

# **Appendices**

## Appendix 1. Member List of the Study Team

### (1) Preparatory Survey Team

Mr. Satoru MIMURA	Leader	Director, Pacific Division, Southeast Asia 1 and Pacific Department, Japan International Cooperation Agency (JICA)
Mr. Yoshitomo KOJOH	Technical Advisor	Senior Coordinator for Meteorological Instruments, Administration Division, Observations Department, Japan Meteorological Agency (JMA)
Mr. Osamu TANABE	Procurement Planning	Director, Personnel Affairs Division, General Affairs Department, Japan International Cooperation System (JICS)
Ms. Mamiko TANAKA	Cooperation Planning	Disaster Management Division 1, Water Resources and Disaster Management Group, Global Environment Department, Japan International Cooperation Agency (JICA)
Mr. Nobutaka NOGUCHI	Project Manager/Meteorological Service Planning/Operation and Maintenance Planning	International Meteorological Consultant Inc. (IMC)
Mr. Yoshihisa UCHIDA	Meteorological Observation and Forecasting System Planning	Japan Weather Association (JWA)
Mr. Toshihide ENDO	Meteorological Data Communication System Planning/Equipment Cost Estimate	International Meteorological Consultant Inc. (IMC)
Mr. Kenji MORI	Procurement and Construction Planning/Installation Work Cost Estimate	Japan Weather Association (JWA)

## (2) Draft Report Explanation Team

Mr. Toshiyuki ARITA	Leader	Director, Public Policy Division, Japan International Cooperation Agency (JICA)
Ms. Mamiko TANAKA	Cooperation Planning	Disaster Management Division 1, Water Resources and Disaster Management Group, Global Environment Department, Japan International Cooperation Agency (JICA)
Mr. Nobutaka NOGUCHI	Project Manager/Meteorological Service Planning/Operation and Maintenance Planning	International Meteorological Consultant Inc. (IMC)
Mr. Toshihide ENDO	Meteorological Data Communication System Planning/Equipment Cost Estimate	International Meteorological Consultant Inc. (IMC)

# Appendix 2. Study Schedule

## (1) Preparatory Survey

Schedule	Governmental Member				Consultant Member			
	Mr. Satoru MIMURA	Mr. Yoshitomo KOJOH	Mr. Osamu TANABE	Ms. Mamiko TANAKA	Mr. Nobutaka NOGUCHI	Mr. Yoshihisa UCHIDA	Mr. Toshihide ENDO	Mr. Kenji MORI
2009	Leader	Technical Advisor	Procurement Planning	Cooperation Planning	Project Manager / Meteorological Service Planning / Operation and Maintenance Planning	Meteorological Observation and Forecasting System Planning	Meteorological Data Communication System Planning / Equipment Cost Estimation	Procurement and Construction Planning / Installation Work Cost Estimation
16 Aug.	Sun	Tokyo → Auckland NZ090 (18:15 - 08:15) Auckland → Apia NZ862 (15:00 - 19:55)						
17 Aug.	Mon	Discussion with JICA Samoa Office, Courtesy call on Ministry of Foreign Affairs and Trade, Courtesy call on Ministry of Finance, Courtesy call on Ministry of Natural Resources and Environment, Courtesy call on Samoa Meteorology Division, Discussion with Samoa Meteorology Division						Discussion with Office of the Regulator, Discussion with Samoa Meteorology Division
18 Aug.	Tue	Courtesy call on and Discussion with Secretariat of Pacific Regional Environment Programme (SPREP) and World Meteorological Organization (WMO), Discussion with Samoa Meteorology Division				Discussion with Samoa Meteorology Division, Site Survey at Head Office of Samoa	Courtesy call on and Discussion with Secretariat of Pacific Regional Environment Data Collection, Site Survey at Head Office of	Discussion with Samoa Meteorology Division, Discussion with Samoa Meteorology Division
19 Aug.	Wed	Discussion with Samoa Meteorology Division, Site Survey at Head Office of Samoa Meteorology Division				Discussion with Samoa Meteorology Division, Discussion with Ministry of Agriculture and Fishery, Discussion with Samoa Bureau of Statistics	Discussion with Samoa Meteorology Division, Discussion with Telecommunication Company	Discussion with Samoa Meteorology Division, Discussion with Samoa Meteorology Division
20 Aug.	Thu	Discussion with Samoa Meteorology Division, Site Survey at Faleolo International Airport				Discussion with Samoa Meteorology Division, Discussion with Natural Resources and Environment, Discussion with Samoa Tel	Discussion with Samoa Meteorology Division, Discussion with Natural Resources and Environment, Discussion with Samoa Tel, Site Survey at Faleolo International Airport	Discussion with Samoa Meteorology Division, Discussion with Samoa Meteorology Division
21 Aug.	Fri	Signing on Minutes of Discussion, Discussion with Samoa Meteorology Division, Report to JICA Samoa Office				Signing on Minutes of Discussion, Discussion with Samoa Meteorology Division, Discussion with Samoa Tel, Site Survey at Head Office of Samoa Meteorology Division		
22 Aug.	Sat	Apia → Auckland NZ861 (03:15-06:25)				Site Survey in Upolu Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation)		
23 Aug.	Sun	Auckland → Tokyo NZ099 (08:30-16:40)				Site Survey in Upolu Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation)		
24 Aug.	Mon					Discussion with Samoa Meteorology Division Site Survey in Upolu Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation)		
25 Aug.	Tue					Discussion with Samoa Meteorology Division Site Survey in Manono Island, Site Survey at Faleolo International Airport, Discussion with Airport Authority		
26 Aug.	Wed					Discussion with Samoa Meteorology Division Site Survey in Upolu Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation), Discussion with Airport Authority		
27 Aug.	Thu					Discussion with Samoa Meteorology Division Upolu Island → (By Ferry) Savaii Island, Site Survey in Savaii Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation)		
28 Aug.	Fri					Discussion with Samoa Meteorology Division, Data Collection Site Survey in Savaii Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation)		
29 Aug.	Sat					Discussion with Samoa Meteorology Division, Data Collection Savaii Island → (By Ferry) Upolu Island Site Survey in Upolu Island, Site Survey at Faleolo International Airport (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation)		
30 Aug.	Sun					Discussion with Samoa Meteorology Division, Internal Meeting, Data Collection		
31 Aug.	Mon					Site Survey at Head Office of Samoa Meteorology Division, Discussion with Samoa Meteorology Division, Data Collection at the Samoa Police	Discussion with Samoa Meteorology Division, Discussion with the Fishery Division, Discussion with Maritime Administration, Data Collection at the Samoa Police	Site Survey at Head Office of Samoa Meteorology Division, Discussion with the Electric Power Corporation
1 Sep.	Tue					Discussion with Samoa Meteorology Division	Discussion with Samoa Meteorology Division, Discussion with Cell-phone Company, Discussion with Internet Provider	Study for Construction Materials and Methods, Quantity Survey for Equipment Installation Work
2 Sep.	Wed					Discussion with Samoa Meteorology Division	Discussion with Samoa Meteorology Division, Discussion with Internet Provider, Study for Transportation	Study for Construction Materials and Methods, Quantity Survey for Equipment Installation Work
3 Sep.	Thu					Discussion with Samoa Meteorology Division	Discussion with Samoa Meteorology Division, Data Collection at Samoa Commercial Bank	Discussion with Samoa Meteorology Division, Discussion with Industrial Waste Disposal Company
4 Sep.	Fri					Discussion with Samoa Meteorology Division, Report to JICA Samoa Office	Discussion with Pacific Regional Environment Programme (SPREP) and World Meteorological Organization (WMO), Discussion with Samoa Meteorology Division, Report to JICA Samoa Office	Study for Construction Materials and Methods, Quantity Survey for Equipment Installation Work
5 Sep.	Sat					Site Survey in Upolu Island (Site Selection for Repeaters, Radio Wave Interference Study, Line of the Site Confirmation), Internal Meeting, Data Collection, Discussion with Samoa Meteorology Division		
6 Sep.	Sun					Internal Meeting, Data Collection Apia → Auckland NZ863 (20:55- 00:06)		
7 Sep.	Mon					Discussion with Samoa Meteorology Division		
8 Sep.	Tue					Auckland → Tokyo NZ099 (08:30-16:40)		
9 Sep.	Wed						Discussion with Samoa Meteorology Division, Discussion with Cell-phone Company, Study for Transportation, Data Collection, Quantity Survey for Equipment	Study for Construction Materials and Methods, Discussion with Ministry of Works, Transport and Infrastructure
10 Sep.	Thu						Discussion with Samoa Meteorology Division, Study for Transportation, Data Collection, Quantity Survey for Equipment	Discussion with Fire Division, Discussion with Planning and Urban Management Agency, Collection of Questionnaires
11 Sep.	Fri					Study for Environmental Impact Assessment, Report to Samoa Meteorology Division, Quantity Survey, Data Collection		
12 Sep.	Sat					Apia → Auckland NZ861 (03:15-06:25)		
13 Sep.	Sun					Auckland → Tokyo NZ099 (08:30-16:40)		
14 Sep.	Mon					Data Collection Apia → Auckland NZ863 (20:55-00:05)		
15 Sep.	Tue					Auckland → Tokyo NZ099 (08:30-16:40)		

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**(2) Explanation of Draft Report**

