

A.6.8 Satellite Imagery

Where possible satellite imagery techniques shall be used to assist in the securing of project objectives.

A.6.9 Final Results

The following documentation, to be written in English throughout, shall be produced:

- a. Reproducible graphics for publication;
  - \* Submarine topographic maps
  - \* Subsurface geological structure maps
- b. Other graphics;
  - \* Bathymetric charts for the compilation of navigational charts by the Fiji Hydrographic Office
  - \* Geological cross sections
  - \* Bottom sampling station charts
  - \* Bottom sediment charts
- c. Surveying data;
  - \* Table of Latitude and Longitude
  - \* Latitude and Longitude location map
  - \* Tidal height data
  - \* Current observation data
  - \* Datum level sheets
  - \* Hydrographic survey station descriptions
- d. Hydrographic and geological survey reports.

A.7 Cost

Costs have been estimated based on a round figure of F\$750,000 per year, making a total of F\$2,250,000 over the project period. This estimate will require refinement during the project formulation phase.

Costs will have to be met fully from Aid sources.

Enclosure 1 to ANNRX.A to  
Fiji Hydrographic Service's  
Proposal for Development Survey  
dated: February 1990



Enclosure 2 to ANNEX A to  
 Fiji Hydrographic Service's  
 Proposal for Development Survey  
 dated February 1990

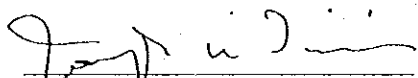
SCHEDULE

	First Year	Second Year	Third Year
Horizontal control			
Tidal observation			
Sounding			
Current observation			
Geological survey			
making submarine topographic charts			
making submarine geological structure charts			

SCOPE OF WORK

SCOPE OF WORK  
FOR  
THE PREPARATION OF NAUTICAL CHARTS  
IN  
THE NORTHERN LAU ISLANDS REGION  
IN  
THE REPUBLIC OF FIJI  
AGREED UPON BETWEEN  
MINISTRY OF PUBLIC WORKS, INFRASTRUCTURE & TRANSPORT  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

MARCH 15 ,1994



HON. RATU J. DIMURI  
MINISTER,  
MINISTRY OF PUBLIC WORKS,  
INFRASTRUCTURE & TRANSPORT



DR. YASUHIRO GANEKO  
LEADER,  
PREPARATORY STUDY TEAM,  
JAPAN INTERNATIONAL  
COOPERATION AGENCY

## I. INTRODUCTION

In response to the request of the Government of the Republic of Fiji (hereinafter referred to as "Fiji"), the Government of Japan decided to conduct a study on the Preparation of Nautical Charts in the Northern Lau Islands Region (hereinafter referred to as "the Study ") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of Fiji.

The present document sets forth the scope of work with regard to the Study.

## II. OBJECTIVES OF THE STUDY

The objectives of the Study are to prepare nautical charts in the Northern Lau Islands Region, and to report the recommendation for improvement of operation and management system of hydrographic surveying and nautical charting in Fiji.

## III. STUDY AREA

The Study on the preparation of nautical charts covers the Northern Lau Island Region approximately 40,400 km<sup>2</sup> (Appendix- I).

## IV. SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study shall cover the following items (The technical details are shown in Appendix- II).

### 1. Preparation of nautical charts

#### (1) Control point survey

Based on the existing control points available for the Study, unknown positions of landmarks and other navigational objects as well as new points necessary for sounding operation shall be determined by Global Positioning System (GPS) observation.

(2) Sounding

Sounding operation shall be carried out by using echo sounders, and the positioning of the ship shall be done by GPS.

(3) Coastline and topographic drawing

Coastline sheets shall be prepared, and land topographic features are plotted on the sheets, by using existing aerial photographs and topographic maps.

(4) Tidal observation

In order to determine the chart datum level and make tidal reduction to soundings, a tide station and temporary tide poles shall be set in appropriate places.

(5) Preparation of smooth sheets

Based on the results of surveys, smooth sheets shall be prepared on plastic films.

(6) Preparation of nautical charts

Taking into account the international chart publication plan of Fiji, nautical charts on a scale of 1/150,000 shall be produced by using the smooth sheets to be prepared as well as existing charts and available data.

