THE INDEPENDENT STATE OF SAMOA
MINISTRY OF FINANCE

PREPARATORY SURVEY
ON
THE PROJECT FOR
CONSTRUCTION OF PACIFIC CLIMATE CHANGE CENTRE
IN
THE INDEPENDENT STATE OF SAMOA

JULY, 2016

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

YAMASHITA SEKKEI INC.
PADECO CO., LTD.
EARL CONSULTANTS, INC.

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16-082

Summary

Summary

1. Outline of country

The Independent State of Samoa (hereinafter referred to as “Samoa”) is composed of a total of nine islands, two main islands, Upolu, where the capital city Apia is located, and Savaii, and other smaller surrounding islands. It has a population of about 190,000 (as of 2014). It is the largest of the independent Polynesian nations and has the fifth largest population and land area of the 14 independent South Pacific nations.

Economically, Samoa depends heavily on development aid, overseas remittances, tourism, and the agricultural and fishing industries. Its GDP in 2014 was approximately $800 million (around $4,200 per capita). More Samoans are thought to live abroad than in Samoa itself, mainly in countries such as the US, Australia and New Zealand. Primary industry accounts for 11.2% of GDP, secondary industry 30.2% and tertiary industry 58.6%. The main exports are agricultural goods like palm oil and taro. Samoa’s tourism industry makes up about 25% of its GDP, and in 2013, 132,000 tourists visited the country. Being an island state surrounded by the ocean, it is vulnerable to natural disasters such as tidal waves and cyclones. In recent years, there has been human suffering due to natural disasters such as the tsunami caused by the Samoa earthquake in September 2009, and flooding caused by Cyclone Evan in December 2012, bringing about immense economic impact.

2. Project background, sequence of events, and overview

Small island countries, spread over the Pacific region, are extremely susceptible to natural disasters. Since concerns are growing that natural disaster may occur more frequently and become more intensified in the region in the future as climate change worsens, it is urgent and therefore important to establish a base inside the region and develop human resources in this field in order to respond to climate change and disaster prevention. Against this background, formulation of the “Strategy for Climate and Disaster Resilient Development in the Pacific (2017 to 2030)” is under way in the region led by international regional organizations and UNDP.

The Secretariat of the Pacific Regional Environment Programme (hereinafter referred to as “SPREP”), the implementing body of the Project for Construction of Pacific Climate Change Centre (hereinafter referred to as “the Project”), is an international agency established in 1993 by 26 countries and territories (including 14 island countries called Pacific Island Countries, or PICs) and the headquarters in Apia, the capital of Samoa. As one of the central agencies promoting regional-level efforts in the Pacific region for climate change, SPREP is making comprehensive efforts in the field, including the above development strategy, the formulation and implementation of climate change adaptation and mitigation measures in collaboration with donor agencies, and human resource development aimed at increasing its say on the international stage.

In recent years, various types of financial support for the climate change from international organizations and donors have been activated, consequentially the workload of SPREP has been

increased rapidly in numbers. In response to this, SPREP almost doubled its number of staff in the five years from 2010. Although SPREP is expected to continue its considerable contribution to easier access to climate change funds, promotion of aid coordination, accumulating and providing related information, and human resource development in a wide range of fields related to climate change, it lacks accommodation space for staff and sufficient training facilities to conduct these activities, and so urgently needs to be expanded.

The Project is to establish the Pacific Climate Change Centre (hereinafter referred to as “PCCC”), with the Ministry of Finance of Samoa and SPREP, the core agency of climate change measures in the region, as its implementing body and, through the reinforcement of SPREP’s functions, beefing up measures including human resource development, thereby contributing to the implementation of regional strategy.

3. Outline of investigation results and content of the Project

In view of the above-mentioned situation, Japan International Cooperation Agency (hereinafter referred to as “JICA”) decided to conduct a preparatory survey and dispatched a survey team for the first field survey from May 11 to 31, June 27 to July 5, and August 25 to September 3, 2015 and the second field survey from October 18 to November 1, 2015. The survey team held discussions with the officials concerned of the Government of Samoa, and conducted a field investigation. After returning to Japan, the team drew up an outline design based on analysis done in Japan, held an explanation on the draft of the outline plan from May 21 to 26, 2016, and compiled a report on the preparatory survey.

The grant aid, through the establishment of PCCC, is to reinforce SPREP’s functions as the core agency of climate change measures in the Pacific region, with the aim of beefing up measures including human resource development in assured fields in the region. The plan, based on the following policy, is to construct facilities and procure the necessary training materials.

(1) Facility policy

The development plan was formulated according to the following basic policy.

- In the individual operations of SPREP, assistance is received from donors for each project or program, so business plans, including training, have the characteristic of being distinctly changeable. Because of this, the primary focus will be on versatile facility function and structure reinforcement, and all-purpose equipment to cope with expected business expansion, rather than responding to expected individual projects while referring to SPREP’s future training schedules and staffing plans.
- The size and details of the new building will be determined to appropriately meet the current status of activities and operating capacity of SPREP, considering the present state of the Project site and existing facilities.
- Environmental design will be included.
- Circulation in the new building, also between new building and existing conditions will be designed as functional.

- Because the construction will be carried out while the existing facilities are being used, necessary care will be taken for safety, vibration, noise and other possible nuisances of the construction works.

(2) Facility plan

Based on discussion with the Samoa side, the main facilities' will be a Training / Multi-purpose Room and a Climate Change Management Office, for the purposes of conducting training to accompany the expected expansion of climate change related operations, and creating a work environment that can deal with the increasing duties of SPREP's Climate Change Department.

Table i Facility plans

Building Name	Structural Details	Facility Details	Total Floor Area
PCCC	Reinforced concrete structure 2 storied building	Training / Multi-purpose Room, Climate Change Management Office, IT Business Centre, Server / Data Centre, Generator hut	1,560m^2

1) Training / Multi-purpose Room

Because PCCC is expected to serve as a basis for human resource development in the Pacific region, it is indispensable to have training function in the facility. In addition, following the basic policy that puts importance on the versatility of the facility function and reinforcement of the operating structure to cope with an expected expansion of undertakings of SPREP, a Training / Multi-purpose Room which can be used for a variety of activities including meeting as well as training activities is included in the Project.

To ensure the versatility of the Training / Multi-purpose Room taking into account all future training schedules and various non-training needs, it shall accommodate up to 90 people but also have moveable partitions installed for dividing it equally into three, enabling the size of the room to be adjusted according to the number of people taking part in an activity.

2) Climate Change Management Office

Along with the expected expansion of climate change related operations, staffs of the Climate Change Department (hereinafter referred to as "CCD"), will undertake an increasingly broad range of tasks in the future, such as strengthening access to climate change funds, coordinating regional climate change measures and operations, accumulating and providing related information, and the administration side of human resource development in a range of climate change related fields. As a workplace that can implement these tasks, the Climate Change Management Office with a staff of 54 will be set up in response to the CCD's future staffing plans.

3) Environmental design

Because PCCC is expected to receive many visitors from PICTs as a centre of human resource development, PCCC should be a demonstration of a green building as a good practice of sustainable development. In this connection, environmental-friendly design is positively adopted in the Project, paying attention to its maintenance and cost-effectiveness.

Environmental designs are broadly divided into passive designs, which are expected to produce an energy saving effect through measures such as building structure and window positioning, and active designs, which introduce equipment that can generate energy, such as solar panels, or that has an energy reduction effect. The table below outlines the environmental designs adopted for the Project.

Table ii Environmental Friendly Design Adopted for the Project

1. Passive Design		
No.	Design method	Descriptions
1-a	Natural ventilation	Prompting natural ventilation with adequate opening size and position
1-b	High standard insulation	Ensuring sufficient insulation capacity with wall and roof
1-c	Daylight controlling	Avoiding from direct sunlight while utilizing indirect sunlight efficiently
2. Active design		
No.	Design method	Descriptions
2-a	Photovoltaic panel	Installed on the roof of PCCC.
2-b	LED lighting	Long life and energy efficient lighting fixture
2-c	Water saving toilet	Installing water saving toilet
2-d	Rainwater harvesting	Collecting rainwater from the roof of PCCC
2-e	Solar power monitoring system	Recording and showing on display amount of energy produced by solar power system and consumed within the compound of SPREP
2-f	Lighting control system	Controlling artificial lighting within sensors
2-g	Anaerobic digester	System in which microorganisms break down biodegradable material in the absence of oxygen.

(3) Equipment selection policy

The main installation sites for equipment requested from the Samoa side are the Training / Multi-purpose Room, Climate Change Management Office, Server / Data Cener, and IT Business Centre. In the Project, support equipment has been chosen according to the following basic selection policy.

- Equipment that general training facilities should be equipped with (versatility)
- Technical and financial feasibility of maintenance and operation of equipment

(4) Equipment plan

The main equipment to be procured under the Project is as follows.

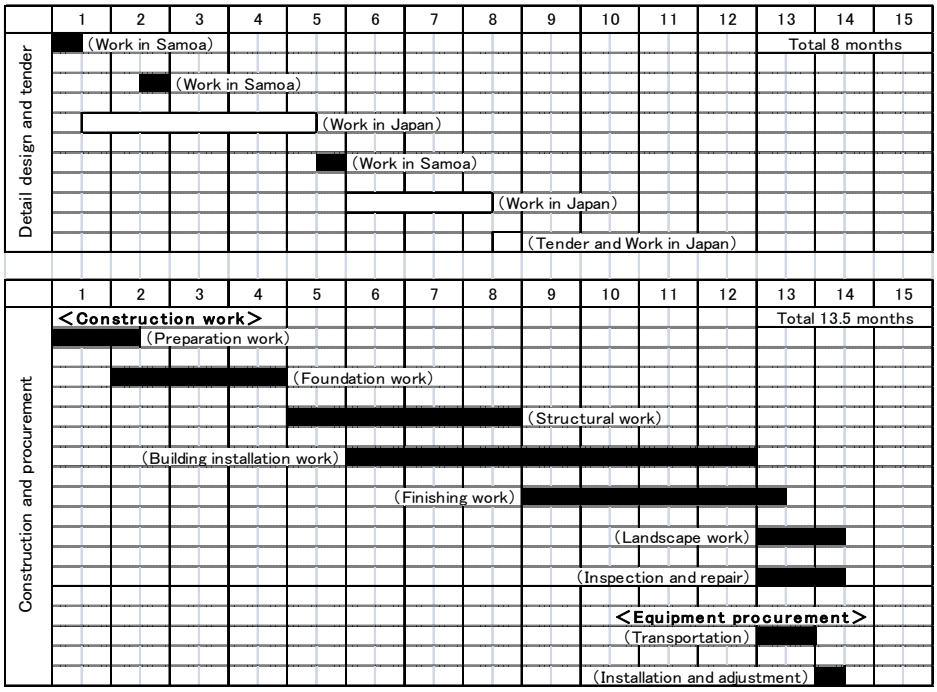
Table iii Principal planned equipment

Classification(Location)	Equipment	Description	No.
Training / Multi-purpose Room	Smart boards	For presentation, etc. in trainings	3
	Projectors	For presentation, etc. in trainings	3
	Recessed Screen	For presentation, etc. in trainings	3
	High performance computers	For data analysis works and preparation of training materials, etc.	1
Climate Change Management Office	Plotter	To make training and educational materials	1
Server / Data Center	Data Storage (for Server)	To store and keep digital data analyzed and collected To be connected to the existing server system	1
IT Business Center	General-purpose computer	For self-learning for Trainees	6

4. Project Schedule and Estimated Project Cost

After the signing of the contract, the contractor is to obtain verification from JICA to commence construction and equipment works. Given the size of the Project facilities and conditions of local construction, approximately 13.5 months in total will be required for construction works, procurement and installation of equipment, and operational instruction. This presupposes smooth procurement of materials and equipment and prompt procedures of relevant organizations of the Samoa side, and smooth implementation of undertakings of the Samoa side. Estimated project cost to be borne by the Samoa side during the project implementation is 12.7 million Japanese yen

Table iv Project implementation schedule



5. Evaluation of the Project

(1) Appropriateness

The Project is recognized as to be appropriate as Japan's Grant Aid in the light of the following points.

1) Project beneficiaries

SPREP training activities are held for 26 affiliated countries and territories over the entirety of the Pacific region (excluding Hawaii). Ordinarily, two to three representatives from each countries and territories participate in the training program, so it can be said that those benefitting from the Project are the governments and citizens of those countries and territories. In this way, it is recognized that the appropriateness of the Project is high, owing to the wide range of benefits.

2) Consistency with Japanese aid measures and policies

In the Okinawa "Kizuna" Declaration adopted at the PALM 6 held in 2012, "environment and climate change" and "response to natural disasters" were given as pillars of cooperations, and expressing support for the climate change and disaster prevention sectors was emphasized. Additionally, in the "Fukushima Iwaki Declaration" adopted at the PALM 7 held in 2015, the need for comprehensive and long-term approaches to climate change were emphasized. In response, Japan demonstrated its intention to provide comprehensive support through collaboration with SPREP and mentioned the construction of PCCC as well as technical assistance for human resource development and capacity building in the field of climate change throughout the Pacific region. Thus, the Project is consistent with the above-metioned.

Furthermore, the Project serves for the Japanese pledge at COP21 in December 2015, which promised numerical targets of 1.3 trillion yen yearly through governmental and private assistance by 2020 in order to achieve climate change-related support for developing countries.

Additionally, the Project coincide with Environment/Climate Change given as a priority area in the Ministry of Foreign Affairs' Country Assistance Policy for Samoa, and environmental preservation and disaster prevention given as priority measures of cooperation in the JICA Country Analytical Work for the Pacific Region.

(2) Effectiveness

The target values expected from implementing the Project are shown in the following.

1) Quantitative effects

Table v Quantitative effects

Index	Curent Value (2015)	Target Value (2021) Three years after completion of the Project
Utilization rate of Training / multi-purpose room (%)	0%	61%
Number of beneficiaries under the demonstration effect of environmental performance of the PCCC (person / year)	1) 0 2) 0	1) 1,400 *1 (number of visiters to the SPREP headquarters participating in training) 2) 23,000 *2 (number of visitors to the website "Pacific climate change portal" managed by SPREP)

*1

A) The number of people who will experience and learn from PCCC's environmental design by using PCCC for training is 708 per year.

B) TEC trainees who visit the PCCC will experience and learn about environmental design. The number will be 685 persons per year.

*2

The number of people who will learn about the PCCC's environmental design by visiting the Pacific Climate Change Portal (http://www.pacificclimatechange.net/) run by SPREP.

23,000 people visit the Pacific Climate Change Portal annually. By posting relevant information on the front page of the portal site, the visitors can learn about the PCCC's environmental design, therefore the number of annual visitors is deemed as the number of learners.

2） Qualitative effects

The following effects are expected by the construction of PCCC.

