

Fiji

A Country Profile



January 1980

Office of Foreign Disaster Assistance
Agency for International Development
Washington, D.C. 20523



OFDA COUNTRY PROFILES: APRIL 1980

AFRICA

Cape Verde
Chad
Djibouti
Ethiopia
Mali
Mauritania
Niger*
Sahel Transportation Survey
Senegal
Somalia
Upper Volta
Zaire

ASIA

Bangladesh
Burma
India
Indonesia
Malaysia
Nepal
Pakistan
Philippines

CARIBBEAN

CARICOM Regional Profile
Dominican Republic
Haiti

LATIN AMERICA

Bolivia
Chile
Ecuador
El Salvador*
Guatemala
Honduras
Nicaragua
Peru

NEAR EAST

Turkey

SOUTH PACIFIC

Fiji
Tonga
Western Samoa

INDIAN OCEAN

Island Countries of the
Indian Ocean *

* in preparation

FIJI: A COUNTRY PROFILE

prepared for

The Office of U. S. Foreign Disaster Assistance
Bureau for Private and Development Cooperation
Agency for International Development
Department of State
Washington, D. C. 20523

by

Evaluation Technologies, Inc.
Arlington, Virginia
under contract AID/SOD/PDC-C-0283

The profile on Fiji is one in a series designed to provide baseline country data in support of the planning, analysis and relief operations of the Office of U. S. Foreign Disaster Assistance (OFDA). Content, scope and sources have evolved over the course of the last three years, and no doubt will continue to do so. The relatively narrow focus is intentional. To avoid redundancy, some topics one might expect to find in a "country profile" are not covered here.

If the information provided can also be useful to others in the disaster assistance and development communities, so much the better. Every effort is made to obtain current, reliable data; unfortunately, it is not possible to issue updates as fast as changes would warrant. A cautionary note, therefore, to the reader: statistics are indicators at best, and if names and numbers matter, the bibliography will point to a current source.

We invite your comments and corrections. Address these and other queries to OFDA, AID, as given above.

April 1980

TO:

COUNTRY PROFILE USER Dear _____.

Please use this form to note any changes, additions, corrections or suggestions you think would update and improve this country profile. Since our aim is to make these profiles as relevant as possible, your critique is essential and very much wanted. Return comments to Lucy Drobot, OFDA Country Profiles, Room 1262A.

NAME/OFFICE: _____ PHONE: _____ Date: _____

TOPIC

COMMENTS

TOPIC	COMMENTS

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1. General Information1.1 Geographic Codes

AID	882
FIPS	FJ
State region	EA

1.2 Country Names

Official	Dominion of Fiji
Local	Fiji
Short	Fiji

1.3 Calendar and Holidays

New Year's Day.....	January 1
Good Friday.....	*
Easter Monday.....	*
Mohammed's Birthday.....	June 3
Queen's Birthday.....	June 11
Sukuna Day.....	August 2
Fiji Day.....	October 10
Deepavah.....	October
Prince Charles' Birthday.....	November 14
Christmas Day.....	December 25
Boxing Day.....	December 26

* variable dates

Fiscal year

1.4 Currency (March 1980)

1 Fiji dollar (F\$) = US \$1.22

1.5 Time Zones

EST +17; GMT +12

1.6 US Mission to Fiji and Staff (October 1979)

Embassy of the United States
 31 Loftus Street
 P.O. Box 218, Suva
 Tel: 23031; Telex: 2255

Ambassador.....John P. Condon
 Deputy Chief of Mission.....Linda C. Stillman
 Consular Section.....James Webb, Jr.
 Administrative Section.....Christopher W. Runckel
 Agency for International Development....Robert V. Craig
 Public Affairs Officer.....R. Don Crider

1.7 Sister Cities

None

1.8 Host Country Mission and Staff in US (August 1979)

Chancery of the Dominion of Fiji
 1629 K St., N. W., Suite 520
 Washington, D.C. 20006
 Tel: 296-3928

Ambassador.....Berenado Vunibobo C.B.E.
 Counselor.....Narendra P. Singh

1.9 Treaties and Agreements

Consuls
 Extradition
 Investment Guaranties
 Peace Corps
 Postal Matters
 Property
 Telecommunication
 Trade-Marks
 Visas

1.10 International Organization Memberships

U.N. and several specialized agencies, South Pacific Forum, the Commonwealth, Asian Development Bank, South Pacific Commission, South Pacific Bureau for Economic Cooperation (SPEC), EEC, ILO, IMF, IBRD, IDA, G-77, GATT, ICAO, ISO, ITU, associate member of Economic and Social Commission for Asia and the Pacific.

1.11 Travel and Visa Information

Passport and onward/return ticket required. Visa issued on arrival for stay up to 4 months; can be extended 2 months. Check Fiji Mission to the UN, 1 United Nations Plaza, New York 10017, for specific requirements.

Cholera immunization required of travelers from affected areas. Yellow fever certificate required of travelers one year of age and over arriving by air from infected areas. Smallpox vaccination required of air travelers one year of age and over arriving from a country any part of which is infected.

1.12 Ethnic and Sociocultural Groups

Original inhabitants, Melanesians with some Polynesian admixture, make-up 44% of population. Indians, first introduced in 1870's by British as laborers in sugar industry, now constitute a majority (about 50%) of population. Remaining 6% includes Europeans, part-Europeans, Chinese, and other Pacific Islanders.

A majority of Indians are rural, providing bulk of labor for sugar cultivation in western Viti Levu, Rewa Valley, and northern Vanua Levu; most others reside near urban centers, and are employed in services, small businesses, and professions.

Fijians are more widely and evenly scattered in all rural areas and are only inhabitants of outer islands. The majority of Fijians are subsistence farmers, although there is a small number who play an important role in government.

Europeans and Chinese are overwhelmingly urban, mostly in managerial and executive positions.

No nationally integrated social structure in Fiji. Divergent cultural ideals/stereotypes constitute a potential threat to national unity. Traditional Fijian society was community-centered and controlled by conservative and authoritarian hereditary leaders. Loyalty, obedience and reverence were preferred character traits. Personal wealth used for ceremonial display (communal good) rather than material gain. British philosophy of indirect rule through Council of Chiefs (no interference in daily lives of people) resulted in few changes in value system. Fijians found military and police roles congenial insofar as they paralleled traditional values.

In contrast, Fijian Indians were drawn from many different areas in subcontinent, generally emigrated as individuals rather than as families, though British agreed to ratio of 40 females/100 male immigrants. Conditions of employment in Fiji encouraged rapid breakdown of most caste distinctions and rewarded individual initiative and hard work. Since land ownership was closed to them, Indians saw wage employment and trade as only avenues of progress. Indian culture in Fiji values individual effort and acquisition of material wealth. Lack of middle class in traditional Fiji resulted in new trade and entrepreneurial roles being filled by Indians and Chinese.

At present many Fijians regard Indians as acquisitive foreign interlopers, while Indians type Fijians as ignorant and indolent. Social relations are formal; communities separate. Indians feel Fijian ownership of land and control of political process renders them second-class citizens, but have not been able to alter political balance of power.

1.13 Languages

Official language - English.

Most Fijians speak Bauen dialect of Indigenous Fijian (Melanesian) language; most Indians speak Hindustani, a locally developed form of Hindi.

1.14 Religion

Most native Fijians are Christians; major sects are Methodist (85% of Fijian population) and Roman Catholic (12%). About 70% of Indian population is Hindu, 25% is Muslim.

11.15 Education and Literacy

An estimated 95% of children 6-13 years attend school. Literacy rate is estimated at between 75 and 85%.

2. Government

2.1 National Government

Independent nation within British Commonwealth. Governor General, appointed by British monarchy, in turn appoints as Prime Minister the leader of majority party in House of Representatives, and, on recommendation of Prime Minister, a Cabinet of Attorney General and 12 ministers. Besides 12 cabinet members there are 7 Ministers of State.

A 22 member Senate consists of 8 Senators appointed by Council of Chiefs, 7 by Prime Minister, 6 by leader of the opposition, and one by Council of Rotuma. Half the members are appointed every three years for 6 year terms.

The 52 member House has 27 members (12 Fijian, 12 Indian and 3 general) elected from communal rolls (separate rolls for 2 major ethnic groups as well as general communal roll for European and Chinese) and 25 members (10 Fijian, 10 Indian, 5 general) elected from national rolls (all races vote together).

Independent judiciary includes Court of Appeals and a Supreme Court under Chief Justice appointed by Governor General.

2.2 Political Parties and Issues

The multiracial Alliance Party won 36 of 52 House seats in September 1977 elections. The largely Indian based National Federation Party split into two factions following an earlier election in the spring.

Long-standing issues are the Indians' appeal for "one-man, one vote" in electoral process and for changes in the present land tenure system which denies them land ownership.

2.3 Regional Organization

Four divisions, each headed by Commissioner appointed by Prime Minister: Central (headquarters at Nausori) includes Tailevu, Naitasiri, Rewa, Serua and Namosi; Eastern (Levuka) includes Lau, Lomaliviti, Kadavu and Rotuma; Northern (Labasa) includes Bau, Macuata and Cakaudrone; and Western (Lautoka) includes Ba, Nadroga/Navosa and Ra. Commissioners represent Minister for Fijian Affairs within their districts; constitute

most important link between Fijian Administration (that part of administrative system having jurisdiction only over ethnic Fijians) and general government. Commissioners assisted by district officers. Division broken down into 14 provinces governed by councils comprising elected majority and several appointed chiefs. Councils make by-laws, draw up own budgets, levy taxes, share in advisory function of Council of Chiefs (overlapping membership), and have legislative role in Fijian Administration. An executive head of each council, the roku tui, is appointed with approval of Fijian Affairs Board (head of Fijian Administration).