2. Recommendation to the relevant authorities in Fiji

(1) Analysis of the present operation and management system

Based on the relevant data and information, an analytical study should be made to identify present conditions and problems in operation and management system of hydrographic surveying and nautical charting in Fiji.

(2) Preparation of recommendation

Recommendation shall be prepared for the improvement of operation and management system of hydrographic surveying and nautical charting in Fiji.

V. STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative study schedule (Appendix- III)

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## VI. REPORTS AND FINAL RESULTS

JICA shall prepare and submit the following reports in English and final results to Fiji.

### 1. Reports

#### (1) Plan of operation

Twenty (20) copies in English at the commencement of the Study in Fiji.

#### (2) Progress report

Twenty (20) copies every fiscal year.

#### (3) Final report

Fifty (50) copies upon the completion of the Study.

### 2. Smooth sheets

One (1) set for each area.

### 3. Nautical charts

Two hundred (200) copies for each chart.

### 4. Other surveying and observation data results prepared through the Study (Mentioned in Appendix-IV).

These results will belong to Fiji after having completed the whole work.

## VII. UNDERTAKING OF THE GOVERNMENT OF FIJI

1. To facilitate smooth conduct of the Study, the Government of Fiji shall take necessary measures:

(1) to secure the safety of the Japanese study team (hereinafter referred to as "the Team");

(2) to permit the members of the Team to enter, leave and stay in Fiji for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees;



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(3) to exempt the members of the Team from taxes, duties, fees, and other charges on equipment, machinery and other materials brought into and out of Fiji for the conduct of the Study;

(4) to exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study;

(5) to provide necessary facilities to the Team for unrestricted re-export of equipment and machinery brought into Fiji for the conduct of the Study;

(6) to provide necessary facilities to the Team for remittance as well as utilization of the funds introduced into Fiji from Japan in connection with the implementation of the Study;

(7) to secure permission for entry into private properties or restricted area for the implementation of the Study;

(8) to secure permission for the Team to take all data and documents (including maps and aerial photographs) related to the Study out of Fiji to Japan;

(9) to provide medical services as needed. Its expenses will be chargeable on the members of the Team; and

(10) to secure permission to use telecommunication facilities for the execution of the field survey.

2. The Government of Fiji shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willfull misconduct on the part of the members of the Team.

3. Fiji Hydrographic Service (hereinafter referred to as "FHS") shall act as a counterpart agency to the Team and also as a coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

4. FHS shall, at its own expense, provide the Team with the followings, in cooperation with other organization concerned:



(1) available data (including maps and aerial photographs) and information related to the Study;

(2) counterpart personnel;

(3) suitable office space with necessary equipment in Suva if necessary;

(4) credentials or identification cards if necessary;

(5) surveying vessels with crew; and

(6) appropriate number of vehicles and drivers when required.

