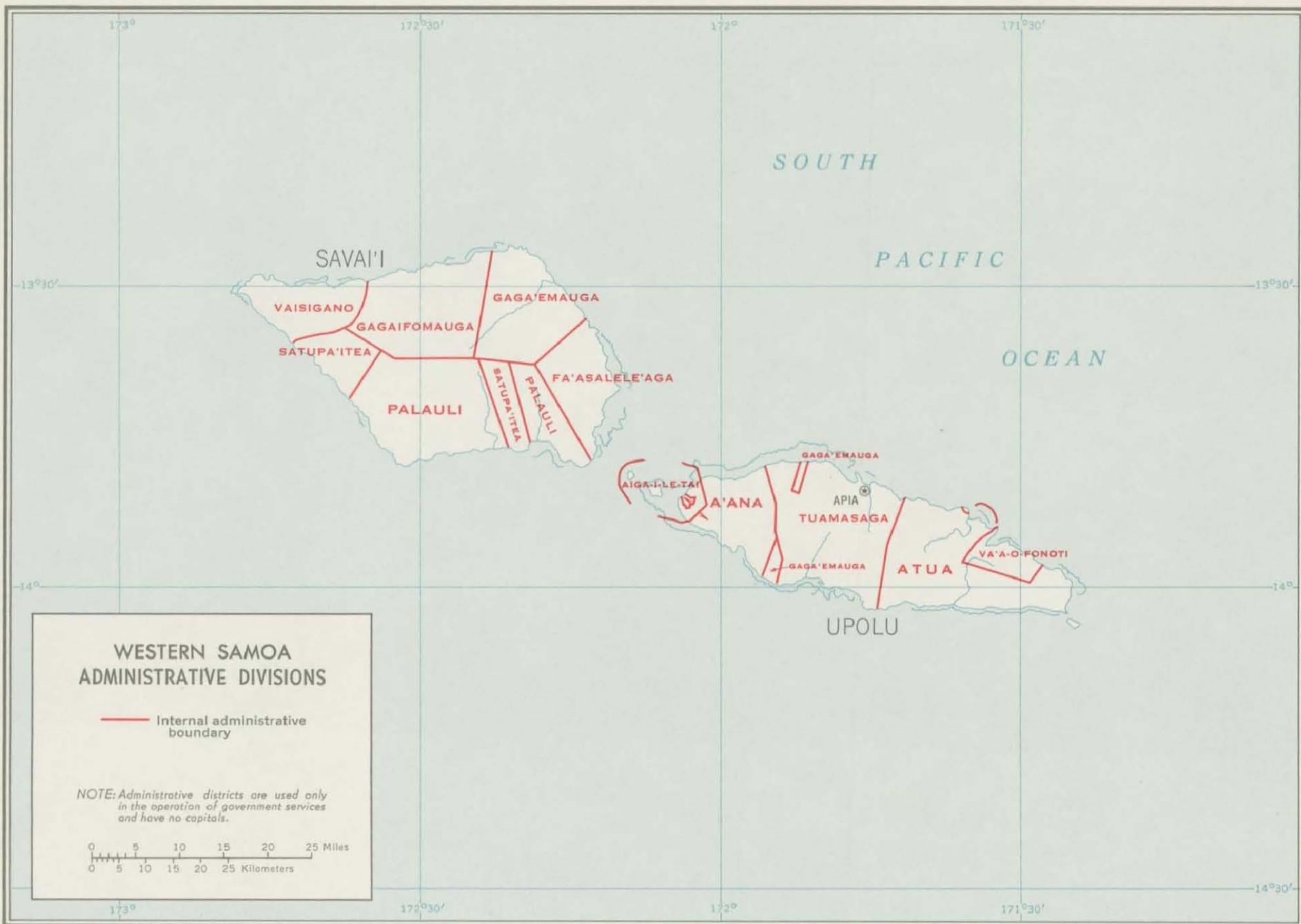


PN- AAK- 329

**Western
Samoa**
A Country Profile

March 1980

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



OFDA COUNTRY PROFILES: APRIL 1980

AFRICA

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Upper Volta
Zaire

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Haiti

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NEAR EAST

Turkey

SOUTH PACIFIC

Fiji
Tonga
Western Samoa

INDIAN OCEAN

Island Countries of the
Indian Ocean*

* in preparation

WESTERN SAMOA: 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 Western Samoa 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.

March 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.

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TOPIC

COMMENTS

TOPIC	COMMENTS

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1. General Information1.1 Geographic Codes

AID 491
FIPS WS
State region EA

1.2 Country Names

Official Western Samoa
Local Samoa | Sisifo
Short Western Samoa

1.3 Calendar and Holidays

New Year's Day	January 1
Anzac Day	April 25
Independence Day	June 3,4,5
Christmas Day	December 25
Boxing Day	December 26
Good Friday	*
Easter Monday	*
Whit Monday	*

* variable dates

1.4 Currency (March 1980)

100 sena = 1 tala
WS\$ 1 = US\$ 1.10

1.5 Time Zones

EST - 6; GMT-11

1.6 US Mission and Staff

American Ambassador Anne Clarke Martindell is resident in Wellington, New Zealand.

P.O. Box 1190
Wellington, New Zealand
Tel: 722-068

US Consular Agent: Vernon W. MacKenzie
P.O. Box 586, Apia
Tel: 21631

Regional Development Officer (A.I.D.): Robert V. Craig
P.O. Box 218
Suva, Fiji
Tel: 23031

1.7 Sister Cities

None

1.8 Host Mission and Staff in US

Because of expense involved, Western Samoa has not established any formal diplomatic or consular missions abroad. In 1969 an honorary consul was appointed to Los Angeles. Trade and development office in Auckland, New Zealand, is only other overseas representation. New Zealand, in accordance with Treaty of Friendship with Western Samoa, acts as channel of communications with governments and international organizations outside the Pacific Islands area.

Since joining the UN in December 1976, Western Samoa has established a temporary chancery in NY and appointed H.E. Malava Iulai Tomas as Ambassador.