Schedule		Governmental Member		Consultant Member	
		Mr. Toshiyuki ARITA	Ms. Mamiko TANAKA	Mr. Nobutaka NOGUCHI	Mr. Toshihide ENDO
		Leader	Cooperation Planning	Project Manager/ Meteorological Service Planning/ Operation and Maintenance Planning	Meteorological Data Communication System Planning/ Equipment Cost Estimate
2 Dec.	Wed			Tokyo → Auckland NZ090 (18:30 - 09:20)	
3 Dec.	Thu			Auckland → Apia NZ264 (21:45 - 01:40)	
4 Dec.	Fri			Discussion with JICA Samoa Office, Discussion with Samoa Meteorology Div.	
5 Dec.	Sat			Site Survey at Saluafata	
6 Dec.	Sun			Site Survey at Saluafata and Togitogiga	
7 Dec.	Mon			Site Survey at Togitogiga, Discussion with Samoa Meteorology Div., Explanation of Draft Report to Samoa Meteorology Div.	
8 Dec.	Tue	Tokyo → Auckland NZ090 (18:30 - 12:35) Auckland → Apia NZ262 (15:40 - 19:35)		Discussion with Office of the Regulator, Discussion with Samoa Meteorology Div., Explanation of Draft Report to Samoa Meteorology Div.	
9 Dec.	Wed	Discussion with JICA Samoa Office, Discussion with Ministry of Foreign Affairs and Trade, Discussion with Ministry of Finance, Discussion with Ministry of Natural Resources and Environment, Discussion with Samoa Meteorology Div., Explanation of Draft Report to Samoa Meteorology Div.			
10 Dec.	Thu	Discussion with Samoa Meteorology Div., Discussion with Ministry of Natural Resources and Environment, Signing of Minutes of Discussion, Report to JICA Samoa Office			
11 Dec.	Fri	Apia → Auckland NZ261 (02:40 - 06:40)		Site Survey at Togitogiga, Discussion with Cell-phone companies, Discussion with Disaster Management Office, Discussion with Samoa Meteorology Div.	
12 Dec.	Sat	Auckland → Tokyo NZ099 (09:15 - 16:25)		Discussion with Samoa Meteorology Div., Data Collection	
13 Dec.	Sun			Internal Meeting Apia → Auckland NZ267 (20:35 - 00:35)	
14 Dec.	Mon				
15 Dec.	Tue			Auckland → Tokyo NZ099 (09:15 - 16:25)	

### **Appendix 3. List of Parties Concerned in the Recipient Country**

- **Ministry of Foreign Affairs and Trade**

Mr. Sua Mose Aiono Chief Executive Officer, CEO  
Ms. Seira Fuimaono Principal Macroeconomic Policy Officer

- **Ministry of Finance**

Ms. Noumaa Simi Chief Executive Officer (CEO)  
Mr. Mathew Tofilau Senior Aid Officer, Aid & Loan Division

- **Ministry of Natural Resources and Environment**

Dr. Tu'u'u Luafatasaga Ietitaia Setu Taule'alo Chief Executive Officer (CEO)  
Mr. Taulealeausumai Laavasa Malua Chief Executive Officer (CEO)  
Mr. Elisaia Talouli Assistant Chief Executive Officer (ACEO)  
Ms. Filisita Heather Principal Land Registry Officer

#### **Samoa Meteorology Division**

Mr. Ausetalia Titimaea Assistant Chief Executive Officer, ACEO  
Mr. Sagato Tuiafiso Principal Scientific Officer, Weather Service Section  
Mr. Sunny Seusen Principal Scientific Officer, Climate Section  
Mr. Anne Rassmussen Principal Scientific Officer, Climate Change  
Ms. Filomena Nelson Principal Management Officer, National Disaster Management Officer  
Mr. Paratiso Toailoa Administration Officer  
Ms. Uili Namulauulu Meteorological Technical Officer, Maota Airport

- **Ministry of Agriculture and Fishery**

#### **Policy, Planning and Communication Division**

Mr. Frank Fong Assistant Chief Executive Officer, ACEO

#### **Fishery Division**

Mr. Ueta Jr. Faasili Principal Fisheries Officer, Offshore Section

- **Ministry of Works, Transport and Infrastructure**

#### **Maritime Administration**

Mr. Tapaga Collins Principal Surveyor

#### **Secretariat of Pacific Regional Environment Programme: SPREP**

Mr. Kosimiki Latu Deputy Director  
Mr. Kapeni Matatia Information Technology Manager

Mr. Dean Solofa Pacific Islands Global Climate Observing System Officer

- **Samoa Bureau of Statistics**

- Economic Statistics Division**

Mr. Laupua Fiti Assistant Chief Executive Officer, ACEO

- **World Meteorological Organization: WMO**

Mr. Henry K. Taiki Programme Officer

- **Samoa Aviation Authority: SAA**

Mr. Tafilipepe Alefosio Matulino Deputy General Manager  
Mr. Ueta Solomona Jr Manager Aerodromes & ATS  
Mr. Amosa Amosa Chief Technical Officer  
Mr. Peniamina Gagab Manager, Works and Technical Services

- **Samoa Police**

Mr. Logoitino Filib Inspector

- **Department of Defence, Australia**

Commander Tony Powell, RAN Maritime Surveillance Advisor for Samoa Police

- **Piula Theological College**

Reverend Dr. Eteuati Tuioti Principal

- **Digicel Samoa Limited**

Mr. Alex Abraham General Manager  
Mr. Toalepai Waikato F. Lefale Special Projects Manager  
Mr. Laupu'e Raymond Hughes Information Technology Manager

- **Samoa Tel**

Mr. Ms. Fipe Tanielu-Leitupo Accounts Director-Int'l, Interconnection, Wholesale  
Mr. Tapuai Asolima Leapai Chief Engineer  
Mr. Jonathan Porter Interconnection Business Analyst

- **Electric Power Corporation: EPC**

Mr. Taliofila Setafano Moa Sili Chief Inspector

- **Computer Services Limited: CSL**

Mr. Dave Main Operation Manager

- **Mountain Fresh Farms Ltd.**

Mr. Edwin Tamasese Farms Ower





## Appendix 4. Minutes of Discussions

MINUTES OF DISCUSSIONS  
THE PREPARATORY SURVEY 2  
ON THE PROGRAMME FOR  
“IMPROVING THE WEATHER FORECASTING SYSTEM AND METEOROLOGICAL  
WARNING FACILITIES FOR SAMOA AND METEOROLOGICAL APPLICATIONS TO  
OTHER SECTORS”  
IN THE INDEPENDENT STATE OF SAMOA

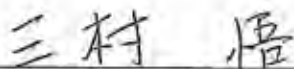
Based on the result of the Preparatory Survey on March – April 2009, the Government of Japan (hereinafter referred to as “GOJ”) decided to conduct a Preparatory Survey2 on the Programme for Improving the Weather Forecasting System and Meteorological Warning Facilities for Samoa and Meteorological Applications to Other Sectors (hereinafter “the Programme”) and entrusted the survey to the Japan International Cooperation Agency (hereinafter referred to as “JICA”).

JICA sent to the Independent State of Samoa (hereinafter referred to as “Samoa”) the Preparatory Survey2Team (hereinafter referred to as “the Team”), which is headed by Mr.Satoru MIMURA, Director of the Pacific Division, Southeast Asia I and the Pacific Department, JICA, and is scheduled to stay in the country from August 16 to September 14.

The Team held discussions with the officials concerned of the Government of Samoa (hereinafter referred to as “GOS”) and conducted a field survey in the requested 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 Preparatory Survey Report for Outline Design.

Apia, August 21, 2009



Mr. Satoru MIMURA  
Leader, Preparatory Survey 2 Team,  
Japan International Cooperation Agency  
(Japan)



Tu'u'u Dr. Ietiata Taule'alo  
Chief Executive Officer,  
Ministry of Natural Resources and Environment  
(Samoa)

## ATTACHMENT

### 1. Title of the Programme

The Programme for “Improving the Weather Forecasting System and Meteorological Warning Facilities for Samoa and Meteorological Applications to Other Sectors” in the Independent State of Samoa

### 2. Objective of the Programme

The Objective of the Programme is to improve Samoa’s capability for the meteorological observation, weather forecasting and early warnings to tackle meteorological disasters and adopt Climate Change in Samoa by upgrading the weather and climate observation forecasting and information dissemination systems.

### 3. Proposed Sites for the Programme

The proposed sites for the Programme are shown in Annex-1.

### 4. Responsible Organization and Implementing Agency

The Responsible Organization: Ministry of Natural Resources and Environment (hereinafter referred to as “MNRE”).

The Implementing Agency: Meteorology Division, MNRE (hereinafter referred to as “MD”).

The Organization chart is shown in Annex-2.

### 5. Items Requested by the Samoan side

After discussions between the Samoan side and the Team (hereinafter referred to as “the both sides”), the items described in Annex-3 were finally requested by the Samoan side.

The both sides confirmed that the appropriateness of the requested items would be examined in accordance with the further survey and analysis in Japan and the final components of the Programme would be decided by the Japanese side.

### 6. Scheme of Japan’s Programme Grant Aid for Environment and Climate Change



The Samoan side understood the scheme of Japan's Programme Grant Aid for Environment and Climate Change and the necessary measures to be taken by the GOS as explained by the Team and described in Annex-4, Annex-5 and Annex-6.

#### 7. Administration of the Programme

The both sides confirmed the administration of the Programme as shown in Annex-7.

For promoting proper and smooth execution of the Programme, the both sides confirmed that the Consultative Committee of the Programme (hereinafter referred to as "the Committee") would be established whose functions and provisional composition are described in Annex-8.

#### 8. Schedule of the Survey

The consultants will proceed to further studies in Samoa until 14 September, 2009.

JICA will prepare the draft Preparatory Survey 2 Report and dispatch a mission in order to explain its contents to the Samoan side in the middle of December 2009.

In case that the contents of the report are accepted in principle by the GOS, JICA will complete the final report and send it to the GOS by the end of March, 2010.

#### 9. Land for the Programme

The Samoan side agreed to secure necessary lands and make the preparation for the Programme as shown in Annex-9 by the end of November, 2009.