#### VII. UNDERTAKING OF JICA

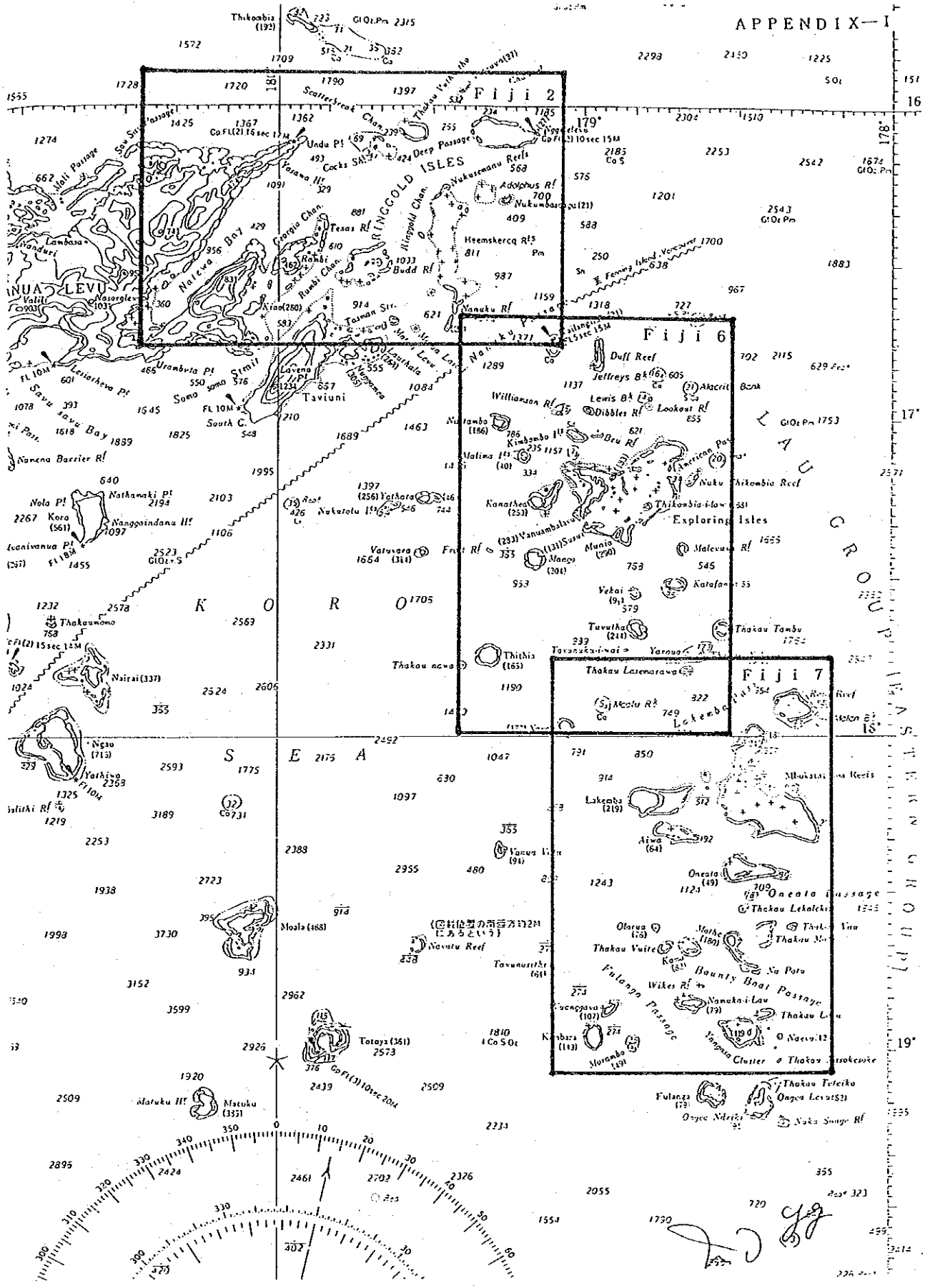
For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the study team to Fiji; and
2. to pursue technology transfer to the Fiji counterpart personnel in the course of the Study.

#### VIII. OTHERS

JICA and FHS, shall consult with each other in respect of any matter that may arise from or in connection with the Study.

APPENDIX-I



APPENDIX- II

TECHNICAL DETAILS

1. Hydrographic survey standards and nautical charting specifications

The International Hydrographic Organization (IHO) Standards for Hydrographic Surveys (S-44) as well as the Chart Specifications of the IHO should in principle be applied to the hydrographic surveying and nautical charting to be carried out under the Study.

2. Control point survey

(1) Principal specifications

- a. Grid system: Fiji Map Grid
- b. Ellipsoid of reference: WGS-72
- c. Origin of coordinates: 17° 00' 00" S, 178° 45' 00" E

(2) Horizontal control accuracy

- a. For primary shore control points: Accuracy of 1 part of 10,000
- b. For secondary point and where the survey is extensive: No more than 0.25 mm at the scale of the survey

3. Sounding operations

(1) Sounding

- a. Accuracy of soundings in terms of depth:
  - Within 0.3 metres for the area shallower than 30 metres in depth
  - Within 1 % of the depth for the area deeper than 30 metres
- b. Intervals between sounding lines
  - The interval between sounding lines will be 1-5 miles, and should be determined having regard to the significance of the area and to the topographical character of the sea floor, water depth, etc.

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- Whenever practicable, anomalous depth and shoals reported in the survey area should be examined, using the side scan sonar.

c. Correction of echo soundings (correction of sound velocity in sea water)

- For the area shallower than 50 metres: By bar-check method

- For the area deeper than 50 metres: By using Echo Sounding Correction Tables

d. Tidal reduction for sounding

Tidal reduction shall be made only for those soundings less than 200 metres in depth.