Address: c/o the Permanent Mission of Samoa to the United Nations
820 Second Avenue, Room 303, New York, N.Y. 10017
Tel: 212 682-1482

New Zealand's Embassy, which represents Western Samoa in US is located at:

19 Observatory Circle, N. W.
Washington, D.C. 10008
Tel: C05-1721/1724

1.9 Treaties and Agreements

Investment Guaranties
Peace Corps

1.10 International Organization Memberships

ADB, Commonwealth of Nations, Economic Commission for Asia and the Far East, G-77, IBRD, IFC, IMF, South Pacific Commission, South Pacific Forum, U.N., WHO.

1.11 Travel and Visa Information

No entry permit needed if stay is 7 days or less. Passport and smallpox vaccination certificate required. Visitors who wish to stay longer than 7 days should apply to the Immigration Division of the Prime Minister's Office.

1.12 Ethnic and Sociocultural Groups

89% of population is of Indigenous Polynesian stock; an additional 10% is Euronesian (of mixed European and Polynesian descent). Samoan society is still organized according to traditional extended family (Aiga) system, under direction of Matais (Chief). Matais are chosen by common consent of group to administer family's affairs and to represent it on village and district levels.

1.13 Languages

Official languages: English and Samoan. Primary school instruction is in Samoan, with English taught as second language; intermediate schools use English as language of instruction, but also teach vernacular.

1.14 Religion

Missionaries converted essentially the whole population to Christianity; Congregational Church claims 45%, Methodists 20%, and Roman Catholics, 20%. Mormons, Seventh Day Adventists and other Protestant churches have smaller congregations.

1.15 Education and Literacy

The education system, based on New Zealand's, is in three divisions - primary, intermediate and secondary - and responsibility of the government. Mission schools play important role. The South Pacific Regional College of Tropical Agriculture is located in Western Samoa.

Literacy rate: Samoan, 90%; English, 50%.

2. Government

2.1 National Government

Parliamentary democracy modelled on that of UK, but modified to suit Samoan customs. Present Head of State, descendant of Samoan royal line, holds position for life. His successors will be elected to five-year terms. Head of State appoints Prime Minister and, with his advice, the members of the cabinet. Parliament, known as legislative assembly, composed of 45 Samoan members elected by Matais and two European members elected by universal adult suffrage. Prime Minister appointed in 1976 was first not to carry royal Matai title. Judiciary consists of Supreme Court, Magistrate's Court and Lands and Titles Court. Supreme Court's Chief Justice is appointed by President.

2.2 Regional Organization

Since most Samoans still live within the traditional extended family social structure, local government by Matais persists. Matais are chosen by common consent by Aiga extended family to direct family's affairs and to represent it in village and district Fono (councils). Government service programs (health, education, police, etc.) are organized on basis of geographic districts, but only district representative is administrator on Savai'i, and districts have no political significance.

2.3 Major Government Figures (January 1980)

Head of State.....	Malietoa, Tanumafili II
Prime Minister.....	Efi, Taisi Tupuola
Min. of Agriculture.....	Wa, Seumanu Aita Ah
Min. of Civil Aviation.....	Eikeni, Asi
Min. of Economic Development.....	Tamatoa, Letiv
Min. of Education.....	Mimio, Faimaono
Min. of External Affairs.....	Efi, Taisi Tupuola
Min. of Finance.....	Filipo, Vaovasamanaia
Min. of Fisheries & Forestry.....	Tamatoa, Letiu
Min. of Health.....	Anapapa, Faumuina
Min. of Immigration.....	Efi, Taisi Tupuola
Min. of Internal Affairs.....	Efi, Taisi Tupuola

Min. of Justice.....Eikeni, Asi
Min. of Labor.....Eikeni, Asi
Min. of Lands & Survey.....Rapi, Lasa
Min. of Marine.....Eikeni, Asi
Min. of Police.....Eikeni, Asi
Min. of Rural Development.....Efi, Taisi Tupuola
Min. of Works.....Kurene, Seuamuli
Attorney General.....Slade, Neroni

3. Disaster Preparedness

3.1 Host Disaster Plan

Early Warning Observatory:

Located at the end of Mulinu'u Peninsula, about 1 1/2 miles from center of Apia, observatory carries out research in meteorology, terrestrial magnetism, seismology, and oceanography. US Coast and Geodetic Survey has provided some instruments and equipment.

Seismology station at Afiamalu, 6 miles inland from Apia, established in 1957 as part of US Government and Geodetic Survey standardized seismographic network.

International seismic seawave warning system joined in 1963. Visual seismograph at observatory gives earthquake readings correlated with remote readings of tide gauge in Apia harbor.

3.2 US Plan

No mission plan.

3.3 Volags

The Foundation for the Peoples of the South Pacific.

3.4 Disaster Types and History

Hurricane, flood, earthquake, tsunami, volcanic eruption. The country suffered damaging hurricanes in 1966 and 1968 and a wind storm in June 1964 which killed 250 people.

Summary of Disaster History

<u>Disaster</u>	<u>Location</u>	<u>Date</u>	<u>No. Killed</u>	<u>No. Victims</u>	<u>DMG (\$000)</u>
Hurricane	all islands	1/29/66	10	95,000	\$600
Hurricane	all islands	2/10/68	0	0	\$238
Wind Storm	all islands	6/13/64	250	n.a.	n.a.

4. Population4.1 National Demographic Characteristics

The 1976 census reported a population of 151,275; 1978 estimates are in range of 153,000 - 154,000. Dramatic declines in growth rates over past 20 years have resulted from reduction in fertility as WHO sponsored family planning program gained acceptance and from increased emigration, mostly to New Zealand and American Samoa. Emigration of more than 2 1/2% of total population some years moderated growth rate from natural rate of about 3% per annum to less than 1% (1971-76), but contributed to high dependency ratio (ratio of number of persons under 15 and over 60 to persons between 15-60 was 1.12 according to 1976 census). Growing population pressure may be outcome of recent end of WHO's participation in family planning and New Zealand's limitations on number of Western Samoan immigrants (since 1975).

4.2 Regional Distribution

Most of population lives in coastal regions of the two main islands: Upolu 110,000; Savai'i 42,000 (1976 census figures). Of smaller islands, only Manono and Apolima are inhabited. Northern coast of Upolu has highest population concentration, Apia urban area and northwest Upolu having about 69,000 people in 1976 (Western Samoan Dept. of Statistics). Apia has an estimated population of 35,000. Density for country as a whole was 53 per square km in 1976.