Suva, Lautoka and eight other towns are administered by local councils. Robi Island and Rotuma are Fiji dependencies.

2.4 Major Government Figures (February 1980)

Governor General.....	Cakobau, George, Ratu Sir
Prime Minister.....	Mara, Kamisese, Ratu Sir
Deputy Prime Minister.....	Ganilau, Penaia, Ratu Sir
Attorney General.....	Deoki, Andrew
Min. for Agriculture & Fisheries.....	Mavoa, Jonati
Min. for Commerce & Industry.....	Ramzan, Mohammed
Min. for Economic Planning.....	
Min. for Education.....	Sikivou, Semesa
Min. for Fijian Affairs & Rural Development.....	Ganilau, Penaia, Ratu Sir
Min. for Finance.....	Walker, Charles
Min. for Foreign Affairs.....	Mara, Kamisese, Ratu Sir
Min. for Health.....	Beddoes, Edward James
Min. for Labor, Industrial Relations & Immigration.....	Tonganivalu, David, Ratu
Min. for Tourism, Transport & Civil Aviation.....	Vakatora, Tomasi
Min. for Urban Development & Housing.....	Leweniqila, Militoni
Min. for Works & Communications.....	Nasilivata, Livali
Min. of State for Cooperatives.....	Waqanivavagi, Sakiasi
Min. of State for Lands & Mineral Resources.....	Clark, Bill

3. Disaster Preparedness

3.1 Host Disaster Plan

Disaster relief organization is centered in Emergency Service Committee (EMSEC) of Ministry for Home Affairs. EMSEC coordinates ministerial, departmental, and agency disaster plans; maintains essential supplies and services during emergency; advises cabinet on necessary supply and service maintenance measures; directs relief work of armed forces and police.

Cabinet Minister for Home Affairs chairs committee; permanent Secretary for Home Affairs is Deputy Chairman; permanent secretaries for Finance, Transport, Works, Telecommunications, Public Service Commission, Health, Information, Commissioner of Police, heads of welfare and Red Cross organizations are members and senior Assistant Secretary for Home Affairs acts as secretary.

Parallel EMSEC's exist in each of the administrative divisions, chaired by divisional commissioners, with membership comprising divisional heads of departments, heads of welfare and Red Cross organizations and divisional chiefs and the divisional planning officers as secretaries. The same structure prevails on the district level. NB - further detail in country and divisional plans, on file at OFDA.

EMSEC Procedures:

Deputy Chairman maintains and updates ministerial and departmental plans; oversees operations and manning of EMSEC control center, located in Ministry of Home Affairs. (An information room is also maintained there during an emergency). Permanent Secretary for Finance controls emergency finance and supervises stocks and distribution of foodstuffs and essential commodities. Permanent Secretary for Works monitors holdings and controls distribution of essential petroleum products. Other members are responsible for support from their respective departmental resources.

Specific responsibilities are as follows:

Food	- Ministry of Finance
Medical	- Ministry of Health
Military	- Royal Fiji Military Forces
Movements	- Controller of Transport
Petrol	- Public Works Department Head Office
Police	- Royal Fiji Police
Telecommunications	- General Post Officer, Headquarters
Works	- Public Works Head Office

These officers report to control center, maintain liaison with their divisional representatives and provide information to their respective agencies.

Control center maintains a log of incoming and outgoing messages and resulting actions; a record of information concerning function of center; format for sitreps and relief system; alert methods and criteria for opening and closing center.

Note - EMSEC deals only with emergency situations. Long-term relief and reconstruction is responsibility of Prime Minister's Hurricane Relief Committee (PMHRC) with which EMSEC has close ties. PMHRC located in Min. for Fijian Affairs and Rural Development; Permanent Secretary is Josua Cavalevu.

3.2 US Plan

American mission is small; functions would probably be limited to reporting, coordination with Fijian authorities, consular and administrative functions and clerical support. Latter functions also apply to Tuvalu, Papua-New Guinea, New Hebrides and Solomon Islands. One telex is available at Embassy. Peace Corps staff (2), director and program and training officer, plus 180 volunteers scattered throughout islands, might be available.

US Embassy Office
31 Loftus St., Suva
P.O. Box 218, Suva
Tel: 23031; Telex: 2255

Peace Corps Office
249 Waimanu Rd., Suva
P.O. Box 1094, Suva
Tel: 311344

3.3 US Contact List

Bernard J. Fennell
Second Secretary, PAO

7 Disraeli Road
Suva

23-164

Peter D. Eicher
Third Secretary
MDRO

48 Lovoni Road
Tamauva

383-086

Connie A. Wagner FSS-7	115 Prince's Road Tamavua	383-516
John Dalessio Peace Corps Director	50 Beach Road Suva	27-321
Kenneth Baer Peace Corps Program and Training Officer	Vetala Street LAMI	361-617

See also US Mission Staff, section 1.6.

3.4 Host Contact List

Operations Room-EMSEC Department of Home Affairs Government Buildings		211404
Josua Cavalevu (Perm. Sec'y MFARD) Operations Room for PMHRC		23930
Moses Bquadromo Secretary for Home Affairs Government Buildings	Office Home	211210 361737
Emori Tudja Assistant Secretary, Home Affairs Government Buildings	Office Home	211403 28541
Ratu Sir Kamisese Mara Prime Minister Government Buildings	Office Home	211201 311629
Wate Tagilala Controller of Government Supplies Walu Bay	Office Home	311388 381590
W. Thompson Perm. Sec'y for Finance Government Buildings	Home Office	27231 211475

Berenado Yunibobo Secretary for Works Government Buildings	Office Home	211220 381054
Robert D. Dods Secretary for Transport Government Buildings	Office Home	211350 24562
Dr. Shiu Chand Ramrakha Secretary for Health Government Buildings	Office Home	211412 311568
Joseph W. Sykes Chairman, Public Service Commission Ratu Sukuna House, Suva	Officer Home	211480 23327
Col. Paul Manuelli Commander, Royal Fiji Military Forces Mead Road, Suva	Office Home	22801. Ext. 1 383484
T.A. Handford Commissioner of Police Joske Street, Suva	Office Home	311222 25597

3.5 Other Contacts

John Tucker	Australian High Commission	25495
	Home	26396
Brian Murray	New Zealand High Commission	311422
	Home	361859
Red Cross	Mss. Douglas, Leys, and Ongtas	24585
UNDP	Joske Street	312500

UNDP covered by South Pacific Regional Office located in Manila:
Metropolitan Bank, 6813 Ayala Ave., Makati, Rizal. Cable: UNDEVPRO
Manila; telex: RCA 7222250; tel: 80-40-11.

SPEC (regional) - likely dollar donor.

3.6 US Mission Assessment

Recent Fijian relief efforts have been effective and will probably be more so in future. But, due to Fiji's small size and remote location, maintenance of large stocks of emergency supplies is impossible and some reliance on outside aid is necessary. New Zealand and Australia are most logical sources. On local level, both Australian and New Zealand embassies have larger staff than US, are likely to have more expertise, especially in area of assessment. US has been vital aid donor in recent emergencies. (Total contribution by USG following Cyclone Meli March 1979 was in excess of \$350,000.) Other diplomatic missions unlikely to play large role in relief effort, UN has been significant donor, though slow and inefficient. (50 UN professionals in Fiji; none with disaster relief orientation.) Future possibility of UNDP regional office being relocated in Suva, which would presumably change quality of assistance.

Probable requests include food, transportation equipment (especially for water transport), heavy equipment and water tanks, smaller disaster supplies, such as tents and blankets, as needed if disaster affects more than 10,000 people or causes wide-spread damage. USG lent 3,000 gallon-capacity portable water tanks in 1972 emergency; supplied 300 tents and tent flies, 2600 plastic 5 gallon water containers, 400 double decker cots, and 600 cotton blankets following 1979 hurricane.

Medical storage facilities in some areas are limited or non-existent, and storage of large amounts of perishable medical supplies might present a problem.

3.7 Host Resources

Food Stockpiles:

Fiji plan calls for food stockpiles sufficient to feed 10,000 people for one month; to date target has not been achieved. All stockpiled food is non-perishable, thus immediate need is likely for such staples as flour and rice, which cannot be stored for long periods of time in Fiji. Three distribution centers: Nadi, Labasa, and Suva. District commission offices in Nausori, Lautoka, Levuka, and Labasa also possible distribution centers; smaller and more remote government offices could be called upon for the same purpose. No large private stocks of food in country; largest wholesale and retail outlets normally have one to two weeks supply on hand.

Acceptable foods include: flour, rice, skim milk or milk biscuits, canned meat and fish, margarine, sugar, tea, and yellow split peas. (Based on previously donated supplies.) Fijian staples and accompaniments: taro, yam, cassava and leafy vegetables, coconut, pork, fish; acceptable alternatives: rice, wheat-flour, dehydrated potato. Indian staples and accompaniments: rice, wheat-flour and pulses and vegetables; acceptable alternatives: maize flour, millet, sorghum.