(2) Ship's positioning:  $\pm$  25 metres

4. Tidal observation

(1) performance of tide gauges to be employed

a. For analogue type tide gauges:

- Scale: 1/40 or more

- Recording paper feeding speed: 12 mm/h or more

b. for digital type tide gauges:

- Accuracy: Within  $\pm$  0.5 %

- Data recording time interval: 5 minutes or less

- Unit of tidal height indicated: 1 cm

(2) Chart Datum Level

a. Lowest Astronomical Tide (LAT) shall be used for the chart datum.

b. The mean sea level will be obtained by comparing the mean sea level obtained by one-month observation, Suva Tide Station being as the standard port.

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5. Smooth sheets to be prepared

(1) Projection to be used: Transverse Mercator projection

(2) Scale: 1/150,000

6. Nautical charts to be prepared

(1) Nautical charts should be prepared in accordance with the INT chart publication scheme of FHS in conformity with the Chart Specifications of the International Hydrographic Organization (IHO).

(2) The following three charts will be prepared:

a. Chart No. Fiji 2: 16° 46' 28" S, 15° 54' 30" S,  
179° 32' 57" E, 179° 04' 30" W

b. Chart No. Fiji 6: 17° 59' 33" S, 16° 40' 00" S,  
179° 25' 00" W, 178° 30' 55" W

c. Chart No. Fiji 7: 19° 04' 40" S, 17° 45' 00" S,  
179° 06' 30" W, 178° 11' 16" W

(3) Chart scale: 1/150,000

(4) Projection: Mercator projection



(5) Spheroid: WGS-72

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APPENDIX- III

TENTATIVE STUDY SCHEDULE

ITEM	YEAR	1994	1995	1996	1997	1998
		7 10	1 4 7 10	1 4 7 10	1 4 7 10	1 1
1. PREPARATION OF NAUTICAL CHARTS						
CONTROL POINT SURVEY						
SOUNDING						
COASTLINE AND TOPOGRAPHIC DRAWING						
TIDAL OBSERVATION						
PREPARATION OF SMOOTH SHEETS						
PREPARATION OF NAUTICAL CHARTS · CHART ORIGINAL · PRINTING						
2. RECOMMENDATION FOR IMPROVEMENT OF OPERATION AND MANAGEMENT SYSTEM						
ANALYSIS OF PRESENT CONDITION						
PREPARATION OF RECOMMENDATIONS						
REPORT		Δ P/O	Δ P/R	Δ P/R	Δ P/R	Δ F/R

NOTE:  STUDY IN FIJI  
 STUDY IN JAPAN  
 P/O PLAN OF OPERATION  
 P/R PROGRESS REPORT  
 F/R FINAL REPORT

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APPENDIX- IV

FINAL RESULTS

1. Control point survey
  - (1) List of control points and their geographical positions
  - (2) Control point sheets
  - (3) Coastline sheets
2. Sounding
  - (1) Echogram
  - (2) Ship's position fixing records
  - (3) Sounding sheets (boat sheets)
3. Tidal observation
  - (1) Tidal observation records
  - (2) Results of determination of the chart datum level
4. Smooth sheets of survey
5. Nautical charts
  - (1) Chart originals
  - (2) Printing plates of the charts
  - (3) 200 printed copies of each chart

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MINUTES OF MEETING

MINUTES OF MEETING

ON

THE SCOPE OF WORK

FOR

THE PREPARATION OF NAUTICAL CHARTS

IN

THE NORTHERN LAU ISLANDS REGION

IN

THE REPUBLIC OF FIJI

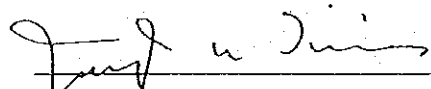
BETWEEN

MINISTRY OF PUBLIC WORKS, INFRASTRUCTURE & TRANSPORT

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

MARCH 15 ,1994



HON. RATU J. DIMURI  
MINISTER,  
MINISTRY OF PUBLIC WORKS,  
INFRASTRUCTURE & TRANSPORT



DR. YASUHIRO GANEKO  
LEADER,  
PREPARATORY STUDY TEAM,  
JAPAN INTERNATIONAL  
COOPERATION AGENCY



## MINUTES OF MEETING

The Japanese Preparatory Study Team organized by Japan International Cooperation Agency, headed by Dr. YASUHIRO GANEKO visited the Republic of Fiji from February 15th to March 15th, 1994 for the purpose of discussing the Scope of Work for "The Preparation of Nautical Charts in the Northern Lau Islands Region in the Republic of Fiji" ( hereinafter referred to as "the Study").