- Improvement of SPREP's capability to accumulate/disseminate information regarding the regional actions against climate change
- Strengthening of SPREP's collaboration ability with donors in the field of climate change
- Promotion of the utilization of climate change funds by SPREP and affiliated countries.
  (The use of climate change funds is facilitated by capacity building of project formation)

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Location Map/Perspective

Location Map

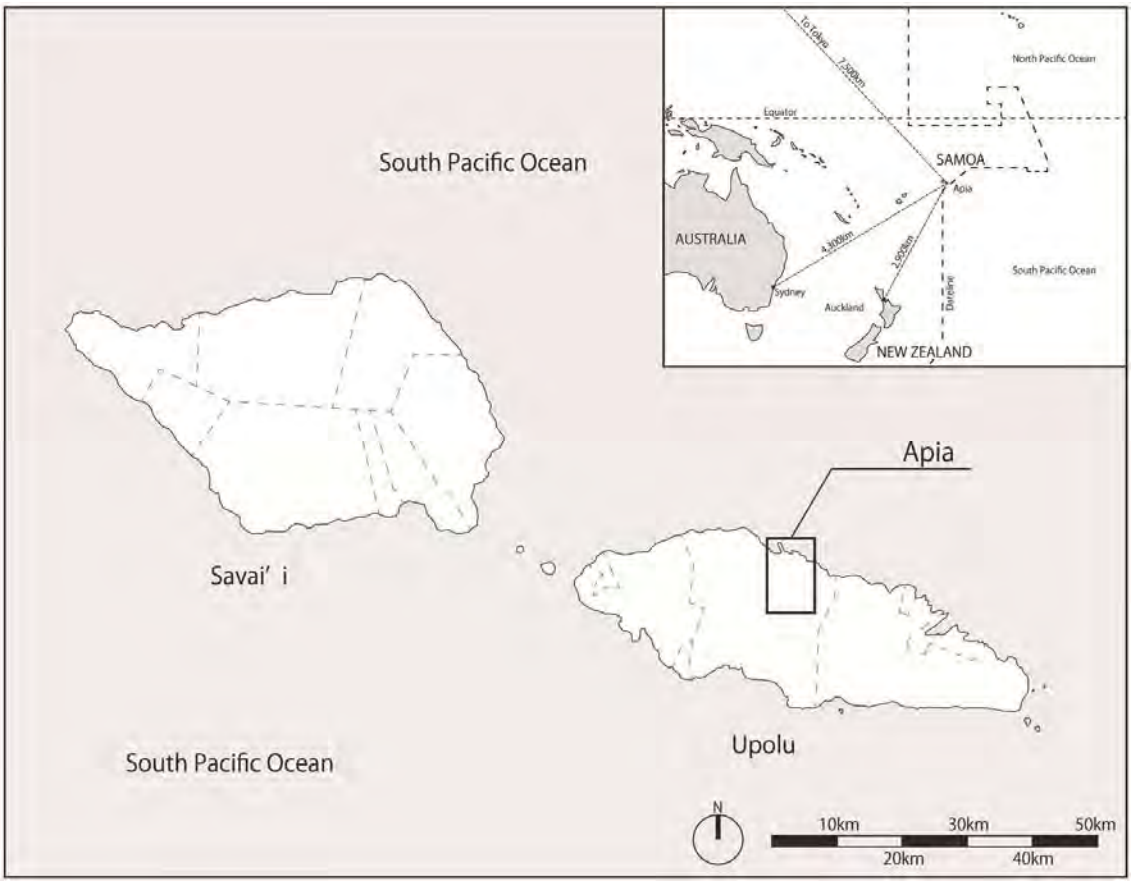
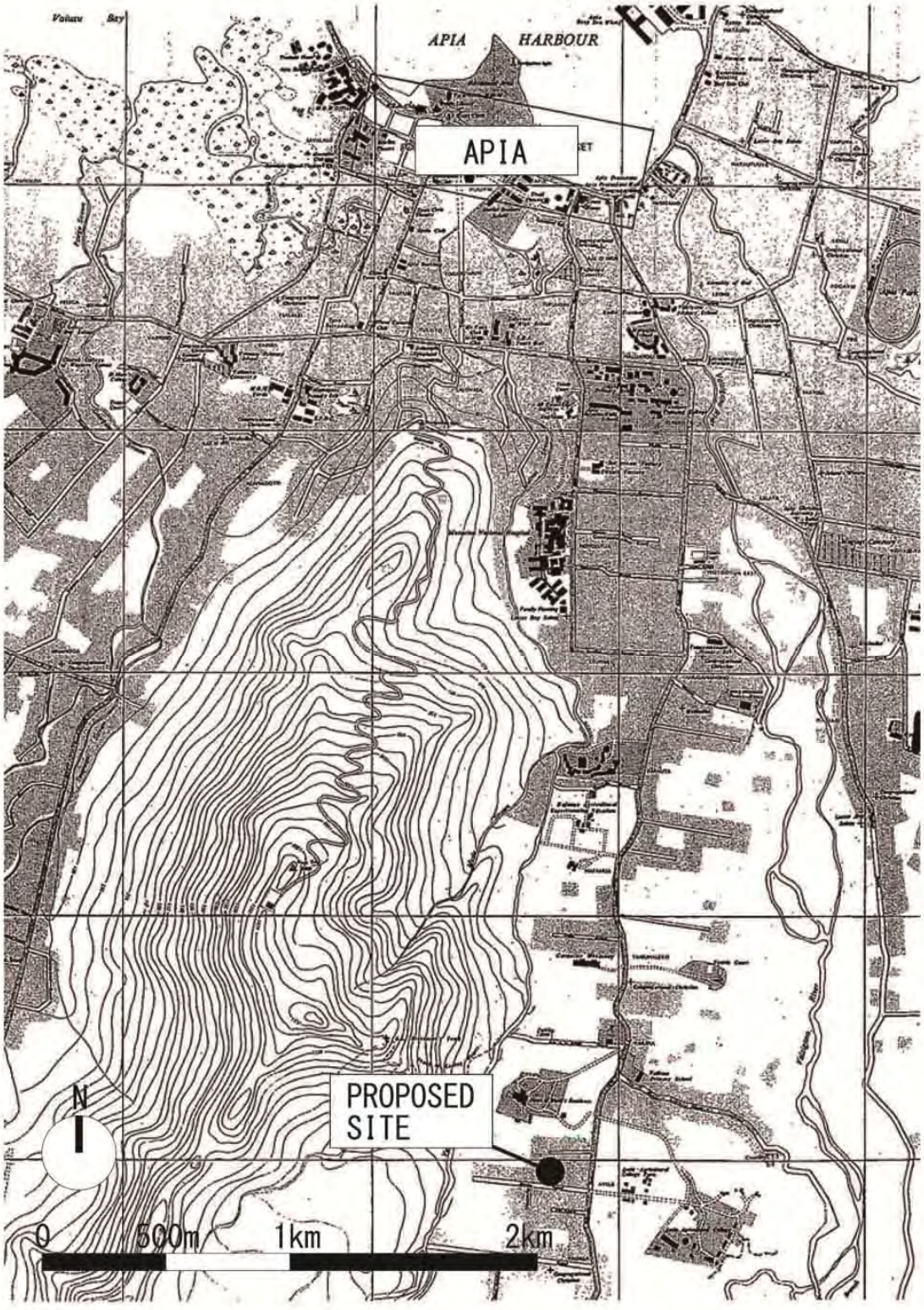


Figure I：Map of the Independent State of Samoa



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Perspective

Figure II：Image of Bird’s Eye View of the Proposed Building

Figure III：Image of North Side

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Abbreviation

Abbreviations

CCD	Climate Change Division of SPREP
CliDEsc	Climate Data for the Environment Services Application Client
COP21	21st Conference of the Parties
EIA	Environment Impact Assessment
GCF	Green Climate Fund
JICA	Japan International Cooperation Agency
JMA	Japan Meteorological Agency
PALM6	The Sixth Pacific Islands Leaders Meeting
PALM7	The Seventh Pacific Islands Leaders Meeting
PCCC	Pacific Climate Change Centre
PICs	Pacific Island Countries
PICTs	Pacific Islands Countries and Territories
SPREP	The Secretariat of the Pacific Regional Environment Programme
SDS	Strategy for the Development of Samoa
TEC	Training and Education Centre
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WMO	World Meteorological Organization

Chapter 1 Background of the Project

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1-1 Background of the Project

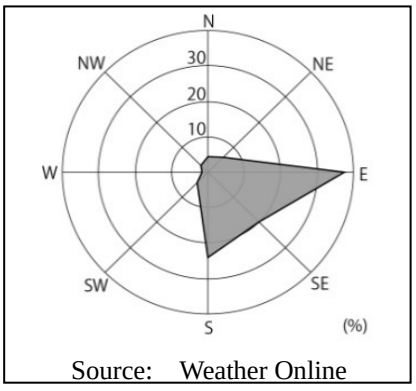
In recent years, various types of financial support for the climate change from international organizations and donors have been activated, consequentially the workload of SPREP has been increased rapidly in numbers. SPREP is expected to continue its considerable contribution to easier access to climate change funds, promotion of aid coordination, accumulating and providing related information, and human resource development in a wide range of fields related to climate change, while it lacks accommodation space for staff and necessary training facilities to conduct these activities, and so urgently needs to be expanded.

At the SPREP meeting held in 2012, SPREP decided to establish PCCC and to request the Government of Japan for the grant aid for the Project. In 2013, the Pacific Islands Forum in the Republic of the Marshall Islands reinforced the regional commitment to address climate change as the greatest threat to the livelihoods, security and well-being of the peoples of the Pacific through the Majuro Declaration on Climate Change. As a result, an official application form was submitted to the Government of Japan through the Government of the Independent State of Samoa (hereinafter referred to as “Samoa”) in 2013.

1-2 Environmental Conditions

(1) Environmental Conditions

Apia, the capital city of Samoa, is located in a tropical climate with an average annual temperature of 28℃ and average relative humidity of 76%. November through April is generally regarded as the rainy season, however, the start and end of the season vary from year to year. Prevailing winds range from south to east. The climate data for Apia in 2015 is shown in Figure 1-1 and Table 1-1.



Source: Weather Online

Figure 1-1: Wind Direction in Apia (2015)

Table 1-1: Temperature, Rainfall, Humidity, and Wind Speed in Apia (2015)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Maximum Temperature (℃)	31.5	31.7	31.9	32.2	32.0	31.6	31.5	30.8	31.1	31.4	32.2	31.8
Average Minimum Temperature (℃)	25.2	25.2	25.1	24.5	24.6	23.7	23.1	23.0	23.2	23.6	25.7	24.4
Monthly Rainfall (mm)	315	202	574	154	500	440	3	80	11	92	683	234
Monthly Average Humidity (%)	79	78	78	76	76	73	75	73	75	76	75	77
Wind Speed (m/s)	8.5	9.8	8.8	8.3	10.8	11.0	11.6	13.0	14.6	13.8	15.6	12.0

Source: Monthly average humidity: www.weather-and-climate.com, others: Weather Online

(2) Cyclones

Samoa suffers from cyclones once every few years, with the occurrences concentrated between December and February. A summary of cyclones damage in Samoa is shown in Table 1-2.

Table 1-2 Cyclone Damage in Samoa (1980-2015)

Date of Occurrence	Name	Category	Recorded Wind Speed in Samoa (m/s)	Amount of Damage (million USD)
Dec. 2012	EVAN	4	46.3	465
Feb. 2005	OLAF	5	44.4	0.03
Jan. 2004	HETA	5	51.4	35
Jan. 1991	VAL	4	45.0	240
Dec. 1991	WASA	4	No record. The peak of the cyclone itself was 63.8m/s.	5.2
Feb. 1990	OFA	4	49.9	120
Jan. 1989	FILI	2	No record. The peak of the cyclone itself was 26.4m/s.	15.5
Jan. 1989	GINA	1	No record. The peak of the cyclone itself was 23.6m/s.	

Source: The Independent State of Samoa Weather Forecast / Disaster Measure Improvement Plan Preparatory Survey Report
Samoa Post-Disaster Needs Assessment Cyclone Evan 2012

(3) Earthquakes

Samoa locates in the northeast of the Tonga Trench where is the boundary of the Pacific plate and the Indo-Australian plate comprising the Ring of Fire, and is a country with frequent earthquakes. Recently, approximately 3,000 people became evacuated owing to the tsunami occurring due to the magnitude 8.1 earthquake originating approximately 230 km to the south of Apia in 2009. It is estimated that there is a 40% chance of a V to VII degree earthquake on the revised Mercalli intensity scale (between 4 and 5 Lower on the JMA seismic intensity scale) occurring within the next 50 years.

1-3 Social and Environmental Considerations

(1) JICA Guidelines for Environmental and Social Considerations.

This preparatory survey did not unearth any points of concern from an environmental or social perspective that must be taken into consideration in the Project area. The Project should receive a category classification of C according to the JICA Guidelines for Environmental and Social Considerations, as it has been determined that there will be a minimal or virtually non-existent adverse impact on the environment and society.

(2) Samoan Environmental Permit Application Procedures

In expanding facilities on the premises of the SPREP headquarters under the Project, an environmental impact assessment (EIA) regulated by the Government of Samoa must be implemented in advance of the construction works of the Project, updating the contents of the initial environmental assessment report submitted by the SPREP headquarters at the time of its

establishment. The development permit is necessary to be obtained from the Planning and Urban Management Agency, the Ministry of Natural Resource and Environment. It has been confirmed that these environmental permit application procedures will be followed promptly by SPREP as the main organization.

Chapter 2 Contents of the Project

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2-1 Basic Concept of the Project

(1) Overall Goals

Small island countries, spreaded over the Pacific region, are extremely susceptible to natural disasters. Since concerns are growing that natural disaster may occur more frequently and become more intensified in the region in the future as climate change worsens, it is urgent and therefore important to establish a base inside the region and develop human resources in this field in order to respond to climate change and disaster prevention. Against this background, formulation of the "Strategy for Climate and Disaster Resilient Development in the Pacific (2017 to 2030)" is under way in the region led by international regional organizations and the UNDP. It is being formulated as an integrated framework of current "Pacific Islands Framework for Action on Climate Change 2006-2015" and "Pacific Disaster Risk Reduction Management Framework for Action 2005-2015" after one year extension of implementation periods of both two frameworks was resolved in the Pacific Islands Forum in September 2015. It is expected that this new integrated framework will be more effective and comprehensive because similarity of some countermeasures to climate change and disaster can be seen. It sets three targets, (1) Strengthening integrated risk management to enhance climate and disaster resilience, (2) Low carbon development and (3) Strengthened disaster preparedness, response and recovery, especially, it stresses the importance of human resource development.

(2) Basic Concept of the Project

SPREP, which will be the executing agency of the Project, is making comprehensive efforts in the field of climate change as the main organization that promotes regional level efforts in the Pacific region, including the above development strategy. SPREP is expected to continue its considerable contributions to human resource development in the field of climate change related to the overall goals. In recent years, as supports on climate change from international agencies and donors have increased extensively and more frequently, it is prioritized for SPREP to ensure a working environment to cope with heavier workload and training facilities with enough capacity to implement their program.

In this connection, the Project objective is to contribute to the enhancement of resilience to climate change and environment mentioned in the regional strategy as overall goals, with improving functions of SPREP related to climate change and developing human resources in the region.

To achieve the objective, the Project comprises the construction of PCCC on the premises of the existing SPREP headquarters and the procurement of the necessary equipment for the implementation of training, and aims to strengthen the capacity for human resource development as one of the SPREP's main functions. It is expected to contribute to the enhancement of climate

change countermeasures including human resource development and the improvement of the functions of SPREP such as training, accumulation and dispatch of related information on regional efforts, donor coordination and project formation.

2-2 Outline Design of the Japanese Assistance

2-2-1 Design Policy

2-2-1-1 Basic Policy

(1) Basic Policy

The Government of Japan, at the request of the Government of Samoa, dispatched a preparatory survey team for the Project between May and November in 2015. During that period, in the M/D of the first survey, it was agreed that SPREP should provide a business plan (hereinafter referred to as "the Business Plan") to examine the contents of requests concretely. The draft was submitted on October 26, 2015.

Officially, the draft is expected to be approved and finalized at the Council Meeting of SPREP, scheduled for September 2016. Therefore, the nature of the document is fluid for the moment. In addition, it is also necessary to pay attention to the high changeability of the Business Plan. Although activities in a wide spectrum of fields have been assumed in the Business Plan, the operating expenses of SPREP are guaranteed only in the event of receiving assistance from donor agencies for each project and program.

However, the action policy that aims at environmental preservation and improvement, and sustainable development, which are the mission of SPREP, is based on the consensus of the Pacific island countries and SPREP Members. Therefore, it is a firm basis that importance will be placed on human resource development by SPREP in the regional strategy on climate change. In addition, strengthening the training function as one of the SPREP's main functions can be recognized as foundation-building to realize "Coordination and Cooperation between SPREP and Japan in Supporting Comprehensive Climate Change Countermeasures in the Pacific Region," which was confirmed at PALM 7.

Against this background, PCCC is designed referring mainly to future training and staffing plans attached to the Business Plan, focusing on the versatility of the facility function and the reinforcement of the operating structure of SPREP to cope with an expected expansion of undertakings, instead of responding to the presumed contents of individual undertakings.