Population Classified by Region, Faipule

	<u>District and Sex, 1976</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>
<u>Western Samoa</u>	151,983	78,639	73,344
<u>Apia Urban Area</u>	32,099	16,400	15,699
Faleata East	8,583	4,442	4,141
Vaialuga West	23,516	11,958	11,558
<u>North West Upolu</u>	36,739	18,972	17,767
Aana Alofi No. I	4,623	2,450	2,173
Aana Alofi No. II	3,058	1,540	1,518
Aana Alofi No. III	4,860	2,521	2,339
Faleata West	6,723	3,454	3,269

	<u>Total</u>	<u>Male</u>	<u>Female</u>
Gagaemauga No. I	2,117	1,088	1,029
Sagaga (Le Falefa)	6,922	3,591	3,331
Sagaga (Le Usoga)	4,257	2,200	2,057
Vaimauga East	4,179	2,128	2,051
<u>Rest of Upolu</u>	<u>40,927</u>	<u>21,316</u>	<u>19,611</u>
Aiga-i-le-Tai	4,021	2,085	1,936
Aleipata (Itupa-i-Lalo)	3,097	1,635	1,462
Aleipata (Itupa-i-Luga)	1,480	760	720
Anoamaa East	3,455	1,801	1,654
Anoamaa West	4,403	2,294	2,109
Falealili	4,590	2,430	2,160
Falelatai and Samatau	3,456	1,774	1,682
Gagaemauga No. II	456	244	212
Lefaga	3,758	1,950	1,808
Lepa	1,460	745	715
Lotofaga	1,785	932	853
Tuamasaga South (Safata)	5,344	2,770	2,574
Tuamasaga South (Siumu)	1,868	1,007	861
Vaa-o-Fonoti	1,754	889	865
<u>Savai'i</u>	<u>42,218</u>	<u>21,951</u>	<u>20,267</u>
Alataua West	1,996	1,010	986
Faasaleleaga No. I	4,589	2,363	2,226
Faasaleleaga No. II	2,977	1,543	1,434
Faasaleleaga No. III	2,290	1,166	1,124
Faasaleleaga No. IV	1,289	660	629
Falealupo	1,078	528	550
Gagaemauga No. I	1,336	721	615
Gagaemauga No. II	644	338	306
Gagaemauga No. III	2,283	1,140	1,143
Gagaifomauga No. I	1,726	920	806
Gagaifomauga No. II	2,533	1,349	1,184
Gagaifomauga No. III	1,218	637	581
Palauli	2,468	1,328	1,140
Palauli (Le Falefa)	3,108	1,633	1,475
Palauli West	3,410	1,758	1,652
Salega	3,287	1,701	1,586
Satupaitea	1,731	889	842
Vaisigano East	2,666	1,439	1,227
Vaisigano West	1,589	828	761

Source: Department of Statistics. (Cited in Western Samoa, Quarterly Statistical Bulletin. 4th Quarter, Oct. - Dec., 1978.)

5. Health, Nutrition and Housing

5.1 Overall Health Status

Western Samoa is free of most serious epidemic diseases, though filariasis has been a common health problem. Morbidity patterns have been changing with infectious diseases such as tuberculosis and typhoid being brought under control while incidence of heart disease, diabetes and obesity is increasing.

In 1977 the most common diseases were influenza (14,030), infantile and other diarrhea (2,406), gastroenteritis (660), measles (240), infectious hepatitis (214), gonorrhoea (199), childhood communicable diseases (312). Leading causes of death (exclusive of fetal) after ill-defined symptoms, were heart disease, pneumonia, cerebrovascular disease, malignant neoplasms, infective and parasitic diseases, enteritis, and tuberculosis.

Extent of malnutrition is not known, but a recent survey found about 15% of pre-school children (under age 5) and 11% of primary school children malnourished. Cause of animal protein deficiency in children's diets may lie in traditional customs rather than in lack of food. With precedence governed by age and status, children eat last at family meals when protein-rich foods may already have been consumed.

5.2 Vital Statistics

Birth per 1000 population, 1976	37
Deaths per 1000 population, 1976	7
Infant deaths per 1000 births, 1976	40
Life expectancy at birth, 1966-71	61

5.3 Health Facilities and Services

All health services are government operated; system comprises general hospital in Apia, 15 district hospitals administered by district medical officers and 9 dispensaries. Monthly village clinics are held by district nurses. Apia General Hospital with about 300 beds is country's main

hospital and referral center. Associated with Apia Hospital are the teaching facilities of Apia Nursing School and a dental clinic administered by dental division of health department. An additional 350 beds are distributed among the following district hospitals: on Upolu - Afega, Aleipata, Fagaloa, Falelatai, Manono, Fusi, Lefaga, Teulumoeaga, Lufilufi, Poutasi; on Savai'i - Fagamolo, Palauli-i-Sisifo, Safotu, Sataua, Satupaitea, Tuasivi.

5.4 Health Personnel

A major problem in delivery of health services is country's shortage of doctors (3.5 physicians/10,000 population; 2,890 persons/physician in 1975). Many of country's medical officers are graduates of Fiji School of Medicine.

Medical and Allied Health Personnel (1975)

Physicians	55
Dentists (university level)	2
Dental practitioners	12
Dental technicians	4
Pharmacists	1
Pharmaceutical assistants	11
Nurses - Midwives	18
Nurses	161
Nursing aides	56
Physiotherapists	2
Nutritionists	1
Dietitians	1
Medical laboratory technicians	2
Medical laboratory assistants	28
Laboratory aides	8
Radiographers	4
X-ray assistant technicians	4
Darkroom assistants	2
Health Inspectors	4
Assistant health Inspectors	21
Medical record technicians	19
Health statistics technicians	1

Source: United Nations, World Health Statistics Annual 1977. Vol. III.

