

資 料

資 料

1. 調査団員氏名
2. 調査日程
3. 関係者（面談者）リスト
4. 当該国の社会経済状況（国別基本情報抜粋）
5. 討議議事録（M/D）
6. 事前評価表
7. 「トゥ」国側負担工事分及び同予算資料
8. ケース別コスト分析
9. フナフティ島のラグーン側の計画潮位と新施設の1階床レベルの検討
10. 参考資料／入手資料リスト
11. PMH 患者数実績
12. 同規模病院における部門別面積比較表
13. 敷地調査図
14. 対象敷地範囲図
15. 既存施設各室平面図

トゥヴァル国プリンセスマーガレット病院建設・医療機材供与計画基本設計調査
基本設計現地調査団員氏名
(2000年10月31日～2000年12月1日)

Member List of Basic Design Study
on the Project for Construction and Supply of Medical Equipment
for Princess Margaret Hospital in Tuvalu

- | | |
|--|---|
| 1. 総括 / 森本 康裕
Yasuhiro MORIMOTO
Team Leader | 国際協力事業団無償資金協力部業務第二課長代理
Deputy Director, Second Project Management Division,
Grant Aid Management Department,
Japan International Cooperation Agency (JICA) |
| 2. 技術参与 / 鈴木 正之
Dr. Masayuki SUZUKAWA
Technical Adviser | 自治医科大学救急医学教室教授
Professor,
JICHIKA University |
| 3. 業務主任 / 建築計画・病院運
営管理
島田 隆次
Takatsugu SHIMADA
Project Manager/Architectural
Planner/ Hospital Management | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 4. 建築 / 構造計画
佐々 優子
Yuko SASA
Architectural
Designer/Structural Designer | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 5. 設備計画 / 井元 知明
Tomoaki IMOTO
Facilities and Utilities
Planner | (株)伊藤喜三郎建築研究所
K. ITO ARCHITECTS & ENGINEERS INC. |
| 6. 機材計画 / 今里 悠一
Yuichi IMASATO
Equipment Planner | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 7. 調達計画 / 積算
中島 康弘
Yasuhiro NAKAJIMA
Procurement and Cost Planner | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 8. 自然条件調査 /
後藤 俊三
Shunzo GOTO
Natural Condition Surveyor | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |

トゥヴァル国プリンセスマーガレット病院建設・医療機材供与計画基本設計調査
基本設計概要説明調査団員氏名
(2001年5月7日～2001年5月26日)

Member List of the Draft Report Explanation
on the Project for Construction and Supply of Medical Equipment
for Princess Margaret Hospital in Tuvalu

- | | |
|--|---|
| 1. 総括 / 岩間 敏之
Toshiyuki IWAMA
Team Leader | 国際協力事業団無償資金協力部業務第二課長代理
Deputy Director, Second Project Management Division,
Grant Aid Management Department,
Japan International Cooperation Agency (JICA) |
| 2. 技術参与 / 鈴川 正之
Dr. Masayuki SUZUKAWA
Technical Adviser | 自治医科大学救急医学教室教授
Professor,
JICHIKA University |
| 3. 業務主任 / 建築計画・病院運営管理
島田 隆次
Takatsugu SHIMADA
Project Manager/Architectural
Planner/ Hospital Management | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 4. 建築 / 構造計画
佐々 優子
Yuko SASA
Architectural
Designer/Structural Designer | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 6. 機材計画 / 今里 悠一
Yuichi IMASATO
Equipment Planner | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |
| 7. 調達計画 / 積算
中島 康弘
Yasuhiro NAKAJIMA
Procurement and Cost Planner | (株)パシフィック コンサルタンツ インターナショナル
PACIFIC CONSULTANTS INTERNATIONAL |

**トゥヴァル国プリンセスマーガレット病院建設・医療機材供与計画基本設計調査
基本設計現地調査日程
(2000年10月31日～2000年12月1日)**

**Survey Schedule of Basic Design Study
on the Project for Construction and Supply of Medical Equipment
for Princess Margaret Hospital in Tuvalu**

No	月日	団員及び行程	業務の概要
1.	10月30日 月曜日	<u>NRT 19:00</u>	
2.	10月31日 火曜日	B,C,D,E,F,G,H <u>6:45 NAN(FJ303)</u> <u>NAN 8:45 9:10 SUV(PC136)</u>	表敬訪問 11:00 Fiji JICA 事務所 12:00 在 Fiji 日本大使館
3.	11月1日 水曜日	B,C,D,E,F,G,H	9:00 UNDP と協議 11:00 WHO と協議
4.	11月2日 木曜日	B,C,D,E,F,G,H <u>SUV8:30 10:45 FUN(PC601)</u>	表敬訪問 14:00 MHWC 副次官 15:00 保健局長 16:00 PMH
5.	11月3日 金曜日	B,C,D,E,F,G,H A <u>NRT 21:15</u>	インセプションレポート説明、要請内容確認 ・ DOH ・ PMH サイト調査
6.	11月4日 土曜日	A <u>8:45 SYD(JL771)</u> <u>SYD12:30 17:40 NAN(QF391)</u> B,C,D,E,F,G,H	・ PMH
7.	11月5日 日曜日	A <u>NAN 8:45 9:10 SUV(PC136)</u> B,C,D,E,F,G,H	団内打ち合わせ
8.	11月6日 月曜日	A <u>SUV 8:30 10:45 FUN(PC601)</u> B,C,D,E,F,G,H	表敬訪問 14:00 首相官邸 16:00 PWD サイト調査
9.	11月7日 火曜日	A B,C,D,E,F,G,H	表敬訪問 9:00 Minister of Health 14:00 PMH サイト調査
10.	11月8日 水曜日	A,B,C,D,E,F,G,H	サイト調査
11.	11月9日 木曜日	A,B,C,D,E,F,G,H	ミニッツ協議 ・ DOH サイト調査

No	月日	団員及び行程	業務の概要
12.	11月10日 金曜日	A,B,C,D,E,F,G,H	ミニッツ協議 ・ MHWC ・ DOH ・ PMH M/D サイン
13.	11月11日 土曜日	(All Members)	サイト調査 団内打合せ
14.	11月12日 日曜日	(All Members)	団内打合せ
15.	11月13日 月曜日	A,B,G, H <u>FUN11:30 13:45 SUV(PC600)</u> A,G,H B <u>SUV NAN(PC177)</u> C,D,E,F,	調査報告 15:00 Fiji JICA 事務所 16:00 在 Fiji 日本大使館 サイト調査、打合せ ・ PMH
16.	11月14日 火曜日	A <u>SUV16:30 16:55 NAN(PC171)</u> B <u>NAN 6:10 10:15 AKL(NZ007)</u> <u>AKL11:15 18:40 KXS(NZ031)</u> <u>KXS 19:55 21:10 HND(JL346)</u> G,H C,D,E,F	関連機関訪問 ・ The Fiji School of Medicine ・ The Colonial War Memorial Hospital 調達事情調査、打合せ ・ 再委託先 サイト調査、打合せ ・ PMH
17.	11月15日 水曜日	A <u>NAN 8:45 11:20 SYD(QF392)</u> C,D,E,F <u>Funafuti Vaitupu</u> G H	調査報告 ・ オーストラリア JICA 事務所 午前 打ち合わせ ・ PMH 調達事情調査 ・ Suva スヴァ再委託先と打ち合わせ
18.	11月16日 木曜日	A <u>SYD10:30 18:05 NRT(JL772)</u> G <u>SUV 7:45 8:10 NAN(PC135)</u> <u>NAN 12:35 17:00 AKL(NZ067)</u> H <u>SUV 14:45 15:10 NAN(PC161)</u> C,D,E,F	関連機関調査 ヴァイトゥブ島医療センターを調査 モトフォウア中等教育施設を訪問
19.	11月17日 金曜日	C,D,E,F G H <u>NAN 10:00 13:35 SYD(QF392)</u>	ヴァイトゥブ島医療センターを調査 調達事情調査 ・ Auckland
20.	11月18日 土曜日	C,D,E,F <u>Vaitupu Funafuti</u> G H <u>SYD 10:30 18:05 NRT(JL772)</u>	調達事情調査 ・ Auckland

No	月日	団員及び行程	業務の概要
21.	11月19日 日曜日	C,D,E,F G	団内打合せ 調達事情調査
22.	11月20日 月曜日	C,D,E,F G	サイト調査 調達事情調査 ・ Auckland
23.	11月21日 火曜日	C,D,E,F G <u>ALK 9:30 16:25 NRT(JL099)</u>	サイト調査、詳細打合せ ・ PMH
24.	11月22日 水曜日	C,D,E,F	サイト調査、詳細打合せ ・ PMH
25.	11月23日 木曜日	C,D,E,F	打合せ ・ オーストラリアエイド ・ 中国大使館 サイト調査、詳細打合せ ・ PMH
26.	11月24日 金曜日	C,D,E,F	サイト調査、詳細打合せ ・ PMH 打合せ ・ TEC, Department of Custom and Taxation
27.	11月25日 土曜日	C,D,E,F	サイト調査、詳細打合せ ・ PMH
28.	11月26日 日曜日	C,D,E,F	団内打合せ
29.	11月27日 月曜日	C,D,E,F <u>FUN 11:30 13:45 SUV(PC600)</u>	打合せ ・ 地盤調査再委託先
30.	11月28日 火曜日	C,D,E,F	9:00 Colonial War Memorial Hospital 12:00 Fiji JICA 事務所 14:00 Fiji School of Medicine 15:30 調査報告 ・ 在 Fiji 日本大使館
31.	11月29日 水曜日	C,D,E,F	午前 調達事情調査 打合せ ・ 測量調査再委託先 午後 CWMH を訪問
32.	11月30日 木曜日	C,D,E,F <u>SUV 7:45 8:10 NAN(PC135)</u> <u>NAN 10:00 13:25 SYD(QF392)</u>	
33.	12月1日 金曜日	C,D,E,F <u>SYD 10:30 18:05 NRT(JL772)</u>	

注):

(JICA) A. 岩間敏之、B. 鈴川正之
(コンサルタント) C. 島田隆次、B. 佐々優子、C. 今里悠一、D. 中島康弘

**トゥヴァル国プリンセスマーガレット病院建設・医療機材供与計画基本設計調査
基本設計概要説明調査日程
(2001年5月7日～2001年5月26日)**

**Survey Schedule of Draft Report Explanation
on the Project for Construction and Supply of Medical Equipment
for Princess Margaret Hospital in Tuvalu**