Note: importance of airlifting any supplies from the United States. Lead time of three to four months necessary for surface shipment of relief supplies from US.

3.8 Transport Logistics

Getting relief supplies to the actual scene of a disaster is likely to be one of the most difficult aspects of any relief operation in Fiji. Roads are few and poor; Kadavu Island, one of largest, has no roads. During a hurricane many essential ones likely to be impassable. Most roads outside towns are unpaved. Few alternative road routes exist. Coastal roads punctuated by many small bridges that could wash out during heavy flooding. Some important roads covered in water during normal high tides.

Air transport facilities are strictly limited. Several small planes and a few helicopters belonging to Fiji Air Services could probably contribute to relief efforts for a limited period of time; Turtle Airlines also has float planes. Use thus restricted to observation, communication, and carrying very small numbers of people; could not carry large amounts of supplies. Landing strips in most major towns (about 15 in all) are seldom hard surfaced and are suitable only for the smallest planes. Nausori Airport is better; the runway is paved and is capable of handling small jets (such as the BAC-111) and transports up to and including Hercules C-130's. Nadi Airport is Fiji's only major international airport; capable of handling jumbo jets and large transports.

For landing rights in government airports contact Nadi Airport directly for landing there, and Nausori Airport for all other government strips. Private strips can be used in emergency without prior consultation. Director of Civil Aviation, Mr. Varley (tel: 211510), will help with any necessary arrangements.

Diplomatic clearance required for entry of any American military aircraft carrying relief supplies. Embassy should be able to obtain it from the Assistant Secretary for Foreign Affairs (Protocol), Mr. Musuka Tabete, telephone 21160. Requests for clearance should include aircraft type, serial numbers, call signs, number of officers and airmen crew members, and estimated time of arrival in Fiji in Zulu time.

Privately Owned Airstrips

<u>Location</u>	<u>Length of Runway</u>	<u>Comments</u>
Malololailai	640 m.	
Ba	640 m.	poorly maintained, perhaps unfit
Vatukoula	730 m.	grass, very well drained and maintained, could handle 50,000 lb. plane
Wakaya	n.a.	
Deuba	600-700 m.	
Korolevu	670 m.	has been unsuitable for some months
Natabola	600 m.	very rough
Ura (southern Taveuni)	730 m.	emergency landing ground only
Nadi		suitable for large jets and transports
Nausori		suitable for small jets (BAC-111) and transports up to and including Hercules C-130. Airport liable to flooding in heavy rains
Labasa	1000 m.	sealed, capable of handling Hercules C-130 in emergency
Savusavu	1000 m.	unsealed; liable to flooding

<u>Location</u>	<u>Length of Runway</u>	<u>Comments</u>
Taveuni-Matei	1000 m.	unsealed
Lakeba	760 m.	unsealed; fuel available
Ovalau-Bureta	750 m.	unsealed, no services

Much of the distribution of relief supplies would have to be done by sea. Watercraft are in sufficient supply in the Suva and Lautoka areas. The Levuka area may be able to enlist the support of small tuna-fishing fleets if necessary. Other areas likely to be short of watercraft for relief work. During the 1972 hurricane supplies requested by GOF included landing craft, high speed shoal draft jet boats, high speed inflatable boats, outboard motors, water barges, and moderate draft tug boat. Probably similar supplies will be needed in future emergencies.

3.9 Communications

During emergencies, Post and Telecommunications Emergency Control Center will be established in the Wireless Telegraph Superintendent's Office on 4th floor of General Post Office Headquarters building in Suva. Tel: 019, ext. 346; and 312985.

Posts and telecommunications radio operators staff 3DP on 24-hour basis at all times to monitor international shipping distress frequencies. Search and rescue procedures are documented and used several times each year; staff's emergency experience is extensive.

P & T Emergency Control linked with EMSEC via 3 separate telephone routes. Police emergency high-frequency pack set radio transceivers available for EMSEC use, as is one direct teleprinter link with GPO.

P & T staff in outlying stations call control center at predetermined times; there, director of telecommunications correlates information and relays it to appropriate officials in EMSEC.

Outlying stations receive complete overhaul of engines, radio sets, etc. and new fuel supply before each hurricane season.

High-frequency back-up facilities are being installed in key locations. High-frequency message relays through regional services and circuits to New Zealand through Tamavua could co-ordinate international aid. On local level P & T has close connections with police mobile radio

units. June 1976 telecommunication within South Pacific region detailed in Muddle's paper on telecommunication (see Bibliography).

Selected P & T instructions:

Emergency high-frequency back-up circuits to the microwave and VHF links will be maintained at the following stations:

Suva	Levuka
Labasa	Sigatoka
Savusavu	Dilo
Taveuni	Vunisea (MET)
Lautoka	Nabouwalu (MET)

The back-up circuit will operate on a frequency of 5090 kHz for day time operation and 3185 kHz for night operation.

In case of a failure of the main microwave and VHF links serving one or other of the above-mentioned stations the post master of the district telecommunications engineer concerned will immediately open up his back-up high-frequency service and report to Suva. He will remain on standby until instructed to stand down by Suva.

Messages concerning the failure of the main microwave and VHF links will take precedence over all other traffic except lightning calls concerning the safety of life at sea or in the air.

In the event that the postmaster of the district telecommunications engineer is unable to contact Suva by the emergency high-frequency circuit, he will use any possible means at his disposal (e.g. by aeradio circuits) to pass a message to Suva stating the situation in respect of the link.

3.10 Equipment

No surplus of heavy equipment in Fiji; would have to be imported. US donated 21 trucks to hurricane relief in 1972. Six of these are now maintained exclusively for relief work; others might be used in an emergency. Because of time required for shipment (about four months) the trucks were not put to optimum use in immediate relief operations. If the US donates heavy equipment in the future, it should be airlifted to Fiji, if possible.

3.11 Early Warning System

Hurricanes:

Fiji weather forecasting service at Nadi monitors tropical storms; if one appears dangerous, various special bulletins are issued:

Tropical cyclone alert: informs community of possibility of warnings to follow.

Gale, storm or hurricane warnings: designated by international convention according to maximum wind force expected. (Gale 8,9; storm 10,11; hurricane 12.)

Radio Fiji broadcasts alerts and warnings on receipt as special bulletins; repeats them every half hour until they are cancelled or replaced. Suva radio 3DP broadcasts all warnings on receipt; repeats hurricane warnings by MF radio telegraphy at 18 minutes past hour until cancelled or replaced; repeats all warnings by high-frequency radiotelephony at 3 minutes past the hour.

Visual signals, designating alert or warning status, are displayed in each division: yellow flag - T.C. alert, black storm or hurricane warning, green - end of alert or warning.

Recorded weather bulletins available on telephone Suva 25671 contain current alert or warnings.

Weather forecasting center, Nadi; telephone 72500 ext. 315, available for essential consultation.

For additional detail see Fiji meteorological service, alerting and warning procedures for tropical cyclones.

Earthquakes:

Network of three local seismic stations (installed in 1960's by Lamont-Doherty Geological Observatory) monitors active seismic zones. Other seismographic stations in southwest Pacific: New Hebrides, French Polynesia, New Caledonia and possibly Papua-New Guinea.

Tsunamis:

International tsunami warning system based in Honolulu, Hawaii provides effective warning of tsunamis originating as result of strong Pacific earthquakes. Unfortunately, due to travel speed of tsunami, those

originating from nearby earthquakes may arrive before warning. Fiji's present tsunami warning system requires Director of Mineral Development to call in warnings over radio after strong local earthquake occurs. As yet no back-up system exists.

3.12 Volags

The Red Cross: Fiji Red Cross, 193 Rodwell Road, Suva. Tel: 3424 585. The Red Cross maintains liaison with EMSEC and provides emergency assistance as possible. After 1972 hurricane it operated rehousing program. Following Cyclone Meli (1979), Fiji Red Cross provided clothing, blankets, nutritional drinks etc., in emergency relief that was expected to last 4-6 weeks.

Societe de Saint Vincent de Paul (SVP): Kwong Tiy Ltd.; POB 60, Suva. WCC: Fiji Council of Churches, Epworth House, POB 35, Suva.

<u>Agency</u>	<u>Intl/Local Staff</u>	<u>Programs</u>
AFL-CIO	n.a.	Ind Dev
The Carr Foundation	n.a.	Comm
Darien Book Aid Plan, Inc.	n.a.	Equip & Mat Aid
The English-Speaking Union of the United States	n.a.	Ed
Foundation for the Peoples of the South Pacific, Inc.	1/3	Ed; Food Prod & Ag; Med & PH
The Salvation Army	1/?	Food Prod & Ag; SW
Seventh Day Adventist World Services, Inc.	n.a.	Equip & Mat Aid
Society of St. Columban	33/	CHP; Ed; Equip & Mat Aid
Stelios M. Stelson Foundation, Inc.	n.a.	Equip & Mat Aid
United Methodist Committee on Relief	n.a.	CD

<u>Agency</u>	<u>Int'l/Local Staff</u>	<u>Programs</u>
World Rehabilitation Fund, Inc.	n.a.	Med & PH
Young Men's Christian Association of the US	1/280	CD; Ed; SW
Young Women's Christian Association of the US	n.a.	CD

Key

Comm	Communications
CD	Community Development
CHP	Construction, Housing, Planning
Coop	Cooperatives, Credit Unions, Loans
Ec & Dev Pl	Economic and Development Planning
Ed	Education
Equip & Mat Aid	Equipment and Material Aid
Food Prod & Ag	Food Production and Agriculture
Ind Dev	Industrial Development
Med & PH	Medicine and Public Health
Nutr	Nutrition
Pop & Fam Serv	Population and Family Services
Pub & Bus Adm	Public and Business Administration
SW	Social Welfare
Women	Women
Youth	Youth

3.13 Disaster Types and History

Strong earthquakes have been felt along Suva-Mbengga seismic zone in past few decades, that of 1953 (magnitude 6.5) and accompanying tsunami caused considerable damage and 8 deaths in Suva and Radavu. Hurricanes and tropical cyclones are most common natural disaster.