Regarding facilities, requests were made about the improvement of a training function accompanying a projected expansion of undertakings and the building of a working environment to meet higher staff numbers. In consideration of the growing budget size of SPREP in the past years and the recent global situation in the area of climate change, such as the activation of the Green

Climate Fund and the adoption of Paris Agreement in COP21, there are enough factors to be able to judge that the active trend in donors' support in the field will continue. Based on these factors, predictions on the expansion of undertakings by SPREP and the accompanying increase in the number of trainings are reasonable, and it can be judged that an expansion of facility capacity by construction of PCCC is highly necessary in an attempt to reinforce and strengthen the training function. Furthermore, in the light of the proper operation of undertakings, staff increase is fundamental, and it is necessary to consider the establishment of a working environment in addition to the strengthening of the training function.

On the other hand, regarding equipment, requests were made about various items of equipment that reflects the contents of individual trainings that are assumed in the Business Plan. As mentioned before, considering the changeability of contents of undertakings by SPREP, and following the policy that puts importance in the versatility of facilities, equipment procured under the Project is limited to those that general training facilities should be equipped with, but SPREP will prepare equipment that is not included in the Project as the implementation of trainings is confirmed.

With the fundamental policy as the premise, it was confirmed that the outline of the Project will be designed after adding the additional policies as described below.

- The size and details of the new facilities will be determined to appropriately meet the amount of activities and the operating capacity of SPREP, considering the present state of the Project site and existing facilities.
- Environmental design will be included.
- Circulation in the new building, also between new building and existing conditions will be designed as functional.
- Because the construction works will be carried out while the existing facilities are being used, necessary care will be taken for safety, vibration, noise and other possible nuisances of the construction works.

(2) Scope of the Project

Building construction aiming to (1) strengthening capacity for human resource development as one of the SPREP's main functions, and (2) establishing working environment and capacity to cope with future expansion of undertakings by Climate Change Division (hereinafter referred to as "CCD") of SPREP accompanying (1), and procurement of basic equipment necessary for general training facility following (1) will be included.

(3) Site Selection

The Project site will be on the premises of the existing SPREP headquarters in the city of Apia. The location of PCCC has been determined in consultation with SPREP as shown in Figure 2-1 with the following reasons;

- PCCC will be fully integrated with other facilities on the premises if it is connected with the existing facilities via corridors.
- The construction site has no building that blocks north-south air flows, thus natural ventilation is easy, so the site is suitable for the environmental-friendly building.
- A circulation of the construction work will be secured if the gate in the west is used exclusively for the construction work. This will also enables to separate the circulation of the construction works from the circulation of SPREP staff, visitors and other users of the existing facilities.

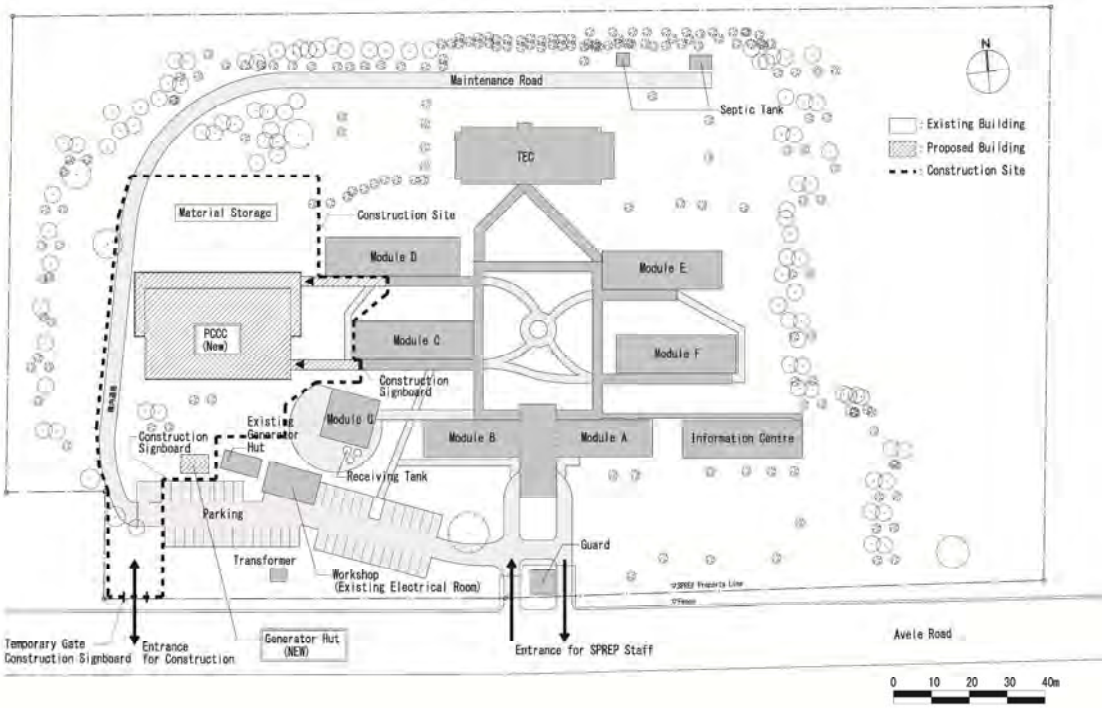


Figure 2-1 Construction Site for PCCC

2-2-1-2 Policy for Natural Conditions

Natural condition in Apia including climate change adaptation will be considered for facility design.

(1) Consideration for High Temperature and Solar Radiation

Apia is hot and humid throughout the year with the monthly average temperature and relative humidity ranging between 26°C and 27°C, and 73% and 79%, respectively. PCCC will have well-insulated roofs and walls to mitigate the impact of the outdoor environment conditions on the indoor conditions. PCCC will also be equipped with eaves, which block strong daytime direct solar radiation.

(2) Consideration for Rainfall

Apia has a tropical climate and is in the rainy season from November to April when the monthly

average precipitation ranges between 250mm and 400mm. The new building will be built so that it will not be submerged even in case of heavy rain, by elevating the floor level of the building as well as the surrounding ground and securing drain passages for rainwater. Moreover, if the earth work or foundation works are carried out in the rainy season, drainage work will also be carried out.

(3) Consideration for Strong Wind

Samoa has experienced a number of strong and damaging cyclones. Among recent ones, tropical Cyclone Evan in December 2012 caused severe damages to the country. PCCC will be designed to have a structure that is sufficiently resistant to the wind pressure of cyclones. Considering wind speed at the time of cyclones experienced in Samoa, wind speed for design is determined as one in the cyclonic region with 500-years recurrence interval in accordance with the AS/NZS.

2-2-1-3 Policy for Socioeconomic Conditions

Since available resource and energy is limited in the small island countries, it will certainly be important for their sustainable development to establish a facility plan conscious of resource-saving and energy saving, which is feasible in the Pacific region. Therefore the Project will aim to make a facility plan that will serve as a model for an environmental-friendly facility in the Pacific region.

2-2-1-4 Policy on Construction Conditions

In Samoa, building permission must be obtained from the Ministry of Works, Transport & Infrastructure (MWTI) prior to the construction. For the issuance of building permission, it is necessary as preconditions to obtain Development Consent from PUMA in MNRE and compliance certificates from the Fire Emergency and Security Authority (FESA) and the MWTI. It is confirmed that the said procedure must be undertaken by SPREP without delay.

The current building code in Samoa is in progress for revision at the time of the preparatory survey. It is deemed that standard similar to New Zealand will be adopted to a revised building code in Samoa. Therefore, as long as the revised building code is not confirmed, New Zealand standard is referred instead.

2-2-1-5 Policy on Procurement Conditions

In principle, construction materials for the Project are to be procured locally or imported from Japan. Construction and building products and supplies made in New Zealand are widely distributed in the construction market in Samoa, therefore materials in local market in Samoa can meet the standard the Project required. In general, Equipment are also to be purchased locally or imported from Japan, but some will be imported from third countries considering economic rationality.

2-2-1-6 Policy on Use of Local Contractors

A number of construction companies have been confirmed in the Samoan construction industry,

which can undertake the construction of the Project, including contractors which have been involved in Japan's grant aid projects. In order to allow the Project to use these construction companies, the Project will adopt a locally common construction method in principle.

2-2-1-7 Policy on Operation and Maintenance

Building installation and equipment that need routine maintenance will be selected in the manners that the maintenance cost will not be a burden for the operation, and that the priority is given to the easy access and timely obtaining of consumables and maintenance parts.

2-2-1-8 Policy on Grade Setting for Facilities and Equipment

The grades of facilities will be determined by referring to similar buildings in Samoa and other Pacific island countries, and giving priority to durability and easiness of maintenance. The grade of the fire fighting system will be similar to typical buildings in Samoa that meet the standard specified by the relevant fire station. Materials will be selected in the light of economic efficiency and performance. The grade of equipment will be determined in the manner that the existing staff members can operate them and suppliers and service providers in Samoa and New Zealand can undertake maintenance work.

2-2-1-9 Policy on Construction Schedule

During the rainy season from November to late April, the rain precipitation is particularly heavy and frequent from December to March, which may have a negative impact on the structural and outdoor works. The construction schedule will be determined in the light of a slowdown of construction during the rainy season.

2-2-2 Basic Plan (Construction Plan / Equipment Plan)

2-2-2-1 Examination of Request

(1) Facility Plan

1) Function

In order to improve training capacity and environment as well as working environment in accordance with future expansion of the responsibility of CCD, rooms listed in Table 2-1 below are requested in PCCC.

Table 2-1 Requested rooms

Room	Descriptions
Training / Multi-purpose Room	For various activities, mainly educational and training activities
Climate Change Management Office	Working environment in accordance with expansion of the responsibility of CCD enhancing its training capability
IT Business Center	Area for visitors to browse climate change related information
Server / Data Center	Area for server system and / or data storage to support activities of CCD
Kitchen	Area to prepare for tea break for training
Toilets	Including disability toilet

Assumed activities in the Training / Multi-purpose Room and Climate Change Management Office as main function of PCCC and appropriate size of both two rooms are as follows;

A) Training / Multi-purpose Room

Because PCCC is expected to serve as a basis for human resource development in the Pacific region, it is indispensable to have training function in the facility. In addition, following the basic policy that puts importance on the versatility of the facility function and reinforcement of the operating structure to cope with an expected expansion of undertakings of SPREP, a Training / Multi-purpose Room which can be used for a variety of activities including meeting as well as training activities is included in the Project.

Size of the Training / Multi-purpose Room is calculated in order to accommodate 90 participants at most, considering the tendency of actual training activities in recent years and analysis of future training plan mentioned in 1-1-1, and needs of other activities except for training comprehensively. Moreover, in order to give the room versatility, movable partitions are installed to divide the room evenly into three to make the room size adjustable according to the number of participants.

a) Activities at the Training / Multi-purpose Room

Activities assumed at the Training / Multi-purpose Room is shown in Table2-2 below. 61% of annual utilization rate is assumed with those activities. Calculation of utilization rate of the Training / Multi-purpose Room is described in the Appendix “Other Relevant Data”.

Table2-2 Activities at the Training / Multi-purpose Room

No.	Activities	Description
1	Training	The Training / Multi-purpose Room will be used for training courses with more than 50 participants, which cannot be conducted at the existing training room. The existing training room will be used for training courses so long as it can accommodate participants.
2	Meeting	Meetings by individual teams of CCD, CCD as a whole, all staff members of SPREP
3	Meeting and training by other organizations	Meeting and training related to climate change by other organizations. At the time of the preparatory survey, The UNEP and WMO have expressed their intentions to use the Training / Multi-purpose Room of PCCC for meetings and workshops.
4	Workshop for school children	Environmental education for primary and secondary school children in Apia
5	Exhibition for visitors participating trainings held in TEC	Exhibition targeting at officials in charge of environmental and climate change issues

b) Size of the Training / Multi-purpose Room

Size of the Training / Multi-purpose Room is calculated considering actual training needs. Training courses with 50 or less participants held in the SPREP headquarters will be conducted in the existing training room in the TEC. According to the future training plan, of training courses with more than 50 participants, the number of courses with about 90 participants is the largest. This means that the training room can be used for about 80% of all training courses with more than 50 participants, if the room is designed to accommodate 90 participants. Thus, the Training / Multi-purpose Room will be designed to have space that can accommodate up to 90 participants. The number of training courses with more than 90 participants is small, mere 4 courses per year, and thus these courses are assumed to be conducted at hotels or elsewhere in the country.

On the other hand, necessary space for activities other than trainings varies, therefore it appears to be appropriate to install collapsible partitions to divide the room evenly into three to make the room size adjustable to meet the number of participants. As shown in the schematic drawing in Figure 2-2, the room will be designed to be size-adjustable for 30, 60 and 90 participants with movable partitions.

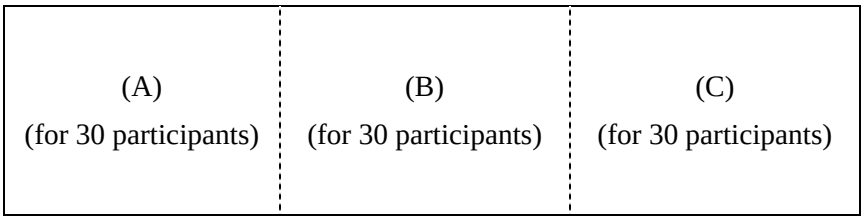


Figure 2-2: Schematic Drawing of the Training / Multi-purpose Room

B) Climate Change Management Office

Establishment of working environment to accommodate additional staff and an expansion of

undertakings of CCD is requested by the Samoa side. In the light of proper operation of undertakings, staff increase is fundamental, therefore establishment of requested working environment is considered as appropriate.

a) Activities at the Climate Change Management Office

Accompanying a projected expansion of undertakings related to climate change, CCD staff will be engaged in wider range of works such as enhancement of access to funding sources related to climate change, coordination of climate change countermeasure and project in the region, accumulation and dispatch of related information and human resource development in a variety of fields of climate change.

b) Size of the Climate Change Management Office

According to the future human resourcing plan of SPREP, the workforce of CCD will increase up to 54. The workforce of CCD was 19 in 2012, when the annual number of training on climate change was largest, 695 person-times, in the last five years. Because training will be increased three times to 2,100 person-times under the SPREP future plan, the increase in the workforce to 54 staff members by 2.8 times seems reasonable.

On the other hand, however, the administration office for CCD at the module D and 1st floor of the TEC has no spare room. In the light of the plan to increase the workforce of departments other than CCD at SPREP, it will be reasonable to integrate the office of CCD into the Climate Change Management Office for 54 staff in PCCC[1].

2) Environmental design

The Samoa side has requested that PCCC should serve as a model for environmental-friendly facilities in the Pacific countries. Because PCCC is expected to receive many visitors as a center of human resource development, PCCC should be a demonstration of a green building as a good practice of sustainable development. In this connection, environmental-friendly design is positively adopted in the Project, paying attention to its maintenance and cost-effectiveness.

Table 2-3 outlines architectural environmental friendly approach to be adopted for the Project, which mainly consists of two types of methods: one is passive design that can produce energy-saving effects with effective building components, window layouts, etc. The other is active design that introduces solar panels and other equipment that can produce energy, as well as installations and equipment that have effects of energy reduction.

In terms of maintenance, passive design requires only general repair work for finishing such as re-paint etc., on the other hand, since active design basically consists of building installation, it is necessary to study feasibility of maintenance plan if building installation necessary for periodical

[1] According to SPREP's plan to increase the overall workforce, the number of staff members at the headquarters is expected to increase from the current 112 to 187. Given that 133 staff members (excluding those of CCD) occupy the office space of the existing facilities of 1,220m^2, each person will occupy space of about 9.2m^2.

maintenance is adopted in the Project.

These environmental designs will also contribute to climate change adaptation such as water saving toilet and rainwater harvesting against drought, high standard insulation against extreme high temperature.

Table 2-3 Environmental Friendly Design Adopted for the Project

1. Passive design		
No.	Design method	Descriptions
1-a	Natural ventilation	Prompting natural ventilation with adequate opening size and position
1-b	High standard insulation	Ensuring sufficient insulation capacity with wall and roof
1-c	Daylight controlling	Avoiding from direct sunlight while utilizing indirect sunlight efficiently
2. Active design		
No.	Design method	Descriptions
2-a	Photovoltaic panel	Installed on the roof of PCCC
2-b	LED lighting	Long life and energy efficient lighting fixture
2-c	Water saving toilet	Installing water saving toilet
2-d	Rainwater harvesting	Collecting rainwater from the roof of PCCC
2-e	Solar power monitoring system	Recording and showing on display amount of energy produced by solar power system and consumed within the compound of SPREP
2-f	Lighting control system	Controlling artificial lighting with sensors
2-g	Anaerobic digester	System in which microorganisms break down biodegradable material in the absence of oxygen.