The Japanese Preparatory Study Team exchanged views and had a series of discussions with representatives of Ministry of Public Works, Infrastructure & Transport and other organizations concerned. A list of the participants appears in Attachment I.

Through these discussions, both sides have completed the Scope of Work for the Study.

As a result, both sides confirmed the following points :

1. The Fiji side agreed that the survey vessel "TOVUTO" including "BABALE" would be used for the Study approximately five months every year. Concerning this, the Fiji side strongly requested that the Japanese side should bear the fuel and ration cost for the "TOVUTO" and "BABALE" because of the limitation of the budget. The Japanese side promised to convey this request to the JICA Headquarters.
2. The Fiji side requested that emphasis would be placed on the technical transfer during the Study period with a view to enabling the Fiji counterpart personnel to improve their technique. In order to do this, the Fiji side requested the training of counterpart personnel in Japan and the provision of machinery equipment such as a Global Positioning System which is used for the Study. The Japanese side responded that this request would be conveyed to the JICA Headquarters.
3. The Fiji side informed that the office space is available for the Study, but due to the shortage of funds, some office equipment may not be available. The Japanese side responded that it would procure office equipment where necessary.
4. The Fiji side informed that it would be very difficult to make a full time of arrangement of the appropriate number of vehicles and drivers as requested. The Japanese side responded that this matter will be considered.
5. The Fiji side agreed to provide approximately seven counterpart persons for hydrographic surveying during the Study period.
6. From the viewpoint of technical transfer, both sides agreed that the hydrographic survey in Vanua Balavu area and its data processing would be carried out by the Fiji side itself with Japanese assistance.  
This work should be finished by the end of 1995.

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7. Fiji Hydrographic Service shall take necessary measures to exempt the Study Team from customs duties, internal taxes, Value Added Tax (VAT) and other fiscal levies which may be imposed in the Republic of Fiji with respect to the supply of the products, services and equipment associated with the execution of the Study.

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Attendance list

Japanese side

Preparatory Study Team

GANEKO YASUHIRO	Leader
MIMURA SHIGESHI	Sounding Survey
HAMASAKI HIROMI	Compilation Planning
TANAKA HIDEO	Horizontal Control Point Survey
IWATA KENJI	Cost Estimation
KAJITA ATSUSHI	Oceanographic Survey
TAKAHASHI KATSUHIKO	Cooperation Policy
TSUJINO HIROSHI	Study Planning

Embassy of Japan

YAMASHITA MAKOTO	Second Secretary
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JICA Fiji Office

WATANABE HAJIME

Fiji side

Ministry of Foreign Affairs and External Trade

RATU TUI CAVUILATI	Permanent Secretary
EMITAI L. BOLADUADUA	Deputy Secretary for Foreign Affairs
JOSEPH O. BROWNE	Chief Secretary of Protocol

Former Ministry of Finance, Economic Planning and Public Enterprises

VUKI VAKATAWA	Senior Assistant Secretary, AID Unit
SAKIUSA TUISOLIA	Principal Planning Officer, CPO
PAULA ULUINACEVA	Graduate Trainee, AID Unit

Former Ministry of Transport and Civil Aviation

RATU MELI BAINIMARAMA	Permanent Secretary
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Fiji Hydrographic Service

FELIX MAHARAJ	Chief Hydrographer
ACA SILATOLU	Senior Hydrographer (Acting)

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資料収集リスト

付属資料 資料収集リスト(1)