#### 10. Other relevant issues

The following issues were discussed and agreed by the both sides.

##### 10-1. Procurement Guideline

The Procurement Guidelines of Japan's Programme Grant Aid for Environment and Climate Change (Type1-E) will be applied for the procurement procedure of the Programme.

##### 10-2. Required Procedure for the Programme implementation

The Required Procedures for the Programme implementation shown in Annex-9 shall be done by the Samoan side.



#### 10-3. National Adaptation Programme of Action (NAPA)

The objective of the Programme is to enhance the capability of meteorological observation, forecasting and early warning system for Samoa, and to collect data for Climate Change for reduction and prevention of damages of meteorological related disasters for the implementation of NAPA.

#### 10-4. Data Transmission System

The team will examine the feasibility of the following communication methods;

- (a) Radio (Spread spectrum) communication;
- (b) Existing telecommunication;
- (c) Mobile phone; and,
- (d) The combination of all the above.

#### 10-5. GTS Data Transmission Route

The both sides confirmed that the GTS connection(s) can be Pago Pago, Melbourne or both. The Samoan side will determine the route(s) by the end of October, 2009.

#### 10-6. Tax Exemption

The tax exemption including Value Added Tax (VAT), custom duty, and any other taxes and fiscal levies in Samoa which are to be arisen from the Programme activities will be ensured by MNRE /MOF.

MNRE will take any procedures necessary for tax exemption, and in case tax is not exempted, the required tax will borne by MNRE/MOF.

#### 10-7. Cost Estimation for Operation and Maintenance

The Team explained the recurrent cost estimated for operation and maintenance for the equipment as shown in Annex-3. The Samoan side understood the required recurrent cost explained by the Team.

#### 10-8. Technical Assistance

The Samoan side understood that the Programme Grant Aid for Environment and Climate Change can include technical assistance, such as equipment O&M training, training for meteorologists, community awareness programme and capacity development activities for the dissemination of weather information.

#### 10-9. Operation and Maintenance of facilities and equipment

(1) The Samoan side agreed to take any necessary measures and allocate necessary budget in order to operate and maintain the equipment to be procured under the Programme.

(2) As the equipment must be monitored periodically, MD accepted to submit Annual Reports concerning condition and usage of the equipment to MNRE and JICA Samoa Office.

(3) The Samoan side should employ at least one staff for operation and maintenance by the end of 2009 and another one in 2010.

#### 10-10. Environmental and Social Consideration



The both sides confirmed that the Samoan side is responsible to take any measure to complete Environmental Impact Assessment if necessary for implementation of the Programme.

10-11. Emergency Fund System

In order to implement replacement and renewal units/spare parts of the equipment, the Team suggested that MD should generate the emergency fund system.

10-12. Plan for the utilization of the Wind Profiler

The Samoan side will indicate clarification of the necessity of Wind Profiler to the Team by the middle of September.

END



Annex-1 Programme Sites

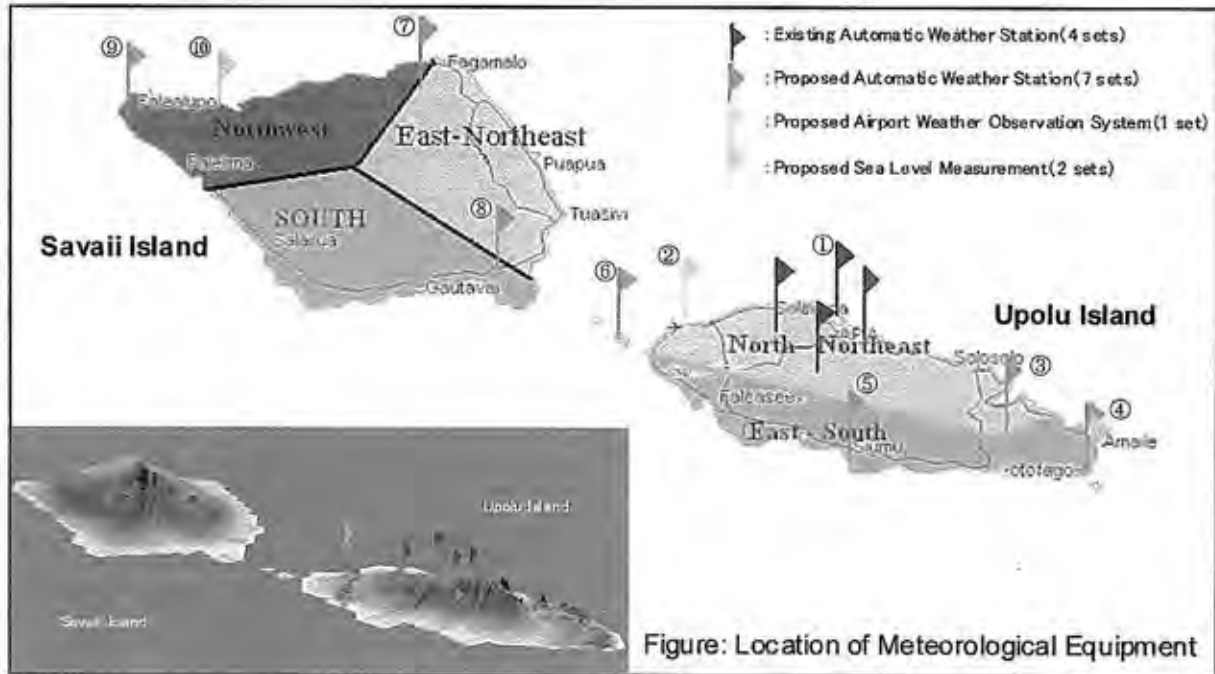


Table: Outline of Proposed Site for Meteorological Equipment

Island	Upolu Island					Manono Island	Savaii Island			
No.	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Name of the Site	Samoa Meteorological Div. Head Office (Apia)	Faleolo International Airport	Afulilo	Samatau/Lefaga (Aleipata Wharf)	Togitogiga	Manono	Avao	Maota Airport	Falealupo (Tufutafoe)	Asau MNRE Office

Organization Chart

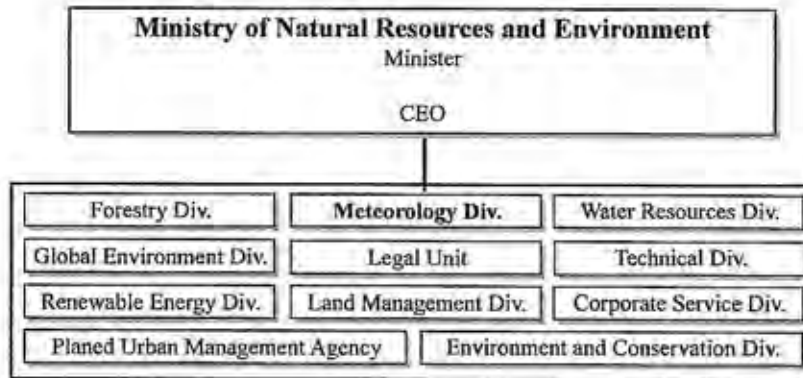


Figure: Organization Chart of Ministry of Natural Resources and Environment (MNRE)

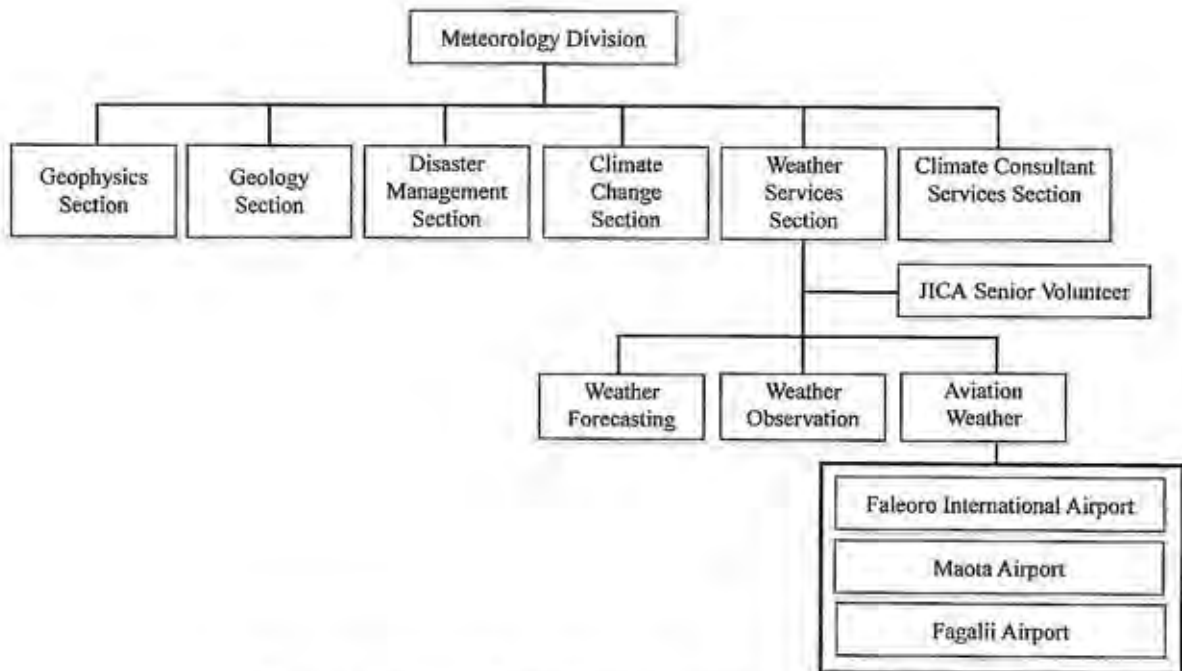


Figure: Organization Chart of Samoa Meteorology Division

*Handwritten signatures or initials.*

## Annex-3

## Tentative List of Items Requested by the Government of Samoa

Items	Description	Places	Quantity
1	Airport Weather Observation System	Faleolo	1
2-1	Automatic Weather Station	Afulilo	1
2-2	-ditto-	Samatau / Lefaga	1
2-3	-ditto-	Togitogiga	1
2-4	-ditto-	Manono Tai	1
2-5	-ditto-	Avao	1
2-6	-ditto-	Maota Airport	1
2-7	-ditto-	Tufutafoe	1
3	Central Data Acquisition System	MD Head Office	1
4	Data Communication System	---	1
5-1	GTS Message Switch	MD Head Office	1
5-2	Meteorological Satellite Data Receiving System	MD Head Office	1
6-1	Sea Level Measurement System	Aleipata wharf	1
6-2	-ditto-	Asau MNRE Office	1
7-1	Forecast Support System	MD Head Office	1
7-2	Early Warning System	MD Head Office	1
7-3	Power Back-up System	MD Head Office	1
8	Wind Profiler	MD Head Office	1

The items shall be determined through the further survey from technical and economical perspectives by the GOJ.