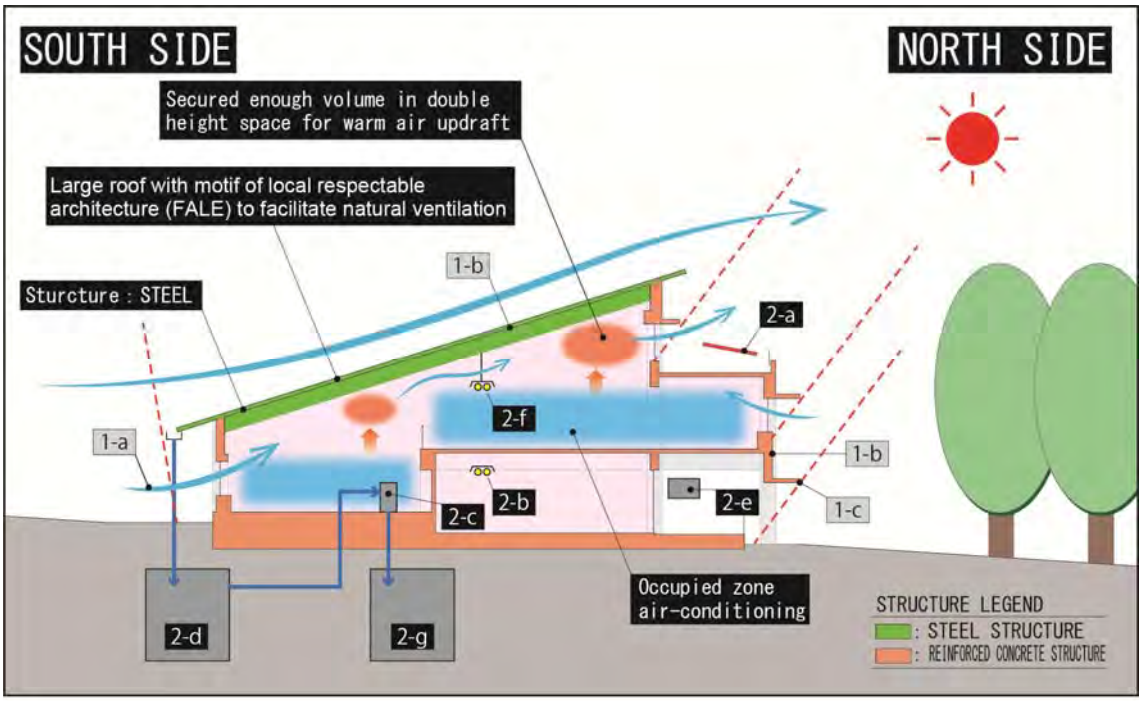


Figure 2-3 Image of Environmental Design

(2) Equipment plan

As the result of the field survey, the Samoa side requested equipment required for training and research activities which Samoa side plans to perform at the new facilities as provided in Table 2-4 below.

Table 2-4 Contents of Requested Equipment

No	Room / Departments	Summary / Notes
a)	Training / Multi-purpose Room	Ceiling microphones integrated into Video and Audio System, Cameras integrated into Video and Audio System, Video conferencing system, LCD display, Projector, Recessed screen, Smart podium etc: 17items
b)	Climate Change Management Room	Copy machine with Printer, Plotter ,etc. WiFi router GPS, GPS camera, Unmanned Aerial Vehicle with built-in camera and GPS locator Weather Animation and TV-weather Presentation software, Climate Change Projections Downscaling and Mapping software, Lightning Strike Software and Data Access and license, CliDEsc visualization software Software for GIS mapping, Projection Software for Planning and Intervention modeling for Adaptation & Mitigation projects Software (Photoshop, and Page layout software), Microsoft Office, Video editing software, Website software
c)	Server / Data Center	Computer for research, Server, Rack etc. UPS, Surge protection device Satellite phone with antenna
d)	IT Business Center	WiFi router All-in-one energy saving computer, OCR Scanner

Resources: Minutes of Meeting

1） Basic policy of Equipment plan

A) Coverage of Equipment Plan

Based on the field survey, equipment requested by Samoan side is categorized as follows depending on where they are to be used.

a) Training / Multi-purpose Room
b) Climate Change Management Room
c) Server / Data Center
d) IT Business Center

B) Basic Policy of Equipment Selection Criteria

The equipment requested at the field survey includes a variety of items assumed in the specific training in the future plan and items necessary with huge amount of operation and maintenance cost.

Basic policy of equipment selection criteria in the Project described hereunder:

a) Equipment that general training facilities should be equipped with (versatility)
b) Technical and financial feasibility of maintenance and operation of equipment

2） Policy on existing items of equipment

It is deemed that existing equipment used in the existing facilities will be maintained or replaced by SPREP, so that it is not covered by the Project.

Existing server system set up in the server room in TEC has no capacity to accommodate future workload of CCD. Moreover, there is no room for an additional server rack in the existing server room. Feasibility of procurement of equipment for server system working with existing system is examined in order to provide essential ICT services in PCCC.

2-2-2-2 Construction Plan

(1) Site Plan and Floor Plan

1) Access

Points to note for layout planning of PCCC in order to assure accessibility to PCCC in the light of the existing condition are as follows.

- The PCCC building will be located where it is easily accessible from the existing buildings.
- The entrance to the PCCC building will be located on an extension of the passages of existing Modules C and D for smooth circulation.
- Apart from a circulation for visitors and staff members, a circulation for maintenance will be secured, which is directly accessible from the existing maintenance road.

2) Facility Composition

The layout plan for PCCC rooms will take into account not just the relationship with the existing facilities but also the movement of the sun, wind directions and other natural environmental factors within the proposed site. Non-residential rooms such as machine terrace and toilets will be placed on the east-west side, and major rooms including the Training / Multi-purpose Room and the Climate Change Management Office will be placed on the north-south side to curb the heat load from sunlight and promote natural ventilation.

The eastern side where the entrance is located will be used as a common area, and traffic lines will be created so that visitors can move to their destinations from the common area. The entrance and the foyer of the Training / Multi-purpose Room will be designed to be roofed open area for ventilation.

Machine terrace and other rooms requiring maintenance will be placed on the western side altogether along the existing maintenance road for easy access of vehicles.

Figure 2-4 illustrates the diagram of facility composition incorporating these concepts. Site plan and floor plan are referred to “2-3 Outline Design Drawing”.

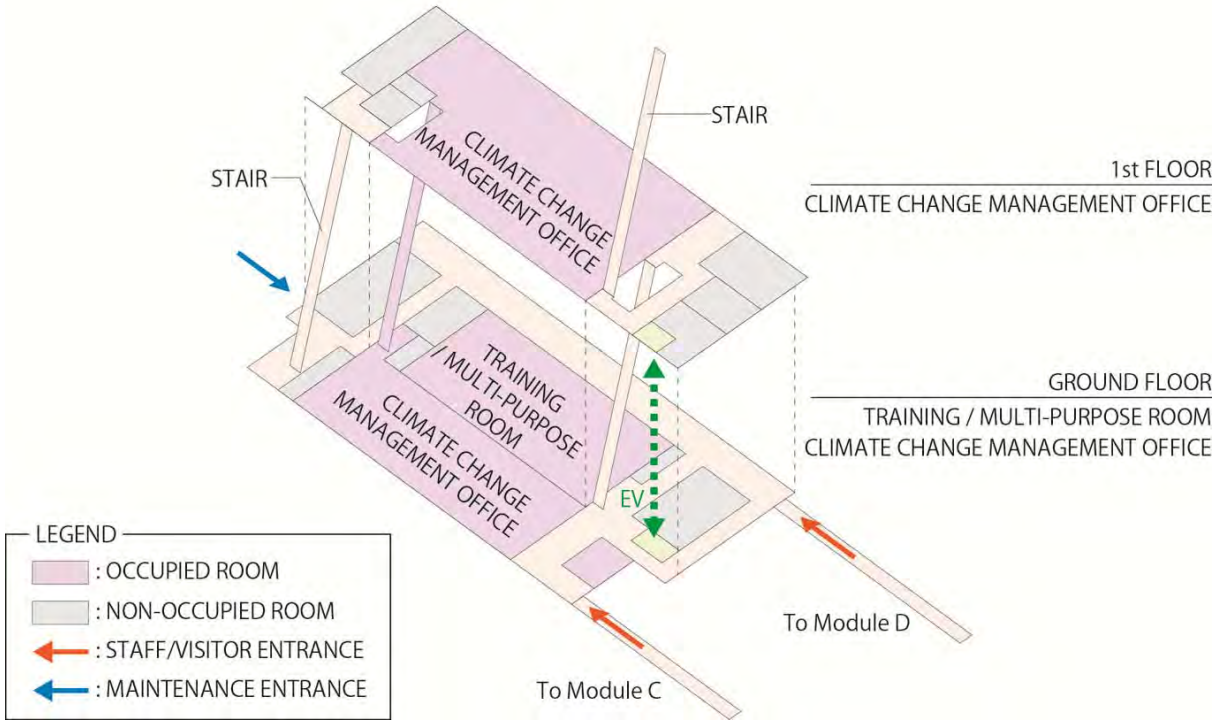


Figure 2-4 Diagram of Facility Composition

3) Plan for major rooms

A) Training / Multi-purpose Room

Though trainings held in the premises of the headquarters of SPREP expect participants from the Pacific region, it is assumed that participants from Samoa where the headquarters located would frequently used the Training / Multi-purpose Room. In this connection, considering Samoan people and the nature of training, the unit floor area will be set at 2.5m^2 / person[2]. Based on this and the maximum capacity of 90 participants, the floor area will be made at around 230m^2 for the room. The dimension of the entire room will be set at 10.8m x 21.6m, and that of the three partitioned rooms at 7.2m x 10.8m. The room will be shaped easy to use for training and meetings, when integrated and partitioned. A storage / control and translator room will be built adjacently so that the Training / Multi-purpose Room can be used for bilingual or TV conferences, which are sometimes held at present.

[2] Based on an interview from SPREP that they felt the existing training rooms in TEC small with approx. 2.3 m^2 / person, unit area per person in the Training / Multi-purpose Room will be set at 2.5m^2 / person. In general, unit area per person in a training room is set at 2 to 3 m^2

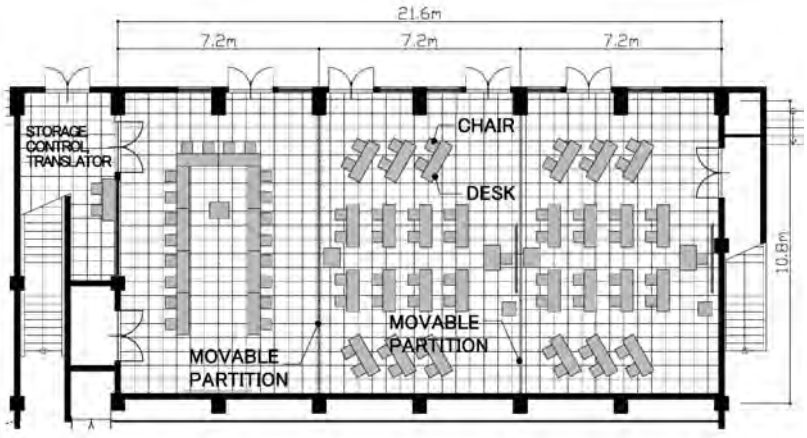


Figure 2-5 Floor plan of Training / Multi-purpose Room

B) Climate Change Management Office

The Office is expected to be used by 54 staff members of CCD. The unit floor area will be set at 10m^2 / person as of the minimum standard in Australia similar to existing facilities.

C) IT Business Center

The Center is self-learning area for visitors, where environmental training materials owned by CCD of SPREP can be browse and displayed. The floor area will be set at about 18m^2 assuming minimum area for desks and chairs for 6 visitors in order to browse information with PCs.

4) Room areas and summary

Table 2-5 shows the floor areas and summary of rooms requested by Samoa side and other necessary rooms such as machine rooms in PCCC.

Table 2-5 Floor Areas and Summary of Rooms in PCCC

Building	Floor	Room	Area (m^2)	Descriptions
PCCC	1	Training / Multi-purpose Room	239	90 participants maximum (3 rooms with the capacity of 30 persons, storage, etc.)
	1・2	Climate Change Management Office	540	Administrative office for CCD staff (54 staff members)
	1	IT Business Center	18	6 visitors can occupy the room at the same time
	1	Server / Data Center	18	To install server and / or data storage
	1	Kitchen	6	Equipped with work counter with sink
	1・2	Toilets	83	Including disability toilet
	1・2	Corridor	439	-
	1・2	Other incidental facilities	177	Storage, machine terrace, pump, water tanks and electricity room
Auxiliary building	1	generator room	40	To install generator

(2) Cross-sectional Plan

Taking advantage of the configuration of the construction site on a gentle slope from south to north, the Training / Multi-purpose Room with a high ceiling will be placed on the lower end of the slope in the north, while the Climate Change Management Office will be placed on the upper end in the south and at the higher level of the Training / Multi-purpose Room. This arrangement will reduce the area facing the outside in high temperature and high humidity, and thus reduce the heat load from outside. The cross-sectional plan of the Climate Change Management Office will be designed to prompt natural ventilation by taking advantage of the difference in the ceiling height and heat movement.

For the opening, open corridor and other open area, eaves and screens will be installed for protection against rain and strong daytime sunlight.

(3) Structure Design

1) Ground conditions of the construction site and foundation structure design

A rock stratum is assumed to exist at a depth of 2m below the ground, and will be used as a bearing ground for direct foundation.

2) Structure design of superstructure

Locally common reinforce concrete structure will be adopted in general, while steel structure will be applied only to the roof of the Climate Change Management Room, as a long span.

3) Load

In terms of the assumed load and external force set in the Project, dead load will be calculated in accordance with finishing and structural materials to be used for the building. On the other hand, wind load, live load and seismic load will be calculated in accordance with the standards of New Zealand because of the absence of the relevant standards in Samoa.

4) Structural material

Strength of major structural material is shown in Table 2-6 below.

Table 2-6 Major Structural Material

Material	Specifications
Concrete	Design strength: Fc=24N / mm^2
Reinforcing bar	Yield strength: 345 N / mm^2, 295N / mm^2

(4) Electrical System Design

1) Service drop and transformer system

The existing transformer has the capacity of 500kVA, and the high voltage power line along Avele Road in the south of the premises has the capacity of 22kV. The maximum power demand of the entire existing facilities is about 110kVA, and the maximum power demand of the facility to be constructed under the Project is expected to be about 100kVA. Thus, no additional transformer will be required, and the existing transformer system will be able to satisfy all the power demand including that of PCCC.

On the other hand, a low-voltage trunk cable will be installed underground to bring electricity from the existing transformer system to the Project's facilities.

Also, 20kW grid connected photovoltaic generating system will be installed in the Project. Before the connection between the system and the grid, inspection by the Electric Power Corporation will be conducted.