No.	月日	団員及び行程	業務の概要
1	5月7日(月)	<u>NRT 19:00</u>	
2	5月8日(火)	C,D,E,F: <u>6:25 NAN(FJ303)</u> <u>NAN SUV(by Car)</u>	14:00 FIJI JICA 表敬訪問 在フィジー日本大使館
3	5月9日(水)	C,D,E,F	9:00 在フィジー トゥヴァル代表部 11:00 植民地戦争記念病院 14:00 植民地戦争記念病院
4	5月10日(木)	C,D,E,F	
5	5月11日(金)	C,D,E,F <u>SUV 5:30 11:45 FUN (PC601)</u>	15:00 MOH 及び PMH 表敬訪問
6	5月12日(土)	C,D,E,F	10:00 MOH 及び PMH と協議 15:30 PMH と協議(カルテ方式)
7	5月13日(日)	C,D,E,F	国内打合せ及び資料整理
8	5月14日(月)	C,D,E,F F: <u>FUN 11:30 13:45 SUV (PC600)</u>	9:30 PMH と協議(手術部、分娩部)
9	5月15日(火)	C,D,E,F	8:30 Vuksich & Borich Ltd. 10:00 PMH(中央材料室、サービス部門)と協議 14:00 首相表敬 16:00 PMH(外来部門)と協議
10	5月16日(水)	C,D,E F: <u>Suva – Nadi by Car</u>	9:00 保健大臣代行表敬 10:30 PMH(歯科)と協議 14:30 PMH(薬局)と協議 15:30 PMH(検査部)と協議 17:30 PMH(X線係)と協議 調達調査
11	5月17日(木)	C,D,E F: <u>Nadi 10:00 12:50 Sydney (QF392)</u>	9:00 財務省と協議 10:00 公共事業局と協議 11:30 環境局と協議 14:00 PMH(管理部門)と協議 15:30 農業局と協議 調達調査
12	5月18日(金)	C,D,E	10:30 PMH(パブリックヘルス部門)と協議 11:30 PMH と協議(カルテ方式) 14:00 PMH(病棟部門)と協議 16:30 PMH と協議(カルテ方式) 調達調査

No.	月日	団員及び行程	業務の概要
13	5月 19日 (土)	A,B: <u>NRT 14:50 17:15</u> <u>Seoul/Incheon (UA827) 20:45</u> C,D,E F	9:30 気象局と協議 14:00 PMH と協議 (カルテ方式)
14	5月 20日 (日)	A,B: <u>9:45 NAD (KE821)</u> <u>NAD 21:00 21:30 SUV by Car</u> C,D,E F: <u>SYD 9:35 18:10 NRT (JL772)</u>	団内打合せ、資料整理 調達調査
15	5月 21日 (月)	C,D,E A,B: <u>Suva 8:30 10:45 Nadi</u> <u>(PC601)</u> A,B,C,D,E	10:00 公共事業局 14:00 首相表敬 15:00 保健大臣代行表敬 16:00 PMH 表敬訪問
16	5月 22日 (火)	A,B,C,D,E	9:00 ミニッツ協議、MOH、PMH、MOF、PWD 他 14:00 敷地状況調査 19:00 JICA 主催夕食会
17	5月 23日 (水)	A,B,C,D,E	9:00 14:00 ミニッツ協議、MOH、PMH、MOF、PWD 他
18	5月 24日 (木)	<u>FUN 16:4z5 17:00 SUV (PC602)</u>	9:00 MOH 及び PMH と協議 12:00 M/D サイン 20:00 調査報告 在フィジー日本大使館及び フィジー JICA 事務所
19	5月 25日 (金)	A,B: <u>Suva 7:45 8:00 Nadi (PC135)</u> <u>NAD 10:00 12:50 SYD (QF392)</u> C,D,E: <u>Suva Nadi by car</u> <u>NAD 9:55 13:00 AKL (NZ045)</u>	調達調査 (オークランド)
20	5月 26日 (土)	A,B: <u>SYD 9:35 18:10 KIX (JL722)</u> C,D,E: <u>AKL 8:30 16:25 NRT</u> <u>(JL099)</u>	

注):

(JICA)

(コンサルタント)

A. 岩間団長、B. 鈴川医師

C. 島田隆次、B. 佐々優子、C. 今里悠一、D. 中島康弘

基本設計現地調査時 関係者（面談者）リスト
（2000 年 10 月 30 日～2000 年 12 月 1 日）

1. 在フィジー日本大使館

羽田 貢由	一等書記官
壹岐 幸史	二等書記官
渡辺 良子	医務官

2. 在フィジー JICA 事務所

鈴木 忠徳	所長
向井 一朗	次長
石崎 高博	所員
遠山 峰司	所員
澤田寛之	所員

3. Office of Prime Minister, Tuvalu

Hon. Ionatana Ionatana	Prime Minister, Government of Tuvalu
Mr. Panapasi Nelesone	Secretary of Government
Mr. Tine Leuelu	Deputy Secretary to Government
Mr. James Conway	Advisor to Government

4. Department of Foreign Affairs

Ms. Palipa Lauti	Multilateral Officer, Department of Foreign Affairs
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5. Ministry of Health, Women and Community Affairs

Mr. Teagai E. Selsia	Minister
Ms. Misalaima Nelesone	Secretary of Health
Ms. Siava Tekafa	Assistant Secretary of Health

6. Department of Health

Dr. Tiliga Pulusir	Director of Health
Dr. Stephen Homasi	Chief Primary & Preventive Health Services
Mr. Faiatea Latasi	Charge Lab. Technologist
Ms. Tapania Taiki	Hospital Matron
Mr. Lavega Malie	X-ray Department
Mr. Natano Elisala	Pharmacy Department
Ms. Falealili Feagai	Health Inspector, Preventive & Primary Health Service
Dr. Isaac Marks	UNV Surgeon
Dr. Miliama T Simeona	Medical Officer

7. Ministry of Natural Resource & Environment

Mr. Paani K. Laupepa Assistant Secretary

8. Land & Survey Department

Mr. Fanoanoaga Patoro Director of Land and Survey Department

9. TTC

Mr. Lopati Tefoto General Manager

10. TEC

Mr. Brown Resture Engineer

Mr. Brown Manao Distribution Engineer

Mr. Taeka Satupa Finance Manager

11. Public Works Department

Mr. Tuisiga Saitala Director of Public Works

Mr. Tapaeko Apisai Technical Adviser

Mr. Richard Humphrey PWD Engineer

12. Colonial War Memorial Hospital

Dr. Salimoni Tuqa Medical Superintendent

Mrs. Losalini Tavaga Chief Hospital Administrator

Ms. Yasuyo Patro CWMH Nurse

13. Meteorological Service of Tuvalu

Ms. Hilia Vavae Director, Meteorological Service of Tuvalu

Mr. Garry Clarke International Operations, Meteorological Service of New Zealand Limited

14. Aus AID in Tuvalu

Ms. Hellani Tumua Administrative Officer

Mr. Allan Boase Team Leader of Waste Management Project

15. 中華民国大使館

王 慶康 Charge of Affaires

呂 欽揚 Secretary

16. Fiji School of Medicine

Dr. Wame Baravilala Dean

Mr. Rodney Yee Manager, Marketing & Development

17. OFCF

寺前 公衛 水産専門員

基本設計概要説明調査 関係者（面談者）リスト
（2001 年 5 月 7 日～2001 年 5 月 26 日）

1. 在フィジー日本大使館

岡本 洋秋	一等書記官
高瀬 美和子	一等書記官
壹岐 幸史	二等書記官

2. 在フィジー JICA 事務所

鈴木 忠徳	所長
向井 一朗	次長
遠山 峰司	所員

3. Office of Prime Minister, Tuvalu

Hon. Faimalaga Luka	Prime Minister of Tuvalu Government
Mr. Panapasi Nelesone	Secretary to Government

4. High Commission of Tuvalu, Fiji

H.E. Enele Sopoasa	Tuvalu High Commissioner
Mr. Fakavae Taomia	Deputy High Commissioner
Ms. Oliolisa Iosna	First Secretary

5. Ministry of Health

Hon. Amasone Kilei	Minister of Health
Hon. Sam P. Teo	Acting Minister of Health
Ms. Siava Tekafa	Assistant Secretary of Health

6. Department of Health

Dr. Isaac Marks	Acting Director of Health, UN Volunteer
Dr. Puakena	Acting Medical Super-intendent
Dr. Miliama T Simeona	Medical Doctor
Ms. Tapania Taiki	Hospital Matron
Ms. Tausala Tekapu,	Higher Executive Officer
Mr. Natano Elisala	Pharmacy Unit
Mr. Faiatea Latasi	Laboratory Unit
Mr. Faalesa Pitoi	Dental Unit
Mr. Lafou	X-ray Department
Ms. Tulua Pasefika,	Operation Theatre Nurse
Ms. Tenilo	OPD Nurse
Ms. Eline Seloten	Public Health Sister
Mr. Kilisimasi Setoga,	Statistical Officer

7. Ministry of Finance & Economic Planning

Mr. Kausea Natano,	Secretary for Finance & Economic Planning
Mr. Charles Safega	Acting Director Customs & Taxation
Mr. Luke Paeniu	Aid Coordinator

8. Ministry of Natural Resource & Environment

Mr. Mataio Tekinene	Department of Environment
Mr. Kilifi O'Brien	Environmental Impact Assessment Officer

9. Land & Survey Department

Mr. Fanoanoaga Patoro	Director of Land and Survey Department
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10. TTC

Mr. Kaitapu Kilima	Telecomms Technician
--------------------	----------------------

11. TEC

Mafaiu Lototua	Chief Engineer
----------------	----------------

12. Public Works Department

Mr. Tuisiga Saitala	Director of Public Works
Mr. Tapaeko Apisai	Technical Adviser

13. Ministry of Local Government, Women & Youth

Hon. Teagai Esekia	Minister
--------------------	----------

14. Meteorological Service of Tuvalu

Ms. Hilia Vavae	Director, Meteorological Service of Tuvalu
-----------------	--

15. Vuksich & Borich Ltd.

Mr. Eddie Gjaltema	Site Representative
--------------------	---------------------

16. 中華民国大使館

王 慶康	Charge of Affaires
曾 隨科	New Cargé d'Affairs
呂 欽揚	Secretary

17. CWMH – Colonial Won Memorial Hospital

Dr. Salimoni Tuqa	Medical Superintendent
Mrs. Losalini Tavaga	Chief Hospital Administrator
Ms. Yasuyo Patel	CWMH Nurse