**Programme Grant Aid for Environment and Climate Change  
of the Government of Japan  
(Provisional)**

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, the new JICA law was entered into effect on October 1, 2008. Based on the law and the decision of GOJ, Japan International Cooperation Agency (hereinafter referred to as "JICA") has become the executing agency of Grant Aid of Japan.

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

Based on the "Cool Earth Partnership" initiative of the GOJ, the Programme Grant Aid for Environment and Climate Change (hereinafter referred to as "GAEC") aims to mitigate negative effects of global warming by reducing Green House Gas emission (mitigation measure such as improvement of energy efficiency) and to adapt the supposed effects (adaptation measures such as stabilization of water supply in a region suffering less precipitation due to the climate change).

GAEC aims toward emission reduction such as achievement of energy saving (environmental-easing measures) and environmental damage control by climate change. Multiple components can be combined to effectively meet the needs. Contractors, suppliers or consultants are not confined to Japanese firms only, and construction can be done based on the local method.

1. Procedures for GAEC

GAEC is executed through the following procedures.

Application	(Request made by the Recipient)
Preparatory Survey	(Preparatory Survey for Outline Design conducted by JICA)
Appraisal & Approval	(Appraisal by GOJ and Approval by the Cabinet)
Determination of	(The Notes exchanged between the GOJ and the Recipient)
Implementation	
Grant Agreement	(Agreement concluded between JICA and the Recipient)
(hereinafter referred to as "the G/A")	



- Firstly, the application or request for a GAEC Programme submitted by the Recipient is examined by GOJ (the Ministry of Foreign Affairs) to determine whether or not it is eligible for GAEC.
- Secondly, if the request is deemed appropriate, JICA conducts the Preparatory Survey for Outline Design, using Japanese consulting firms.
- Thirdly, GOJ appraises the Programme to see whether or not it is suitable for Japan's GAEC, based on the Preparatory Survey Report for Outline Design prepared by JICA, and the results are then submitted to the Cabinet for approval.
- Fourthly, the Programme, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by GOJ and the Recipient. Simultaneously, the Grant will be made available by concluding a grant agreement between the Government of the Recipient or its designated authority and JICA (hereinafter referred to as "the G/A").

JICA is designated by GOJ as an organization responsible for the execution of the Grant.

Procurement Agent ("the Agent") is designated to conduct the procurement services of products and services (including fund management, preparing tenders, contracts and so on) for GAEC on behalf of the Recipient. The Agent is an impartial and specialized organization and shall render services according to the Agent Agreement with the Recipient. The Agent is recommended to the Recipient by GOJ and agreed between the two Governments in the Agreed Minutes ("A/M").

## 2. Preparatory Survey for Outline Design

### 1) Contents of the Survey

The aim of the Preparatory Survey for Outline Design ("the Survey"), conducted by JICA on a requested Programme ("the Programme"), is to provide a basic document necessary for the appraisal of the Programme by GOJ. The contents of the Survey are as follows:

- (1) Confirmation of the background, objectives, and benefits of the Programme and also institutional capacity of agencies and communities concerned of the recipient country necessary for the Programme's implementation.
- (2) Evaluation of the appropriateness of the Programme to be implemented under the Grant Aid Scheme for Environment and Climate Change from a technical, social and economic point of view;
- (3) Confirmation of items agreed upon by both parties concerning the basic concept of the Programme.
- (4) Preparation of an outline design of the Programme.
- (5) Estimation of cost for the Programme.

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



GOJ requests the Government of the Recipient to take whatever measures are necessary to ensure its self-reliance in the implementation of the Programme. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Programme. Therefore, the implementation of the Programme is confirmed by all relevant organizations of the Recipient through the Minutes of Discussions.

## 2) Selection of Consultants

For smooth implementation of the Survey, JICA uses registered consulting firms. JICA selects firms based on proposals submitted by interested firms. The firms selected carry out an Outline Design and write a report, based upon terms of reference set by JICA.

The consulting firms to work on the Programme's implementation after the Exchange of Notes could be, in principle, of any nationality as long as the Firm satisfies the conditions specified in the tender documents.

## 3. Implementation of GAEC after the E/N

### 1) Exchange of Notes (E/N) and Grant Agreement (G/A)

GAEC is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Programme, period of execution, conditions and amount of the Grant Aid, etc., are confirmed. The conclusion of the Grant Agreement (hereinafter referred to as "the G/A") between JICA and the recipient government will be followed to define the necessary engagement to implement the project such as payment conditions, responsibilities of the recipient government and procurement conditions.

### 2) Procedural details

Procedural details on the procurement of products and services under GAEC will be agreed upon between the Recipient and JICA at the time of the signing of the E/N and G/A.

Essential points to be agreed upon are outlined as follows:

- a) JICA is in a position to expedite the proper execution of the Programme.
- b) The products and services shall be procured and provided in accordance with "Procurement Guidelines for Environment and Climate Change of JICA."
- c) The Recipient shall conclude an employment contract with the Agent.
- d) The Agent is the representative acting in the name of the Recipient concerning all transfers of funds to the Agent.

### 3) Focal Points of "The Procurement Guidelines of Japan's Grant Aid for Environment and Climate Change (Type1-E)"

#### a) The Agent

The Agent is the organization which provides procurement services of products and services on behalf of the Recipient according to the Agent Agreement with the Recipient. The Agent is recommended to the Recipient by GOJ and agreed between the two Governments in the A/M.



b) Agent Agreement

The Recipient shall conclude an Agent Agreement, within one month after the date of entry into force of the E/N and the G/A, in accordance with the A/M. The scope of the Agent's services shall be clearly specified in the Agent Agreement.

c) Approval of the Agent Agreement

The Agent Agreement, which is prepared as two identical documents, shall be submitted to JICA by the Recipient through the Agent. JICA confirms whether or not the Agent Agreement is concluded in conformity with the G/A and the Procurement Guidelines for Disaster Reconstruction Grant Aid, and approves the Agreement.

The Agent Agreement concluded between the Recipient and the Agent shall become effective after the approval by JICA in a written form.

d) Payment Methods

The Agent Agreement shall stipulate that "regarding all transfers of the fund to the Agent, the Recipient shall designate the Agent to act on behalf of the Recipient and issue a Blanket Disbursement Authorization ("the BDA") to conduct the transfer of the fund (Advances) to the Procurement Account from the Recipient Account."

The Agent Agreement shall clearly state that the payment to the Agent shall be made in Japanese yen from the Advances and that the final payment to the Agent shall be made when the total Remaining Amount becomes less than 3 % of the Grant and its accrued interest.

e) Products and Services Eligible for Procurement

Products and services to be procured shall be selected from those defined in the G/A.

f) Firms

In principle, a firm of any nationality could be contracted as long as the Firm satisfies the conditions specified in the tender documents.

The Firm, with approval by JICA, may be Japanese nationals and the products to be procured may be the products made in Japan or produced or manufactured by Japanese manufacturer(s) and/or its (their) affiliate(s) in any country.

g) Experts for Technical Assistance

Expert(s) could be deployed to carry out technical assistance. The expert(s) may be recommended by JICA when the conceptual consistency with the Studies is required. In principle, expert(s) is/are preferable to be Japanese nationals if appropriate.

h) Method of Procurement

In implementing procurement, sufficient attention shall be paid so that there is no unfairness among tenderers who are eligible for the procurement of products and services.



For this purpose, competitive tendering shall be employed in principle.

i) Tender Documents

The tender documents should contain all information necessary to enable tenderers to prepare valid offers for the products and services to be procured by GAEC.

The rights and obligations of the Recipient, the Agent and the Suppliers of the products and services should be stipulated in the tender documents to be prepared by the Agent. Besides this, the tender documents shall be prepared in consultation with the Recipient.

j) Pre-qualification Examination of Tenderers

The Agent may conduct a pre-qualification examination of tenderers in advance of the tender so that the invitation to the tender can be extended only to eligible firms. The pre-qualification examination should be performed only with respect to whether or not the prospective tenderers have the capability of accomplishing the contracts concerned without fail. In this case, the following points should be taken into consideration:

- (1) Experience and past performance in contracts of a similar kind
- (2) Property foundation or financial credibility
- (3) Existence of offices, etc. to be specified in the tender documents.

k) Tender Evaluation

The tender evaluation should be implemented on the basis of the conditions specified in the tender documents.

Those tenders which substantially conform to the technical specifications, and are responsive to other stipulations of the tender documents, shall be judged in principle on the basis of the submitted price, and the tenderer who offers the lowest price shall be designated as the successful tenderer.