5.5 Diet Summary

Traditional foods include fish and shellfish, root vegetables (taro, yams, cassava), breadfruit, bananas, coconuts and fresh vegetables (taro greens) and fruits (mangos, papayas, pineapple, limes). Pigs and chickens killed only for feast days. Seasonings include peppers, coconut milk, lime juice, garlic. Beverages: water, kava (cermonial), home-brewed beer.

Palusami (thick coconut cream wrapped in taro leaf and baked underground) is national dish. Pisupo (originally word for pea soup, now also name given canned corn beef) is also favored. Food imports include cereals, meat, fish, dairy products, eggs.

5.6 Cooking Utensils

Food is generally cooked outdoors over an open fire or steamed over hot stones in covered firepits.

5.7 Housing

Traditional fale is typical dwelling in villages; a round or oval pebble floor surmounted by thatch roof supported on ring of posts; no permanent walls. Palm leaf blinds are lowered from eaves on rainy weather or at night. European contact has inspired fales with concrete floors, corrugated iron roofs and lattice work walls. Another hybrid design, used by chiefs and pastors, is an oblong concrete house with closed end walls; rooms often in corners, but with open sides. Faes are grouped around open area with separate cookhouses behind them.

6. Economy

6.1 Overview of Economy

Since national accounts have not been regularly kept and subsistence agriculture is a sizeable part of GNP, reliable figures on income and production are lacking. Though per capita GNP was estimated at only US\$ 350 in 1976, living standard is described as "affluent subsistence." Agriculture, based on export crops of copra, cocoa, bananas and timber, dominates economy, accounting for about one-half of GNP, two-thirds of employment, and more than 90% of exports. An industrial sector consisting of food and agricultural processing, consumer and light import-substituting industries accounts for about 10% of GDP, 5% of employment. Small size of domestic market, lack of skilled labor and entrepreneurship, and isolated geographic location limit sector's growth potential despite government offers of tax and fiscal incentives. Government services and tourism have shown steady growth since mid-1960's, the latter having become an important source of foreign exchange with gross receipts 30% of export goods and services, notwithstanding government's conservative stand on promotion.

Real GDP growth of about 7% in 1977 (compared with average annual rate of 2-3% in previous decade) reflected expansion of major commodities in response to higher international prices. Unfavorable weather conditions reduced production levels of copra and cocoa in 1978. An overall balance of payments surplus in 1977 was exception to general pattern as receipts from tourism and remittances from Samoan citizens abroad have been inadequate to finance resource gap of 25-30% of GNP, and the country has relied increasingly on foreign grants, loans and run-downs of foreign reserves. The debt service ratio on external debt was considered moderate, at about 11.5% in 1978.

The inflation rate is believed to have declined further from the 1977 rate of 8.8%. In extended family system, underemployment, rather than unemployment, is common; decline in net emigration may increase need for employment opportunities, especially in Apia. Growing cash consciousness, exposure to foreign goods and customs may be fostering new materialistic individualism which threatens to undermine traditional authority.

6.2 GNP

GNP per capita in 1976: US\$ 350

Gross National Product in 1976 (current prices)

	<u>US\$ mln</u>	<u>%</u>
GNP at market prices	50.0	100.0
Exports of goods	4.3	8.6
Imports of goods	18.9	37.8

6.3 Imports

Imports grew at annual rate of 20% in current prices (about 5% constant prices) between 1970-75. Structure of imports was changed little, though relative share of fuel imports rose from 4% of total in 1970 to 10% in recent years. Food imports, of which meat and cereals constitute one-half, make up about one-third of total; machinery (including transport equipment) and manufactured goods account for 20% and 30%, respectively.

Composition of imports (c.i.f.) in 1977 (US\$ '000): food, beverages, and tobacco (10,598), fish (700), meat (2,802), cereals (1,961); raw materials (961); fuels, lubricants (2,903); chemicals (1,439); machinery and transport equipment (7,446); other manufactured goods (8,917) for total of 32,254.

New Zealand supplies about 30% of imports; Australia and Japan are other major suppliers.

6.4 Exports

Copra and cocoa have traditionally accounted for about three-fourths of merchandise exports; bananas accounted for remainder until 1971, timber and taro thereafter.

Exports of selected commodities in 1977 (value - US\$ '000): copra, 18,700 tons (4,871); cocoa, 2,571 tons (6,043); bananas, 13,400 (56 lb. cases) (52); timber, 1,541 ('000 feet of super board) (201); taro, 62,000 (72 lb. cases) (360).

New Zealand purchases about 30% of exports; West Germany much of remainder. Japan, Netherlands, American Samoa, Australia, and US are other buyers.

7. Agriculture

7.1 Overview of Agriculture

The agricultural sector, contributing about half of GNP and two-thirds of employment, is considered only viable development prospect. Less than 25% of total (700,000 acres) is cultivated; most productive lands in coastal areas under 1000' elevation. About two-thirds of harvested land is on Upolu but Savai'i, with at least 200,000 uncultivated acres suitable for crops, pasture, and timber, has greatest development potential. Some 80% of area is customary land under Matal management; rest is government or freehold land. While public and private farms make significant contribution, traditional village agriculture with both subsistence and cash crop cultivation is core of sector, accounting for more than half of total output. Customary laws which limit individual land occupancy rights are seen as deterrent to individual investment and thus a factor in low agricultural yields. The issue is a sensitive one in development strategies, and projects to upgrade village agriculture are chosen for acceptability in traditional system.

Other factors accounting for stagnant production of major crops - coconuts, cocoa, bananas, taro - include old coconut and cocoa trees, inadequate replanting, damage from hurricanes and crop diseases, and periodic drought. Crucial to agricultural development are improved cultivation practices and availability of necessary inputs. The government is emphasizing upgrading of land and improvement of techniques and services in both villages and large-scale operations in the Third Five-Year Development Plan (1975-79).

7.2 Crops and Production

With production data lacking, output of major crops can only be inferred from exports; however, with exception of cocoa, only a small amount of which is consumed locally, export crops are also staple crops.

Coconuts, grown on about two-thirds of harvested land, contribute 40-60% of merchandise export earnings. Copra exports declined from high 1977 level of 18,700 tons to 13,777 tons in 1978.

Greatly increased cocoa prices in 1977 were stimulus to increased output when exports amounted to 2,571 tons. 1,176 tons exported in 1978.