Disaster History

<u>Disaster</u>	<u>Location</u>	<u>Date</u>	<u># Killed</u>	<u># Victims</u>	<u>\$ DMG</u>
Cyclone	Kadavu & S. Lau Group	12/09/73	74	5,000	0
Hurricane	Much of Nation	10/21/72	3	85,000	22,500
	Savusavu & Bau	4/03/73	3	0	0
	Lau Group	1/30/75	0	23,000	1,000

4. Population

4.1 National Demographic Characteristics

The 1976 census reported a population of 588,068. Estimates of population size in 1979 range from 615,000 to 620,000. The natural growth rate fell from 3.3% per year (early 1960's) to 2.5% (1974) as a result of an official family planning program which reduced fertility by about one-third; growth rate further moderated by emigration (averaging about 4,000 persons/year in recent years) to an actual growth rate between 1.6 and 1.8% in 1974. 41% of the population was under 15 years in 1976. Population density: 32.3 persons (sq. km.).

4.2 Regional Distribution

About 90% of the population resides on two main islands of Viti Levu and Vanua Levu, with by far the greatest concentration on Viti Levu. With increasing rural-urban drift, 37% of population considered urban by 1976.

Regional Population (1973)

Greater Suva	145,000	Kadavu Island	8,248
Tautoka/Vuda	48,588	Lau Group	15,708
Ba/Magodroa	47,216	Tomaiviti Group	14,228
Tavua	24,272	Yasawa Island Group	4,504
Nadi/Nawaka	34,048	Rotuma Island	3,028

Source: Pacific Islands Yearbook, 1978.

4.3 Urban Areas

Cities and Towns (1977)

Suva City	63,628	Rakiraki	3,755
Tautoka City	22,672	Navua	2,568
Nadi	6,938	Tavua	2,144
Vatukoula	6,425	Sigatoka	1,816
Ba	5,917	Savusavu	1,754
Nausori	5,262	Tavuka	1,397
Labasa	4,328	Karavon	290

5. Health, Nutrition, and Housing

5.1 Overall Health and Nutrition Status

Fiji is free of most tropical diseases including malaria. However, dengue hemorrhagic fever is widespread, outbreaks having occurred in recent years. Filariasis is also prevalent. Infant mortality rate is generally low; most common causes of illness enteric, especially in western provinces although incidence there is declining. Control measures have reduced incidence of tuberculosis, once a serious health problem, and eliminated polio and diphtheria. Measles is widespread but benign. Trachoma, hepatitis, gonorrhoea also present; typhoid rarely occurs. Tetanus is rare and has been virtually eliminated in newborns through program immunizing mothers. Diabetes is a special health problem.

Malnutrition is rare, though anemia is common in pregnant women. Goiter foci in Segenlika Valley.

5.2 National Vital Statistics

Birth/1000 population, 1976	-	29
Death/1000 population, 1976	-	4
Infant deaths/1000 live births, 1974	-	41 (a)
Life expectancy at birth, 1973	-	70

(a) Rate considerably higher than those of previous few years which average about 23, as reported by World Health Statistics Annual 1978.

Source: Bureau of the Census. US Department of Commerce. World Population 1977: Recent Demographic Estimates of the Countries and Regions of the World.

5.3 Health Services and Facilities

Ministry of Health in charge of medical services; most health institutions are government maintained. There are 4 main health divisions: Western, Central (Viti Levu), Northern (Vanua Levu), and Eastern (small islands), each headed by a Divisional Medical Officer and each having a major hospital providing in-and-out patient care and referral services.

Colonial War Memorial Hospital in Suva is largest (330 beds), most comprehensively staffed; other divisional hospitals are located in Lautoka (new 310 bed hospital completed 1975), Labasa (72 beds), and Levuka (40 beds). 11 subdivisinal, 3 area, 4 specialized hospitals (tuberculosis and psychiatric), and 44-45 health centers, providing curative and preventive services, complete public health network. Private hospitals are few: Methodist mission hospitals in Ba; Catholic maternity hospital in Naiserealagi.

5.4 Health Personnel

Population per physician was 2300 in 1975. Latest figures available (1971) on health personnel give following breakdown:

Physicians	- 256	Physiotherapists	- 8
Dentists	- 40	Medical laboratory technicians	- 28
Pharmacists	- 39	Medical radiological technicians	- 19
Veterinarians	- 4	Sanitary engineers	- 3
Midwives	- 229	Health inspectors	- 29
Nurses	- 618	Medical statisticians	- 1

Source: UN World Health Statistics Annual. Vol. III, 1977.

Fiji School of Medicine trains students from other Pacific Islands as well as from Fiji to become medical practitioners. Since 1975 graduates may enter private practice in Fiji after minimum 6 years government service.

5.5 Diet Summary

Staples: Indian - rice, wheat flour prepared as "roti".
Fijian - root crops. Dalo (taro) preferred, cassava, sweet potatoes, yams also used. Consumption of rice by Fijians increasing as is bread in cities.

Meats: Indian - chicken and mutton only in small amounts;
Fijian - beef and pork, canned meat in cities. Pork used by Fijian for ceremonial feasts.

Poultry: substantial and increasing demand for chicken (broilers) and eggs, both for local and tourist consumption.

Dairy: milk, butter (often as ghee) growing in importance

Fish: most common source of animal protein, eaten by both Indian and Fijian population. Local catch includes mullet, mackerel, half beak, pony fish, snappers, bream, tuna. Canned mackerel is popular.

Fruits &

Vegetables: Indian - eggplant ("baigan"), beans, cabbages, okra ("bhindi"), potatoes, tomatoes, carrots, some pulses ("dhal");
Fijian - green vegetables ("bele" and "rourou"), tomatoes, cucumbers, maize, chillies. Bananas, including plantains, oranges, coconuts, melons are common fruits.

Beverages: tea is popular with both Indians and Fijians. National beverage, kava or yaqona, made from pulverized roots of indigenous shrub soaked in water, has slightly narcotic effect and is drunk on ceremonial and social occasions.

Common

Western (most frequently purchased in cooperative stores):
Foods: bread, sugar, condensed milk, flour, biscuits, salt, dripping, onions, baking powder.

5.6 Utensils and Cooking Methods

Coconut milk is frequently used as cooking liquid; meat and vegetable curries are favored by Indian population.

Fijian traditional cooking method consists of wrapping food in banana leaves, placing in pit with heated stones, covering with earth for several hours, eating lukewarm. Use of earth oven now limited mainly to ceremonial occasions.

Traditional Fijian households have kitchen with hearth for cooking which is separate from living house. European style pots (cast iron in 1950's) and crockery are replacing traditional earthenware vessels..

5.7 Housing and Settlement Types

Although type varies somewhat with location, traditional Fijian dwellings are built of local materials with tied or woven walls and thatched roof on raised earth foundation. Mats cover floors of grass or

coconut leaves. Houses of thatched or timber walls with corrugated iron roofs have become common. Typical Fijian village is built around an open green.

Indian sugarcane farmers often use traditional building materials though typical dwelling (in 1960's) is one story iron or frame house on slightly raised foundation.

All main towns have fully or partly treated water supplies; many villages, schools, and hospitals in rural areas have untreated supplies.

6. Economy

6.1 Overview of Economy

Fiji's economy has shifted in the past two decades from a predominantly rural agricultural one (led by sugarcane farming) to an increasingly urban service-oriented one. Dramatic growth in the services sector between 1966-1975, largely from tourism, increased its share in GDP to two-thirds by 1973, while agriculture's share fell from 33% in mid-1960's to about 20% in 1975. Stagnation in agricultural production and rapid growth in tourism encouraged rural to urban migration. Real GDP growth averaging 7.7% per year 1963-1973 slowed to 1.4% annually 1974-77 as the energy crisis and world-wide recession in mid-1970's affected tourism. Growth of employment opportunities has not kept pace with growth of labor force; unemployment rate stood at not less than 10% in 1977. Inflation, fed by high prices for oil and other imports and higher wage demands, reached 13% in 1975 but was reduced to 7% in 1977. Distribution of benefits in Fiji's generally favorable economic situation is uneven, inter-ethnic differences marked: an estimated 42% of population employed in agriculture receive about one-fourth of total income; 58% in non-agricultural activities receive three-fourths. Employed indigenous Fijians generally receive lowest incomes, Indians next; Europeans and Chinese at top of scale.

Goal of recent development plans to reduce reliance on sugar and tourism by expanding industry unsuccessful. The development of manufacturing, limited mainly to processing of agricultural products (about half is sugar milling) for local and export markets, is hampered by small size of domestic market, remoteness from world markets, lack of skilled manpower, and high wages; its contribution to GDP remained at about 10% 1973-77. Best prospects for sector appear to be in processing imported materials for re-export in regional cooperation effort, and in increased manufacturing of local products for export and import substitution (e.g., wood products, coconut and sugar by-products, canning of fruits, vegetables, fish). Though GOF took control of sugar industry in 1973, both manufacturing and tourist sectors are foreign dominated. Leakage in tourist spending estimated at 55% in form of imports or profit repatriation.