The Agent shall prepare a detailed tender evaluation report clarifying the reasons for the successful tender and the disqualification and submit it to the Recipient to obtain confirmation before concluding the contract with the successful tenderer.


The Agent shall furnish JICA with a detailed evaluation report of tenders, giving the reasons for the acceptance or rejection of tenders.

l) Additional Procurement

If there is an additional procurement fund after competitive and / or selective tendering and / or direct negotiation for a contract, and the Recipient would like an additional procurement, the Agent is allowed to conduct an additional procurement, following the points mentioned below:

- (1) Procurement of the same products and services

When the products and services to be additionally procured are identical with the initial tender and a competitive tendering is judged to be disadvantageous, the additional procurement can be implemented by a direct contract with the successful tenderer of the initial tender.



(2) Other procurements

When products and services other than those mentioned above in (1) are to be procured, the procurement should be implemented through a competitive tendering. In this case, the products and services for additional procurement shall be selected from among those in accordance with the G/A.

m) Conclusion of the Contracts

In order to procure products and services in accordance with the G/A, the Agent shall conclude contracts with firms selected by tendering or other methods.

n) Terms of Payment

The contract shall clearly state the terms of payment. The Agent shall make payment from the "Advances", against the submission of the necessary documents from the Firm on the basis of the conditions specified in the contract, after the obligations of the Firm have been fulfilled. When the services are the object of procurement, the Agent may pay certain portion of the contract amount in advance to the firms on the conditions that such firms submit the advance payment guarantee worth the amount of the advance payment to the Agent.

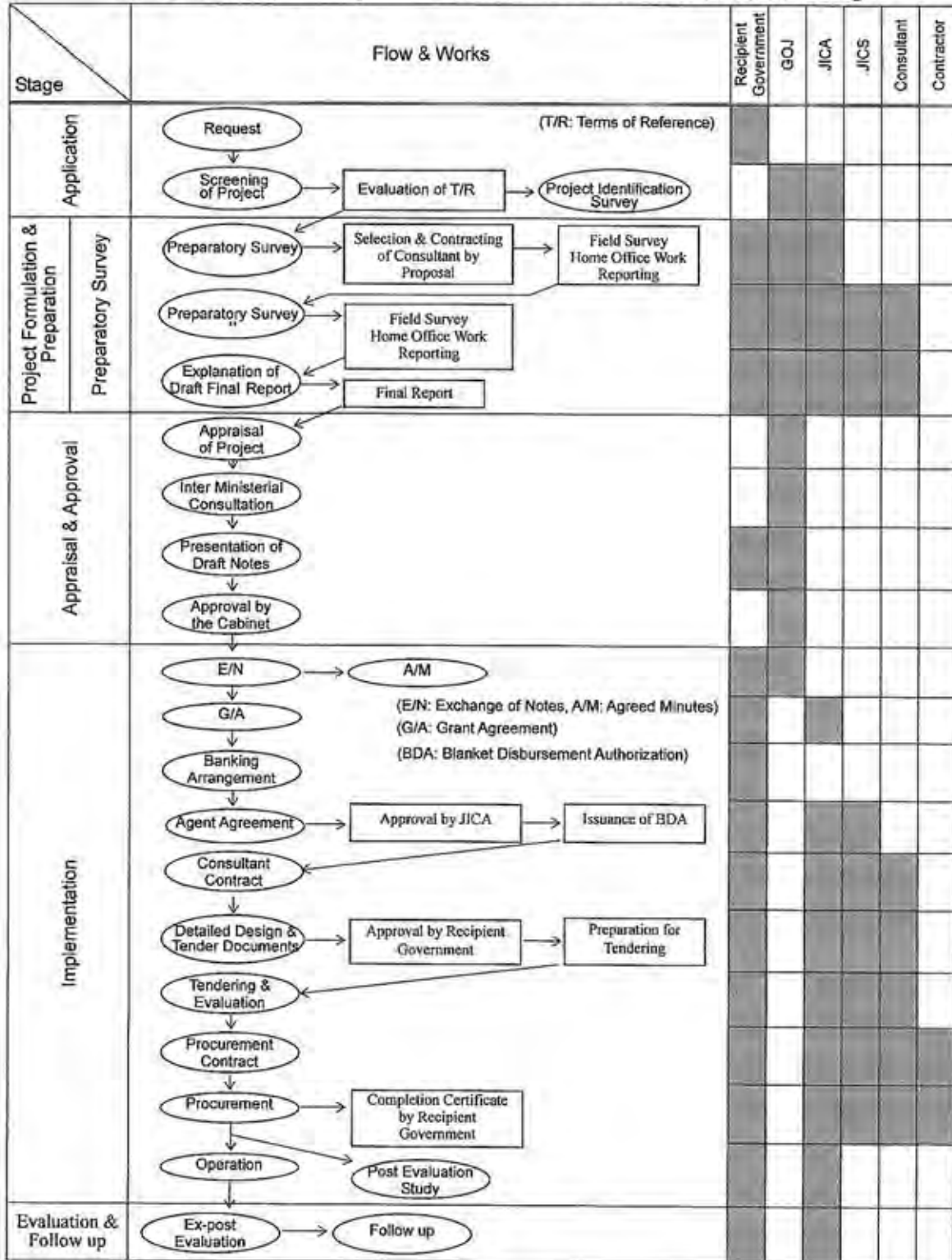
4) Undertakings required to the Government of the recipient country

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

- a) To secure land necessary for the sites of the Programme and to clear, level and reclaim the land prior to commencement of the Programme,
- b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the procurement in case the installation of the equipment,
- d) To ensure prompt unloading and customs clearance at the port of disembarkation and to assist internal transportation therein,
- e) To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the Components including the employment of the Agent,
- f) To accord all the concerned parties, whose services may be required in connection with supply of the products and services under the contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work,
- g) To ensure that the Facilities and/or the Components be maintained and used properly and effectively for the implementation of the Programme,
- h) To bear all the expenses, other than those covered by the Grant and its accrued interest, necessary for the implementation of the Programme, and
- i) To give due environmental and social consideration in the implementation of the Programme.



Flow Chart of Japan's Programme Grant Aid for Environment and Climate Change



5) Proper Use

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

6) Re-export

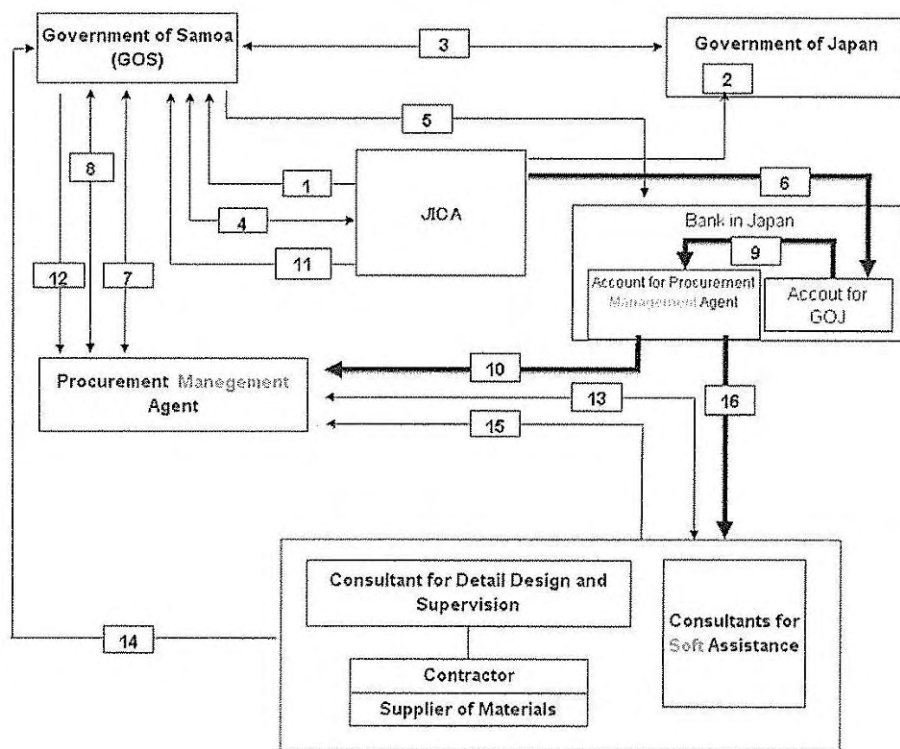
The products purchased under the Grant Aid should not be re-exported from the recipient country.