Volume of banana exports has declined sharply over several years, the 1977 level of 13,400 (56 lb boxes) being about one-tenth of the 1971 level. Hurricane damage and diseases (especially bunchy top) are cited as causes.

Yields of the main staple, taro, are only one-fourth to one-third of potential; however, higher export levels were expected to result from improved production in 1978. 69,000 cases had been exported by July of that year - twice the level of same period in 1977.

Other crops include coffee, ta'amu, breadfruit, yams, various fruits and vegetables (papayas, mangoes, avocados, limes) and spices.

54-56% of Western Samoa is forested, about one-third on steep terrain. Reserves of exploitable forest are considerably larger on Savai'i; land clearance has proceeded at faster rate on easier terrain of Upolu. Since purchase of Potlatch Timber Company (Asau, Savai'i) in 1977 by Samoa Forest Products, Ltd. (owned jointly by government and an Australian company), exports have grown (1.5 million board feet in 1977 compared with 446,000 board feet in 1976). More rapid reforestation appears necessary to maintain resources.

Imports of fish, meat and dairy products remain high as domestic output has shown little expansion. The local fish catch increased from 1,200 tons in 1973 to 1,750 tons in 1977 as a result of programs providing boats, nets, refrigeration facilities, and training of fishermen.

Livestock numbers (1976): pigs (50,000), cattle (22,000), horses (3,800), poultry (95,000 - estimates vary widely).

8. Physical Geography8.1 Climate

Climate is tropical with well-defined rainy season from November to April. Rainfall averages 113" annually, 75" in rainy season. Mean daily temperature is 80°F (27°C), with little if any seasonal variation. (Extremes recorded were 93°F and 61°F.) High humidity is usual.

Precipitation varies widely from place to place, 112" annually on northern coast of Upolu, 90" in far west, while south coast appears to receive about 30% more rain than north. Northern coast of Savai'i receives about 120"/year, southern coast more. Rainfall over inland mountains averages 200" yearly on Upolu and over 300" on Savai'i. Great damage from hurricanes is unusual; two severe hurricanes in past century but cyclonic storms with winds of 40-60 miles per hour are common during December-April hurricane season.

8.2 Temperatures (Centigrade)

<u>Period</u>	<u>Average Temp.</u>		<u>Max. Temp.</u>		<u>Min. Temp.</u>		<u>Relative Humidity 9am.</u>	
	<u>Actual</u>	<u>Mean</u>	<u>Actual</u>	<u>Mean</u>	<u>Actual</u>	<u>Mean</u>	<u>Actual</u>	<u>Mean</u>
1975	26.3	26.6	29.5	29.9	23.1	23.3	82.4	83.1
1976	26.3	26.6	29.7	29.9	22.9	23.3	83.4	83.1
1977	26.9	26.6	30.1	29.9	23.1	23.3	78.7	83.1
<u>1978</u> - (1)								
April	26.8	27.1	30.3	30.4	23.4	23.7	82.0	80.9
May	26.9	26.8	30.3	30.2	23.4	23.4	82.0	80.2
June	26.4	26.5	30.0	29.8	22.9	23.1	84.0	79.9
July	25.9	26.1	29.7	29.3	22.1	22.7	79.0	78.2
August	26.1	26.1	29.4	29.3	22.7	22.7	80.0	77.4
September	26.2	26.2	30.0	29.6	22.5	22.8	75.0	76.4

<u>Period</u>	<u>Average Temp.</u>		<u>Max. Temp.</u>		<u>Min. Temp.</u>		<u>Relative Humidity 9am</u>	
	<u>Actual</u>	<u>Mean</u>	<u>Actual</u>	<u>Mean</u>	<u>Actual</u>	<u>Mean</u>	<u>Actual</u>	<u>Mean</u>
October	26.6	26.4	30.0	29.7	23.2	23.2	80.3	77.8
November	26.4	26.6	29.8	30.0	22.9	23.3	79.7	77.7
December	27.1	26.7	30.6	30.0	23.7	23.5	80.1	79.5

(1) Provisional figures.

Source: Apia Observatory. (Western Samoa - Quarterly Statistical Bulletin 4th Quarter. October - December, 1978.)

8.3 Rainfall (millimeters)

<u>Period</u>	<u>Upolu</u>							
	<u>Afiamalua</u>		<u>Faleolo</u>		<u>Lotofaga</u>		<u>Piula</u>	
	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>
1975	4,969	5,258	2,873	2,380	3,894	3,978	n.a.	3,696
1976	4,465	5,258	2,410	2,380	n.a.	3,978	n.a.	3,696
1977	n.a.	5,258	1,628	2,380	n.a.	3,978	n.a.	3,696
<u>1977</u>								
April	263	521	127	198	n.a.	261	146	317
May	313	268	102	164	n.a.	408	352	287
June	81	226	43	114	n.a.	245	103	211
July	161	218	93	89	198	286	127	168
August	66	245	23	143	238	280	104	151

<u>Period</u>	<u>Afiamalu</u>		<u>Faleolo</u>		<u>Lotofaga</u>		<u>Piuta</u>	
	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>
September	53	227	48	124	401	326	n.a.	210
October	573	252	111	216	603	323	253	318
November	428	540	141	231	743	517	n.a.	352
December	266	698	181	273	n.a.	332	n.a.	443

Savali

<u>Period</u>	<u>Asau</u>		<u>Fagamalo</u>		<u>Salailu</u>		<u>Satupaitea</u>	
	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>	<u>Total</u>	<u>Mean</u>
1975	2,509	2,780	2,854	3,903	2,730	3,076	2,626	3,569
1976	n.a.	2,780	2,976	3,903	1,920	3,076	n.a.	3,569
1977	2,074	2,780	2,354	3,903	3,309	3,076	2,712	3,569
<u>1977</u>								
April	121	275	49	304	244	283	136	221
May	18	104	128	262	196	196	251	221
June	2	72	54	174	193	209	143	322
July	30	69	93	157	69	226	76	331
August	38	72	31	137	103	225	172	338
September	3	55	94	190	120	134	135	283
October	113	204	133	217	615	382	541	526
November	111	310	138	362	455	263	301	282
December	135	437	422	492	176	366	370	309

(1) Provisional figures.