資料-4 当該国の社会経済状況（国別基本情報抜粋）

	トゥヴァル
	Tuvalu

一般指標					
政体	立憲君主制	*1	首都	フナフティ(Funafuti)	*2
元首	英国女王エリザベス2世、総督／トマシ・ブアブア	*1,3	主要都市名		*3
			雇用総数	千人 (年)	*6
独立年月日	1978年10月1日	*3,4	義務教育年数	7年間 (年)	*13
主要民族／部族名	ポリネシア系96%、ミクロネシア系	*1,3	初等教育就学率	% (年)	*6
主要言語	ツバル語、英語	*1,3	中等教育就学率	% (年)	*6
宗教	キリスト教	*1,3	成人非識字率	% (年)	*13
国連加盟年	2000年9月5日	*12	人口密度	人/km2 (年)	*6
世銀加盟年		*7	人口増加率	% (年)	*6
IMF加盟年		*7	平均寿命	平均 男 女	*10
国土面積	0.03 千km2	*1,6	5歳児未満死亡率	/1000 (年)	*6
総人口	千人 (年)	*6	カロリー供給量	cal/日/人 (年)	*10

経済指標					
通貨単位	オーストラリア・ドル	*3	貿易量	(年)	
為替レート	1 US \$ = 1.92 (2001 年 6 月)	*8	商品輸出	百万ドル	*15
会計年度		*6	商品輸入	百万ドル	*15
国家予算	(年)		輸入カバー率	(月) (年)	*14
歳入総額		*9	主要輸出品目		*1
歳出総額		*9	主要輸入品目		*1
総合収支	百万ドル (年)	*15	日本への輸出	0百万ドル (1999 年)	*16
ODA受取額	5.2 百万ドル (1998 年)	*18	日本からの輸入	0.4 百万ドル (1999 年)	*16
国内総生産(GDP)	百万ドル (年)	*6			
一人当たりGNP	ドル (年)	*6	粗外貨準備額	百万ドル (年)	*6
GDP産業別構成	農業 % (年)	*6	対外債務残高	百万ドル (年)	*6
	鉱工業 % (年)	*6	対外債務返済率(DSR)	% (年)	*6
	サービス業 % (年)	*6	インフレ率 (消費者価格物価上昇率)	% (年)	*6
産業別雇用	農業 男 % 女 % (年)	*6			
	鉱工業 % (年)	*6			
	サービス業 % (年)	*6	国家開発計画		
実質GDP成長率	% (年)	*6			*11

気象	(年～ 年平均)	観測地：フナフチ（南緯8度30分、東経179度12分、標高3m）												*4,5
月	1	2	3	4	5	6	7	8	9	10	11	12	平均/計	
降水量	470.1	447.0	299.0	267.6	275.8	235.7	289.1	338.8	228.4	319.6	302.0	391.0	3864.1 mm	
平均気温	28.1	28.2	28.2	28.2	28.2	27.9	27.6	27.7	28.0	28.1	28.2	28.2	28.1 ℃	

- *1 各国概況（外務省）
- *2 世界の国々一覧表（外務省）
- *3 世界年鑑2000（共同通信社）
- *4 最新世界各国要覧10訂版（東京書籍）
- *5 理科年表2000（国立天文台編）
- *6 World Development Indicators2000
- *7 The World Bank Public Information Center,
International Financial Statistics Yearbook 1998
- *8 Universal Currency Converter

- *9 Government Finances Statistics Yearbook1999 (IMF)
- *10 Human Development Report2000(UNDP)
- *11 Country Profile(EIU),外務省資料等
- *12 United Nations Member States
- *13 Statistical Yearbook 1999(UNESCO)
- *14 Global Development Finance2000(WB)
- *15 International Finances Statistics 2000(IMF)
- *16 世界各国経済情報ファイル2000(日本貿易振興会)

注：商品輸入については複式簿記の計上方式を採用しているため
支払い額はマイナス表記になる

	トゥヴァル
	Tuvalu

我が国におけるODAの実績 (資金協力は約束額ベース、単位：億円)						*17
項目	暦年	1995	1996	1997	1998	1999
技術協力		0.30	0.31	0.21	0.28	
無償資金協力		5.47	6.14	0.07	0.20	
有償資金協力		0.00	0.00	0.00	0.00	
総額		5.77	6.45	0.28	0.48	

当該国に対する我が国ODAの実績 (支出純額、単位：百万ドル)						*17
項目	暦年	1995	1996	1997	1998	1999
技術協力		1.43	1.07	1.00	0.41	
無償資金協力		0.02	3.55	5.74	0.64	
有償資金協力						
総額		1.45	4.62	6.74	1.04	

OECD 諸国の経済協力実績 (支出純額、単位：百万ドル)						*18
	贈与 (1) (無償資金協力・ 技術協力)	有償資金協力 (2)	政府開発援助 (ODA) (1)+(2)=(3)	その他政府資金 及び民間資金(4)	経済協力総額 (3)+(4)	
二国間援助 (主要供与国)	4.9	0.0	4.9	-0.9	4.0	
1. Australia	1.9	0.0	1.9	0.0	1.9	
2. NewZealand	1.6	0.0	1.6	0.0	1.6	
3. Japan	1.0	0.0	1.0	0.0	1.0	
4. France	0.3	0.0	0.3	0.0	0.3	
多国間援助 (主要援助機関)	0.3	0.0	0.3	0.0	0.3	
1. UNDP			0.2	0.0	0.2	
2. EC			0.1	0.0	0.1	
その他						
合計	5.2	0.0	5.2	-0.9	4.3	

援助受入窓口機関	*19
技術協力：首相府外務局 無償：首相府外務局 協力隊：(派遣取極なし)	

*17 我が国の政府開発援助1999(国際協力推進協会)

*18 International Development Statistics (CD-ROM) 2000 OECD

*19 JICA資料

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON THE PROJECT FOR CONSTRUCTION AND SUPPLY OF MEDICAL EQUIPMENT
FOR PRINCESS MARGARET HOSPITAL
IN TUVALU


In response to a request from the Government of Tuvalu, the Government of Japan decided to conduct a Basic Design Study on the Project for Construction and Supply of Medical Equipment for Princess Margaret Hospital (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").


JICA sent to the Tuvalu the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Yasuhiro Morimoto, Deputy Director of the Second Project Management Division, Grant Aid Management Department, JICA, and is scheduled to stay in the country from November 2, 2000 to November 27, 2000.

The Team held discussions with the officials concerned of the Government of Tuvalu and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Funafuti, November 10, 2000


Mr. Yasuhiro Morimoto
Leader
Basic Design Study Team
JICA


Honorable Teagai Esekia
Minister for Health, Women
and Community Affairs
Government of Tuvalu

ATTACHMENT

1. Objective of the Project

The Objective of the Project is to improve the quality of medical services of the Princess Margaret Hospital through construction of new facilities and procurement of medical equipment for the Princess Margaret Hospital.

2. Project site

The site of the Project is the Princess Margaret Hospital, Funafuti atoll, Tuvalu.

3. Responsible and Implementing Agency

3-1. The Responsible Agency is Ministry of Health, Women and Community Affairs.

3-2. The Implementing Agency is Health Department, Ministry of Health, Women and Community Affairs.

4. Items requested by the Government of Tuvalu

After discussions with the Team, the items described in Annex 1-1 and Annex-2 were finally requested by the Tuvalu side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

4-1. Construction of the Building and Facilities

Details of items are listed in Annex 1-1

4-2. Procurement of the Equipment

Details of items are listed in Annex-2

5. Japan's Grant Aid Scheme

5-1. The Tuvalu side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex-3.

5-2. The Tuvalu side will take the necessary measures, as described in Annex-4, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.



6. Schedule of the Study

6-1. The consultants will proceed to further studies in Tuvalu until November 27, 2000.

6-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around March 2001.

6-3. In case that the contents of the report is accepted in principle by the Government of Tuvalu, JICA will complete the final report and send it to the Government of Tuvalu by September 2001.

7. Other relevant issues

7-1. The Project requested for Japan's Grant Aid shall not be duplicate with those applied for or assisted by other international organizations and bilateral donors.

7-2. The Tuvalu side shall answer the questionnaires by November 20, 2000.

7-3. The Health Department shall confirm the detailed conditions of acquirement of the land designated as the Project site and inform the Team of the result by November 20, 2000. When it deemed necessary, the Health Department shall take the necessary measures to secure the land prior to the signing of the Exchange of Notes.

7-4. The Tuvalu side agreed to complete the following undertakings prior to the commencement of the construction work;

7-4-1. Clearance of the existing facilities and utilities within the proposed site for the construction of the new facilities as shown in Annex 1-2,

7-4-2. Grading of ground in the proposed site for construction,

7-4-3. Relocation of the existing electric cable, the distribution box and the water pipe line to a suitable place,

7-4-4. Construction of a water supply system for the existing facilities and

7-4-5. Preparation of a ward and an office for the isolation ward and the Primary and Preventive Health Care Office in order to transfer these functions temporarily.



- 7-5. The Health Department shall request the Public Works Department to construct the approach road to the new hospital building.
- 7-6. The Health Department shall take the necessary measures so that all the items relevant to the undertakings required for the implementation of the Project will be included in the budgetary plan for the fiscal year 2001 which will be finalized in the parliament session on December 6, 2000.
- 7-7. The Health Department will demolish the existing women's ward immediately after the completion of the construction work of the new buildings.
- 7-8. The Tuvalu side will install the planned incinerator in the Southwest corner of the existing hospital buildings.
- 7-9. The Health Department will forward the plan on training of doctors and health personnel for the Hospital and will assign them appropriately.
- 7-10. The Tuvalu side will use and maintain properly and effectively the facilities constructed and the equipment procured under the Project by allocating the necessary budget and the appropriate personnel.
- 7-11. The Tuvalu side will make efforts to understand the system which may be influenced by the procurement of facilities and equipments by the Project, from the current hospital system, such as 1) Patient Card System (one patient - one card), 2) Central Sterilization Service, 3) Nurse Station, 4) Open Outpatient Area, 5) Dining Room, 6) Recovery - ICU Room.
- 7-12. The Tuvalu side requested the consultant services for hospital management, operation and maintenance of facilities and waste management as one of the components of Grant Aid.
- 7-13. The Tuvalu side will prepare LP gas cylinder after the handing over of the new facilities.

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Requested Facility Items for the Project

The contents of facility requested by the Tuvalu Government are as follows;

	Department	Facility
1	Ward	- Men's Ward - Women's Ward - Obstetrics/Gynaecology and Paediatric Ward - Isolation (Infectious Disease/Psychosis) Ward
2	Out-patient (including Emergency Unit)	
3	Operating Theatre	
4	Laboratory	
5	X-ray	
6	Pharmacy	
7	Dental	
8	Mortuary	
9	Administration	
10	Public Health	
11	Service (other facilities)	- Kitchen and Dining - Laundry - Workshop - Garage - Others

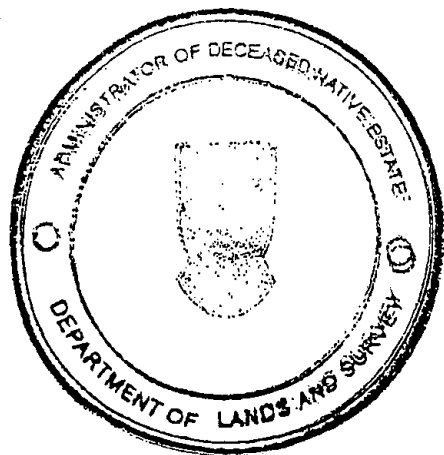
Note:

- Both side conform that the facility mentioned above includes the related common spaces such as corridor, storage and machine room, the necessary utilities such as electricity, water supply, sewage and telecommunication etc. The details of such common spaces and utilities will be discussed further between the Japanese and Tuvalu side.
- The size and capacity of the facility will be determined after further studies.