### Flow of Funds and Implementation of the Programme

→ Flow of Implementation  
 → Flow of Fund



- 1 Preparatory Survey/ Materials for Outline Design
- 2 Approval of Cabinet
- 3 Signing of Exchange of Notes (E/N)
- 4 Signing of Grant Agreement (G/A)
- 5 Banking Arrangement
- 6 Payment of funds from the Government of Japan
- 7 Signing of Agent Agreement(A/A)
- 8 Decision of project components
- 9 Transfer of funds (the Advances)
- 10 Payment of Remuneration for Agent
- 11 Recommendation of Consultant for Detail Design/Supervision (JICA→Government of Samoa)
- 12 Recommendation of Consultant for Detail Design / Supervision (Government of Samoa→Procurement Agent)
- 13 Conclusion of Contract
- 14 Construction, Procurement, and Technical Assistance
- 15 Application for Payment
- 16 Payment

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## Annex-6

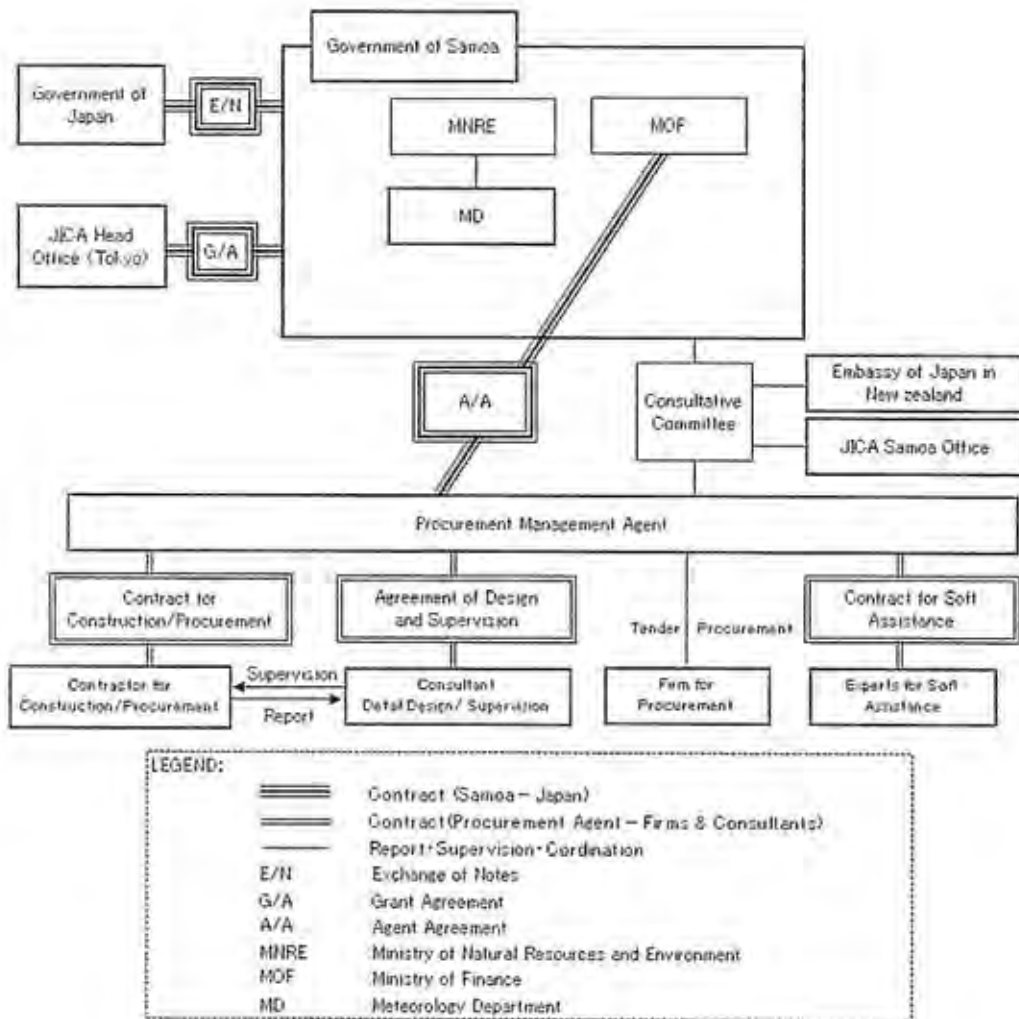
## Major Undertakings to be taken by Each Government

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 provide facilities for the distribution of electricity		
	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	•	
5	To bear the following commissions to a bank of Japan for banking services based upon the B/A		
	1) Payment commission		•
6	To ensure unloading and customs clearance at port of disembarkation in recipient country		
	1) Marine (Air) transportation of the products from Japan to the Recipient	•	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site	•	
7	To accord all concerned parties, whose services may be required in connection with the supply of the products and the services under the approved contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.		•
8	To exempt or bear of all concerned parties from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the approved contracts.		•
9	To maintain and use properly and effectively the facilities contracted and equipment provided under the Grant		•
10	To bear all the expenses, other than those to be borne by the Grant, necessary for construction of the facilities as well as for the transportation and installation of the equipment		•

(B/A: Banking Arrangement)

Annex-7

Organization Chart for the Implementation of the Programme



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**Consultative Committee**

**1. Functions**

The Consultative Committee (hereinafter referred to as "the Committee") will be established in order to fulfill the following functions:

- 1) to confirm as implementation schedule of the Programme for the speedy and effective utilization of the Grant and its accrued interest;
- 2) to discuss modification of the Components, taking into account of the products enumerated in the list attached to the Procurement Guidelines and/or the result of the preparatory survey for the Programme by JICA;
- 3) to discuss modification of the Programme;
- 4) to exchange views on the allocations of the Grant accrued interest as well as on potential end-users;
- 5) to identify problems which may delay the utilization of the Grant and its accrued interest, and to explore solutions to such problems;
- 6) to exchange views on publicity related on the utilization of the Grant and its accrued interest; and
- 7) to discuss any other matters that may arise from or in connection with the G/A.

The first meeting of the Committee shall be held immediately after the approval of the Agent Agreement by the JICA, which shall be concluded between MOF and the Procurement Management Agent (hereinafter referred to as "the Agent").

The selection of the Agent will be agreed between the two governments in the Agreed Minutes attached in the Exchange of Notes.

Further meetings will be held by the request of the either the Samoan side or the Japanese side. The Agent also advise both sides on the necessity to call a meeting of the Committee.

**2. Composition (Provisional)**

- 1) Representative of Ministry of Foreign Affairs and Trade
- 2) Representative of Ministry of Finance
- 3) Representative of Ministry of Natural Resources and Environment
  - Representative of Meteorology Division
  - Representative of Disaster Management Office-Section
- 4) Representative of Ministry of Agriculture
- 5) Representative of Ministry of Health
- 6) Representative of Ministry of Commerce Industry and Labor
- 7) Representative of Ministry of Revenue

- 8) Representative of Fishery Division
- 9) Representative of Samoa Airport Authority
- 10) Representative of the Procurement Management Agent
- 11) Representative of JICA Samoa Office

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## Site Securing Situation

Table: Site Securing Situation for Automatic Weather Station

Name of Site	UPOLU			MANONO	SAVAII		
	Afulilo	Samatau / Lefaga	Togitogiga	Manono	Avaio	Maota Airport	Falealupo/Tufutafoe
Site Securing	The SAMOATEL has generally agreed. For obtaining the permission from the SAMOATEL, the equipment specifications are required.	Under the selection	There is no problem. The selected site is the existing climate observatory.	The SAMOATEL has generally agreed. For obtaining the permission from the SAMOATEL, the equipment Specifications are required.	The Education Department has generally agreed. For obtaining the permission, further discussions with the Vaipouli College is required.	There is no problem. There is the own land of the Ministry of Natural Resources and Environment	The SAMOATEL has generally agreed. For obtaining the permission from the SAMOATEL, the equipment Specifications are required.

Table: Site Securing Situation for Sea Level Measurement System

Name of Site	UPOLU	SAVAII
	Aleipata Pier	
Site Securing	The Samoa Port Authority has generally agreed.	There is no problem. There is the own land of the Ministry of Natural Resources and Environment

Annex-10

**Required Procedure of Project Implementation**

Name of Procedure	Apply to	Required Period	Required Documents	Applicant
Obtaining Capital Cost of the Project	(i) Ministry of Finance	Two (2) Month	<ul style="list-style-type: none"> <li>• Approval from Cabinet Development Committee</li> <li>• Project Document</li> </ul>	Ministry of Natural Resources and Environment (National Weather Service)
Obtaining Recurrent Cost of the Project	(i) Ministry of Finance (ii) Ministry of Natural Resources and Environment	Two (2) – Three (3) weeks	<ul style="list-style-type: none"> <li>• Approval from Cabinet Development Committee</li> </ul>	(i) Ministry of Finance (ii) Ministry of Natural Resources and Environment

**The Samoan side shall be done for smooth implementation of the Programme**

Annex-11

Estimated Recurrent Cost of The Programme (Draft)

Estimated Recurrent Cost

Equipment	Item	Qty	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Remarks
Wind Profiler	DC Power P Board for Power Supply Unit	1	0	0	49,200	0	0	0	0	0	0	0	
	DC Power S Board for Power Supply Unit	1	0	0	0	0	0	135,000	0	0	0	0	
	Fan for Power Trans Receiver Unit	1	0	0	0	0	0	0	15,000	0	0	0	
Compact UPS	Battery	12	0	0	264,000	0	0	264,000	0	0	264,000	0	Every 3 years
Computers (24hr. continuous operation)	Hard disk	6	0	0	180,000	0	0	180,000	0	0	180,000	0	Every 3 years
	CD for data storage (20sheets-1set)	1	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	
Computers (12hr. day operation)	Hard disk	6	0	0	0	180,000	0	0	0	180,000	0	0	Every 4 years
Printer	Printer ink cartridge	4	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	
	Paper(500sheets-1 set)	2	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	
Diesel Engine Generator	Oil seal and filter	2	0	4,000	4,000	22,500	4,000	4,000	4,000	22,500	4,000	4,000	Every 1 and 4 years
	Battery for Engine start	1	0	0	0	0	0	6,000	0	0	0	0	Every 6 years
Solar Power Supply System (Obs)	Long Life Battery	16	0	0	0	0	0	0	0	0	735,600	1,471,360	10% in 9th, 20% in 10th year

Subtotal (JPY)	33,700	27,700	520,900	226,200	27,700	612,700	42,700	226,200	1,207,580	1,489,060
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Others

Cost Item	Details	Qty	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Remarks
Electricity Charge	Wind Profiler	1	887,078	887,078	887,078	887,078	887,078	887,078	887,078	887,078	887,078	887,078	50% will be borne by
	Airport Weather Observation System	1	87,459	87,459	87,459	87,459	87,459	87,459	87,459	87,459	87,459	87,459	Airport Authority
	Others	1	507,256	507,256	507,256	507,256	507,256	507,256	507,256	507,256	507,256	507,256	
Fuel cost	Fuel consumption of DEG	1	30,050	30,050	30,050	30,050	30,050	30,050	30,050	30,050	30,050	30,050	