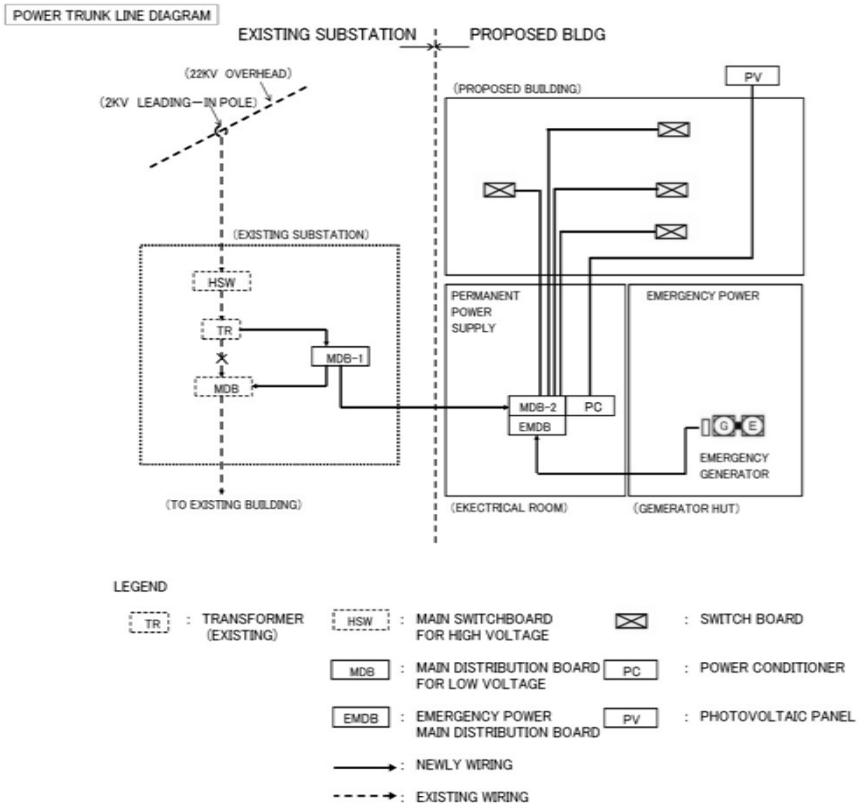


Figure 2-6 Electrical Wiring Diagram

2) Power supply system

Electricity will be supplied from main distribution board to lighting switchboards of PCCC with buried cables, cable racks and lying pipes. To keep the facility functions alive at the time of power outages, a 100kVA emergency generator with automatic switcher will be installed. The local voltage is relatively stable with the fluctuation of about ±5% around the rated voltage, and thus no automatic voltage regulator (AVR) will be installed in the power supply system of the proposed facilities

themselves.

3) Lighting and socket outlets

A lighting switchboard will be installed on each floor. The circuit configuration, as well as the secondary piping and wiring from the switchboards to lighting equipment and electrical outlets, will be planned appropriately. Electrical cables will be laid under the floor for the Climate Change Management Office in order to facilitate future desk layout change and avoid wiring on the floor where a wheel chair may pass.

Table 2-7 Lighting and Socket Outlets

Lighting equipment	General lighting	Power-saving equipment such as LED lights will be selected.
	Emergency lighting	Battery-operated LED wall lights will be installed in rooms and corridors for emergency purposes.
Electrical outlets	General electrical outlets	General electrical outlets will be earthed. 400V outlets will be installed in some places.

4) Telephones

As the existing facilities use IP phones, the Project's facilities will use the same system. The main hub for the entire SPREP placed in the server room in the TEC building will be upgraded, and telephone lines will be wired to the proposed facilities via underground cables. The Climate Change Management Office will be equipped with the number of telephone sets equal to the number of staff members, and other rooms with an appropriate number of telephone sets. Piping, wiring and installation works will be carried out by the Japanese side.

5) LAN system

LAN cables will be installed from the main server for the entire SPREP placed in the server room in the TEC building via underground cables. Piping and wiring works for LAN cables will carried out by the Japanese side.

6) Fire alarm system

A fire alarm system will be installed in accordance with instructions of the FESA fire station and relevant standards of New Zealand. The fire alarm panel will be installed in the existing guard hut.

7) Lightning protection

A lightning conductor or rod will be installed on the roof for protection against lightning strikes.

(5) Air Conditioning / Ventilation Design

1) Air-conditioning system

Training / Multi-purpose Room, Climate Change Management Office, IT Business Center and Server / Data Center will be equipped with air-conditioning system. Packaged air-conditioning units will be selected because they can be individually controlled and easily maintained. Thermal insulating capacity of the roof and wall of those rooms will be enhanced in order to reduce air-conditioning load for energy-saving. For the season when air-conditioners are unnecessary, ceiling fans will be installed in the rooms.

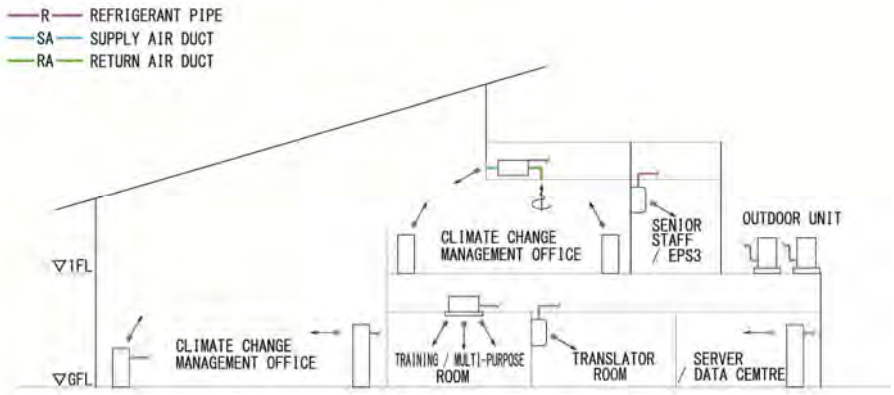


Figure 2-7 Air-Conditioning System Diagram

2) Ventilation system

A simple and easy-to-handle mechanical ventilation system will be installed, which naturally brings in fresh air and mechanically exhaust air.

(6) Plumbing System Design

1) Sanitary equipment

Sanitary fittings will be installed to meet the building plan. Toilets for persons in wheelchairs will be installed and western-style basins will be adopted.

2) Water supply facilities

City water is supplied to the existing facilities. An isolated water supply system will be installed and connected to the existing supply conduit to supply city water to the proposed facilities.

A dual water supply system will be adopted for miscellaneous use and drinking. To reduce the running cost, the supply system of water for miscellaneous use will be designed to use rainwater as well as city water.

The water supply system will consist of a reservoir and pressurized water supply pump.

Table 2-8 shows the estimated amount of water needed for the Project’s facilities

Table 2-8 Estimated Amount of Water Needed

Target	Estimated No. of persons (persons)	Unit amount of water needed (litter per person/day)	Ratio of drinking water (%)	Ratio of water for miscellaneous use (%)	Daily amount of drinking water needed (L/day)	Daily amount of water for miscellaneous use needed (L/day)
PCCC Staff	54	100	50	50	2,700	2,700
Visitors	90	80	50	50	3,600	3,600
				Total	6,300	6,300

The necessary capacity of tanks is estimated as follows:

Reservoir (two-tank type): $6m^3$ (new tank, to reserve city water)

Underground water tank: $26m^3$ (new tank, to reserve both city and rain water. $6m^3$ for miscellaneous use and $20m^3$ for fire-fighting water tank)

3) Hot water supply equipment

An electrical hot water dispenser will be installed in the kitchen.

4) Drainage facilities

Living wastewater will be treated in an anaerobic septic tank and released underground of planted areas via perforated pipes. Rainwater collected from the large roof will be reserved in the underground water tank for miscellaneous use, but rainwater elsewhere will be released underground from side ditches around the facilities via soak pits.

An estimated amount of wastewater discharged from the proposed facilities is shown below.

Table 2-9 Estimated Amount of Wastewater Discharged

Estimated No. of persons (persons)	Unit amount of wastewater discharged (L) (Samoan standard)	Daily amount of wastewater discharged (L/day)
54 (PCCC staff) + 90 (visitors)	24	2,500 →$2.5m^3$

The necessary capacity of septic tank is estimated as follows:

Anaerobic septic tank volume: $15m^3$

Treatment capacity: $2.5m^3$/day

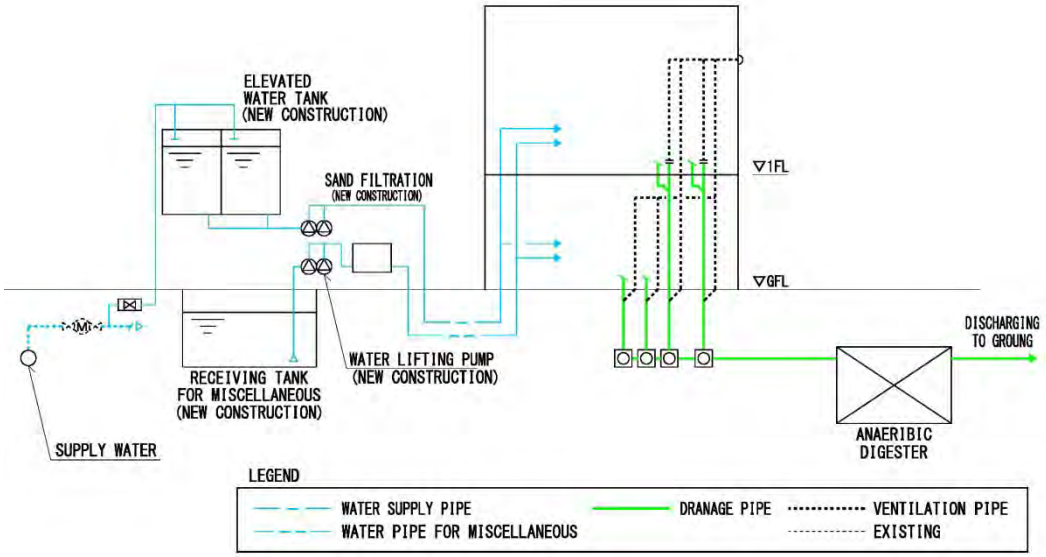


Figure 2-8 Plumbing System Diagram

5) Firefighting system

An outdoor fire hydrant system and fire extinguishers will be installed.

(7) Special facility plan

1) Elevators

While research and study are in progress for revisions to the current construction standards law in Samoa, the Asset Management & Building Division of MWTI has instructed that the proposed facilities should be equipped with elevators on the grounds that Samoa is planning to adopt regulations similar to those in the construction standard law of New Zealand, and that the revised law will stipulate provisions of barrier free facilities. It is reasonable to install elevators in the proposed facilities because they are facilities of an international organization to be used by staff members and visitors of various nationalities related to SPREP.

(8) Plan for Construction Materials

1) Basic policy

Construction materials will be procured according to the following policies in the light of the climate, environment, practices in the construction industry, schedule, cost, operation and maintenance system and other factors in Samoa.

- Major construction materials are available locally, but those unavailable will be imported from Japan to secure the facility functions required.
- Finishing materials which match the existing facilities of SPREP and can be locally maintained will be selected.

2) Materials

A) Structural materials

The Project's facilities will consist of reinforced concrete structure and concrete block walls, which are widely used in Samoa. Sand and coarse aggregate for concrete can be easily procured in Samoa.

B) Exterior finishing materials

Table 2-10 lists major exterior finishing materials and notes.

Table 2-10 Major Exterior Finishing Materials

Part	Finishing materials	Notes
Roof	Metal roof Asphalt waterproofing	Designed for higher wind pressure resistance
Exterior wall	Paint	Designed for easier maintenance
Doors and windows	Aluminum fitting	Designed for higher durability
Exterior pavement	Pebbles, etc.	Local materials are prioritized.

B) Interior finishing materials

Table 2-11 lists major interior finishing materials and notes.

Table 2-11 Major Interior Finishing Materials

Room	Floor	Wall	Ceiling	Notes
Training / Multi-purpose Room	Carpet tile	Paint	Acoustic board	Designed for higher sound absorbency
Climate Change Management Office	Carpet tile	Paint	Acoustic board	Designed for higher sound absorbency
Corridor	Tile	Paint	None (partially spandrel)	Designed for easier maintenance
Toilet	Tile	Tile	Fiber reinforced cement board	Designed for higher water resistance

2-2-2-3 Equipment Plan

(1) Examination of Candidate Equipment

The result of examination on candidate equipment is shown in Table 2-12 below. Selection criteria in accordance with basic policy are listed below. If an item falls into the criteria, it is excluded from the scope of the Project.

(Equipment that a general training facility should be equipped with (versatility))

- Items for limited purpose and not frequently used

- Items whose basic function can be covered by existing equipment, freeware and facility installation
- Items required advanced skill to use efficiently

(Technical and financial feasibility of maintenance and operation of equipment)

- Items required large amount of operation and maintenance cost

In the light of essential for typical training facility, the number of the items is also examined.

Table 2-12 List of Candidate Equipment

№	Requested Equipment	Qty.	Prio-rity	Selection criteria				Judg-ment	Planned Qty.
				1)	2)	3)	4)		
	a) Training / Multipurpose Room								
1	Ceiling microphones integrated into Video and Audio System	6	A	✔				×	-
2	Cameras integrated into Video and Audio System	3	A	✔				×	-
3	Video conferencing system	1	A	✔				×	-
4	Surge protection device	1	A		✔			×	-
5	Smart board	3	A					○	3
6	LCD display	2	A	✔				×	-
7	Projector	3	A					○	3
8	Recessed screen	3	A					○	3
9	Electronic podium	3	A	✔				×	-
10	High performance computer	14	A					○	1
11	Green Screen for background to video presentation	1	B	✔				×	-
	b) Climate Change Management Room								
1	Commercial printer and photocopier with sorter	1	A		✔			×	-
2	Plotter	1	A					○	1
3	GPS unit	5	A					○	5
4	GPS camera	1	A					○	1
5	Unmanned Aerial Vehicle with built-in camera and GPS locator	1	B	✔			✔	×	-
6	Weather Animation and TV-weather Presentation software	6	B	✔		✔	✔	×	-
7	Climate Change Projections Downscaling and Mapping software	6	B	✔		✔	✔	×	-
8	Lightning Strike Software and Data Access and license	6	B	✔		✔	✔	×	-
9	Graphic design software	10	A	✔			✔	×	-
10	Microsoft office	20	A					○	7
11	Video editing software	5	A	✔			✔	×	-
12	Web-Design Software	2	A	✔			✔	×	-
13	GIS-mapping Software	6	A	✔			✔	×	-

14	Visualization Software	1	A	✔	✔			×	-
15	Web-Design Software	1	B	✔	✔			×	-
16	Rain gauge	1	A	✔				×	-
17	Anemometer	1	A	✔				×	-
18	Automatic weather station	1	A	✔				×	-
19	Solar radiation radiometer	1	A	✔				×	-
20	Solar water purifiers for demonstration	1	A	✔				×	-
	c)Server / Data Center								
1	Server Rack	5	A					○	1
2	APC Uninterrupted Power Supply	5	A					○	1
3	Surge protection device	1	A		✔			×	-
4	Switch and Console	5	A	✔				×	-
5	Climate measurement system	1	A	✔				×	-
6	Power measurement device	1	A	✔				×	-
7	Fire wall	2	A	✔				×	-
8	Router	2	A	✔				×	-
9	Rack Mount Server	16	A	✔				×	-
10	Server & Back-up software	1	A	✔				×	-
11	SAN Storage	8	A					○	1
12	Satellite phone with dish	1	B	✔			✔	×	-
	d) IT Business Center								
1	Printer / Copy machine(WB)	2	A		✔			×	-
2	All-In-One energy saving Computer	6	A					○	6
3	OCR Scanner	1	B	✔				×	-

(2) Equipment to procure

Specifications and purpose of the major equipment procured under the Project are described in Table 2-13 and Table 2-14 below. Equipment for server system will be procured to expand the data storage of existing server system and will be installed in the Server / Data room of PCCC on condition that Samoa side will procure and install the interface required for connection between the data storage under the Project and existing server system.

Table 2-13 Major Equipment Plan

Equipment	Q'ty	Description
a) Training / Multi-purpose Room		
Smart board	3	➢ To use for presentation etc in trainings
Projector	3	➢ To use for presentation etc in trainings
Recessed screen	3	➢ To use for presentation etc in trainings
High performance computer	1	➢ For data analysis work and preparation of training material etc.
b) Climate Change Management Room		
Plotter	1	➢ To make training and educational materials
c) Sever / Data Center		
Sever rack	1	➢ To install network equipment, data storage and UPS functionally
UPS	1	➢ To protect system equipment, storage and switch from unforeseeable power troubles

Data storage (for server)	1	➢ To store and keep digital data analyzed and collected ➢ To be connected to the existing server system
d) IT Business Center		
General-use computer	6	➢ To use for self learning for Trainings etc

Table 2-14. Summary of Major equipment Specifications

Equipment	Basic specifications
Smart board	Components: 1) LCD panel: > antagonal1,350mm 2) Touch panel: Electric pen 3) Interface: Input / output connector 4) E-pen: Light interception method 5) Fixing material: for wall mount
High performance computer	Components: 1) Processor: > 2.40 GHZ 2) OS：Windows 10 MS Professional, 2016 3) Chip set: Intel C602or C612 4) CPU core：> 6 core or more 5) Chassis：>15MB or more
Plotter	Components 1) Plotter: Printing function, Scanning function 2) Stand 3) Touch screen 4) Software for copying / scanning 5) Spindle
Data storage (for server)	Components: 1) Storage controller unit 2) Hard disc drive: 24 X (2TB) 3) Interface 4) FC switch

Requested items not included in the Project will be procured by SPREP as the implementation of trainings is confirmed.