地名	オセアニア地域	調査団名	フィジー国北部ラウ諸島海域海図作成調査	調査の種類	海図作成のための事前調査					
国名	フィジー国	調査期間	1994年 2月 14日～1994年 3月 17日	担当者	氏名					
番号	資料の名称	形態	版型	ページ数	枚数	ポリカ・セル	部数	収集先(又は発行機関)	寄贈・購入	備考
	TAVEUNI NORTH (VANUA LEVU) 1/50,000	地図				セル	1	Lands and survey DEP.	購入	
1	TAVEUNI SOUTH (VANUA LEVU) 1/50,000	"				"	"	"	"	
2	MBUTHA BAY (VANUA LEVU) 1/50,000	"				ポリカ	"	"	"	
3	MATAKUNEA (VANUA LEVU) 1/50,000	"				"	"	"	"	
4	NDRUA NDRUA (VANUA LEVU) 1/50,000	"				"	"	"	"	
5	SANGGANI (VANUA LEVU) 1/50,000	"				"	"	"	"	
6	MAPINDEX (VANUA LEVU) 1/50,000	"				"	"	"	"	
7	FIJI ISLAND MAP (VANUA LEVU) 1/750,000	"				"	"	"	"	
8	UDU POINT (VANUA LEVU) 1/50,000	"				"	"	"	"	
9	SEETS21 (VANUA LEVU) 1/250,000	"				"	"	"	"	
10	地形図 標定図	"	A-3			セル	"	"	寄贈	
11	フィジー諸島至ラウ諸島	"				ポリカ・セル	"	日本水路部	購入	
12	フィジー-ラウ諸島間航路状況図	"				"	"	"	"	
13	FIJI ISLANDS BATHYMETRIC MAP OF FIJI	"				"	"	Lands and survey DEP.	"	
14	EXCLUSIVE ECONOMIC ZONE 1/2,500,000	"				"	"	JICA	"	

番号	資料の名称	形態	版 型	ページ数	サイズ	部数	収集先(又は発行機関)	寄贈・購入	備 考
15	LAUTOKA TO YASAWA ISLANDS DEPTH IN METRES 1/150,000	地図				1	JICA		
16	KIA BATHYMETRY SERIES 1/250,000	"				"	"		SHEET 2
17	CIROBIA BATHYMETRY SERIES 1/250,000	"				"	"		SHEET 3
18	LOMAIVITI BATHYMETRY SERIES 1/250,000	"				"	"		SHEET 5
19	MATUKU BATHYMETRY SERIES 1/250,000	"				"	"		SHEET 8
20	ONO-I-LAU BATHYMETRY SERIES 1/250,000	"				"	"		SHEET 9
21	LAU OR EASTERN GROUP EXPLORING ISLES 1/150,000	"				"	"		F.6
22	TAVEUNI ISLAND 1/150,000	"				"	"		F.3
23	VANUA LEVU 1/150,000	"				"	"		F.2
24	Pacific Islands Yearbook 16th Edition	書籍	A5号	717	オリジナル	"	Angus & Robertson Publishers	購入	
25	Current Economic Statistics July 1993	"	A4号	120	"	"	Bureau of Statistics	"	
26	Marine Act, 1986	"	B5号	370	"	"	Government Printing Office	"	
27	Fiji's Ninth Development Plan 1986-1990	"	B5号	191	"	"	Central Planning Office	"	
28	Fiji Geodetic Datum 1986 (1 January 1987)	文庫	A4号	16	オリジナル	"	Lands and Survey Department	寄贈	

番号	資料の名称	形態	版 型	ページ数	フォーマット	部 数	収蔵先 (又は発行機関)	寄贈・購入	備 考
29	FIJI NAUTICAL ALMANAC 1994 FIJI Hydrographic Service	書籍	A477	60	フォーマット	1	MARINE DEPARTMENT REPUBLIC OF FIJI 1993	購 入	
30	THE NATIONAL ENVIRONMENT STRATEGY FIJI	"	A477	102	"	1	FHS	寄 贈	
31	CURRENT ECONOMIC STATISTICS APRIL 1990 Bureau of statistics, Suva, Fiji		A437	119	ソフト	1	"	"	
32	FIJI STREET DIRECTORY	"	B577	88	フォーマット	1	"	"	
33	OPPORTUNITIES FOR GROWTH Policies and Strategies for Fiji in the medium term	"	B577	158	"	1	"	"	
34	THE FIJI HYDROGRAPHIC SERVICE 1970-1991- A WORKING EXAMPLE OF THE CHALLENGES THAT FACE SMALL MARITIME STATES IN DEVELOPING A VIABLE NATIONAL HYDROGRAPHIC CAPABILITY	文献	A477	13	ソフト	1	"	"	Conference of commonwealth surveyors 1991 paper
30	'AREAS TO BE AVOIDED' 'RELIABILITY ANALYSIS' 'EXPLANATION OF ANALYTICAL PROCEDURES'		A477	2 2 1	"	1	"	"	