Gold has been principal mineral but high grade ores are being depleted with reduced production. Exploitation of possible copper reserves in Namosi holds most promise for mining sector though benefits to economy not expected until late 1980's.

Fiji's high import dependence has resulted in chronic trade deficits which, however, have been offset in balance of payments by capital inflows and net services. Gross international reserves in 1977 were equivalent to 7 months merchandise imports.

According to Asian Development Bank assessment, economic performance in 1977 was not expected to improve significantly in short term, but long-term prospects were thought to be good in view of Fiji's untapped land and marine resources provided GOF became more actively involved in production sectors. Major areas of growth for 1980's expected to be forestry, mining (if copper reserves prove exploitable), hydroelectric generation, and fisheries.

6.2 Key Indicators

GNP at 1976 market prices: \$660 million; \$1,150 per capita. Growth rates of GNP per capita (real) 1960-76 and 1970-76: 3.4% and 4.4%, respectively.

Source: 1978 World Bank Atlas. GNP at market prices rounded to US\$ tens of millions; GNP per capita rounded to nearest US\$ 10.

	<u>Gross Domestic Product (GDP)</u>		
	<u>1974</u>	<u>1975</u>	<u>1976</u>
GDP at current market prices (F\$ mn.)	450.0	536.0	596.3
GDP at 1968 factor cost (F\$ mn.)	196.6	196.8	201.8
Growth rate (%)	2.6	0.1	2.5
GNP at 1968 market prices (F\$ mn.)	220.2	219.1	223.9
Growth rate (%)	3.8	-0.5	2.2
Per Capita GNP (1) (US\$)	1,010	1,090	1,150
GDP (at 1968 factor cost) by industry (%)	100.0	100.0	100.0
Agriculture, forestry and fishery	19.8	19.9	20.1
Mining and manufacturing	11.0	11.1	11.6
Construction	5.0	4.4	4.1
Electricity and water supply	1.5	1.6	1.6
Transportation & communication	8.0	8.4	8.4
Commerce (including tourism)	22.9	21.6	21.1
Other services	31.8	33.0	33.1

(1) World Bank estimates. A multi-year based period (1974-1976) was used to derive the estimates.

Source: Asian Development Bank, Economic Report on Fiji, May 1978.

6.3 Imports

Imports increased at average rate of 4% per year between 1974-1977; terms of trade worsened as result of oil crisis in 1973. Consumer goods traditionally account for about one-third of imports. Primary food imports have grown at more than 10% per annum in recent years.

Imports by Value, 1977 (F\$ '000)

	<u>1st Quarter</u>	<u>2nd Quarter</u>
Food	11,542	13,277
Beverages & tobacco	947	1,049
Crude materials	556	585
Mineral fuels	10,749	13,857
Oils & fats	956	1,345
Chemicals	4,175	5,716
Manufactured goods	11,975	13,306
Machinery	12,847	14,240
Miscellaneous articles	6,606	7,874
Miscellaneous transactions	2,165	2,016
Total	62,518	73,265

Source: Asian Development Bank, Economic Report on Fiji, 1978.

6.4 Exports

Traditional exports - sugar, coconut oil, gold - dominate exports but share fell from about 76% of total in 1975 to about 69% in 1977. In diversification attempt, share of new export items - cement, veneer sheets, paints, and ginger - rose slightly from 5% in 1975 to 7% in 1977. More significant diversification expected as copper and pine resources are exploited. Re-export trade, involving mainly petroleum, fish, and electronic equipment, has shown fastest growth, from 18% to 24% (1975 to 1977).

Principal Exports (FOB)
(F\$. '000)

	<u>1976</u>	<u>Jan-Jun 1977</u>
Sugar		
Qty. MT (000)	250	44
Value	67,604	12,922
Coconut oil		
Qty. MT (000)	14	9
Value	4,564	5,409
Oil Seed, cake and meal		
Qty. MT (000)	4	3
Value	271	268
Gold		
Qty. kg.	2,045	678
Value	7,250	2,381
Cement		
Qty. MT	10	3
Value	305	157
Ginger		
Qty. MT	1,089	86
Value	637	54
Molasses		
Qty. MT (000)	72	26
Value	869	465
Bakery products		
Qty. kg (000)	752	305
Value	504	190
Cigarettes		
Qty. kg (000)	8	11
Value	39	24
Paints		
Qty. MT (000)	116	56
Value	203	114
Veneer sheets		
Qty. sq. m. (000)	1,421	1,514
Value	637	520
Lumber		
Value	953	255

At the end of 1976, five major trading partners with following shares: Australia 22%, UK 20%, Japan 11%, New Zealand 10%, US 4%. The share of Asian countries, including Japan, rose from 13% of total trade in late 1960's to about 22% in 1976. Regional trade still small - 2% in 1976.

7. Agriculture

7.1 Overview of Agriculture

Though traditional basis of economy, agriculture grew by only 1% during decade 1965-75. As a result of declining employment and production, food imports and rural to urban migration increased. When considering agriculture's potential for providing export earnings, employment, and import substitution commodities, revitalization of sector in Seventh Plan period (DP 7 - 1976-80) seen as important goal though one requiring major effort. Major issues: increase in land utilization; improvement in land tenure security (after special committee concluded that 10-year lease period without guarantee of renewal inhibited investment and land development); increase in production both for export and import substitution (by bringing more subsistence farming into commercial production, reviving sugar industry which declined after 1970, diversifying into other crops, and developing plan for achieving food self-sufficiency); expansion of support services.

Of total land area (1.8 million hectares), about 20% is arable, 80% suitable for grazing and forestry. Less than half of arable land, 10% of potential pastureland was being utilized in mid-1970's. About 83% of all land is communally owned by Mataqalis (sub-clans at village level); 17% is Crown or freehold land. About one-fourth of Mataqali land is leased, mainly for agricultural use to Indians who own only 2% of total land. Indigenous Fijians are generally subsistence farmers, cultivating small holdings in traditional manner on about 35% of harvested land.

7.2 Crops and Production

Sugar is principal crop, grown mainly on small holdings by tenant farmers. Government-owned Fiji Sugar Corporation, Ltd. controls milling and marketing; provides inputs, research, transport. Total production was about 355,147 tons in 1977, reflecting some recovery of industry. Seagaga Project (25,000 acres being transformed into sugar cane area near Labasa, Veñua Levu) contributed 104,000 tons. 318,049 tons were exported. More than half of exports in recent years have gone to EEC (mainly UK) under terms of Lome Convention.

Production of coconuts, traditional second crop, has declined due to old trees, hurricane damage, drought, widely fluctuating prices, and poor crop management. About 60% of production comes from small holders on Vanua Levu and outer islands. Showing some recovery since 1975, production reached 28,000 tons in 1977. Most exports are in form of oil.

GOF emphasizing expansion of other crops for export such as ginger, passion fruit (approximately 910,000 kg. of fruit were expected in 1977 from about 100 ha), cocoa, and timber. Small quantities of fruits and vegetables (yams, dalo, melons, beans, tomatoes, garlic, and eggplant) are also exported. Rootcrops - dalo, cassava, yams - are important food crops.

Important in achieving goal of food self-sufficiency (food import bill doubled between 1971 and 1976) are programs promoting rice, fish, and beef production. Rice (largest imported food item - 17,000 tons 1977) is grown on about 10,000 ha. (only 7% irrigated) with low productivity, mainly in Rewa Valley near Suva and in Navua district. Progress slow in government efforts to expand irrigated area, raise yields on rainfed areas.

Fiji's extensive marine zone provides good potential for development of fishing industry which has operated traditionally on subsistence level. Though GOF operates tuna cannery in Levuka and supports commercial and local fishing operations, domestic demand is not presently met.

Domestic beef production declined and imports grew between 1973 and 1976 despite country's ample grazing lands. During DP7 period, two major development projects to boost beef production have been underway - both on Viti Levu. Projected growth of national herd to 181,000 head by 1980 and expected output of 3,700 tons of beef annually. Some 13,000 cows are raised for dairy products. With expanding poultry production, Fiji was self-sufficient in eggs, though not in poultry meat, in 1976.

Caribbean pine, planted on 74,400 hectares, to be harvested beginning in late 1980's; potential major export commodity. Native forests presently supply small timber trade.

7.3 Crop Dates

<u>Crops</u>	<u>Harvested period</u>	<u>Bulk of harvest</u>
Maize	Sep - Nov	n.a.
Rice	Feb - Jul	n.a.
Millet	Aug - Sep	n.a.
Sorghum	Aug - Sep	n.a.
Sugar cane	Jul - Jun	Jul - Dec
Sugar	Starting July	n.a.
Potatoes	Sep - Dec	n.a.
Sweet potatoes, taros & cassava	Whole Year	May - Oct
Vegetables	Whole Year (1)	n.a.
Dry beans	Sep (2)	Sep
Pigeon peas	Sep	Sep
Citrus fruit	May - Sep	n.a.
Bananas	Whole Year	n.a.
Pineapples	Jun - Dec	n.a.
Groundnuts	Jun - Oct	n.a.
Sesame seed	Aug - Sep	n.a.
Coconuts	Whole Year	n.a.

