup illegal, Bainimarama retained his position as government leader after elections in [2014](#) and [2018](#) that international observers deemed credible. Bainimarama’s party lost control of the government after [elections in 2022](#) with former opposition leader, and current Prime Minister, Sitiveni Rabuka winning the office by a narrow margin.

Geopolitics of an Island Country

Fiji appears to have settled their internal squabbles, for now. Tourism is a major industry in Fiji and it is a geopolitical fact is that if they expect to attract tourists, they must providing a safe environment for the visitors. Otherwise the tourists, and their dollars, will just stay away. You would hope that this reality would sink into the heads of those plotting further [Ruritanian](#) style coup and counter-coup. Only time will tell.



Figure 12 – MV Reef Endeavour Sailing in Yasawa Islands, Fiji

Credit: Rodeime, [Creative Commons Attribution-Share Alike 4.0 International license](#)

In terms of foreign relations, Fiji has been in the process of strengthening ties with other Pacific Island Nations through the [Pacific Islands Forum](#), currently [meeting in Tonga](#). Fiji has a lot of balls in the air to juggle. Relations with the smaller island nations should be the easiest, they all have a lot of common interests.

Dealing with larger players, however, is more of a challenge. [Australia](#) is effectively the regional power and Fiji has [aligned itself with Australia in a military alliance](#). This could help stabilize Fiji by providing an incentive not to invite Australian military intervention (Australia has a [competent military](#)) should Fijians try extra-constitutional political change.

Another big player in the neighbourhood is China, the Fijian prime minister [has expressed admiration](#) for the Chinese economic development but is [wary of too close ties](#) to the Asian behemoth. Of course, if China gets too closely involved with Fiji, this could invite intervention from either [Australia](#) or the [United States](#). Small nations have tread carefully when dealing with larger countries. Geopolitics can be a rough game.

That kind of wraps things up with this short look at Fiji. Follow up on the links if any of this interests you.

Standard Caveat

The purpose of my weblog postings is to spark people's curiosity in geology. Don't entirely believe me until you've done your own research and checked the evidence. If I have sparked your curiosity in the subject of this posting, follow up with some of the links provided here. If you want to, go out into the

field and examine some rocks on your own with the help of a good field guide. Follow the evidence and make up your own mind.

In science, the only authority is the evidence.