Source: Apia Observatory, (Western Samoa - Quarterly Statistical Bulletin. 4th Quarter, Oct. - Dec., 1978.)

8.4 Land Forms

Western Samoa lies between 13 and 15 degrees south latitude and 171 and 173 degrees west longitude. Closest neighbor is American Samoa, about 80 miles to the east. Tonga's northern islands are 130 miles south and Fiji is 4-500 miles to the southwest.

Two main islands, Upolu (430 miles square), and Savai'i (703 miles square) are of high volcanic type. 7 small islands (Apolima, Manono, Fanuatapu, Namua, Nuutele, Nuulua and Nuusafee, include both high (Apolima) and low (Manono) types. Apolima Strait, between Savai'i and Upolu, is about 8 miles wide, Savai'i is approximately 47 miles long by 27 miles wide, while Upolu is 47 miles long by 15 miles wide. Both large islands have rugged mountainous interiors surrounded by narrow fertile coastal plain and outlying reefs and lagoons. Mountains are heavily forested except at highest altitudes or where recent lava flows have destroyed vegetation.

8.5 Land Use

Of total land area of 700,000 acres, 20% is of high to moderate fertility, 16% moderate to low fertility, 64% low fertility. Less than 25% of land is under cultivation; 54-56% is covered by forests and secondary scrub with most valuable timber resources 1,000' - 1,500' above sea level; remainder consists of fallow land, bush, lava fields, and human settlements.

Estimated Land Use, 1975 (1)
(acres)

	<u>Village lands</u>	<u>WSTEC & other lands</u>	<u>Total</u>
Coconuts alone or interplanted	92,000	10,000	102,000
Cocoa, bananas and taro	32,000	6,000	38,000
Total harvested area	124,000	16,000	140,000
Other, including residential	30,000	14,000	44,000

(1) Because inter-cropping is a general pattern of cultivation, and land parcels are usually small and irregular, estimates of areas harvested for each crop are approximate and may involve some double counting.

Source: World Bank, Western Samoa: Development Issues and Prospects, 1978.

8.6 Rivers

Short swift-flowing rivers which drain highland areas have little significance for transportation. Major commercial value is as hydroelectric power source. Shallow coastal waters are protected from storms but necessitate use of shallow draft boats.

8.7 Mountains

Both main islands mostly rugged highland terrain rising to central mountain range. Highest elevation on Savai'i is 6,094', on Upolu, 3,608'.

8.8 Seismicity

Location along South Pacific collision zone means that Western Samoa experiences an average of 8 tremors annually, though severe damage has not occurred since 1917 earthquake on Upolu.

8.9 Volcanos

All of Western Samoa's mountains are of volcanic origin and several are still active. Mt. Matavanu on Savai'i erupted intermittently between 1905 and 1911, covering much cultivated land with lava flows.

9. Transportation and Logistics

9.1 Road Network

The road network totalling 800 km (500 miles) is generally adequate for size of country but in need of improvements in many sections. Western Samoan Department of Public Works classified roads in 1977 as follows: 458 km main, 73 km town, 320 km secondary, 1200 km plantation. 51 km of main and 47 km of town roads had permanent surfaces.

Upolu and Savai'i have main coastal roads from which feeder roads extend into interior; Upolu has 3 cross-island roads; Savai'i none.

World Bank project to reconstruct parts of East Coast Road at Central Cross Road in eastern Upolu began in 1975. Pavement surfaces of East Coast Road which runs 23.6 km from Apia to Falefa Falls were in poor condition due to inadequate drainage, pavement strength, maintenance, and from erosion by wave action in 9 km section.

Central Cross Island Road, principal link between north and south coasts, climbs 800 m. (at Afflamalu), had poorly maintained sections in mid-1970's as did Southwest Road with which it connects. There is heavy urban traffic between Apia and Vailima (3.4 km), the 6-7 m. wide paved section on plain.

As part of a World Bank agricultural development project on Savai'i, access roads will be built to 4 WSTEC estates and improvements will be made on southern coastal road as follows: sealing of 72 km stretch from Salelologa to Falelima; sealing and realignment of 21.5 km road section from Falelima to Asau.

9.2 Vehicles

A total of 3,671* motor vehicles registered in 1977 included 989 private cars, 1,590 pick-ups, 315 trucks, 149 buses, 397 taxis, 131 motorcycles, 79 tractors, 12 other (includes landrovers, forklifts, etc.)

* Provisional figures from Western Samoa Department of Police and Prisons as cited in Western Samoa: Annual Statistical Abstract, 1977.

9.3 Surface Miles

Apia to:	<u>km</u>	Vailima to:	<u>km</u>
Vailima.....	3.4	Afiamalu.....	6.4
Siumu.....	21.1	Afiamalu to:	
Falefa Falls.....	23.6	Siumu.....	11.3
Faleolo.....	32.0	Faleolo to:	
		Saleloga.....	24.0

9.4 Railroad Network

Western Samoa has no rail system.

9.5 Ports

Ports are government-controlled and administered by Marine Department. Two ports: the major one, Apia, on island of Upolu; the minor one, Asua, on Savai'i, is primarily used for shipment of timber. Inter-island travel and commerce conducted by means of shallow draft boats capable of sailing in reef waters. Mulifanua and Salelologa are terminal points for ferry from Upolu to Savai'i. A recently acquired second vehicular ferry has considerably increased cargo capacity.

Apia

Coordinates: Lat. 13° 50' S; long. 171° 55' W. Chief port of Independent State of Western Samoa.

Approach: Port is secure from May to November, but exposed to gales during the wet season - December to April and May. Pilot meets all vessels provided E.T.A. is known in advance, in the case of sailing vessels well to windward, outside reef. Good leading lights enable large steamers to come in at night, but daylight arrivals and sailings preferable.

Largest vessel: maximum draft, 10 m. Maximum tonnage 12,500 g.r.t.

Accommodation: One wharf, length 184.08 m. for vessels up to 213.35 m. Depth at low tide 10.97 m. All loading and discharging with ship's gear; no floating crane.
Storage: Two 1,860 sq. m. transit sheds available.
Provisions: Limited supplies available.
Water: Fresh water at all wharf berths.