(1) Except for tomatoes which are harvested Aug. - Dec.

(2) Assumed to be similar to that for pigeon peas.

7.4 Agricultural Imports

<u>Item</u>	<u>Value, 1976</u> <u>(C.I.F. - F\$ '000.)</u>
Flour	771
Tea	877
Canned beef	783
Fresh beef	1,531
Canned fish	2,613
Butter	860
Rice	3,544
Beer	120
Unmanufactured tobacco	577
Lumber	36

See Economic Imports, section 6.3.

7.5 Agricultural Exports

<u>Item</u>	<u>Quantity</u>	<u>1976 Value</u> <u>(F.O.B. - F\$ 000)</u>
Sugar	250,000 m.t.	67,604
Coconut oil	14,000 m.t.	4,564
Oil Seed, cake, and meal	4,000 m.t.	271
Ginger	1,089 m.t.	637
Molasses	72,000 m.t.	869
Cigarettes	8,000 kg.	39
Veneer sheets	1,421,000 sq. m.	637
Lumber		953

See Economic Exports, section 6.4.

8. Physical Geography

8.1 Climate

Fiji has tropical oceanic climate with warm, humid southeast trade winds, so that windward sides have relatively high average rainfalls (120-200" annually) while central mountains cause relative rain shadow on northern and western sides; rainfall averages about 70" annually. Prevailing winds are easterly, varying east-southeast. Northerlies, known further west as northwest monsoons, blow during summer (Nov. to March) and bring rain to northwest coasts.

Equatorial low pressure belt brings humid calm weather to archipelago in November and January. Weather most oppressive January - March with conjunction of heat and humidity.

February and March usually the wettest months in both dry and wet zones. Rainfall least in both zones in June and July, ranging from 2"/month in dry zone to 5-6" in wet zone. Dry zones have clearly defined rainy season: December through April.

Temperatures in coastal areas range between 60° F and 90° F, with average annual mean temperature being 77° F. Dry zones are likely to be cooler in winter than wet zones due to clear skies. At upper elevations in mountains, winter temperatures may fall to 40's. Humidity in wet zones ranges between 60 - 95%, greatest in mornings; range in dry zones is 45 - 86%.

Fiji lies within Pacific hurricane belt and is vulnerable to severe storms usually from mid-November through April.

8.2 Temperatures (Fahrenheit)

<u>Location</u>	<u>J</u>	<u>F</u>	<u>M</u>	<u>A</u>	<u>M</u>	<u>J</u>	<u>J</u>	<u>A</u>	<u>S</u>	<u>O</u>	<u>N</u>	<u>D</u>
Lambasa	79.9	80.0	79.7	78.9	77.2	75.8	74.6	75.2	76.4	77.6	78.4	79.4
Nandi	80.7	80.6	80.1	79.2	76.9	75.5	74.1	74.7	76.1	77.3	78.5	79.8

8.3 Precipitation (Inches)

Location	<u>J</u>	<u>F</u>	<u>M</u>	<u>A</u>	<u>M</u>	<u>J</u>	<u>J</u>	<u>A</u>	<u>S</u>	<u>O</u>	<u>N</u>	<u>D</u>
Lambasa	13	14	14	8	5	2	2	2	3	4	6	10
Lautoka	9	14	12	6	4	2	2	3	2	3	4	7
Penang	12	15	13	10	5	3	2	3	3	3	5	9
Suva	11	12	15	13	10	7	5	8	8	9	10	12
Rel. Humidity(%)												
Lambasa	78	81	82	82	79	79	76	71	69	67	69	71
Nandi	75	78	80	80	77	79	76	71	69	66	67	69

8.4 Land Forms

1,000 miles due north of New Zealand and 7,022 sq. mi. in land area, Fiji consists of 361 islands, 97 inhabited. Range of landforms spans all oceanic island types, from coral atolls to mountainous high islands. Main islands, Viti Levu and Vanua Levu (90% of total land area), are volcanic; constitute a fusion of continental rocks with oceanic basalt, resulting in diversified terrain and variety of mineral and soil resources. Interior of larger islands consists of broken hills and razorback ridges with elevations up to 4,000'.

Fiji lies entirely within southern tropics, between 15 and 22 degrees south latitude, 177 west and 174 degrees east longitude, except for Rotuma Island, situated at 12° 27' south latitude and 177° 7' east longitude (240 min northwest of main Fiji groups). International dateline bisects the group, but for convenience day is same throughout Archipelago.

8.5 Land Use

83% of total land area, 3.8 million acres, owned communally by 6,000 Fijian land-owning groups called Mataqali. 10% reserved for Fijian use, while rest may be leased by members of other races, with consent of Mataqalis. Remaining land is either freehold (10%) or Crown land (7%). Indians own less than 2%, but farm 450,000 acres of best land, including most of sugar cane area, leasing it from native land trust board.

About 20% of land is arable; 80% suitable for pastureland and forestry.

Harvested Area of Major Agricultural Crops, 1966 and 1975
(in hectares)

	<u>1966</u>	<u>1975</u>
Coconut	74,000	65,013
Sugar cane	42,830	44,444
Rice	7,920	10,068
Bananas	400	18 (3)
Taro (1)	72	1,658
Cocoa (2)	82	148
Ginger	40	41

(1) Based on yield assumption of 5.0 m.t. per hectare.

(2) Based on yield assumption of 500 kg. per hectare.

(3) Hurricane Bebe, pests, and diseases have destroyed most banana trees.

Source: World Bank, Economic Situation and Prospects of Fiji, 1977.

8.6 Rivers and Waterways

Several major permanent rivers give access to interior of Viti Levu and north coast of Vanua Levu. Alluvium carried by these rivers forms narrow fertile coastal plains, which support commercial agriculture.

Main rivers of Viti Levu in order of importance:

Rewa - with its tributaries, drains about 1/3 of island; navigable for 40 mi. by launches, much further by punts and powered canoes.

Sigatoka - rises on opposite side of central range from Rewa, discharges in southwest Navua.

Nadi - short, drains northwest plains.

Ba - 40 miles long, drains northwest plains.

Navua - system 40 miles long, drains area of 470 sq. mi. to south coast. Main river 15 mi. long, navigable by small craft.

Vanua Levu:

South coast - Nasikawa, Yanawai, and Wainunu

North coast - Dreketi (largest, navigable 18 mi.), Lekutu, Sarawaqo.

Northeast coast - Wailevu, Labasa, and Quwa drain Labasa plains and unite in Labasa delta.

Taveuni - hundreds of streams but none of commercial importance.

Kadava - many creeks and streams but no large or important rivers.

8.7 Mountains

Vitu Levu - main dividing range lies roughly north and south, curving eastward at both ends to form southern and northeastern coastal ranges; 29 peaks over 3,000' of which Mt. Victoria (4,341') is highest. Highest point in northeast coastal range is 2,841', in southern, 2,102'. Suva Rewa range runs from behind Suva toward Navua at lower elevations. Conua range, inland from Lantoka, and Korobasabasaga range forming eastern wall of Navua Valley, both high and rugged with near 4,000' peaks. Medrausucu range, running north from Suva Rewa range toward coast, has no peaks over 2,500'.

Vanua Levu - mountains form discontinuous central spine running the length of the island. Ranges, southwest-northeast are: Seatura and Seatovo range, Valili, Kotofini, and northeast ranges. Highest peaks 3,386'. Northern slopes fall gently to sea as plains; divided by northwest running ridges and hills. Both Taveuni and Kadava are mountainous; greatest heights 4,040' and 2,750' respectively.

8.8 Seismicity

To the east of Fiji where the Pacific plate is subducted under the Tonga Trench numerous earthquakes occur. Shallow quakes near Tonga, at intermediate depths under the Lau Basin, and deep between Lau and Viti Levu. Since deep earthquakes seldom cause damage on land surface, that 70% of the world's deep focus quakes are recorded from Fiji area is not of great concern. However, two active seismic zones exist offshore of Fiji: 1) north of Vanua Levu and 2) between Suva and Mbengga. Strong earthquakes have occurred in Suva Kandavu area (1850's), in upper Rewa Valley (1869),

at Ovalu (1919), at Tunuloa (1921), and at southern tip of Koro Island (1932), suggesting another fault running northeast from Mbengga toward Taveuni. Activity in Suva-Mbengga zone evinced in 1953, 1961, 1970, and 1975 earthquakes. Also, 30 minor earthquakes were recorded in July-August 1976 in this area.

8.9 Volcanism

Though many of Fiji's islands are partly or wholly volcanic in origin, and hot springs are common, no volcanic activity has been recorded since the arrival of Europeans in the area.

9. Transportation and Logistics

9.1 Road Network

Total road mileage is about 1900; 720 miles are described as all-weather. Most principal roads are all-weather, gravel-surfaced and carry two-lane traffic. However, frequent sharp curves and single lane bridges present driving hazards and construction standards do not permit continuous use.

Vitu Levu is circled by a 317 mile road: Queen's Road, running westward from Suva to Lautoka via Navua, Segotoka and Nadi is 156 miles; King's Road from Suva to Lautoka via Nausori, Rakiraki, Tavua, and Ba is 166 miles. Suva-Nadi road is undergoing reconstruction; remaining section to be completed is between Segotoka and Deuba. Several short branch roads extend from main highway.