Subtotal (JPY)	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843	1,511,843
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Total (JPY)	1,535,543	1,539,543	2,032,743	1,738,043	1,539,543	2,124,543	1,554,543	1,738,043	2,719,223	3,010,903
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Cost Distribution

Division	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
Meteorological Division	1,048,275	1,052,275	1,545,475	1,290,775	1,052,275	1,637,275	1,067,275	1,250,775	2,231,955	2,523,635
Airport Authority	487,269	487,269	487,269	487,269	487,269	487,269	487,269	487,269	487,269	487,269

Conditions:

- Assuming all proposed equipment supplied
- Solar Generating System Supports 20% Electricity of Head Office
- Operation time of Diesel Engine Generator : 103hrs. Year x 80% (20% covered by Solar power)
- Electricity charge for Wind Profiler and AWOS is borne equally by Meteorology Division and Airport Authority



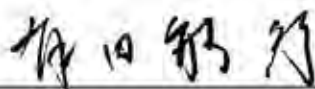
MINUTES OF DISCUSSIONS  
THE PREPARATORY SURVEY 2  
ON THE PROGRAMME FOR  
**“IMPROVING THE WEATHER FORECASTING SYSTEM AND  
METEOROLOGICAL WARNING FACILITIES FOR SAMOA AND  
METEOROLOGICAL APPLICATIONS TO OTHER SECTORS”**  
IN THE INDEPENDENT STATE OF SAMOA  
(EXPLANATION ON DRAFT REPORT)

From August to September 2009, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched the Preparatory Survey 2 on the Programme for Improving the Weather Forecasting System and Meteorological Warning Facilities for Samoa and Meteorological Applications to Other Sectors (hereinafter referred to as “the Programme”) to the Independent of Samoa (hereinafter referred to as “Samoa”), and through discussion, field survey and technical examination of the results in Japan, JICA prepared a draft report of the survey.

In order to explain and consult with the concerned officials of the Government of Samoa (hereinafter referred to as “the GOS”) on the components of the draft report, JICA sent the Draft Report Explanation Team (hereinafter referred to as “the Team”), which is headed by Mr. Toshiyuki ARITA, Director of the Public Policy Division, Tokyo International Center, JICA, and is scheduled to stay in Samoa from December 3 to 14, 2009.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets.

Apia, December 10, 2009



Mr. Toshiyuki ARITA  
Leader, Draft Report Explanation Team,  
Japan International Cooperation Agency  
(Japan)



Mr. Taulealeausumai Laavasa Malua  
Chief Executive Officer,  
Ministry of Natural Resources and Environment  
(Samoa)

## ATTACHMENT

### 1. Components of the Draft Report

The Samoan side agreed and accepted in principle the components of the Draft Report explained by the Team. The components of the Programme are shown in Annex-1.

### 2. Technical Cooperation under the Programme

The Samoan side agreed and accepted the Technical Cooperation under the Programme explained by the Team. The courses and schedule of Technical Cooperation are shown in Annex-1.

### 3. Japan's Programme Grant Aid for Environment and Climate Change Scheme

The Samoan side understood the scheme of Japan's Programme Grant Aid for Environment and Climate Change and the necessary measures to be taken by the GOS as explained by the Team and described in Annex-4, Annex-5 and Annex-6 of the Minutes of Discussions signed by the both sides on 21 August, 2009 (hereinafter referred to as "the Previous M/D").

### 4. Schedule of the Survey

JICA will complete the final report in accordance with the confirmed items and send it to the GOS by the end of March 2010.

### 5. Tentative Schedule of the Programme

The Samoan side understood the tentative schedule of each implementation stage of the Programme including signing of the Exchange of Notes (E/N) and the Grant Agreement (G/A) as shown in Annex-2. The Samoan side also understood the time schedule is subject to change, depending on the signing date of the E/N and the G/A.

### 6. Agent Agreement (A/A)

The Samoan side understood the necessity of conclusion of the A/A immediately after the signing of the E/N and the G/A for the smooth implementation of the Programme.

A A

## 7. Confidentiality of the Programme

### 7.1 Detailed Specifications

The both sides confirmed all the information related to the Programme including detailed technical specifications of the equipment and other technical information shall not be released to any other party(ies) before the signing of the Contract(s) for the Programme.

### 7.2 Programme Cost Estimation

The Team explained to the Samoan side the estimated programme costs to be borne by the Government of Japan (hereinafter referred to as "the GOJ") and by the GOS as shown in Annex-3. Since these costs are provisional and would be further examined, they are subject to change. The both sides agreed to take necessary measures for securing the required budget in order to implement the Programme.

The Programme cost estimation as well as the Draft Report should be carefully dealt with and never be released or revealed to any third parties before all the relevant contract is concluded because the information affects the Tender process.

## 8. Undertakings of the Samoan side



The Team requested and the GOS agreed to the following undertakings in addition to the major undertakings described in the Previous M/D.

### 8.1 Land for the Programme

The Samoan side agreed to take necessary measure for securing the required lands for the Programme and complete it within 2 months after the signing of the E/N and the G/A.

### 8.2 Operation and Maintenance of the equipment

- (1) The Samoan side agreed to take any necessary measures and allocate necessary budget in order to operate and maintain the equipment to be procured under the Programme.
- (2) As the equipment must be monitored periodically, the Samoa Meteorology Division (hereinafter referred to as "the SMD") accepted to submit Annual Reports concerning condition and usage of the equipment to the Ministry of Natural Resources and Environment (hereinafter referred to as "the MNRE") and JICA Samoa Office.
- (3) The Samoan side should employ at least one staff for operation and maintenance by the end of 2009 and at least one or more in 2010.

### 8.3 Tax Exemption

The tax exemption including Value Added Tax (VAT), custom duty, and any other taxes and fiscal levies in Samoa which are to be arisen from the Programme activities will be ensured by the MNRE /Ministry of Finance (hereinafter referred to as "the MOF").

The MNRE will take any procedures necessary for tax exemption, and in case tax is not exempted, the required tax will be borne by the MNRE/the MOF.

### 8.4 Assigning of Counterpart Personnel

The Samoan side will assign enough personnel for operation and maintenance of the equipment to be procured under the Programme.

### 8.5 Allowances and other expenses

The Samoan side agreed to bear accommodation fee, daily allowance and other expenses related to the implementation of the Programme including the Technical Cooperation required for the SMD's personnel.

## 9. Other relevant issues

### 9.1 Component of the Programme

The Samoan side agreed that the components of the Programme will be determined by the GOJ based on the result of the survey.

### 9.2 Overlapping with other projects

The Samoan side explained that the project would not be overlapped with other projects supported by foreign and/or international donors, NGOs and Domestic official organizations.

END

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## Annex-1

All the items indicated in Annex-1 shall be determined through the further survey from technical and economical perspectives by the GOJ.

Components of the Programme (Tentative)

Name of the Equipment	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	Total Quantity
Airport Weather Observation System (AWOS)							2									2
AWOS Display System							3									3
Automatic Weather System (AWS)				1	1	1		1	1				1		1	7
Calibration Instrument	1															1
Meteorological Data Communication System	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
Meteorological Data Management System	1															1
GTS Message Switch System	1															1
Meteorological Satellite Data Receiving System	1															1
Forecast Support System	1															1
Early Warning System	1															1
Power Back-up System	1															1
Wind Profiler System	1															1
Name of Ancillary Facility	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	Total Quantity
Power Back-up Shed	1															1
Equipment Shed	1															1
Concrete Shelter	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	17
Foundation of Wind Profiler System	1															1

Site No. of the Programme

Name of Site	Site No.	Name of Site	Site No.
The SMD Head Office	①	Maota International Airport	⑨
Mt. Vaea	②	Mt. Valusia	⑩
Mt. Fiamoe	③	Tuasivi	⑪
Togitogiga	④	Mt. Tagotala	⑫
Le Mafa	⑤	Le Piu Tai	⑬
Saluafata	⑥	Vaisala	⑭
Faleolo International Airport	⑦	Mt. Talu	⑮
Manono	⑧		

### Courses of Technical Cooperation under the Programme (Tentative)

Component	Activity
Equipment Operation and Maintenance	Production of equipment manual summary
	Production of observation instruments and data communication equipment maintenance and management manual
	Production of observation and data communication equipment maintenance and management record book
	Preparation of consumables & spare parts list including technical specification and detailed procurement plan
	Practice training of countermeasures, fault finding, remedy and recovery against abnormal conditions
	Adjustment and correction of the observation instruments
	PC networking and Linux operation
Data Quality Control	Standardized drawings of the AWS and AWOS observatory
	Formulation of observation rules (observation order, time and duration, reporting time, etc.) and standardized beau fort and cloud level
	Preparation of daily observation data input sheet (Excel file)
	Establishment of automated formula for calculating station pressure, sea level pressure, relative humidity, vapor pressure and dew-point temperature
	Handling of the observed data which deviates from normal level (data error check and data entry)
	Database development and management
	Implementation of statistical processing for the climate data by Excel
	Data protection, storage, retrieval protection
	Analysis of statistical processing results
	Quality evaluation of the existing climate data
Weather Information Dissemination	Productions of newspapers, Journals and media release weather information
	Production of Television Weather and Internet products
	Renewal of Web site design
	Production of 2 types of booklets (leaflet holder type) such as "Tropical Cyclone" and "Climate Change" for promoting further understandings of pupils, students and the public
	Distribution of booklets and workshop for primary school students for year 1 to 8 to understand nature of weather & climate and the impact of climate change
	Distribution of booklets and workshop for college students for year 9 to 13 to understand nature of weather & climate and the impact of climate change
	Study for needs of weather information users
	Implementation of aviation weather services cost recovery formulation and policy
	Development and installation of product dissemination strategy
	Formulation and productions of weather and climate products
	Monitoring and assessing the quality of products
	Short term forecast with the Wind Profiler and Observed data (grid data)
Weather Forecast	Development of Point Forecast Guidance (VBA in Excel)
	Development of short term forecast with the observed data, guidance for daily forecast and weekly and extended forecast
	Development of Weekly Forecast and Extended Forecast(15days)
	Decision of the moving side with Pressure change
	Acquisition of the tropical disturbances with Satellite Picture and Wind Profiler
	Use of SATAID software for General Forecasting and Tropical cyclone forecasting.
	Watch of the relation of Easterly wave and SPCZ
	Producing of statistical analysis of low level and upper level system
	Production of forecast briefing flowchart and forecast briefing record book
	Practical training for forecast briefing