CK178

CK177



Project Site

Proposed site
for Construction

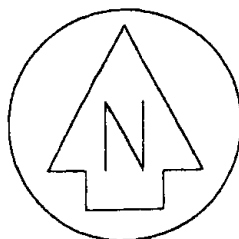
115x

CK179

108x

CK174

107x



Note: Dimension and shape of the site and layout of scale of the existing buildings are indicated just for reference.

SCALE 1 : 800

LEASE COMPILATION PLAN PRINCESS MARGRET HOSPITAL

Lands and Survey Department

DATE : 04 September 2000

REQUESTED EQUIPMENT

ANNEX 2

No.	Location	Q'ty	Priority		
	ITEMS		A	B	C
A. Emergency (Outpatient)					
A-05	Examining Table	1	1		
A-06	Examining Lamp	1	1		
A-07	Instrument Cabinet	1	1		
A-10	Drip Stand	2	1		1
A-17	Stretcher with Siderails	2	2		
A-18	Wheel Chair, Adult	2	1		1
A-19	Otoscope/Ophthalmoscope	2	1		1
A-24	Dressing Trolley	2	1		1
D-09	Minor Surgery Instrument Set	1	1		
F-15	Refrigerator	1	1		

B. Laboratory					
B-02	Binocular Microscope	2	1		1
B-04	General Centrifuge	1	1		
B-10	Blood Coagulation Meter	1	1		
B-13	Refrigerator	1	1		
B-14	Distilling Apparatus	1	1		
B-15	Autoclave	1	1		
B-17	Dry Heat Sterilizer	1	1		
B-20	Instrument Cabinet	1	1		
B-21	Incubator	1	1		
B-51	pH meter	1	1		

C. Dental Room					
C-01	Dental Chair Unit	1		1	
C-07	Dental X-Ray Unit	1	1		
C-08	Dental X-Ray Protective Set	1	1		
C-09	Instrument Cabinet	1	1		
C-12	Dental Film Processor	1	1		
C-15	Light Cure Unit and Filling Materials	1	1		

1200X 1125 X 1125
260" 5.00" 1125" 1125"
1125"

D. Surgery (Outpatient)					
D-01	Examining Table	6	5	1	
D-02	Examining Lamp	3	3		
D-03	Suction Unit with Stand	1	1		
D-08	View Box	5	5		
D-15	Electric Plaster Cutter	1	1		
D-16	Plaster Breaker Spreader Set	1	1		

E. Medicine (Outpatient)					
E-04	Ultrasonic Nebulizer	2	1		1
E-12	Sphygmomanometer, Stand Type	2	1		1
E-15	Sphygmomanometer, Desk Type	2	1		1
E-16	Spirometer	1	1		
D-20	Weighing Scale	1	1		
E-51	ECG	1	1		

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No.	Location	Q'ty	Priority		
	ITEMS		A	B	C
F. Outpatient Pediatrics (Outpatient)					
F-12	Weighing Scale for Infant	1	1		
F-13	Height Scale for Infant	1	1		

G. Obstetrics & Gynecology (Outpatient)					
G-09	Colposcope	1		1	
D-04	Instrument Cabinet	2	1		1
G-51	OB-GYN Examination Table	1		1	

H. Service Office					
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I. Radiology X-Ray					
I-02	X-Ray System, 500mA with Accessories	1	1		
I-03	View Box	1	1		

J. Ultrasound Room					
J-01	Ultrasound Scanner with Accessories	1		1	
J-02	Examining Table	1		1	

K. Medicine Ward					
K-01	Patient Bed with Table	30*	30*		
K-04	Oxygen Stand with Safety Belt	4	2		2

L. Central Sterilization Unit					
L-01	Autoclave	2	2		
L-05	Instrument Cabinet	1	1		

M. Administration					
M-01	Copy Machine	1	1		
M-03	Computer with Printer and UPS	2	1		1

N. Pharmacy					
N-02	Medicine Cabinet	1	1		
N-03	Refrigerator	1	1		
N-07	Narcotic Safe	1		1	
N-08	Top-Pan Balance	1	1		
N-11	Water Distiller	1	1		

O. Operation room					
O-03	Operating Light, Major Combination	1	1		
O-05	Anesthesia Apparatus with Ventilator	2	1		1
O-06	Anesthesia Trolley	2	1		1
O-10	Instrument Cabinet	2	1		1
O-11	Instrument Trolley	2	1		1
O-13	Drip Stand	2	1		1
O-16	Sphygmomanometer, Stand Type	2	1		1
O-19	Patient Monitor	2	1		1
O-22	Operating Instrument Set	1	1		
O-24	Stretcher with Siderails	2	1		1
O-26	Kick Bucket	2	1		1
G-06	Dilation and Curettage Set	1	1		
P-19	Cesarean Section Set	1	1		
O-51	View Box	1	1		

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No.	Location	Q'ty	Priority		
	ITEMS		A	B	C
P. Delivery Room					
P-01	Delivery Table	1	1		
P-02	Operating Light, Stand Type	2	1	1	
P-03	Instrument Cabinet	1	1		
P-06	Drip Stand	1	1		
P-14	Suction Unit with Stand	1	1		
P-15	Oxygen Cylinder Cart & Regulator	1	1		
P-18	Delivery Instrument Set	3	1	2	
P-20	Weighing Scale for Infant	1	1		
P-21	Height Scale for Infant	1	1		
P-22	Stretcher with Siderails	2	2		
P-51	Infusion Pump	1	1		

Q. Nurse Station					
Q-01	Refrigerator	1	1		
Q-02	Instrument Cabinet	2	1		1
Q-03	Examining Lamp	2	1		1
Q-04	Chart File Cart	2	2		
Q-05	Dressing Cart	2	1		1
Q-09	Laundry Bag Cart	2	1		1
Q-10	Sphygmomanometer, Stand Type	2	2		
Q-11	Suction Unit with Stand	2	1		1
Q-17	Ultrasonic Nebulizer	2	1		1
Q-19	Scale for Adult	2	1		1
Q-51	View Box	1	1		

R. Intensive Care Unit					
R-02	Examining Lamp	2	1		1
R-04	Ventilator (Respirator)	1	1		
R-05	View Box	2	1		1
R-06	Instrument Cabinet	1	1		
R-07	Medicine Cabinet	1	1		
R-11	Drip Stand	8	4		4
R-17	Sphygmomanometer	4	1		3
R-19	Suction Unit with Stand	2	1		1
R-20	Continuous Suction Apparatus	2	1		1
R-21	Ultrasonic Nebulizer	2	1		1
R-22	Bedside Monitor	3	2		1
R-23	Defibrillator, with ECG and Cart	1	1		
R-24	Pulse Oximeter	2	2		
R-26	Refrigerator	1	1		
R-28	Laryngoscope with Complete Accessories	2	1		1
R-29	ICU Bed	4	3		1
R-51	Central Patient Monitor			1	
R-52	Infusion Pump	1		1	

S. Nursery Unit					
S-01	Cot with Mobile Stand	10	5		5
S-02	Infant Incubator	2	1		1
S-06	Suction Unit with Stand	2	1		1
S-08	Phototherapy Unit	1	1		
S-09	Infusion Pump	5	2		3
S-13	Instrument Trolley	1	1		
S-19	Sphygmomanometer, Stand Type	2		2	
S-21	Infant Incubator, Transport	1	1		
S-26	Neonatal Monitor	1	1		

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No.	Location	Q'ty	Priority		
	ITEMS		A	B	C
T. Motorpool					
T-01	Ambulance (4 Wheel Drive)	1	1		
T-51	Emergency Kit	1	1		
U. Maintenance					
U-01	Maintenance Tool Set	1	1		
V. Morgue					
W. Kitchen					
W-07	Refrigerator	1	1		
W-12	Gas Range	1	1		
W-51	Freezer	1		1	
W-52	Food Blender	1		1	
Y. Meeting Room					
Y-51	Slide Projector	1	1		
Y-52	White Board	1	1		
Y-53	Screen	1	1		
Z. Public Health					
M-05	Fax Machine	1	1		
M-06	Small Printing Machine	1	1		

Priority A: Highest priority

Priority B: Mid priority

Priority C: Low priority

* Number of beds to be adjusted based on the number of planned beds and existing beds

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Japan's Grant Aid Program

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.

Application (request made by a recipient country)

Study (Basic Design Study conducted by JICA)

Appraisal & Approval (appraisal by the Government of Japan and approval by the Cabinet of Japan)

Determination of Implementation (Exchange of Notes between both Governments)

Implementation (implementation of the Project)

(2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study Report prepared by JICA and the results are then submitted to the cabinet for approval.

Fourth, the project approved by the cabinet becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

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2. Contents of the Study

(1) Contents of the Study

The purpose of the Basic Design Study conducted by JICA on a requested project is to provide a basic document necessary for appraisal of the project by the Japanese Government. The contents of the Study are as follows:

- a) confirmation of the background, objectives, benefits of the project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,
- b) evaluation of the appropriateness of the project for the Grant Aid Scheme from a technical, social and economical point of view,
- c) confirmation of items agreed on by the both parties concerning a basic concept of the project,
- d) preparation of a basic design of the project,
- e) estimation of cost of the project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request. Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

(2) Selection of Consultants

For smooth implementation of the study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on the proposals submitted by the interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country after Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay



in implementation should the selection process be repeated.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds to procure the equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials or such.

(2) Exchange of Notes (E/N)

Both Governments concerned extend Japan's Grant Aid in accordance with the Exchange of Notes in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid etc., are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedure such as Exchange of Notes, concluding a contract with (a) consulting firm(s) and (a) contractor(s) and a final payment to them must be completed.

(4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)



(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. The Government of Japan shall verify those contracts. The "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(6) Undertakings Required to the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

- a) to secure land necessary for the sites of the project prior to the installation work in case the project is providing equipment,
- b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) to secure buildings prior to the installation work in case the project is providing equipment,
- d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the



Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) Proper Use

The recipient country is required to maintain and use the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for the operation and maintenance as well as to bear all expenses other than those covered by the Grant Aid.

(8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in a bank in Japan. The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the Verified Contracts.