On Vanua Levu, Labasa is connected with Nabouwala by 92-mile road and with Naveukemburi by 36-mile road. A 45-mile road extends east of Nasavusavu to Buca Bay and a new gravel-surfaced highway linking Nasavusavu and Labasa was scheduled for completion late 1978.

9.2 Vehicles

Of total 35,000 vehicles in use in 1978, about half were registered as private cars. Others included 9,000 goods vehicles, 1,300 taxis, 1,500 tractors, and 2,500 motorcycles.

9.3 Surface Miles

From Suva to:	<u>Road</u>	<u>Sea</u>	<u>Air</u>
Deuba	35	---	---
Korolevu	65	---	45
Korotogo	80	---	---
Sigatoga	86	---	---
Nadi Airport	135	---	75
Nadi Town	132	---	---
Lautoka (Queen's Rd)	151	130	---
Lautoka (King's Rd)	164	---	---
Nausori	12	---	---
Rakiraki	96	---	---

From Suva to:	<u>Road</u>	<u>Sea</u>	<u>Air</u>
Tavua	124	---	---
Ba	140	---	---
Savusavu	---	125	100
Labasa	---	182	121
Lakeba	---	170	---
Apia, Western Samoa	---	645	---
Sydney, N.S.W.	---	1,739	---
Auckland, New Zealand	---	1,150	---
Honolulu, Hawaii	---	2,783	---
Vancouver, B.C.	---	5,194	---
San Francisco, Calif.	---	4,867	---
Nukualofa, Tonga	---	415	---

9.4 Railroad

No public rail system. Fiji sugar corporation own 644 kms of 2' gauge track serving cane growing areas at Ba, Lautoka, and Penang on Viti Levu and in Labasa area on Vanua Levu. Main route runs from Tavua to Sigatoka.

9.5 Ports

Port facilities used by ships plying between Australia and North America, as well as by those on South Pacific routes. Two main ports, Suva and Lautoka, account for about 75% of cargo handled. A smaller port at Levuka is also port of entry. 300 additional loading points. Inter-island shipping services concentrated on more profitable routes with greater volume of goods, more passengers. Government plans to provide central loading points for cargo and passengers.

Suva, Viti Levu Island

Coordinates: 18° 8' South; long. 178° 26' East. A port of entry.

Approach: Any depth in bay. Good anchorage on mud bottom. No bar.
Tides: rise and fall, 1.37 m. ordinary tides, 1.83 m.
Springs.

- Accommodation: King's Wharf available for ocean-going vessels, 494 m. with 12.19 m. alongside at North/South berth, and 183.5 m. with 9.45 m. alongside at East/West berth. Prince's Wharf used by local shipping vessels.
Water: Water at King's Wharf.
- Bunkers: Fuel oil and light diesel fuel from Shell Co. (Pacific Islands), Ltd. at King's Wharf. Light diesel and gas oil from Mobil Oil Co. No coal.
- Development: A new local shipping wharf under construction. Present local shipping wharf (Prince's Wharf) to be dredged and improved for extra overseas vessels.
- Shiprepairs: Government slipways (1) up to 500 tons; (2) up to 1,000 tons; (3) 200 tons. Repair wharf with 3.05 m. alongside. Bish Ltd. Engineers and steel boat builders are fully equipped for all types of shiprepair and general engineering work.
- Towage: Tugs by prior arrangements only.
- Pilotage: Pilot boards vessels 8 km. off lower lead.
- Airport: Nandi International airport, 240 km. by road; air service between Suva and Nandi.
- Working Hours: Sunday work for perishable cargos only.

Lautoka, Viti Levu Island

- Coordinates: 17° 36' South; 177° 26' East. A port of entry.
- Accommodation: Second largest port in Fiji Islands. Government wharf with two berths to take overseas vessels up to 9.75 m. draft. There is plenty of anchoring space outside Vio Island in calm water. All loading done with ship's gear. Private wharves: Privately owned T-shaped jetty with a length of wharf face of 45.71 m. Overseas vessels of up to 9.14 m. draft may berth alongside at owners' discretion. Vessels are moored to bow with dolphins on shore side for breast lines.
Water: Not available.
- Bunkers: Not available.

Pilotage: Usually a commercial pilot is engaged, who boards outside Navula passage.

Airport: International airport at Nandi, 19.2 km.

Minor Ports

Levuka, Ovalau Island

Coordinates: 17° 41' South; long. 178° 51' East. A port of entry.

Approach: Tides: R. of T., 1.52 m.

Accommodation: No bar, good anchorage. Harbor protected by reef 1.2 km. offshore. Can take four medium size vessels. Small wharf, 32.19 m. long and 5.33 to 8.23 m. alongside; large wharf, 154.8 m. long with depths from 6.10 to 10.97 m. alongside. All loading done with ship's gear.

Bunkers: Available at main wharf from Shell Corp. (Pacific Islands) Ltd., diesel fuel only.

Pilotage: Compulsory.

Ellington, Viti Levu Island

Coordinates: 17° 20' South long. 178° 14' East. Not a port of entry.

Accommodation: Has a "T" wharf 43.58 m. long. Depth of water alongside at L.W.O.S.T. is 6.10 m. There is a good though restricted anchorage area with good holding ground. All loading done with ship's gear.

Water: Not available.

Bunkers: Not available.

Pilotage: Usually a commercial pilot is engaged.

Working Hours: No Sunday work except in emergencies, or moving perishable cargos.

Labasa, Vanua Levu Island

Coordinates: 16° 26' South, long. 179° 22' East. Not a port of entry.

Accommodation: No wharf, but good anchorage, mud bottom. Minimum depth of 13.71 m., with ample swinging room at L.W.O.S.T. The minimum depth in the channel leading to ship's anchorage is 10.97 m. at L.W.O.S.T. All loading done with ship's gear. Water: Not available.

Bunkers: Not available.

Pilotage: Usually a commercial pilot is engaged.

Airport: Daily air service.

Savu Sava, Vanua Levu Island

Coordinates: 16° 47' South; long. 179° 21' East. Not a port of entry.

Accommodation: A good large anchorage with good holding ground. Government wharf of 37.49 m. length with 5.79 m. alongside. All loading done with ship's gear from lighters. Water: Not available.

Bunkers: Not available.

Pilotage: Usually, when vessels are proceeding to Savu Savu, they enter first at Suva or Levuka and engage a commercial pilot. The pilot takes the vessel to Savu Savu where he remains until the loading is completed, then pilots the vessel back to Suva or Levuka where an outward clearance is obtained.

Airport: Nearby Labasa connected by daily air service.

9.6 Shipping

167 vessels are registered in local shipping, with total net tonnage of 6,298 tons. 8 weigh more than 150 tons; 25 between 50 and 150 tons, 66 between 10 and 50 tons, more than 60 under 10 tons.

Companies operating cargo or passenger services to Fiji include Burns Phelp (SS) Co. Ltd., Sofrana - Unilines, Kyowa Shipping Co., the Pacific Forum Line, the Bank Line, Nedlloyd, Pacific Navigation of Tonga, Union Steam Ship Co. of New Zealand, and P & O.

9.7 Airports

Two major airports: international one at Nandi, and Nausori near Suva. Nandi Airport refueling stop for trans-Pacific flights has been developed and administered by South Pacific Air Transport Council, comprising UK, Australia, New Zealand, and Fiji. Upgrading for use by jumbo jets completed in mid-1975. Nausori's main scaled runway (1,969 m.) has flare path for night landings.

Airstrips at Labasa and Savusavu on Vanua Levu; Matel on Taveuni; Bureta on Ovalu; Lakeba Island in Lau group; Gau and Bua are government-owned. In addition, there are private airstrips at Pacific Harbor, Natadoia, and Vatukoula, all on Viti Levu, and at Melololailai Island, Laucala Island, and Wakaya Island. (See also Disaster Preparedness, section 3.8.)

NB: For up-to-date information consult latest issue of weekly International Notams, International Flight Information Manual, and/or ICAO's Air Navigation Plan for appropriate region.

NANDI Intl.

<u>Location</u> <u>Coordinates</u>	<u>Eleva-</u> <u>tion M/</u> <u>Temp C</u>	<u>Runway Characteristics</u>			<u>CL</u>	<u>Aircraft</u> <u>Strength</u> <u>(1,000 kg)</u>	<u>Fuel/</u> <u>Octane</u>
		<u>NR/Type</u>	<u>Slope</u> <u>%</u>	<u>Aircraft/</u> <u>Length M</u>			
17° 45' 16" S 177° 26' 50" E	19 31.4	03/21 PA 1 & INSTR, 09/27 N - INSTR	0.18 0.614	B707-323C 3600,3210 2100,3200 2133	A	LCN 70L100 LCN 25H33	JA1/ 100

Remarks: Alternative aerodromes: Noumea/La Tontouta, Pago Pago/Intl.
Stopway 21-16; 27-30. No telex.

Aids: ILS (03-1), L PA (03-1), SA (09), VA (03+21+09), LR, LTX, LB, LO, MD, MC, MT, MTD, MS, MFD, MTX, MO, L6,7,9.

SUVA/Nausori Intl.