番号	資料の名称	形態	版 型	ページ数	枚数・部数	収集先(又は発行機関)	寄贈・購入	備 考
29	FIJI NAUTICAL ALMANAC 1984 FIJI Hydrographic Service	書籍	A477	60	1	MARINE DEPARTMENT REPUBLIC OF FIJI 1993	購入	
30	THE NATIONAL ENVIRONMENT STRATEGY FIJI	"	A477	102	1	FHS	寄贈	
31	CURRENT ECONOMIC STATISTICS APRIL 1990 Bureau of statistics, Suva, Fiji		A477	119	1	"	"	
32	FIJI STREET DIRECTORY	"	B577	88	1	"	"	
33	OPPORTUNITIES FOR GROWTH Policies and Strategies for Fiji in the medium term	"	B577	158	1	"	"	
34	THE FIJI HYDROGRAPHIC SERVICE 1970-1991 - A WORKING EXAMPLE OF THE CHALLENGES THAT FACE SMALL MARITIME STATES IN DEVELOPING A VIABLE NATIONAL HYDROGRAPHIC CAPABILITY	文献	A477	13	1	"	"	Conference of Commonwealth Surveyors 1991 paper
30	'AREAS TO BE AVOIDED' 'RELIABILITY ANALYSIS' 'EXPLANATION OF ANALYTICAL PROCEDURES'		A477	2 2 1	1	"	"	

フィジー国での物価調査結果

付属資料 フィジー国での物価調査結果(1)

平成6年3月現在

フィジー国物価(1)

1F\$=Y80

1US\$=F\$0.7

区分	品名	単位	F \$	U S \$	円	
燃料等	ディユーガソリン	1ℓ	1.2	0.84	96	
	軽油	〃	0.6	0.42	48	
通信費	電話料	スバ市内	10分	0.2	0.14	16
		スバ→日本	分	2.9	2.03	232
	葉書送料	スバ→日本	1枚	0.5	0.35	40
文具類	鉛筆	1本	0.3	0.21	24	
	ボールペン	〃	0.5	0.35	40	
	ノート	1冊	1	0.7	80	
	手帳	大	〃	1.03	0.721	82.4
		小	〃	0.23	0.161	18.4
	領収書	〃	2.15	1.505	172	
	スコッチテープ	1本	8.1	5.67	648	
	パンチ(2穴)	大	個	20	14	1600
		小	〃	3.6	2.52	288
	コピー用紙(約300枚)	75gsm	9.5	6.65	760	
写真類	フィルム	36枚取	5.94	4.158	475.2	
	同時プリント	〃	19.57	13.699	1565.6	
船具等	ロープ	大(20mm)	220m	414	289.8	33120
		(ナイロン)中(15mm)	〃	290	203	23200
		小(10mm)	〃	70	49	5600
	アンカー	(9kg)	1個	187	130.9	14960
	シャックル	(22mm)	〃	7.2	5.04	576
		(12mm)	〃	3.5	2.45	280
		(8mm)	〃	2	1.4	160
	針金	(1mm)	1kg	1.35	0.945	108
	鉄パイプ	(21㍑)	6m	77.5	54.25	6200
	塩ビパイプ	(61㍑)	6m	77	53.9	6160
	ワイヤー	(3mm)	1m	4.4	3.08	352
	シート	(3.6×3.6m)	1枚	17.05	11.935	1364
		(6.0×4.8m)	〃	37.37	26.159	2989.6
(9.2×7.2m)		〃	73.7	51.59	5896	
衣類	半袖カッターシャツ	1枚	20	14	1600	
	Tシャツ	〃	7	4.9	560	
	パンツ	〃	3	2.1	240	
	ハンカチ	〃	0.5	0.35	40	
	普段着ズボン	1着	25	17.5	2000	
	作業用ズボン(上下)	〃	20	14	1600	
	ジーパン	〃	20	14	1600	
	帽子	〃	7	4.9	560	
履物類	布製シューズ	1足	20	14	1600	
	靴下	〃	5	3.5	400	
	ゴムぞうり	〃	5	3.5	400	
食器類	陶器皿	1枚	3	2.1	240	
	陶器カップ	1個	1.5	1.05	120	
	ガラスコップ	1個	3	2.1	240	