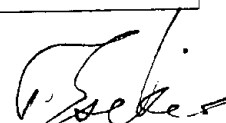
b) The payments will be made when payment requests are presented by the bank to the Government of Japan under an Authorization to Pay issued by the Government of the recipient country or its designated authority.

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Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	To construct gates and fences in and around the site		●
4	To construct the parking lot	●	
5	To construct roads		
	1) Within the site	●	
	2) Outside the site		●
6	To construct the building	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1)Electricity		
	a.The distributing line to the site		●
	b.The drop wiring and internal wiring within the site	●	
	c.The main circuit breaker and transformer	●	
	2)Water Supply		
	a.The city water distribution main to the site		●
	b.The supply system within the site (receiving and/or elevated tanks)	●	
	3)Drainage		
	a.The city drainage main (for storm, sewer and others) to the site		●
	b.The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	●	
	4)Gas Supply		
	a.The gas supply system within the site	●	
	5)Telephone System		
	a.The telephone trunk line to the main distribution frame / panel (MDF) of the building		●
	b.The MDF and the extension after the frame / panel	●	
	6)Furniture and Equipment		
	a.General furniture		●
	b.Project equipment	●	
8	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
9	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)




MINUTES OF DISCUSSIONS
ON BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION AND SUPPLY OF
MEDICAL EQUIPMENT FOR PRINCESS MARGARET HOSPITAL
IN TUVALU
(EXPLANATION ON DRAFT REPORT)

In November 2000, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project for Construction and Supply of Medical Equipment for Princess Margaret Hospital (hereinafter referred to as "the Project") to Tuvalu, and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

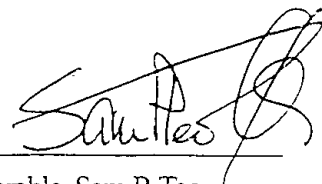
In order to explain and to consult the Tuvalu on the components of the draft report, JICA sent to Tuvalu the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Toshiyuki Iwama, Deputy Director of the Second Project Management Division, Grant Aid Management Department, JICA, from May 10 to May 24.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Funafuti, May 24, 2001



Mr. Toshiyuki Iwama
Leader
Draft Report Explanation Team
Japan International Cooperation Agency



Honorable. Sam P. Teo
Acting Minister for Health
Government of Tuvalu

ATTACHMENT

1. Components of the Draft Report

The Government of Tuvalu agreed and accepted in principle the components of the draft report explained by the Team.

ANNEX 1-2 explains the functional breakdown of the facilities, and ANNEX 1-3 explains the equipment list and its proposed allocation. Modifications and amendments to the Draft Report are in ANNEX-2.

2. Japan's Grant Aid Scheme

Tuvalu side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Tuvalu as explained by the Team and described in Annex-3 and Annex-4 of the Minutes of Discussions signed by both parties on November 10, 2000.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Tuvalu by September 2001.

4. Other Relevant Issues

4-1. The name of the responsible agency has been changed from the Ministry of Health, Women and Community Affairs to the Ministry of Health.

4-2. The Tuvalu side requested the consultant services for hospital management, especially for improvement of the new patient's medical record system, and for improvement of imaging diagnostics as one of the component of the Grant Aid.

4-3. Present land agreement will expire in 2017. Tuvalu side agreed to take necessary actions to secure the present hospital premises for further continuous use.

4-4. The Tuvalu side agreed to complete the following undertakings prior to the commencement of the construction work;

4-4-1. Preparation of the necessary temporary facilities like the Primary and Preventive Health Care Office, Isolation Ward, Kitchen, Laundry, and Pharmacy etc. in order to keep the hospital functions during the construction works,

4-4-2. Relocation of the existing electric cable and the distribution box, and the water pipeline and elevated water tank to a suitable place,

4-4-3. Clearance of the existing facilities and utilities within the proposed site for the construction of the new facilities as shown in ANNEX 1-1,

4-4-4. Construction of the approach road to the new hospital.

4-5. The Tuvalu side will demolish the existing women's ward immediately after the completion of the

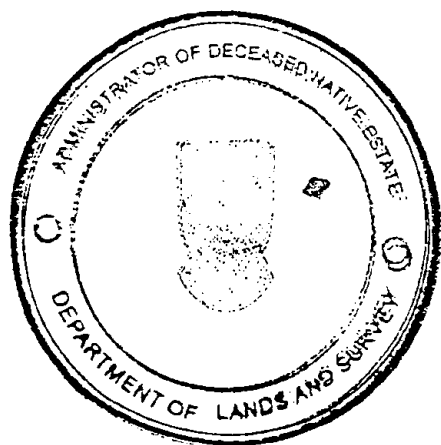
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construction work of the new buildings,

- 4-6. The Tuvalu side agreed and committed to allocate appropriate budget to ensure proper and effective operation and maintenance of the facility and equipment provided under the Project. Buildings constructed and equipment provided under the Grant will have a guarantee period of one year after the issuance of the completion certificate. Thereafter, they are subject to maintenance by the Tuvalu side.
- 4-7. The Tuvalu side agreed to secure the necessary medical and administrative personnel in order to maintain the hospital function properly and effectively.
- 4-8. The Tuvalu side requested technical training for maintenance of medical equipment. The Team agreed to forward the request to the authorities concerned in Japan and asked the Tuvalu side to send an application form to JICA Fiji office.
- 4-9. Tuvalu side suggested EIA, and the team agreed to consider measures to mitigate adverse environmental effects during the implementation of the Project.
- 4-10. Government of Tuvalu requested if it is possible for the Government of Japan to include the cost of the construction of access road to the new hospital as a part of the Project, because it is not covered under the present road construction contract, and the likely cost may exceed the budget. In the discussion that followed it was noted that it is not possible because it is against the general rule of the Japanese Grant Aid.

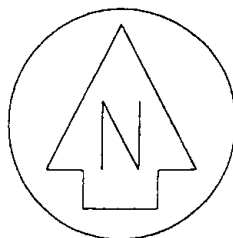
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Project Site

CK179



CK178

CK177

Proposed site
for Construction

115x

108x

107x

CK174

Note: Dimension and shape of the site and layout of scale of the existing buildings are indicated just for reference.

SCALE 1 : 800

LEASE COMPILATION PLAN PRINCESS MARGRET HOSPITAL

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Requested Facility Items for the Project

The contents of facility requested by the Tuvalu Government are as follows;

Department & Unit	Rooms	Department & Unit	Rooms
[1] Out-patient Department		[3] In-patient Department	
Out-Patient Unit	Reception & Medical Records Rm.	Men's Ward	Ward, Shower Rm. & Sluice Rm
	Consultation Rooms	Women's Ward	Ward, Shower Rm. & Sluice Rm
	Treatment Rooms	Ob/Gyn. Ward	Ante-natal Rm.
	Pediatrics Consultation Rm.		Post-natal Rm.
	Ob/Gyn. Consultation Rm.		Shower Rm. & Sluice Rm.
	Ultrasound Rm.	Pediatrics Ward	
	Waiting Hall, Corridor	ICU	
Dental Unit	Dental Treatment Rm.	Isolation Ward	Ward, Shower Rm. & Sluice Rm
	Dental X-ray Rm.	Psychiatric Ward	Ward, Shower Rm. & Sluice Rm
	Dental Laboratory	Nurses Station	
	Staff Rm.	[4] Public Health Department	
Pharmacy Unit	Drug Dispensary		PH Office
	Medical Storage 1		Meeting Rm. & Storage
	Medical Storage 2		PH Dr. Room
	Staff Rm.	[5] Administration Department	
[2] Central Medical Service Department			DOH's Office
Laboratory Unit	Laboratory		Secretary's Office
	Mortuary		Medical-superintendent's Rm.
Operation Unit	Operation Theatre		Doctors' Rm.
	Preparation Rm.		Administration Rm.
	Changing & Hand Washing Rm.		Matron and Nurses' Rm.
	Dirty Utility		Library
Delivery Unit	Delivery Rm.	[6] Service Department	
	Labour Rm.		Kitchen
Radiology Unit	X-ray Rm.		Dining
	Control Rm. & Dark Rm.		Laundry
	Staff Rm.		Linen/Sewing Rm.
Central Supply Unit	Sterilization Rm.		Machine Rm.
			Electrical Rm.

Note:

- Both side conform that the facility mentioned above includes the related common spaces such as corridor and storage, the necessary utilities such as electricity, water supply, sewage and telecommunication etc. The details of such common spaces and utilities will be discussed further between the Japanese and Tuvalu side.
- The size and capacity of the facility will be determined after further studies.

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Equipment List and Its Proposed Allocation

ITEMS	Q'ty	ADM	OPEM	OPINT	OPSUR	OPPED	OPGY	US	WTG	PHARM	DNTL	LAB	OP	STER	RAD	SERV	MW	WW	DEL	NST	ICU	POSTD	PEDW	PH
1 Anesthesia Apparatus with Ventilator	1												1											
2 Anesthesia Trolley	1												1											
3 Autoclave	2													2										
4 Autoclave	1											1												
5 Bed for child	4																							
6 Bedpan washer for Wards	3																1	1	1				4	
7 Bedside Monitor	2																				2			
8 Binocular Microscope	1											1												
9 Blood Coagulation Meter	1											1												
10 Central Patient Monitor	1																			1				
11 Cesarean Section Set	1												1											
12 Chart File Trolley	2																			2				
13 Colposcope	1						1																	
14 Computer with Printer and UPS	1	1																						
15 Continuous Suction Apparatus	1																				1			
16 Copy Machine	1	1																						
17 Cot with Mobile Stand	2																					2		
18 Defibrillator, with ECG and Cart	1																				1			
19 Delivery Instrument Set	2																		2					
20 Delivery Table	1																		1					
21 Dental Chair Unit	1										1													
22 Dental Film Processor	1										1													
23 Dental X-Ray Protective Set	1										1													
24 Dental X-Ray Unit	1										1													
25 Dilatation and Curettage Set	1																							
26 Dressing(Instrument) Trolley	4		1										1									1		
27 Drip Stand	7		1										1								1			
28 Dry Heat Sterilizer	1											1							1		4			
29 ECG	1			1																				
30 Electric Plaster Cutter	1		1																					