<u>Location</u> <u>Coordinates</u>	<u>Eleva-</u> <u>tion M/</u> <u>Temp C</u>	<u>Runway Characteristics</u>			<u>Aircraft</u> <u>Strength</u> <u>(1,000 kg)</u>	<u>Fuel/</u> <u>Octane</u>
		<u>NR/Type</u>	<u>Slope</u> <u>%</u>	<u>Aircraft/</u> <u>Length M</u>		
18°03'S 178°34'E	5 30.5	10/25 N-INSTR	0.10	1801	B LCN 24H43	JA1 100

Remarks: Alternate aerodromes: Nandi/Intl. Stopway 10-106, 28-30
Clearway 10-106.

Aids: L, LR, LTX, LB, LO, MD, MC, MT, MTX, MO, L4,9.

Key

Abbreviations

- INSTR Instrument Approach Runway
- N-INSTR Non-Instrument Runway
- PA I Precision Approach Runway Category I
- PA II Precision Approach Runway Category II
- REG-NS Intl Non-Scheduled Air Transport, Regular Use
- REG-S International Scheduled Air Transport, Regular Use

Radio Aids

- ILS Instrument Landing System
- DME Distance Measuring Equipment
- VOR VHF Omni-Directional Range
- RL Radio Locator

Lighting Aids

- LPA Precision Approach Lighting System
- LSA Simple Approach Lighting System
- LVA Visual Approach Slope Indicator System
- LAV Abbreviated Approach Slope Indicator System
- LR Runway Edge, Threshold & Runway End Lighting
- LC Runway Center Line Lighting
- LTD Runway Touchdown Zone Lighting
- LTX Taxiway Lighting
- LB Aerodrome or Identification Beacon
- LO Obstruction Lighting

Marking Aids

MD	Runway Designation Markings
MC	Runway Center Line Markings
MT	Runway Threshold Markings
MTD	Runway Touchdown Markings
MS	Runway Sidestripe Markings
MFD	Fixed Distance Markings
MTX	Taxiway Center Line & Holding Position Markings
MO	Obstruction Markings

Runway Surface and Length

H	Hard Surface (numbers = ft. in hundreds)
S	Non-Hard Surface (number = ft. in hundreds)

Additional Lighting

L1	Portable Runway Lights (electrical)
L2	Boundary Lights
L3	Runway Flood Lights
L4	Low Intensity Runway Lights
L5	Low Intensity Approach Lights
L6	High Intensity Runway Lights
L7	High Intensity Approach Lights
L8	Sequenced Flashing Lights
L9	Visual Approach Slope Indicator (VASI)

9.8 Personal Entry Requirements

Passport required. Visa is not required. Visitors permits are issued at the airport of entry and are valid for up to one month. Smallpox vaccination required. Cholera and yellow fever immunization for arrivals from infected areas. Traveler must show means of return transportation and sufficient funds to pay expenses during stay in order to be admitted.

9.9 Aircraft Entry Requirements

All private and non-scheduled commercial aircraft overflying or landing for non-commercial purposes must obtain prior permission from the Director of Civil Aviation, Private Bag, Nandi Airport, Fiji (telegraphic address: AIRCIVIL NANDI/TELEX: none) at least 48 hours prior to departure. All requests must include: a) aircraft type and registration marks, b) pilot's name, c) purpose of flight, d) origin, destination, and stops in Fiji, e) date and time of arrival and departure, f) number of

passengers, g) aircraft take-off weight and tire pressure, h) survival equipment carried on board.

All private and non-scheduled commercial aircraft landing for commercial purposes must obtain prior permission from the Permanent Secretary for Transport and Tourism, P.O. Box 2219, Suva, Fiji (telegraphic address: COMMWORKS SUVA/TELEX: none) at least 14 days before departure. All requests must include: a) aircraft type and registration marks, b) operator's name and address, c) charterer's name and addresses, d) name of agent in Fiji, e) purpose of flight, f) type and amount of cargo to be set down and picked up, g) number of passengers, h) proposed fares for passengers originating in Fiji, i) date and time of arrival and departure, j) aircraft take-off weight and tire pressure, k) details of third party insurance coverage for the part of the flight within the territory of Fiji.

Special Notices:

Aircraft inbound to Fiji from malarial areas are prohibited from using Nausori Airport. Parking facilities and handling by customs and immigration at Suva Nausori Airport are limited. Failure to submit advance notification may cause considerable delays or denial of arrival authorization. Non-scheduled public transport flights will not normally be permitted arrival due to the limited medical and health inspection facilities available. Only in exceptional circumstances will aircraft with either a weight in excess of 90,000 lbs. or a tire pressure in excess of 80 psi, be permitted to land at Suva Nausori Airport. Request for aircraft servicing for all aircraft should be addressed to Qantas Airways, Ltd. Nandi Airport, Fiji (telegraphic address: QANTAS NANDI/TELEX: none) or to Air Pacific, Ltd., Nausori Airport, Fiji (telegraphic address: AIRPAC SUVA/TELEX: none).

9.10 Airlines

International:

Air India, Air Nauru, Air New Zealand, American Airlines, British Airways, Canadian Pacific Airlines, Japan Airlines, Pan Am, Qantas, and UTA serve Fiji.

Domestic:

Air Pacific Ltd.: Air Pacific House, corner of MacArthur and Mutt Streets, Suva. Regional services to Western Samoa, Tonga, the Solomon Island, the Gilbert Islands and Tuvalu, the New Hebrides, Papua New Guinea, Noumea, New Caledonia, American Samoa, Australia, and New Zealand. Domes-

tic services link Suva, Nandi Airport, Labasa, Savusavu, and Taveuni.
 Fleet: 2 BAC-111/475, 3 Trilanders, 2 HS 748.

Fiji Air Ltd.: P.O.B. 1259, Suva. Operates 72 scheduled services a week and charter flights; connects Suva, Nandi, Segatoka, Deuba, Vatakoula, Ovolu, Labkba and Maololoailai Gau Island, and Bua. Fleet: 4 Britten Norman Islanders; 1 Beach Baron, 1 Beach Queen Air.

Turtle Island Airways - began operation April 1978, provides services to outer islands and Yosawa group with 3 Cessna 206 amphibious seaplanes.

9.11 Air Distances

Nandi (Nadi) to:	Statute <u>Miles</u>	Nandi (Nadi) to:	Statute <u>Miles</u>
Nausori	76	San Francisco	5,461
Norfolk Is.	985	Singapore	5,163
Noumea	786	Sydney	1,968
Pago Pago	820	Tahiti	2,164
Perth, Austr.	3,923	Tarawa Atoll	1,353
Port Moresby	2,107	Tonga	540
Port Vila	601	Townsville	2,009
Rarotonga	1,499	Wallis Is.	527
Santo	701	Wellington	1,635

Nausori to	Statute <u>Miles</u>
Port Vila	674
Tonga	466
Ura	117
Wellington	1,622

10. Power and Communications

10.1 Electric Power

75% of electricity is supplied by two public companies: the Electricity Department of the Suva City Council (SCCED) and the Fiji Electricity Authority (FEA). Two major industries, Emperor Gold Mines (EGM) and the Fiji Sugar Corporation (FSC) supply 25%, mostly for own use. The power sector, mainly supplying Viti Levu by means of small, diesel system, is undergoing reorganization with FEA having taken over SCCED; final integration of two companies expected in 1981.

About 50% of population has access to electricity though cost is high. Per capita consumption is about 500 kWh. Rural electrification program is in early stages. In an effort to reduce reliance on costly imported fuel for power generation (28% of total net imports at cost of F\$ 10 million in 1976), GOF is giving high priority to development of country's only indigenous energy resources, hydropower, with total potential estimated at 2000 GWh annually. Several sites have been proposed in Nandrau Plateau (Viti Levu), 4 for immediate development. World Bank is financing first stage of Monasavu-Wailoa hydroelectric project to be completed July 1981 with initial capacity of 40 MW - later to be expanded to 80 MW.

SCCED - 22,300 customers in Suva and vicinity. Suva Station - 13.5 MW; Kinoya Station - 39.1 MW.

FEA - about 12,800 customers, mostly in western Viti Levu. Central Station, Vunda (Vuda) - 11,400 kW; Nandi (Nadi) - 8,370 kW; Lautoka - 6,175 kW; Singatoka (Sigatoka) - 4,498 kW; Deumba (deuba) - 1,760 kW; Rakiraki - 310 kW; Lamgasa (Labasa, Vanua Levu.)

EGM and FSC - combined total about 22.3 MW.

FEA distributes electricity at 33 kV, 11 kV and 440 1230 V. Development plans call for construction of 132 kV transmission lines for inter-connected system and extension of existing 33 kV sub-transmission lines and the low voltage distribution network.

10.2 Telecommunications

Most inhabited islands can be contacted by radio or telephone. The Post and Telecommunications Department provides radio-telephone and telegraph services to outer islands and to neighboring Pacific island

countries. Main towns on Viti Levu have automatic exchanges. The P and T Department and Fiji International Telecommunications Ltd. (FINTEL) provide telephone and cable links with overseas countries, and the latter operates a satellite earth receiving station at Wailoku, Suva.

Fiji has COMPAC (Commonwealth Pacific Telephone Cable) link with US/Canada, New Zealand/Australia, and other countries. Telex system growing.

10.3 Radio

Fiji is center of communications for South Pacific area. Fiji Broadcasting Commission (Radio Fiji): POB 334, Broadcasting House, Suva, consists of 10 AM and 2 FM stations in 2 national networks: Radio Fiji One and Radio Fiji Two, broadcasting in English, Fijian, and Indian. 300,000 radio sets in 1978.

10.4 Television

Fiji has no television.

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