### Technical Cooperation Schedule (Tentative)

Expert	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Meteorological Equipment Operation and Maintenance	□0.85					■0.6	□0.1		■0.7							■0.7				□0.1	
PC Network/WEB Design	□0.05						■0.7	□0.1		■0.7										■0.7	□0.1
Weather Data Quality Management	□0.1					■0.6			■0.7			■0.7			■0.6					■0.6	□0.1
Climate Data Statistical Analysis	□0.05														■0.6					■0.7	□0.1
Weather Product Planning	□0.1	■0.6			■0.6		■0.6			■0.7											□0.1
Weather Information Dissemination	□0.1	■0.6			■0.6		■0.1			■0.1						■0.3					□0.1
Weather Forecasting Method/Guidance	□0.1	■0.6			■0.6		■0.1						■0.6				■0.6			■0.6	□0.1
Weather Briefing	□0.05	■0.7			■0.6		■0.1									■0.6					■0.1
Weather Information User Service	□0.05	■0.7					■0.1													■0.7	□0.1

Legend □ Activity in Japan  
 ■ Activity in Samoa

Annex-2

Tentative Schedule of the Programme

Detailed Design and Tendering Procedures		Total: 7 Months						
		1	2	3	4	5	6	7
Detailed Design		■	■	■	■	■	■	■
Tendering Procedures							■	■

Equipment Procurement, Installation and Technical Cooperation		Total: 30 Months																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Preparation and Approval of Manufacturing and Shop Drawings		■																													
Equipment Procurement & Manufacturing	Steel Pole for Meteorological Data Communication System		■	■	■																										
	Meteorological Data Communication System, Airport Weather Observation System (AWOS) & Automatic Weather System (AWS)		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	AWOS Display System, Meteorological Data Management System, GTS Message Switch System, Meteorological Satellite Data Receiving System, Forecast Support System, Early Warning System, Power Back-up System & Wind Profiler System		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Pre-shipment Inspection				■				■				■																			
Transportation	Marine (Equipment Procurement Country → Apia Port)				■			■				■																			
	Inland (Apia Port → Each Site)					■			■			■																			
Ancillary Facility Construction Work	Concrete Shelters		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Equipment Shed, Power Back-up Shed & Foundation for Wind Profiler System		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Steel Pole Foundation Work						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Equipment Installation					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Equipment Adjustment																															
Inspection and Handing Over																															
Technical Cooperation																															

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Annex-3-2

Estimated Recurrent Cost to be borne by the Samoa Side

Estimated Recurrent Cost to be borne by the Samoa Meteorology Division

Equipment	Item	Qty	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Remarks
Wind Profiler	DC Power F Board for Power Supply Unit	1	0	0	49,200	0	0	0	0	0	0	0	
	DC Power S Board for Power Supply Unit	1	0	0	0	0	0	135,000	0	0	0	0	
	Fan for Power/Train Receiver Unit	1	0	0	0	0	15,000	0	0	0	0	15,000	
Compact UPS	Battery	6	0	0	132,000	132,000	0	132,000	132,000	0	132,000	132,000	Every 3 years
	Hard disk	6	0	0	0	90,000	90,000	0	0	90,000	90,000	0	Every 3 or 4 years
Computer (14hours operation)	CD for data storage (200hours/1 year)	1	2,500	2,500	2,500	90,000	2,500	2,500	2,500	2,500	2,500	2,500	
	Hard disk	6	0	0	0	0	90,000	90,000	0	0	0	90,000	Every 5 or 6 years
Printer	Printer ink cartridge	4	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	
	Paper(300sheets/1 set)	2	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	
Diesel Engine Generator	Oil and filter	2	0	4,000	4,000	22,500	4,000	4,000	4,000	22,500	4,000	4,000	Every 1 and 4 years
	Battery for Engine start	1	0	0	0	0	0	6,000	0	0	0	0	Every 6 years
Solar Power Supply System	Long Life Battery	-	0	0	0	0	0	0	0	0	0	643,750	10% in 10th year
<b>Subtotal (JPY)</b>			<b>21,700</b>	<b>27,200</b>	<b>208,900</b>	<b>355,700</b>	<b>322,700</b>	<b>396,200</b>	<b>158,200</b>	<b>136,200</b>	<b>249,200</b>	<b>888,420</b>	

Cost Item	Details	Qty	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Remarks
Internet Connection	VSAT	1	11,520	11,520	11,520	11,520	11,520	11,520	11,520	11,520	11,520	11,520	
Observation Network Frequency Fee	Observation Network	1	100	100	100	100	100	100	100	100	100	100	
Antivirus Software	Software upgrading and annual execution	2	200	200	200	200	200	200	200	200	200	200	
Electricity Charge	Equipment	1	37,168	37,168	37,168	37,168	37,168	37,168	37,168	37,168	37,168	37,168	
Fuel cost	Fuel consumption of DSG	1	930	930	930	930	930	930	930	930	930	930	
Clearing at each project sites	8 sites x 1 day x 1 labour/month x 40 Tola/day	1	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	
Land Renting Cost	7 project sites (Customary Lands) x 500	1	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	
Building Communication Tower Renting Cost	7 existing towers x 100 Tola/month x 12 months	1	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	
Travel Expenses of EMDs personnel	Accommodation Fee and Daily Allowance	1	7,000	7,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
<b>Subtotal(Samoa Tab)</b>			<b>72,598</b>	<b>72,598</b>	<b>70,598</b>	<b>70,598</b>	<b>70,598</b>	<b>70,598</b>	<b>70,598</b>	<b>70,598</b>	<b>70,598</b>	<b>70,598</b>	
<b>Total (Samoa Tab)</b>			<b>73,273</b>	<b>73,387</b>	<b>76,558</b>	<b>80,732</b>	<b>76,943</b>	<b>81,229</b>	<b>75,148</b>	<b>74,478</b>	<b>77,712</b>	<b>95,909</b>	
<b>Total (JPY)</b>			<b>2,571,890</b>	<b>2,575,890</b>	<b>2,685,890</b>	<b>2,833,690</b>	<b>2,700,690</b>	<b>2,868,690</b>	<b>2,637,690</b>	<b>2,614,190</b>	<b>2,727,690</b>	<b>3,366,410</b>	

Estimated Recurrent Cost to be borne by the Samoa Airport Authority

Cost Item	Details	Qty	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Remarks
Electricity Charge	Equipment	1	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	
<b>Total (Samoa Tab)</b>			<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	<b>3,905</b>	
<b>Total (JPY)</b>			<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	<b>137,066</b>	
<b>Recurrent Cost (Samoa Tab)</b>													
Samoa Meteorology Division (SMD)			73,273	73,387	76,558	80,732	76,943	81,229	75,148	74,478	77,712	95,909	
Samoa Airport Authority (SAA)			3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	3,905	
<b>Recurrent Cost (JPY)</b>													
Samoa Meteorology Division (SMD)			2,571,890	2,575,890	2,685,890	2,833,690	2,700,690	2,868,690	2,637,690	2,614,190	2,727,690	3,366,410	
Samoa Airport Authority (SAA)			137,066	137,066	137,066	137,066	137,066	137,066	137,066	137,066	137,066	137,066	

- Conditions:
- Assuming all proposed equipment supplied
  - Solar Power Supply System Supports 25% Electricity of the Met Office
  - Depreciation rate of Diesel Engine Generator: 185hrs./Year x 25% (25% covered by Solar power)
  - Electricity charge for the Equipment to be installed in the Faleolo International Airport is borne equally by Samoa Meteorology Division and Samoa Airport Authority
  - Exchange Rate : JPY25.1/Samoa Tab

## Appendix 5. References

No	Name of References	Original/Copy	Publisher	Data of Publication
1	1999 Census of Agriculture	Original	Ministry of Agriculture	1999
2	National Adaptation Programme of Action	Copy	Ministry of Natural Resources, Environment & Meteorology	2005
3	Samoa's National Disaster Management Plan 2006-2009	Original	the National Disaster Council under Part III Section 9 of the Disaster & Emergency Management	2006
4	Annual Statistical Abstract 2006	Original	Ministry of Finance, Statistical Department	2006
5	Information Paper for Chief Executive Officer of the Ministry of Natural Resources Environment and Meteorology	Copy	Ministry of Natural Resources, Environment & Meteorology	2007
6	Climate Risk Profile for Samoa	Copy	Meteorology Division, Ministry of Natural Resources, Environment & Meteorology	2007
7	2009/2010 Budget Address	Original	Ministry of Finance, Government of Samoa	2009
8	Disaster Alert System: Use of Mobile Technology	Original	Digicel	2009
9	Climate Trends Summary	Copy	Meteorology Division, Ministry of Natural Resources & Environment	2009
10	Rainfall Outlook	Copy	Meteorology Division, Ministry of Natural Resources, Environment & Meteorology	2009
11	Strategy for the Development of Samoa 2009-2012	Copy	Ministry of Finance	2009