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ITEMS	Q'ty	ADM	OPEM	OPINT	OPSUR	OPPED	OPGY	US	WTG	PHARM	DNTL	LAB	OP	STER	RAD	SERV	MW	WW	DEL	NST	ICU	POSTD	PEDW	PH
31 Emergency Kit	1															1								
32 Examining Lamp	7		1		1	1	1												1	1	1			
33 Examining Table	7		1	2	1	1	1	1																
34 Fax Machine	1																							1
35 Film processing tank	1															1								
36 Freezer	1																1							
37 General Centrifuge	1											1												
38 Height Scale for Infant	2					1														1				
39 ICU Bed	3																				3			
40 Incubator	1											1												
41 Infant Incubator	1																					1		
42 Infant Incubator, Transport	1																					1		
43 Infusion Pump (syringe)	1																				1			
44 Infusion Pump	3																		1					
45 Instrument Cabinet	9		1				1				1	1	1	1					1	1	1			1
46 Kick Bucket	1												1											
47 Laryngoscope with Accessories	1																							
48 Laundry Bag Trolley	1																			1				
49 Light Cure Unit	1										1													
50 Maintenance Tool Set	1															1								
51 Medicine Cabinet	2																							
52 Minor Surgery Instrument Set	1		1																	1				
53 Narcotic Safe	1																							
54 Neonatal Monitor	1																							
55 OB-GYN Examination Table	1						1															1		
56 Operating Instrument Set	1												1											
57 Operating Light	1												1											
58 Oscope/Ophthalmoscope	1																							
59 Oxygen Cylinder Cart	3																							
60 Patient Bed	32																							
61 Patient Monitor	1																							
62 pH meter	1											1												

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ITEMS	Q'ty	ADM	OPEM	OPINT	OPSUR	OPPED	OPGY	US	WTG	PHARM	DNTL	LAB	OP	STER	RAD	SERV	MW	WW	DEL	NST	ICU	POSTD	PEDW	PH
63 Phototherapy Unit	1																					1		
64 Plaster Breaker Spreader Set	1		1																					
65 Refrigerator	5		1							1		1								1	1			
66 Refrigerator	1															1								
67 Screen	1																							1
68 Slide Projector	1																							1
69 Small Printing Machine	1																							1
70 Sphygmomanometer(desk type)	6												1							2	1	1		
71 Sphygmomanometer(stand type)	1			1																				
72 Spirometer	1			1																				
73 Stretcher with Siderails	4		2										1						1					
74 Suction Unit with Stand	5			1															1	1	1	1		
75 Top-Pan Balance	1									1														
76 TV/VTR for waiting room	1								1															
77 Ultrasonic Nebulizer	3			1																	2			
78 Ultrasonic Scanner	1							1																
79 Ventilator (Respirator)	1																					1		
80 View Box	9			1	1	1	1	1					1		1					1	1			
81 Washing/drying machine	1																1							
82 Water Distiller	1									1														
83 Weighing Scale	2			1																1				
84 Weighing Scale for Infant	2					1													1					
85 Wheel Chair, Adult	1			1																				
86 White Board	1																							1
87 X-Ray Film Box	1															1								
88 X-Ray System	1															1								

ADM:Administration, OPEM:Emergency(outpatient), OPINT:Internal Medicine(outpatient), OPSUR:Surgery(outpatient)

OPPED:Paediatric(outpatient), OPGY:Gynecology(outpatient), US:Ultrasound(outpatient), WTG:Waiting room(outpatient)

PHARM:Pharmacy, DNTL:Dental, LAB:Laboratory, OP-Operation, STER:Sterilization, RAD:Radiology, SERV:Service, MW:Men's Ward

WW:Women's Ward, DELV:Delivery, NSTN:Nurse Station, POSTD:PostDelivery, PEDW:Paediatric Ward, PH:Public Health

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Modifications and Amendments to the Draft Report

Water Tank	The Tuvalu side requested to maintain the current capacity of 450 m ³ and additional 50 m ³ , the total sums up to 500m ³ . It was accepted by both sides.
Septic Tank	The Tuvalu side requested that soak pits should have proper area to avoid problem of over flow. The Tuvalu side requested to separate the septic tank for the sewage and chemicals, from Laboratory, X-ray, Dental and Pharmacy etc. The Team promised they will be considered in Detailed Design.
Incinerator	The Tuvalu side requested to provide a new incinerator. The Team inspected the present incinerator, and decided not to accept to install the new system, because the new burners had been installed to the incinerator.
Isolation Ward	The Tuvalu side requested the isolation ward to be separated into two rooms by wall, and provisions in the design for possible future extension. It was accepted by the Team.
Psychiatric Ward	The Tuvalu side requested the Psychiatric ward to be separated by wall, and security grill to be installed. It was accepted by the Team.
General Ward	The Tuvalu side requested to increase the size of the wards. But the Team decided to leave the design as it is, because the number of the patient since 1996 to 1999 did not justify the increase.
Public Health	The Tuvalu side requested to have a mini laboratory in the Public Health Department for testing and analyzing the water and food. The Team suggested to use the new laboratory. The Tuvalu side requested three equipment to check water quality and a spray machine for insecticide. Since this is the new request from Tuvalu side, the Team agreed to look into it.
Kitchen	The Tuvalu side wanted to confirm what they have been proposed are accepted, and the Team confirmed that everything will be supplied except for Food Blender. The Tuvalu side requested for an electric oven. It was accepted by the Team.
Laundry	The Tuvalu side pointed out the need and requested Iron machine. The Team agreed to look into it.
Furniture	The Tuvalu side wanted to know if general furniture are included in the Project. The Team explained that they are not included in the Project except.
Air Conditioning	The Tuvalu side requested to consider installing the air-conditioner to both of the Consultation Rooms and Doctors Room. If it can not be accepted, doctors prefer the

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	consultation room with air-conditioner. The Team agreed to look into it.
Fence	The Tuvalu side requested to install fence for the new hospital. The Team explained that the fence cannot be provided by Japanese Grant Aid Project.
Workshop	The Tuvalu side requested workshop for bio-medical and maintaining electrical equipment. The Team agreed to provide general workshop next to the machine room, and suggested to use the existing building for bio-medical workshop.
Garage	The Tuvalu side requested to provide a Garage for ambulance, but the Team did not accept it. However the Team agreed to extend the roof of the entrance area to park the ambulance.
Telephone	The Tuvalu side recommended to consider using the model which is standardized in Tuvalu. The technician will provide the details of these models. The Team will take note of this.
Hot Water System	The Tuvalu side proposed if the other department like Laundry, Kitchen and Dental could be provided with hot water, but the Team explained that the water temperature was not suitable for these departments. The both side agreed to leave them as they are.
Electricity	The Tuvalu side recommended to use cable rack for the wiring system. The Tuvalu side requested to provide switch gear by the Project. It was agreed by the Team. However the step down transformer will be provided by Tuvalu side. The Tuvalu requested the transformer to be provided under the Project. The Team did not accepted because the transformer is located out of the project site. The both side agreed the rooms covered by the stand-by generator are Operation Theater, Delivery Room, ICU, the rooms where the refrigerator or freezer is installed, and one power point in each ward. And the stand-by generator should be operated automatically.
Rubbish	The Tuvalu side suggests to provide proper storage place for rubbish. It was accepted by the Team.

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事前評価表

1. 対象事業名
トゥヴァル国プリンセスマーガレット病院建設計画
2. 我が国が援助することの必要性・妥当性
<p>(1) トゥヴァル国は、ポリネシアに含まれる後発開発途上国（Least among Less Developed Country: LLDC）であり、国家規模が非常に小さく（人口 10,838 人、2000 年）生産性が著しく低い島嶼国の珊瑚礁島である。我が国は、トゥヴァル国をはじめとする大洋州地域に対して島嶼国の抱える拡散性・地理的隔絶性を克服するための経済・社会インフラの整備（保健医療を含む）等、更に、住民への適正な保健医療サービスの提供が重要な課題となっている。このことから、トゥヴァル国に対する我が国の援助は不可欠である。</p> <p>また、トゥヴァル国は、広大な排他的経済水域を有していることから、漁業に対する期待は大きく、水産国である日本への期待が非常に高い。</p> <p>(2) 国家保健計画（National Health Plan 1999 – 2003）において、トゥヴァル国は、「国民の健康を促進し、守り、回復させ、改善し、維持することを責務とする」と掲げており、同計画の中で国家保健行動計画として質・量の両面における保健医療サービスの改善に向けたプログラムを策定し実施している。プリンセスマーガレット病院はトゥヴァル国における唯一の病院であり、同国の保健医療サービスの改善において、その役割は非常に大きい。しかし老朽化及び必要機材の不備により要求されている機能を果たせていないことから、同国では先の国家保健計画、及び保健省総合計画（The Ministry of Health Corporate Plan 1999 – 2003）において、より効率的効果的な医療サービスの提供のために同病院の施設及び機材の整備を行うことを掲げている。</p> <p>(3) トゥヴァル国の社会・経済事情については、別添資料の「トゥヴァル国の社会・経済事情」参照。</p>
3. 協力対象事業の目的（プロジェクト目標）
プリンセスマーガレット病院の施設建設と医療機材の供与、及び患者カルテ管理システムの改善と画像診断技術の向上に関するソフトコンポーネントの実施により、同病院で提供される保健医療サービスの質の向上を図る。
4. 事業の内容
<p>(1) 対象地域 トゥヴァル国フナフティ島</p> <p>(2) アウトプット 病院施設（外来部門、中央診療部門、病棟部門、パブリックヘルス部門、管理部門、及びサービス部門）の建設と医療機材（91 アイテム）の調達によってもたらされる保健医療サービスの質的向上、及び患者カルテ管理の改善と画像診断技術の向上</p> <p>(3) インプット 病院施設（外来部門、中央診療部門、病棟部門、パブリックヘルス部門、管理部門、及びサービス部門）の建設と医療機材（91 アイテム）の調達、及び患者カルテシステムの改善及び画像診断技術の向上に関する技術協力の実施</p>

- (4) 総事業費
概算事業費 7.43 億円 (日本側 7.05 億円、「トゥ」国側 0.38 億円)
- (5) スケジュール
詳細設計期間を含め、12.5 ヶ月の工期を予定
- (6) 実施体制
実施機関：トゥヴァル国保健省保健局

5. プロジェクトの成果

- (1) プロジェクトにて裨益をうける対象の範囲及び規模
対象の範囲：トゥヴァル国の全国民 (約 10,800 人)

- (2) 事業の目的を示す成果指標

	2000 年 (実施前)	2003 年 (実施後) 予定
入院患者数	延べ 701 人/年 (1999 年)	延べ 1,100 人/年
外来患者数	延べ 13,279 人/年 (1999 年)	延べ 18,000 人/年
病床占有率	平均 36.2% (1999 年)	平均 60%
画像診断検査数	延べ 4,446 人/年 (2000 年) (X 線画像診断のみ)	延べ 8,500 人/年 (X 線・超音波画像診断)
ICU 患者数	0 人/年 (2000 年) (現況は、ICU 機材もなく 重症患者は、一般患者と一 緒に一般病棟に収容されて いる)	延べ 300 人/年 (ICU 機材が備われた病室 で、看護婦による集中看護 および術後の回復看護が行 なわれる)