2-2-3 Outline Design Drawing

The following outline design drawings will be presented on the following pages.

Site plan

Ground floor plan

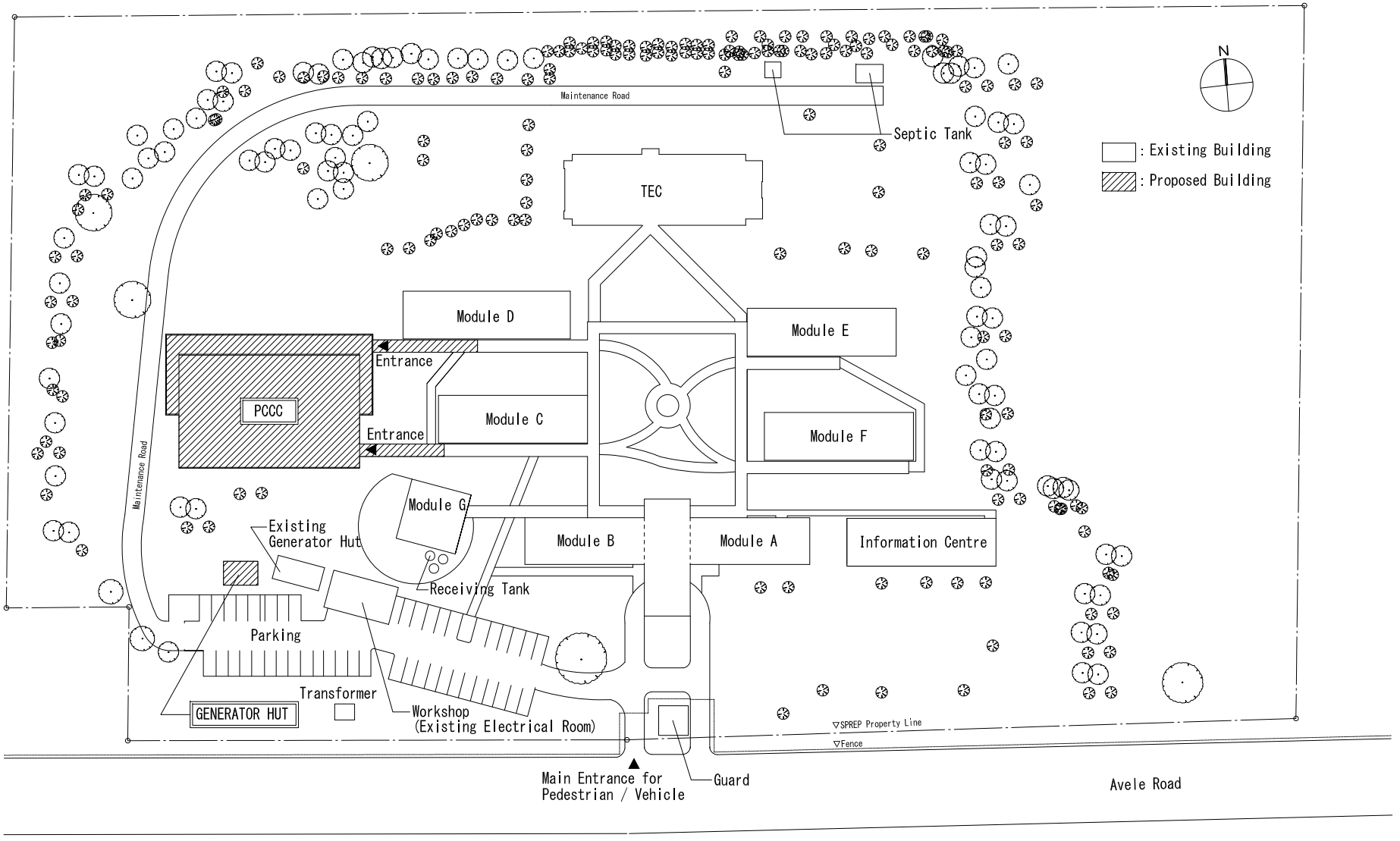
First floor plan

Roof floor plan

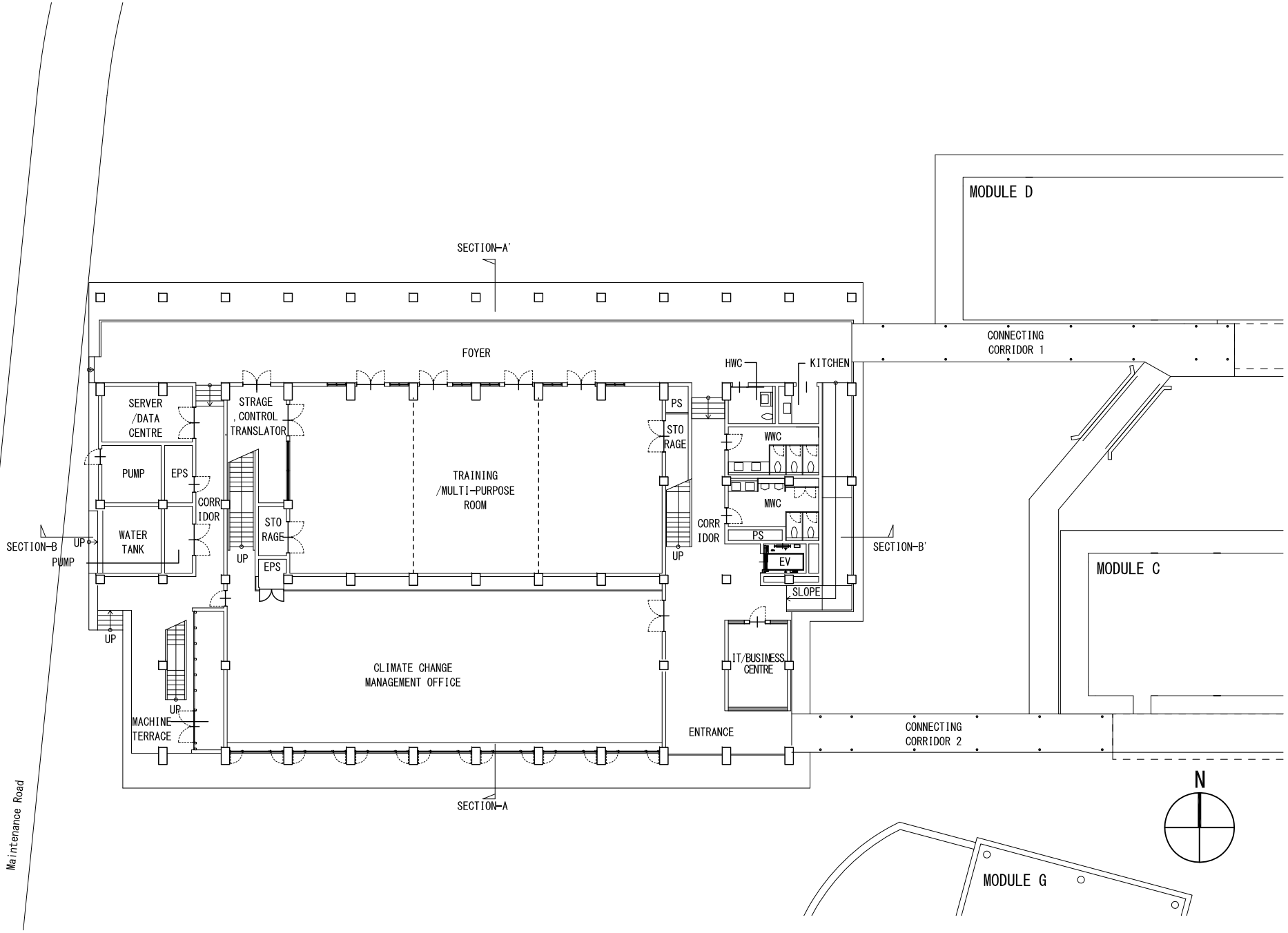
Elevations

Sections

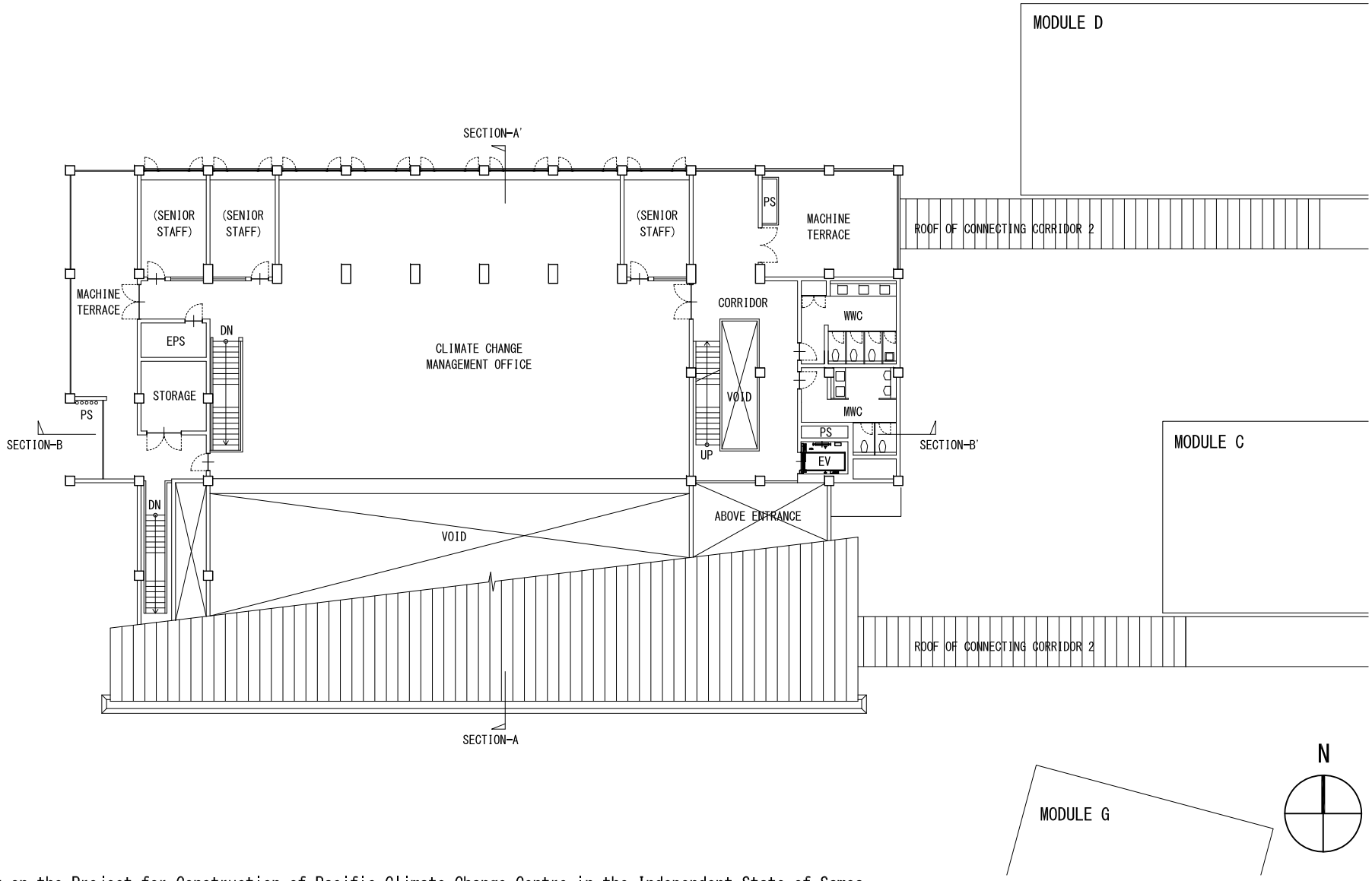
Generator hut



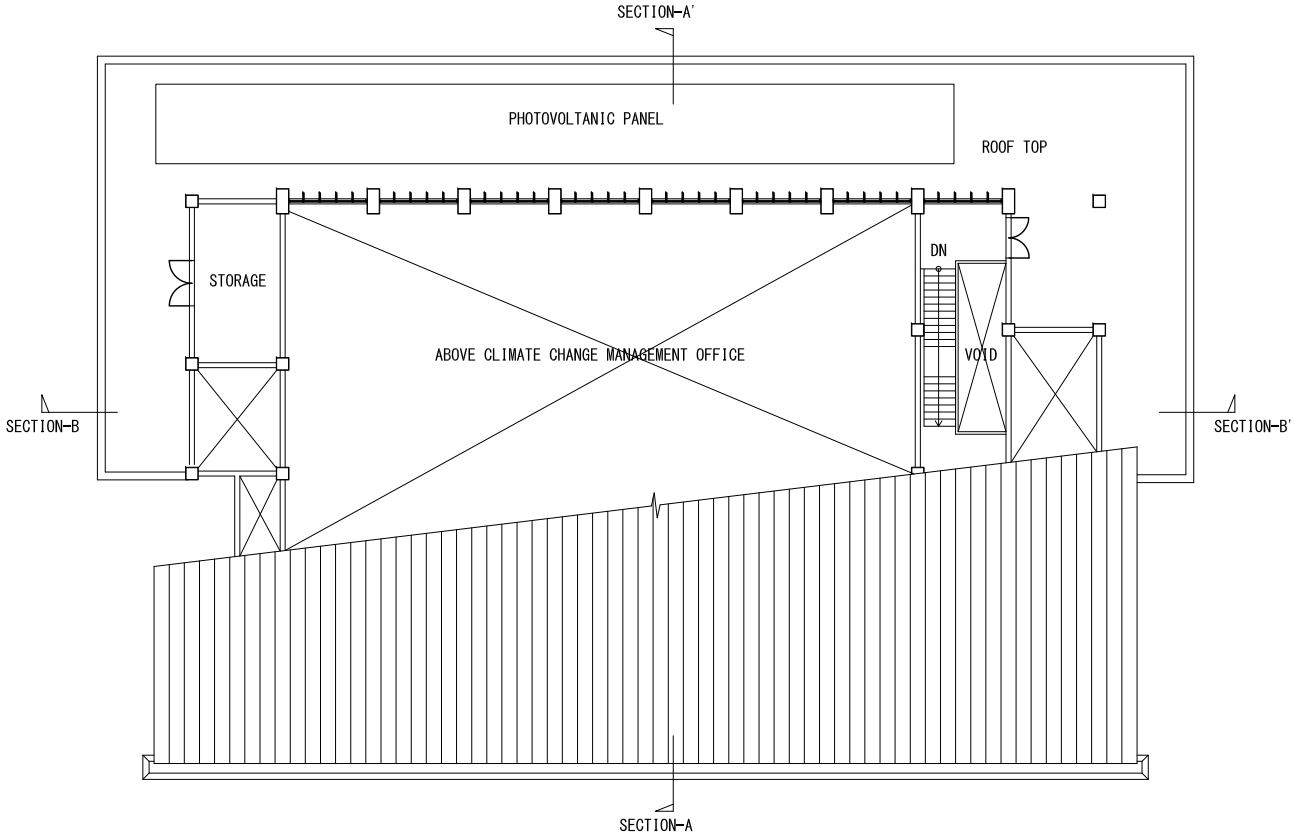
Site Plan S=1/1,200

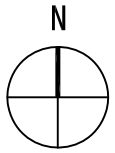


GROUND FLOOR PLAN S=1/300

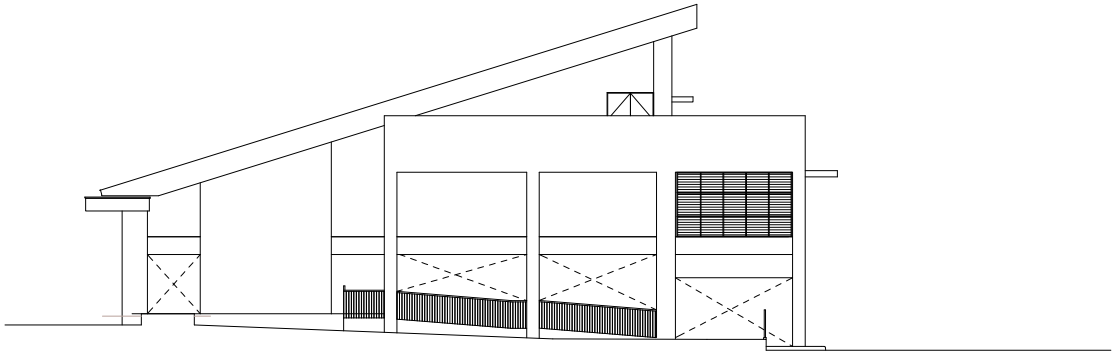


1st FLOOR PLAN S=1/300

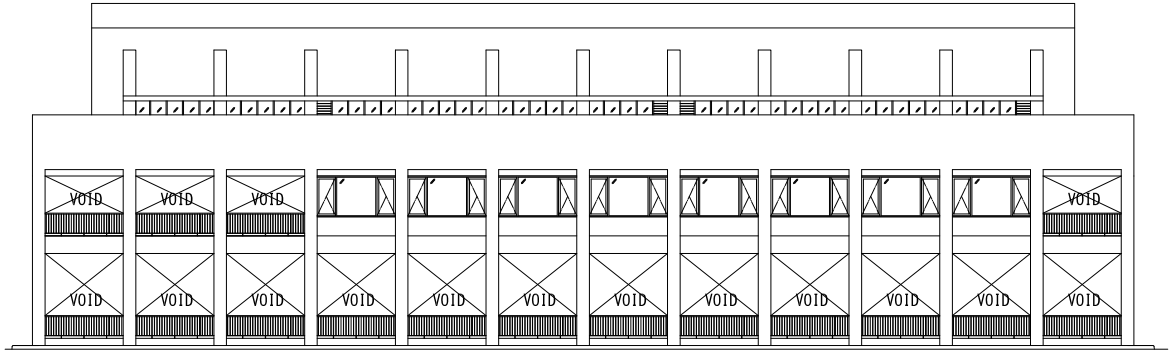




ROOF FLOOR PLAN S=1/300

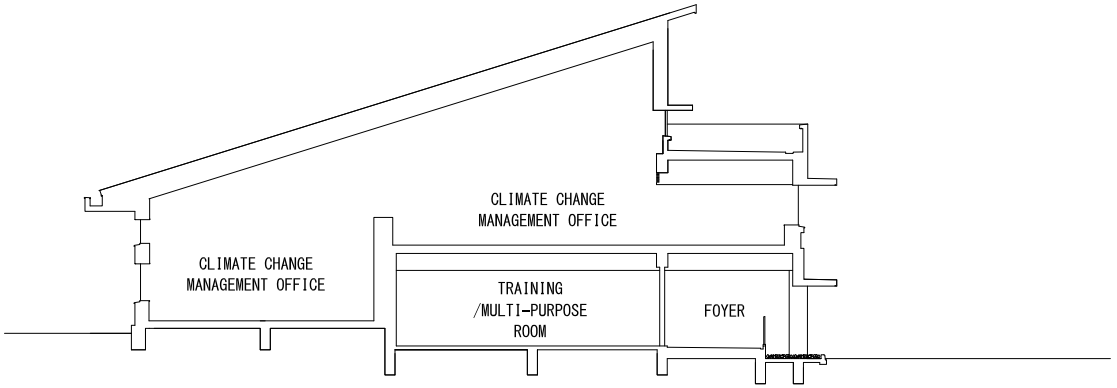


EAST ELEVATION

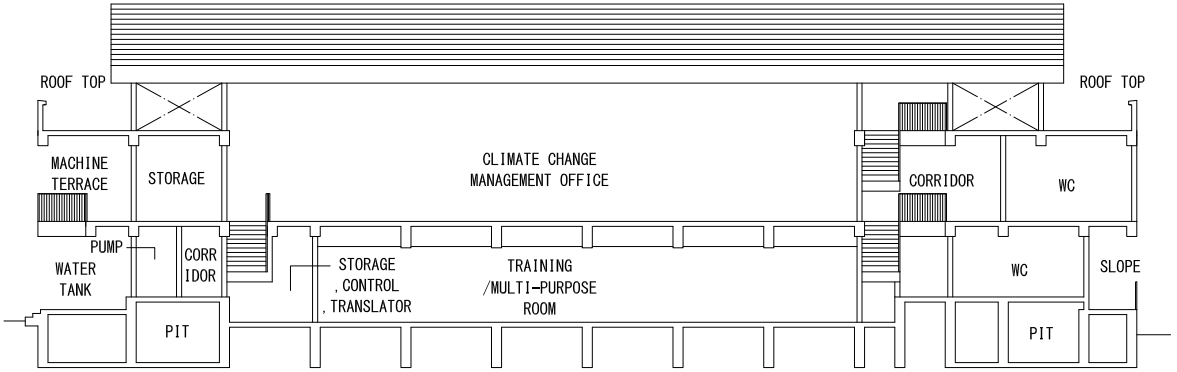


NORTH ELEVATION

ELEVATION S=1/300

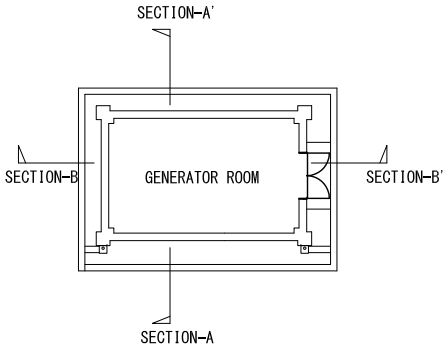


A-A' SECTION

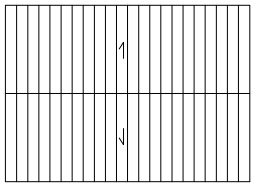


B-B' SECTION

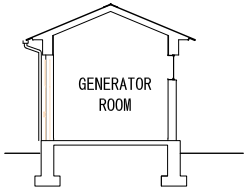
SECTION S=1/300



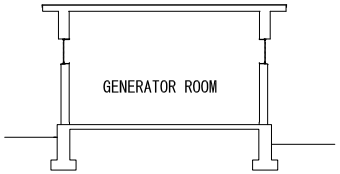
GROUND FLOOR PLAN



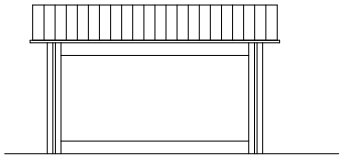
GROUND FLOOR PLAN



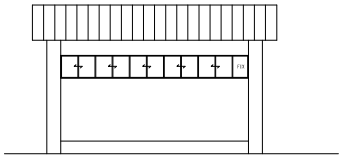
A-A' SECTION



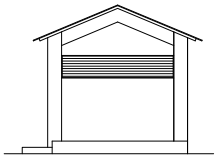
B-B' SECTION



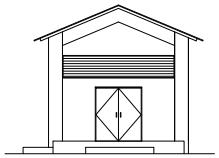
SOUTH ELEVATION



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION

GENERATOR HUT PLAN S=1/300

2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

This Project is to be implemented in accordance with Japan's Grant Aid Scheme. After the Project is approved by the Japanese Cabinet, the Governments of Japan and Samoa will sign an Exchange of Notes (E/N), which is followed by the conclusion of a Grant Agreement (G/A) between Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Government of Samoa. Subsequently, the Government of Samoa will enter into a consulting services agreement for the Project with a Japanese consulting firm, which will conduct a detailed design for the Project's facilities and equipment. Then, detailed design drawings and tender documents will be prepared for the tender. The Japanese construction company who will be awarded the relevant contracts will construct facilities and procure and install equipment for the Project.

Those agreement with consultant and contract with construction company need to be verified by JICA to become effective under Grant Aid Scheme.

Once the construction works start, a project supervision organization will be formed consisting of the implementing agency of Samoa, the Japanese consultant, and construction company.

(1) Project Implementation Structure

The executing agency of the Project is the Ministry of Finance and SPREP. The Ministry of Finance is in charge of the agreement/contract with the consultant and/or the contractor, Banking Arrangement, Payment of commission for Authorization to Pay and amended Authorization to Pay, budget allocation necessary for tax exemption regarding the Project and other necessary procedures. On the other hand, SPREP is in charge of procedures for Development Consent and building permit, leveling the ground of the construction site, planting and gardening works, removal of trees, extension of telephone lines, procurement of general furniture and other necessary works.

(2) Consultant

After the E/N and G/A are signed as mentioned above, the Ministry of Finance of Samoa will conclude a consulting services agreement for the detailed design and supervision of the Project with a Japanese consulting firm and obtain verification from JICA in accordance with the Grant Aid Scheme. After the agreement is verified, the consultant will prepare detailed design drawings and tender documents based on this preparatory survey report and discussions with the Ministry of Finance of Samoa and SPREP. Eventually, these documents will be explained to the Ministry of Finance of Samoa and SPREP to gain their consent.

During the tender and execution of the construction contract, the consultant is to assist in the tendering process and supervise the construction works based on the detailed design drawings and tender documents. For equipment procurement and installation, the consultant is also to assist in the

tendering process and supervise the procurement, installation, trial run, and commissioning of the equipment. The detailed tasks and responsibilities of the consultant are described as follows.

1) Detailed Design

Based on this preparatory survey report, the consultant is to create a detailed plan, review the equipment plan, and prepare tender documents consisting of relevant drawings, specifications, instructions to tenderers, drafts of contracts for construction works and equipment procurement. The consultant is also to estimate the costs of the construction and equipment procurement.

2) Assistance in Tendering

The consultant is to assist the executing agency of Samoa in tendering to select a contractor and in preparing paperwork for the contract. The consultant is also to report the results of the tenders to the Government of Japan.

3) Construction Supervision

The responsibilities of the consultant are to confirm whether the contractor performs its works properly as specified in the contract and to give them advice and guidance as well as coordinate all parties concerned from an impartial position to facilitate the smooth implementation of the Project. The major tasks of the consultant are described below:

- Examine and confirm the construction plans, working drawings, equipment specifications, and other relevant documents submitted by the contractor;
- Conduct pre-shipment inspection to examine and confirm the quality and performance of the construction materials, furniture, and equipment delivered;
- Ensure that building installations and equipment are delivered and installed and that operating instructions are given and demonstrated;
- Monitor and report the progress of the construction works; and
- Witness the commissioning of the completed facilities and equipment.

The consultant is also to report the progress of the Project, the process of payment, the commissioning of completed facilities and equipment, and other relevant matters to the entities concerned in Japan such as JICA..

(3) Contractor

A contractor is to be selected by open tender in which only qualified Japanese Corporations are eligible to participate. In principle, the lowest tenderer is to be awarded the contract with the Ministry of Finance of Samoa for building construction and equipment procurement. In accordance with the contract, the contractor is to construct facilities, and procure, deliver, and install equipment as well as provide the Samoa side with operation and maintenance training for the equipment. Additionally, the contractor is to provide logistic support based on the cooperation with the relevant manufacturers and local agencies so that the Project’s target organization can purchase spare parts

and consumable supplies and receive paid technical training after the equipment is handed over to them.

(4) Japan International Cooperation Agency (JICA)

Under the Grant Aid scheme, Japan International Cooperation Agency (JICA) conducts necessary operation for promoting the Project implementation as the implementing agency of the Government of Japan for the Project.