付属資料 フィジー国での物価調査結果(2)

フィジー国物価(2)

平成6年3月現在

区分	品名	単位	F \$	US \$	円
雑貨類	懐中電灯 小	1 個	2	1.4	160
	大	"	12	8.4	960
	魔法瓶ポット 小	"	20	14	1600
	大	"		0	0
	魔法瓶水筒 小	"		0	0
	大	"		0	0
	徳用マッチ	1 箱	0.95	0.665	76
	蚊取線香	"	1	0.7	80
	傘	1 本	9	6.3	720
	プラスチックたらい	1 個	16	11.2	1280
	クーラーBOX (中)	"	20	14	1600
	プラスチックポリバケツ	20%	8	5.6	640
	トイレットペーパー	4 個	1	0.7	80
	巻尺	3m	3.8	2.66	304
	シャンプー (0.2%)	本	3.45	2.415	276
	殺虫スプレー	"	2.7	1.89	216
	石鹸	1 個	0.4	0.28	32
	歯磨きチューブ	"	1.6	1.12	128
	歯ブラシ	"	0.8	0.56	64
	タオル	1 枚	4	2.8	320
	バスタオル	"	10	7	800
	エナメル洗面器 (36cm)	1 個	4	2.8	320
	(40cm)	"	5	3.5	400
洗剤	0.5kg	2	1.4	160	
漂白剤 (Bleach)	750ml	0.8	0.56	64	
その他	電池 (単1)	2 本	0.8	0.56	64
	(単2)	"	0.45	0.315	36
	(単3)	4 本	0.3	0.21	24
	ミュージックテープ	1 本	5	3.5	400
	ビデオテープ	"	15	10.5	1200
	絵葉書	1 枚	1	0.7	80
飲料	散髪	1 人	3.5	2.45	280
	ジン	1 本(750ml)	17	11.9	1360
	一般ワイン	1 本( 2%)	9	6.3	720
	ビール	740ml×12本	18.25	12.775	1460
	ミネラル水	1 本( 1%)	2	1.4	160
	ペプシコーラ	"	1.5	1.05	120
	スプライト	"	1.5	1.05	120
	コカコーラ	"	1.5	1.05	120
	ウイスキー	1 本(750ml)	18.8	13.16	1504
	ラム酒	1 本(750ml)	16.3	11.41	1304
ヤングナ			0	0	

付属資料 フィジー国での物価調査結果(3)

フィジー国物価(3)

平成6年3月現在

区分	品名	単位	F \$	U S \$	円
食料品	米 (タイ米)	10kg	9	6.3	720
	(短米)	"	9	6.3	720
	砂糖	4kg	2	1.4	160
	塩	2kg	1	0.7	80
	ホワイトガーリック	0.5kg	3	2.1	240
	牛乳	1 ㍺	1.5	1.05	120
	インスタントミルク	0.5kg	3	2.1	240
	コーンオイル	3kg	10	7	800
	牛肉	1kg	5	3.5	400
	ラム	"	3	2.1	240
	豚肉	"	4	2.8	320
	鶏肉	"	4	2.8	320
	ラムソーセージ	"	3	2.1	240
	スパゲッティ	500g	0.75	0.525	60
	ミックスベジタブル	"	2	1.4	160
	ジャガイモ	4kg	2.5	1.75	200
	玉ネギ	1kg	1	0.7	80
	ブロッコリ	"	5.99	4.193	479.2
	セロリ	kg	3.5	2.45	280
	レタス	個	3.5	2.45	280
	タロイモ	1kg	0.55	0.385	44
	パンの実	1 個	0.4	0.28	32
	ココナッツ	"	0.8	0.56	64
果物	トマト	1kg	5	3.5	400
	オレンジ	5 個	2	1.4	160
	パイナップル	1 個	2	1.4	160
	リンゴ	1kg	4	2.8	320
	レモン	"	3	2.1	240
	ライム	"	3	2.1	240
	スイカ	"	2	1.4	160
	バナナ	1 フサ	2	1.4	160
	マンゴ	1 個	0.4	0.28	32