6. 外部要因リスク

成果及び目標の達成には、以下の外部要因リスクが解消される必要がある。

- (1) 「トゥ」国の医師、看護婦等の医療従事者の育成と増員
- (2) 病院管理に関するスタッフの確保
- (3) サイクロン等による大規模災害が起こらず、また感染症の流行が起こらない

7. 今後の評価計画

- (1) 事後評価に用いる成果指標
対象施設における入院患者数 (人/年)、外来患者数 (人/年)、病床占有率 (%)、
画像診断検査数 (人/年)、ICU 患者数 (人/年)、患者の満足度 (%)
- (2) 評価のタイミング
事業終了時の全体の事後評価
施設供用開始後、5 年後(2008 年)を目処に再度全体の事後評価

「トゥ」国側負担工事分及び同予算資料

Portions by the Japanese Side	Portions by the Tuvalu Side	Budget (Rough Cost Estimation, A\$)	
		2001	2002
(1) Building Works Structural works, finishing works	(1) <u>Site Preparation</u> a) Pre construction works b) Ground preparation works: - Demolition of existing facilities - Grading c) Temporary power for the construction d) Temporary access road for the construction site e) Water Supply Relocation of the existing elevated water tank and water supply pipe. f) Electrical Work Relocation of Existing Electrical Cable and Pillar Box from existing place to suitable place. g) Preparation of temporary facilities during the construction period and relocation of isolation ward and PH Office.	(1) <u>Site Preparation</u> a) A\$ 5,000 b) A\$ 50,000 - A\$ 1,000 c) A\$ 500 d) A\$ e) A\$ 200,000 f) A\$ 2,121.5 g) A\$ 200,000	
(2) Electrical Works Power • trunk facilities, lighting, power outlets, P/A systems.	(2) <u>External Works and Approach Roads</u> - Landscaping, planting, fence, etc. within the site. - Permanent road works around the site		(2) - A\$ 50,000 - A\$ (PWD will prepare)
(3) Utilities and Facilities a) Water supply Construction works for the water supply system in the Project site. b) Sewerage system including piping works. c) Sanitation facilities (waste water treatment facility) d) Elevated tank and reserve tank	(3) <u>Utilities and Facilities</u> a) Electrical Work Cabling works from the Substation(TEC) to the new pillar box in the site. b) Telecommunication Work Cabling works from main feeder line to the new PABX in the new PMH. c) The provision of gas(LPG) cylinders		(3) <u>Utilities and Facilities</u> a) A\$ 34,300 b) A\$ 1,955 c) A\$ -

Portions by the Japanese Side	Portions by the Tuvalu Side	Budget (Rough Cost Estimation, A\$)	
		2001	2002
e) Fire-extinguishing facilities f) Electrical supply and transformer system Cabling works from the low tension receiving panel in the Electrical Room. g) Telecommunication system Cabling works from PABX to the facilities, including installation of conduit from the cross connection point at the site boundary to PABX. h) Lighting Protection System i) Lighting system in the site			
(4) Exterior Work Road, path and parking lots within the site. (5) Equipment Equipment for Medical and Operation & Maintenance. (6) Electric Room, Electric Generator Room, Pump Room	(4) Others a) Governmental works including the application and obtaining of Governmental approvals and permissions b) Smooth custom clearance, free custom duties, tax exemptions (import tax, sales tax, value added tax) and prompt internal transportation for the imported and local construction materials and equipment c) Commissions to the Japanese foreign exchange bank for its banking services based upon the Banking Arrangement, namely the advising commission of the "Authorization to Pay" and payment commission (5) Management, operation and maintenance cost for the new building and facilities (6) Tax exemptions and necessary preferential treatment for the construction staff from Japan or a third country	(4) Others a) A\$ _____ b) A\$ _____ * Application Form should be submitted from MoHWC to Ministry of Finance. c) A\$ _____ (5) _____ (6) A\$ _____	(4) Others a) A\$ _____ b) A\$ _____ c) A\$ _____ (5) A\$ _____ (year 2003) (6) A\$ _____

Portions by the Japanese Side	Portions by the Tuvalu Side	Budget (Rough Cost Estimation, A\$)	
		2001	2002
	(7) Smooth entry to, re-entry and departure from Tuvalu for the Japanese technical staff	(7) A\$ _____	(7) A\$ _____
	(8) Cost for procurement and installation of general furniture to the new PMH buildings	(8) A\$ _____	(9) A\$ _____ (year 2003)
	(9) Demolition of the existing women's ward after the completion of construction work.		(10) A\$ _____
	(10) All the expenses, other than to be borne by Japan's Grant Aid within the scope of the Project	(10) A\$ _____	

トゥヴァル国プリンセスマーガレット病院整備計画

ケース別のコスト比較・検討

本件における規模検討方針の妥当性を検証するため、以下のとおり5つのケースを設定して、そのコスト状況に関する比較検討を行った。ケース別の前提条件については別紙 - 1 (2) に整理し、ケース別のコスト累積比較表を別紙 - 1 (3) またケース別コスト累積金額の比較のグラフを別紙 1 (4) に添付する。

1. 前提条件

各ケースにおける前提条件は、別紙 - 1 (2) に示すとおりであるが、各条件については、以下の方法、あるいは方針で設定を行い、必要コストを3項目（初期投資、運鉛管理費、患者移送費）に分けてそれぞれ検討を行った。

(1) 規模の設定

Case 0	改修・建替え工事は行わず、既存施設のままとする。 施設・機材はますます老朽化が進むため、病院の機能は年々低下し、フィジー等へ移送する患者数は年々増加する。最終的には Labo.検査及びX線検査の必要な患者も移送する。
Case 1	PMH を保健センターとして建替える。 入院施設は持たず、入院の必要な患者は全てフィジーに移送する。 既存と同様の一般外来、歯科、薬局、ラボ検査、X線撮影、PH は行う。
Case 2	PMH を 10 床の有床診療所として建替える。 48 時間以上の入院が必要な患者は、フィジーに移送することとし、正常分娩のみ実施する。 既存と同様の一般外来、歯科、薬局、ラボ検査、X線撮影、PH は行う。
Case 3	本件の計画案。 病床数は既存とほぼ同様の 47 床とするが、二次医療病院としての手術、ラボ検査、X線撮影、PH 等の機能を有するように建替えを行う。
Case 4	PMH をフィジーの CWMH レベルの三次医療病院として建替える。 検査、手術等については、3 次医療を行えるレベルの施設・機材を整備する。病床数については、機能の向上に伴う特殊ベット分として、既存から 20 床程度増床とする。 医療スタッフについては、ニュージーランド、フィジー等からの外国人の医師及び看護婦等のリクルートを前提とする。

(2) 初期投資費用

各施設の規模及び機材内容については、日本における各レベルの施設・機材の事例を元に計算した。単価については、Case 3 と比較するため、日本の無償で建設する場合を想定して計算を行った。

(3) 年間予算及び維持管理費について

本件の検討にあたっては、日本における規模別の病院・診療所等の必要経費、及びスタッフの配員状況等のデータを参考として、施設規模に応じた割合を計算し、現在の「トゥ」国における保健局予算を元にケース別の必要経費を算出した。

尚、参考とした資料は以下のとおり。

「医療経済実態調査報告 - 医療機関等調査 - : 中央社会保険医療協議会」(平成 7 年)

「医療施設調査病院報告 : 厚生省大臣官房統計情報部編」(平成 10 年)

(4) 患者移送費の計算

現在「トゥ」国では、TUVALU FUND(AS\$150,000) 及び NZ Scheme(AS\$150,000)という二つの基金によって患者をフィジーまたは必要に応じてニュージーランドかオーストラリアへ移送している。移送費(航空運賃、車輛使用料)のほか、検査費用、治療費、入院費、及び外来患者及び付添い人の滞在費がこれらの予算で賄われている。移送患者数はほぼ 50 名/年であることから、平均して患者一人あたりに必要な金額は、約 360,000 円であると考えられる。

移送する患者の人数に関しては、各ケースごとに下記のように検討した。

Case 0	病院機能の低下に伴い移送患者数は年々増加する。 最終的には、以下に示す現患者数を全て移送することになると想定。 現在の入院患者数(約 700 名/年)、ラボ検査数(約 1800 サンプル/年)、X 線検査数(3200 名/年)。 老朽化に伴って、移送する患者数は年々急速に増加するように設定。
Case 1	全ての入院患者を移送することから、現在の入院患者数(約 700 名/年)が続くものとして計算した。
Case 2	48 時間以上の入院を要する患者を移送する。 現在の入院患者のうち 3 日以上入院している患者数(約 600 人)をもとに計算した。
Case 3	本件の計画案では、PMH の機能向上により、治療のための移送患者は減少すると考えられるが、検査機能向上により新たな患者が発見されることもあることから、移送患者数は変わらないと考えられる。 よって現状と同様の人数(約 50 名/年)が移送され则认为している。
Case 4	フィジーの CWMH に移送している患者については移送の必要性が無くなる。よって、NZ 又は Aus.まで移送する患者数(1 - 2 名/年)のみとして計算した。

2. 分析検討結果

各ケースごとの累積コストの比較については、別紙グラフに示すとおりである。

ケース0、1、及び2については、必要経費のうち、患者の移送費の占める割合が非常に多くなる。患者の移送に必要な経費が高いと考えられること（航空運賃の他、滞在費、付添いの滞在費など）また入院により治療・回復することの必要な患者数が多いことから、Case 2 と Case 3 の間に大きな差が生じている。

一方、ケース4については、施設のグレードアップに必要な初期投資コストが高くなること、運営維持管理に必要な年間予算も高くなることから、他のケースと比べて非効率的であると考えられる。

よって、本件で提案しているケース3、つまり47床の病院を建設することで、PMHの2次病院としての機能を強化し、専門知識の必要な疾患や高度な手術を必要とする外科症例、合併症のある産科症例等のみフィジー又はNZの病院へ移送するという方針が、最も効率的でもあると考えられる。