(5) Local Consultants and Contractors

A resident supervisor appointed from the Japanese consultant will execute all supervision works properly with the assistance of the local consultants as supervision assistants.

Considering local contractors' engineering and mobilizing capacities, they can perform works required as subcontractors of the Japanese contractor.

2-2-4-2 Implementation Conditions

(1) Points to Be Considered for Construction Works

1) Schedule Management

In Samoa, the rainy season from November to April poses considerable challenges in scheduling construction works. There will be a need to assure temporary areas / roads that would not be submerged in the construction site when it floods. Additionally, proper drainage measures should be taken during the rainy season to enable foundation and exterior works. The Japanese contractor will complete these preparatory works as well as make and manage a practical construction schedule by taking the above-mentioned challenges into account.

2) Safety Management

The construction site should be temporarily fenced to minimize the number of entrances to it during the construction works. The contractor should control circulation of construction vehicles and workers for the safety of SPREP personnel and other visitors. In addition, workers in the construction site are to be obliged to wear a helmet and work shoes and use safety belt in case of aerial work. Also, an emergency contact system will be formulated in order to get in contact with the Embassy of Japan and JICA office in Samoa and entities concerned in Japan promptly in the emergency case.

3) Anti-theft measures of materials

To prevent materials from theft, a 24-hour security with three-shift system is advisable to be introduced and available in the construction site.

(2) Points in equipment procurement

1) Equipment selection

- There are some local vendors that sell PCs in Apia, but the range of products is limited. In the light of securing after sales services including spare parts and consumables supply, it is planned to procure products of which manufacturers have local agents in neighboring countries such as New Zealand.
- In order to secure quality and installation of smart boards and projectors which will be installed in Training / Multi-purpose Room it is planned to procure such items from neighboring countries or Japan.

2) Tax exemption

Any kind of Tax such as value adding tax, custom duty, and other fiscal levies, which may be imposed in Samoa will be exempted. In order to get approval of tax exemption from the Ministry of Finance, a copy of the agreement or the contract of the Project will be submitted to the Ministry. The Ministry of Finance will undertake necessary procedures for the tax exemption.

2-2-4-3 Scope of Works

This Project is implemented by mutual cooperation between the Governments of Japan and Samoa side including the Government of Samoa and SPREP. SPREP will be renting the PCCC from the Government of Samoa. The demarcation of responsibilities between the Governments of Japan and Samoa side in the implementation of the Grant Aid cooperation of the Government of Japan is as follows.

(1) Undertakings by the Government of Japan

The following undertakings on consulting, construction, procurement and installation of equipment in the Project are to be provided by the Government of Japan.

1) Consulting services

- Preparation of detailed design of target facilities and equipment as well as tender documents
- Operational support for selection of the contractor as well as contracting works
- Supervision of construction works and advice on delivery, installation, operation instruction, and maintenance of equipment

2) Facility construction and equipment procurement / installation

- Construction of the target facilities
- Procurement of construction materials and equipment of the target facility and their transportation and delivery to the facility.
- Installation, trial run, and adjustment of the equipment procured in the Project
- Explanation and training of operation and maintenance of the equipment procured in the Project

(2) Undertakings to be taken by the Samoa side

Table 2-15. Undertakings to be taken by the Samoa side

Construction works
Secure the lot of land necessary for the Project Level the ground of the Project site (Removal of fallen trees, cutting of trees, ground leveling) Planting and gardening works around the facilities Extend telephone lines Procurement and installation of interface to existing server system
Maintenance
General furniture, etc. other than those provided by the Japanese side Consumables and spare parts Utilize and maintain the Project facilities and equipment
Administrative procedures
Commissions for the Banking Arrangement (B/A), payment to contractors, and Authorization to Pay (A/P) and amended A/P Acquire development consent and building permission, and other permissions required Prompt customs clearance and tax exemption of the construction material and equipment imported for the Project Exemption from various local taxes of the Japanese nationals and corporate entities and parties concerned from third country engaged in the Project Necessary arrangements for the Japanese nationals and parties concerned from third country to enter into and stay in Samoa for the duration of the Project All necessary expenses, other than those covered by the Government of Japan under the Grant Aid Scheme

2-2-4-4 Consultant Supervision

(1) Consultant Supervision Policy

Based on the findings of the preparatory survey, the consultant forms the Project team to be involved in the whole process of the Project from the detailed design stage and ensures the smooth implementation of services, in accordance with the guidelines for the Japanese grant aid projects. The policy for the supervision of the construction work is the following:

- Keep in close contact with the responsible officials of the relevant agencies of Samoa and Japan to ensure that the construction of facilities and the installation of equipment are completed without delay.
- Give prompt and appropriate instructions and advice to the building contractor and their related members from an impartial position.
- Provide proper instructions and advice on the operation and maintenance of the facilities and equipment after their installation and commissioning; confirm the completion of the facility

construction and equipment installation in accordance with the contracts; and then complete the contracts by witnessing the commissioning of the facilities and equipment to confirm their acceptance by the Ministry of Finance and SPREP. Inspect the completed facilities before expiry of guarantee period and prepare an inspection report of one year after completion.,

(2) Consultant Supervision Plan

In addition to a supervisor and local engineers stationed in the Project site throughout the construction period, engineers in the following fields are to be dispatched to Samoa in accordance with the construction progress.