Container &
Ro/Ro Faci-
lities:

One stern roll-on/roll-off operates. A new ro/ro and ferry terminal will be ready in September 1978.

Tanker
Terminal:

Situated on West Reef for vessels up to 213.35 m. long, 10.97 m. maximum draft. Vessel's stern is moored between reef and buoy. A 6 in. diameter discharge line. A launch service is available. A new buoy berth will be ready in July 1978.

Development: Slipway for local ships planned.

Shiprepairs: Minor repairs only.

Towage: A 400 h.p. tug, a 2,000 h.p. and a 120 h.p. Pilot launch also available.

Pilotage: Compulsory for merchant vessels. Pilot boards all vessels 2.4 km out.

Traffic: 1977, 217 vessels. Total tonnage 1,103,393 g.r.t.

Airport: 29 km. Flights direct to Fiji and New Zealand.

Local Holidays: Christmas, New Year, Anzac Day, Easter and Independence Day celebrations.

Working Hours: 24 hours a day. No work 23.30 Saturday to 00.30 Monday. Harbour Master on 24 hour call every day.

Pago-Pago (USA)

- Coordinates:** Lat. 14° 17' S; long. 170° 40' W. Mean HW interval 6 hrs. 42 min.; spring range 0.9 m., mean range 0.7 m.
- Approach:** Depth at entrance 55 to 73 m.; fine basin but much exposed to heavy swell making outer part of harbor unsuitable as anchorage. Harbor is small with numerous banks in its approach. Around the harbor is a fringe of coral reef 91.43 to 457.18 m. off shore, and beyond this reef there is deep water where the largest vessels can lie. Good anchorage anywhere in inner harbor depth 11 to 45.8 m.; best anchorage for large vessels in 36.6 m. off Fagatogo village west of former Naval Station. Anchorage also in outer harbor in good weather. Tides: Average rise and fall 1.2 m. Largest vessel: maximum tonnage, 42,000 tons, maximum draft, 11.4 m.
- Accommodation:** The average depth of harbor is about 45.8 m.; at main wharf, 10.97 m. Good water by pipe from reservoir to wharf. Station Main Dock, for handling general cargo, is 121.91 m. long, 18.29 m. wide, depth 10.97 m. alongside. Fuel dock, for fuelling and handling general cargo, is 121.91 m. long, 13.71 m. wide, depth 11.58 m. alongside. Customs dock, for handling general cargo, is 121.91 m. long, 6.10 m. wide, and depth 2.74 m. alongside. Floating equipment consists of one 240-ton barge and several other small craft.
Cranes: one floating crane with a maximum 25 tons lift; cranes of 2 1/2 to 25 tons capacity available.
Provisions: Fresh provisions and fruits, tinned foods in medium quantities and meat available, but pork and poultry in small amounts; ice may be obtained.
Water: Water, piped to wharf and obtained from island Government, available in unlimited quantities except during the three-month period beginning June 15th.
Private Wharf: Two cannery wharves, northside of harbor, 106.7 m. each to be extended to 121.9 m. with 7.01 m. alongside at L.W.
- Container & Ro/Ro Facilities:** Container ships up to 249.93 m., maximum draft 10.97 m. berth at Main dock. One 25-ton floating crane; three mobile container forklifts for 6.19 m. containers.

- Tanker
Terminals: For vessels up to 195.06 m. length o.a. 10.1 m. maximum draft. Tanker discharge facilities include one 12 in. pipeline for fuel oil, one 6 in. pipeline for diesel oil, one 6 in. pipeline for gasoline, and one 4 in. pipeline for kerosene; rate of discharge unlimited.
- Bunkers:** Diesel, jet, lube oil, gasoline.
- Offshore
Facilities: Four mooring buoys in inner harbor.
- Development:** Enlargement of existing container yard.
- Shiprepairs:** Available through the Director, Marine Railway, Govt. of American Samoa, Pago-Pago, American Samoa 96799. Tel: 633-4123.
- Towage:** One 1,750 h.p. and two 500 h.p. tugs available.
- Pilotage:** Not compulsory. Two pilots available. Night time entering and berthing, weather permitting, up to 22.00 hours. Vessels should make previous arrangements by radio, Channel 16.
- Traffic:** 1977, 795 vessels, 1,012,289 tons cargo.
- Medical
Facilities: Government owned Lyndon B. Johnson Tropical Medical Center at Fagaralii.
- Local Holidays:** New Year, President's Day, Good Friday, April 17, Memorial Day, July 14, Labour Day, Veteran's Day, Thanksgiving, Christmas Day.
- Working Hours:** 07.30 to 16.00 hours.
- Airport:** Tafuna International 11.2 km.

9.6 Shipping

Internal:

Coastal and inter-island shipping still carry some traffic eventually expected to move by road when driving conditions and speeds improve.

Shallow draft sailing boats, Apia-based trading vessels and passenger ferries provide freight and passenger service. Western Samoa has participated in establishing the Pacific Forum Line with a number of other countries in the region (Australia, New Zealand, Fiji, Nauru, Solomon Islands and Tonga).

External:

Regular passenger and cargo services from Australia and New Zealand via Fiji and other Pacific territories. Monthly cargo service from Japan and a five/six weekly service from the USA. Also direct service to the United Kingdom. Nauru State Shipping Line makes regular calls at Apia.

Companies operating regular services include Bank Line, Nedlloyd, Union Steam Ship Co. of New Zealand, Pacific Navigation of Tonga Ltd., Warner Pacific Line, the Fiji Direct Service, and Pacific Islands Transport Lines.

9.7 Airports

One international airport, at Faleolo on western end of Upolu, completed 1973, has recently completed 1,676 m. (5,500') runway. Airstrips for small planes only are located at Fagolii, 2 miles east of Apia, and at Asau, and Salelologa on Savai'i. Savai'i airstrips take planes of Britten-Norman Islander class.

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.

APIA/Faleolo 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>	<u>CL</u>		
13°49'20" S 171°59'30" W	3 306	08/26	0.10	1676	B	LCN 25H25 JA1	

Remarks: REG-S; alternate aerodromes Pago Pago/ Intl.