ケース別前提条件の整理

	Case 0	Case 1	Case 2	Case 3	Case 4
	現状	保健センター	有床診療所	計画案	第三次医療病院
	現状のまま (年々機能低下)	<ul style="list-style-type: none"> ・ ベットなし ・ 外来 (一般外来、歯科) 、薬局、PH、ラボ、X 線 ・ 入院の必要な患者は全て移送 	<ul style="list-style-type: none"> ・ 10 床 ・ 48 時間までの入院 ・ 外来 (一般、歯科) 、薬局、Labo、PH、正常分娩 	<ul style="list-style-type: none"> ・ 47 床の 2 次病院 	フィジー CWMH Level ・ 70 床 ・ 三次医療病院
Initial Cost					
施設建設	現状のまま	保健センターの建設 250 m ² 0.35 億円	10 床の診療所の建設 900 m ² 1.6 億円	47 床の病院の建設 2,600 m ² 5.0 億円	70 床 の病院の建設 5,600 m ² 12.0 億円
機材整備	現状のまま	診療所レベルの機材 0.15 億円	有床診療所レベルの機材 0.4 億円	機材 1.5 億円	機材 4.0 億円
人材のリクルート	必要なし	必要なし Dr. 2 人 Nurse 6 人 その他	必要なし Dr. 6 人 Nurse 10 人 その他	徐々に増員 Dr. 10 人 Nurse 30 人 その他	Dr. 30 人 (新規 20 人) Nurse 90 人 (新規 60 人) その他
年間予算	108,000 千円	32,700 千円	52,800 千円	149,800 千円	371,000 千円
人件費	34,000 千円	12,300 千円	21,200 千円	69,000 千円	190,000 千円
材料費	21,000 千円	11,100 千円	16,600 千円	44,000 千円	106,000 千円
その他経費	53,000 千円	9,300 千円	15,000 千円	36,800 千円	75,000 千円
患者移送費	移送する患者数は年々増加	年間 700 名程度移送 (実績入院患者数)	48 時間以上の入院を要する患者は移送。 年間約 600 名程度 (実績 3 日以上入院患者数)	年間 50 名程度を移送 Tuvalu Fund A\$150,000 (¥9,000,000) NZ scheme A\$150,000 (¥9,000,000)	移送するのは NZ または Aus の病院のみ
- 航空運賃	入院の必要な全ての患者、及び X 線撮影、ラボ検査の必要な患者も移送				
- 治療費					
- 付添い人					
患者 1 名あたり ¥ 350,000 (含付添い人含)					

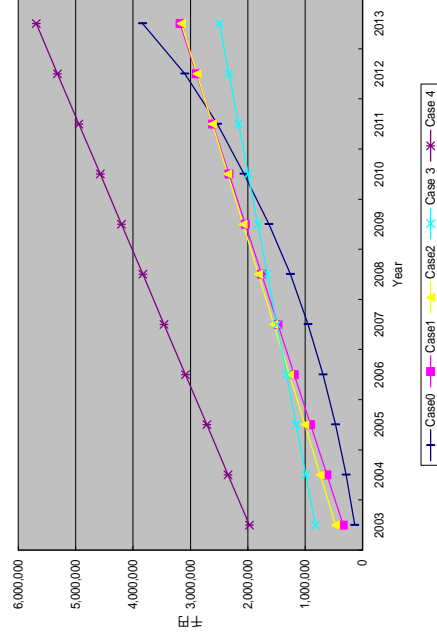
ケース別コスト累積比較

(単位：千円)

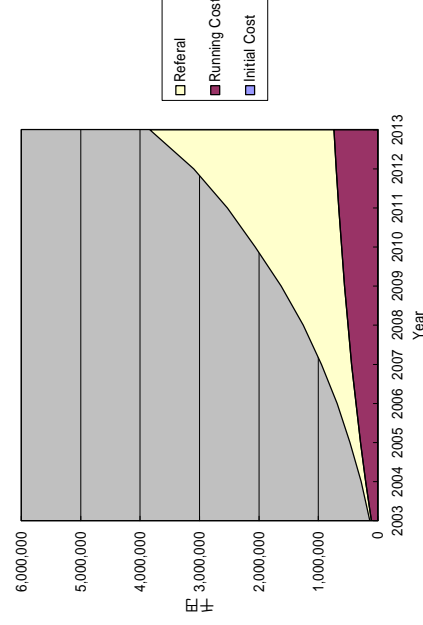
Case	項目	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Case 0	初期投資	0	0	0	0	0	0	0	0	0	0	0
	累計	0	0	0	0	0	0	0	0	0	0	0
	運営管理費	107,200	96,480	86,832	78,149	70,334	63,301	56,970	51,273	46,146	41,531	37,378
	累計	107,200	203,680	290,512	368,661	438,995	502,295	559,266	610,539	656,685	698,217	735,595
	患者移送費	26,250	52,500	98,000	140,000	192,500	245,000	315,000	385,000	420,000	525,000	700,000
Case 1	累計	26,250	78,750	176,750	316,750	509,250	754,250	1,069,250	1,454,250	1,874,250	2,399,250	3,099,250
	合計	133,450	148,980	184,832	218,149	262,834	308,301	371,970	436,273	466,146	566,531	737,378
	累計	133,450	282,430	467,262	685,411	948,245	1,256,545	1,628,516	2,064,789	2,530,935	3,097,467	3,834,845
	初期投資	50,000	0	0	0	0	0	0	0	0	0	0
	累計	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Case 2	運営管理費	32,700	32,700	32,700	32,700	32,700	32,700	32,700	32,700	32,700	32,700	32,700
	累計	32,700	65,400	98,100	130,800	163,500	196,200	228,900	261,600	294,300	327,000	359,700
	患者移送費	252,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000
	累計	252,000	504,000	756,000	1,008,000	1,260,000	1,512,000	1,764,000	2,016,000	2,268,000	2,520,000	2,772,000
	合計	334,700	284,700	284,700	284,700	284,700	284,700	284,700	284,700	284,700	284,700	284,700
Case 3	累計	334,700	619,400	904,100	1,188,800	1,473,500	1,758,200	2,042,900	2,327,600	2,612,300	2,897,000	3,181,700
	初期投資	200,000	0	0	0	0	0	0	0	0	0	0
	累計	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
	運営管理費	52,800	52,800	52,800	52,800	52,800	52,800	52,800	52,800	52,800	52,800	52,800
	累計	52,800	105,600	158,400	211,200	264,000	316,800	369,600	422,400	475,200	528,000	580,800
Case 4	患者移送費	216,000	216,000	216,000	216,000	216,000	216,000	216,000	216,000	216,000	216,000	216,000
	累計	216,000	432,000	648,000	864,000	1,080,000	1,296,000	1,512,000	1,728,000	1,944,000	2,160,000	2,376,000
	合計	468,800	268,800	268,800	268,800	268,800	268,800	268,800	268,800	268,800	268,800	268,800
	累計	468,800	737,600	1,006,400	1,275,200	1,544,000	1,812,800	2,081,600	2,350,400	2,619,200	2,888,000	3,156,800
	初期投資	650,000	0	0	0	0	0	0	0	0	0	0
Case 5	累計	650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000
	運営管理費	149,800	149,800	149,800	149,800	149,800	149,800	149,800	149,800	149,800	149,800	149,800
	累計	149,800	299,600	449,400	599,200	749,000	898,800	1,048,600	1,198,400	1,348,200	1,498,000	1,647,800
	患者移送費	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000
	累計	18,000	36,000	54,000	72,000	90,000	108,000	126,000	144,000	162,000	180,000	198,000
Case 6	合計	817,800	167,800	167,800	167,800	167,800	167,800	167,800	167,800	167,800	167,800	167,800
	累計	817,800	985,600	1,153,400	1,321,200	1,489,000	1,656,800	1,824,600	1,992,400	2,160,200	2,328,000	2,495,800
	初期投資	1,600,000	0	0	0	0	0	0	0	0	0	0
	累計	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000
	運営管理費	371,000	371,000	371,000	371,000	371,000	371,000	371,000	371,000	371,000	371,000	371,000
Case 7	累計	371,000	742,000	1,113,000	1,484,000	1,855,000	2,226,000	2,597,000	2,968,000	3,339,000	3,710,000	4,081,000
	患者移送費	720	720	720	720	720	720	720	720	720	720	720
	累計	720	1,440	2,160	2,880	3,600	4,320	5,040	5,760	6,480	7,200	7,920
	合計	1,971,720	371,720	371,720	371,720	371,720	371,720	371,720	371,720	371,720	371,720	371,720
	累計	1,971,720	2,343,440	2,715,160	3,086,880	3,458,600	3,830,320	4,202,040	4,573,760	4,945,480	5,317,200	5,688,920

ケース別コスト累積比較とその構成

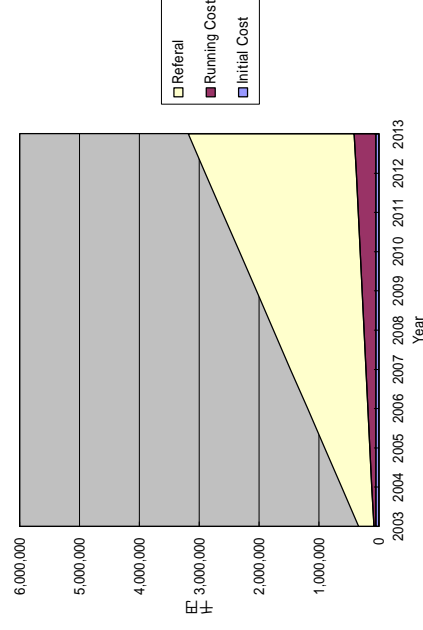
ケース別累積コスト比較



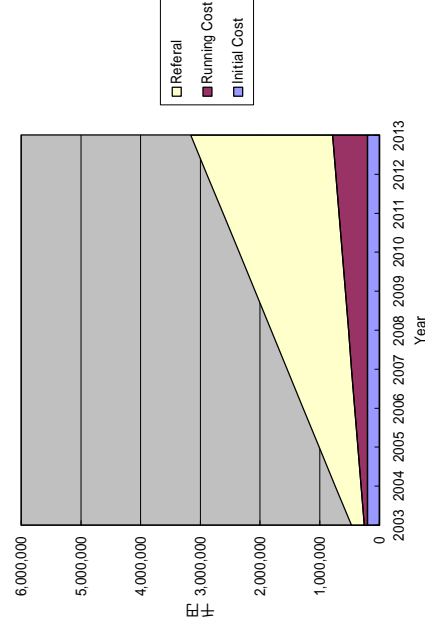
Case 0



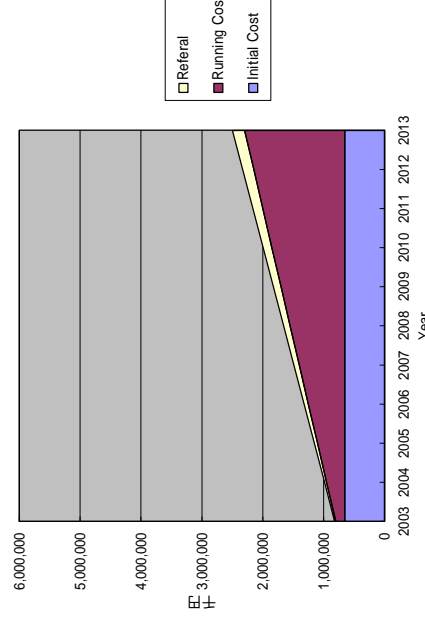
Case1



Case 2



Case 3



Case4