Aids: LVA (08+ 26+), LR, LTX, LB, LO, MD, MC, MT, MTX, MO, L4,9. Stopway 08-274; 26-304. Clearway 08 & 26-274. No telex.

PAGO PAGO/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>	<u>CL</u>		
14°20'04" S 170°42'35" W	9 31	05/23 PA I	0.24	2743	A	AUW48/1 57/2 111/4	None

Remarks: REG-S; alternate aerodromes Nandi/Intl, Noumea/La Tontouta, Rarotonga I/Rarotonga Intl, Wallis/Hibifo.

Aids: ILS (05-1), LPA (05-1), LVA (23+), LR, LTX, LB, LO, MD, MC, MT, MTD, MS, MFD, MTX, MO.

KeyAbbreviations

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 not required up to 7 days. Visa applications should be made in writing at least one month prior to departure and must include proof of accommodation and proof of financial maintenance and means of departure from Western Samoa. Smallpox vaccination required; yellow fever immunization for arrivals from infected areas.

9.9 Aircraft Entry Requirements

All private and non-scheduled commercial aircraft overflying need not obtain prior approval.

All private and non-scheduled commercial aircraft landing for commercial or non-commercial purposes must obtain prior permission from the Aerodrome Superintendent, Faleolo International Airport, Apia, Western Samoa (telegraphic address: MALO APIA/TELEX: None) at least 7 days prior to departure. Requests must include all information pertinent to the flight.

All non-scheduled commercial aircraft landing for commercial purposes should contact the Civil Aviation Division, Ministry of Transport, Private Bag, Wellington 1, New Zealand (telegraphic address: CIVILAIR WELLINGTON/TELEX: None) prior to departure to insure that all regulations governing commercial activity in Western Samoa can be complied with.

9.10 Air Carriers

International:

Polynesian Airlines Ltd.: P.O.B. 599, Beach Rd., Apia; operates domestic services to Faleolo, Maota, Lalomalava, Fagaloo and Asau, and international services to American Samoa, Fiji, Niue, Rarotonga (Cook Is.), Tonga, and New Zealand; fleet of 2 HS 748; services between Western Samoa and other Pacific territories are also run by Air Pacific, Air Nauru and South Pacific Island Airways.

Domestic:

The merged Air Samoa Ltd. and Samoa Aviation Ltd. provide internal air services using a 9-seater Britten-Norman Islander and a 3-seater Cessna. Daily morning and afternoon flights, 7 days a week, from Fagali'i to Faasaleleaga and Asau; flights also to Maota and Lalomalava and, on request, to Siutu.

9.11 Air Distances

Apia (Faleolo) Intl. to:	Statute Miles	Apia (Fagali'i) to:	Statute Miles
Honolulu.....	2,610	Honolulu.....	2,603
Lanthala Bay.....	701	Nandi.....	768
Nandi.....	752	Nausori.....	539
Nausori.....	691	Niue I.....	380
Nukualofa.....	549	Pago-Pago.....	77
Pago-Pago.....	94	Rarotonga.....	935
Rarotonga.....	955	Tahiti.....	1,491
Tonga (Fua'Amotu).....	553	Tonga.....	599
Wallis (Hinifo).....	282	Wallis (Hinigo).....	299
		Wellington.....	2,064

10. Power and Communications

10.1 Electric Power

Government-owned Electric Power Corporation (EPC) provides about 80% of total power generated from its 6.2 MW diesel plants and a 1.3 MW hydro-power plant; supplies Apia area, Salelologa region of Savai'i and is extending service to Falelatai on west coast and Falefa on northeast coast of Upolu. EPC had about 6000 customers in December 1978. A wood-fired 2.5 MW steam power plant operated by government-owned Samoa Forest Products Ltd. in Asau is one of several small public and private plants with aggregate capacity of 3.5 MW.

With commissioning of 2 x 1.8 MW ADB-financed diesel sets in early 1979, total capacity in Upolu was to be 11.1 MW - peak load capacity, 10.4 MW in wet season (Dec.-July), 9.9 MW in dry season (Aug.-Nov.) Three diesel sets of 100 kW each scheduled to begin operation at Salelologa (Savai'i) were under same loan.

In order to reduce EPC's heavy dependence on imported diesel oil for power generation (present cost about US\$ 1.1 million) and meet future energy demand (Upolu's projected to grow at minimum rate of 9.7% yearly 1978-86), government plans to develop country's considerable hydro-power resources. (Upolu has hydro-power potential of 20 MW of which only 1.3 MW has been exploited.) Four projects planned for next 5 years with total installed capacity of 12.4 MW include Magiagi (1.8 MW) to be completed mid-1981 and a second ADB-financed project on Vaisigano River (near Apia, upstream of Magaiagi, 1.8 MW) to be completed December 1981.

10.2 Telecommunications

Postal and radio department supervises all internal and external communications. Central radio station at Apia is linked with eight radio out-stations, staffed by trained Samoan operators on main islands; out-stations communicate with radio Apia daily via radio-telephone and telegraph. Overseas radio-telephone service available to American Samoa, Fiji, New Zealand, Australia, Canada, USA, United Kingdom and other overseas countries; most local ships fitted with radio.

Continuous watch is maintained on International distress frequencies: 600 KC for ocean-going vessels and 2,182 KC for small ships. Continuous radio link maintained with Faleolo Airport.

Apia region has new automatic telephone exchange system. An estimated 3,300 telephones (2.2/100 population) are in use.

10.3 Radio

Western Samoa Broadcasting Service (2 AP): Broadcasting Department, POB 200, Apia; government controlled with commercial sponsorship; broadcasts on two channels in English and Samoan between 1700 hours and 2300 hours. Reception of 2 AP fair in neighboring islands of American Samoa, Tonga, Cook Islands, Tokelau, Fiji, and Niue.

NB - station will broadcast telegrams for listeners in remote villages or those without telephones. In many areas radio is only daily source of information.

Estimates of number of radio sets in use vary widely: 32,000 is estimate of Europa, The Far East and Australasia, 1978-79.

10.4 Television

No local station but reception from American Samoa (KVZK), on limited number of sets, links country with American television networks.

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