- Project manager : Overall coordination and supervision of process and quality control
- Architect : Explanation of design intent and confirmation of materials
- Structural engineer : Confirmation of bearing capacity of soil and structural materials
- Mechanical engineer : Explanation of design intent and midterm and final inspection of plumping and air-conditioning works
- Electrical engineer : Explanation of design intent and midterm and final inspection of electrical works

(3) Contractor's Supervisory Engineer

To complete facilities consistent with design documents within the schedule, the contractor is required to manage joint works with local contractors smoothly and proper technical guidance and schedule management. Understanding the characteristic of the target facilities, the contractor needs to station a construction manager who is familiar with the local conditions to realize designated quality of the facilities.

(4) Procurement Supervision Plan

1) Meetings with the Contractor and Confirmation of Manufacturing Drawings

Meetings on the equipment procurement schedule (ordering, inspection, shipping, transportation, and installation), organization of procurement work (members, and reporting flow and so on), documents required in bidding documents (equipment manufacturing drawing, utility list and so on) will be held.

2) Inspection before Shipping

The consultant will attend inspection of equipment conducted by the contractor at factories of manufacturers before shipping if necessary since some equipment will be assembled at the factories before delivery to designated warehouse for packing for export.

3) Inspection before Shipment

A third party inspection organization selected by the consultant carries out inspection of

equipment before shipment on behalf of the consultant. The consultant will prepare specifications for inspection, confirmation of inspection certificate, and prepare completion report of inspection for the client of the Project.

4) Procurement Supervision on Site

The consultant will supervise procurement work by the contractor such as installation work, inspection for the number and condition of procured equipment, trial-operation, initial operation guidance and operation guidance with the person in charge of the Project in SPREP. The consultant will personally confirm if delivered equipment meets name of manufacturer, model number, and specification as stipulated in the contract, and also collect a list of participants in initial operation guidance with name, department he or she belongs to, title and signature with completion certificate of the guidance. The procurement supervisor will conduct abovementioned service and station on site from installation work to hand-over.

5) Hand-Over of Equipment on Site

The consultant will report to the person in charge of the Project in SPREP and Ministry of Finance when hand-over is successfully completed. The procurement supervisor will undertake this procedure.

6) Inspection before Completion on Site

The consultant will conduct inspection of equipment before expiry of guarantee period and prepare an inspection report.

(5) Procurement Management Plan by the Contractor

1) Confirmation of Drawings for Manufacturing Equipment

The contractor will get approval from the consultant on the equipment procurement schedule (ordering, inspection, shipping, transportation, and installation), organization of the Project implementation (members, and reporting flow and so on), documents required in tender documents (equipment manufacturing drawing, utility list and so on).

2) Inspection before Preshipping

The contractor will conduct inspection of equipment at factories of manufacturers before pre-shipping, in the presence of the consultant if necessary, since some equipment will be assembled at the factories before delivery to designated warehouse in the packing for export.

3) Inspection before Shipment

The contractor will hold meeting with manufacturers prior to inspection, then attend inspection of equipment before shipment conducted by a third party inspection organization, and will submit to the

inspector a copy of shipping documents (Bill of Lading (B/L), Insurance Policy, Invoice, Packing list, and so on).

4) Procurement Management on Site

The contractor will conduct inspection of the number and condition of equipment, trial-operation, initial operation guidance and operation guidance in the presence of the person in charge of the Project in SPREP and the consultant. A procurement management engineer on behalf of the contractor will undertake theses works.

2-2-4-5 Quality Control Plan

(1) Basic Policy and Quality Test (Facilities)

To secure the quality level of the construction works, construction supervision is provided based on the standards commonly applied in Samoa or Japanese standard. Table 2-16 shows the quality control plan for major construction works.

Table 2-16. Qulatiy Control Plan

Work Type	Control Parameter	Control Value	Inspection Method	Quality Standards	Inspection Frequency	Analysis of Results
Earth work	Bearing capacity of soil	294kN/m^2 (30ton/m^2)	Plate bearing test	International standard*	1 location per site	Report
	Slope angle	Within planned range	Gauge, visual inspection		As needed	Photos, inspection documents
	Leveling tolerance for excavation work	Within +0～ -5cm	Level, visual inspection		Same as above	Same as above
	Thickness of replaced soil	+5cm～0	Same as above		Same as above	Same as above
Reinforcement work	Reinforcement cover thickness	Superstructure with finishing layer: 30mm or more	Visual inspection, measurement	International standard*	As needed	Photos, inspection documents
		Foundation in contact with soil: 60mm or more	Same as above		Same as above	Same as above
		Others: 40mm or more	Same as above		Same as above	Same as above
	Shape tolerance	Stirrup / hoop: ±5mm	Same as above		Same as above	Same as above
		Other: ±10mm	Same as above		Same as above	Same as above
	Tensile test	Standard strength or more	Sampling at the work site or at the time of shipment		Every 200t of steel bars of each diameter; 3 test pieces at each test	Report
Concrete work	Compression strength	Strength for quality control:	Test with attendance	International standard*	3 or more test pieces per batch and every	Report

Work Type	Control Parameter	Control Value	Inspection Method	Quality Standards	Inspection Frequency	Analysis of Results
		27N/mm^2 or more			50m^3	
	Slump value	15cm±2.5cm	Test with attendance		Casting	Photos, inspection documents
	Chloride content	0.3kg/m^3 or less	Test with attendance		Same as above	Same as above
	Air content	4.5% ±1.5%	Test with attendance		Same as above	Same as above
	Concrete temperature (at the time of delivery)	35 Celsius degrees or less	Test with attendance		Same as above	Same as above
	Shape tolerance	Flatness of finishing: 10mm or less per 1m	Measurement		At the time of form removal	Same as above
Masonry work (concrete block)	Compression strength	According to each plant's management value	Test with attendance after the plant is selected	International standard*	Once before shipment from the factory	Report
Plastering, painting, roofing, door and window works	Materials, storage methods, work methods, mixing, coating thickness, curing, tolerance	According to technical specifications	Same as left	Same as left	As needed	Photos, inspection documents
Plumping work	Water supply pipes	No leakage	Water pressure test (1.75Mpa for 60 min)	International standard*	Inspect at the completion of piping work	Report
	Drainage pipes	Same as above	Water filling test			
Electrical work	Cables	According to technical specifications	Insulation test	International standard*	Inspect at the completion of cabling work	Report
			Conductivity test			

* BS, ASTM, JIS, ACIS and other international standards

(2) Basic Policy (Equipment)

Assuming the main supplying country in order to ensure economic rationality, the country of origin and supplier of equipment assumed to be procured are reconfirmed at the detailed design phase. At the time of selecting contractors, the country of origin and suppliers are confirmed to ensure proper quality.

(3) Quality Inspection (Equipment)

At the time of equipment procurement and installation supervision, detailed discussion on the schedule, work contents, layout plan, etc. are made with the Samoa side and the contractor to formulate the optimal procurement plan for the Project. Subsequently, the whole operations are to be smoothly progressed while carefully adjusting equipment to architectural plan. Points to be considered for procurement supervision are as follows:

1) Promptly after the conclusion of the contract, the consultant, contractors and personnel of the Samoa side in charge of the Project facilities confirm equipment to be procured, layout plan, the country of manufacture, suppliers, and installation conditions.

2) Shipment of products from Japan is commissioned to a third party, and pre-shipment inspection is conducted in attendance of the consultant.

3) The consultant dispatches a procurement supervisor for installation work of equipment supplier, and the said supervisor attends works on site to supervise connecting work between facilities and equipment based on the layout plan.

4) At the inspection of commissioning of equipment, the number, inconsistency, and specifications and functions required of equipment as set forth in the contract as well as the instruction of use are confirmed to hand over the equipment.

2-2-4-6 Procurement Plan

(1) Construction Materials

1) Procurement Policy

Construction materials are procured from Samoa or Japan in principle. Works required execution directly by manufactures and element required regular maintenance after the completion, in particular, are assumed to be procured from third country.

2) Procurement Plan

- Structural work

  Structural materials such as sands, gravels, cements, and concrete blocks for partition walls are to be procured locally. Reinforcing bars and formwork materials are to be procured from Japan.

- Finishing work

  Both interior and exterior finishing materials, such as aluminum sashes, wood materials, tiles, roof sheets, paint, and glass, are to be procured from Japan.

- Plumbing work

  Submersible pumps, tanks and sanitary appliance are to be procured from Japan.

- Electrical work

  Electrical materials such as lighting fixtures, power panels, cables / wires and conduits are to be procured from Japan.

Table 2-17. List of Major Construction Materials to be procured

	Procurement location		
	Samoa	Japan	Third country
[Materials]			
Portland cement	○		
Aggregate	○		
Deformed bar		○	
Concrete formwork plywood		○	
Concrete block	○		
Structural steel		○	
Waterproofing material		○	
Light gauge steel		○	
Roof sheet		○	
Aluminum door / window		○	
Wooden door / window		○	
Glass		○	
Tile		○	
Gypsum board		○	
Acoustic ceiling material		○	
Paint		○	
[Equipment and electricity]			
Air conditioner		○	
Ceiling fan		○	
Pump		○	
Pipe		○	
Sanitary appliance		○	
Distribution panel		○	
Conduit and wire		○	
Lighting fixture		○	
Lightning arrester		○	
Fire hydrant		○	
Solar power system		○	○
Elevator			○
Anaerobic wastewater treatment system	○		
[Construction machinery]			
Generator 55kW	○		
Truck crane 30t	○		
Bulldozer 15t	○		
Backhoe 0.8m^3	○		
Tire roller 8～20t	○		
Vibrating roller 0.8～1.1t	○		
Tamper 60～100kg	○		
Truck 11t	○		
Submersible pump Dia. 150mm	○		
Concrete mixer 0.3m^3	○		
Concrete pump vehicle 60 m^3/h	○		

(2) Equipment procurement

In principal equipment will be procured from Samoa and Japan. In addition, in order to ensure economic rationality procurement plan including third countries will be examined.

Table 2-18. Procurement plan for major equipment

Equipment	Procurement		
	Samoa	Japan	Third country
Smart board	○	○	○
Projector		○	
Recessed screen		○	
Computer (one (1) High performance computer and six (6) general-use computers		○	○
Plotter		○	○
Data storage (for server)		○	○

Transportation route is assumed as follows;

	Marine transportation		Marine transportation		Inland transportation		
Japan	→	Auckland	→	Apia	→	Project site	

2-2-4-7 Initial Operation Guidance / Operational Guidance Plan

The initial guidance on operation of equipment for all equipment procured under the Project will be provided to the users by technicians and / or engineers sent from the supplier at the time of delivery. The guidance will be included the operation method, precautions during handling, daily inspection, troubleshooting and regular maintenance for end users. It is planned that checking method before and after operation of the equipment will be thoroughly taught in order to keep the equipment in a good condition for a long time.

2-2-4-8 Soft Component (Technical Assistance) Plan

Technical assistance for proper utilization and maintenance of the facilities and equipment under the Project is not included in the Project since it is deemed that existing operation and maintenance system in SPREP is properly organized.

2-2-4-9 Implementation Schedule

To implement this Project through Grant Aid Scheme of the Government of Japan, the following steps are to be taken in the implementation schedule of the Project:

- The Governments of Japan and Samoa will sign E/N and JICA and the Government of Samoa will conclude G/A.
- JICA will recommend a Japanese consulting firm to the Government of Samoa.
- The Ministry of Finance of Samoa and the consulting firm will enter into detailed design and supervision agreement.
- The detailed design stage is followed by tender procedure. After conclusion of a contracts, construction and equipment works are commenced.

(1) Detailed Design

Based on the preparatory survey, the consultant is to make a detailed plan and tender documents consisting of detailed design drawings, specifications, calculation sheet, instructions to tenderers, etc. The consultant is to have close consultations with SPREP in the initial and final phase of detailed design works and submit the final product. Upon their concurrence, detailed design phase are completed.

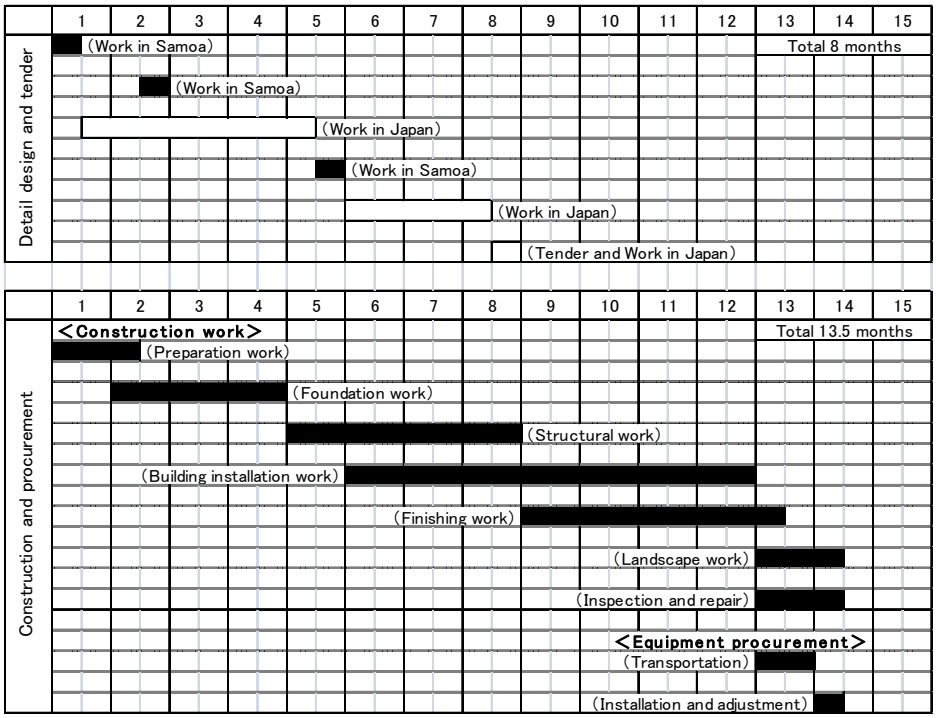
(2) Tender

After the detailed design phase, the prequalification (P/Q) of the tender is announced in Japan. Then, the Ministry of Finance of Samoa invites the construction companies that meet the P/Q criteria to the tender. After tender is made properly in the presence of parties concerned, the lowest tenderer, whose tender is deemed appropriate, is to be awarded the contract for construction and equipment works with the Ministry of Finance of Samoa.

(3) Construction Works and Equipment Works

After the signing of the contract, the contractor is to obtain verification from JICA to commence construction and equipment works. Given the size of the proposed facilities and conditions of local construction situations, approximately 13.5 months in total will be required for construction works, procurement and installation of equipment, and operational instruction. This presupposes smooth procurement of materials and equipment and prompt procedures of relevant organizations of the Samoa side, and smooth implementation of undertakings of the Samoa side.

Table 2-19. Project implementation schedule



2-3 Obligations of Recipient Country

This Project will be implemented under the Grant Aid Scheme of the Government of Japan, and the Samoa side will be responsible for the following tasks.

(1) Preparation Work

- Secure the lot of land necessary for the Project
- Level the ground of the Project site (removal of fallen trees, cutting of trees and ground leveling)
- Planting and gardening works around the facilities provided by the Japanese side
- Extend telephone lines
- Procurement and installation of interface to existing server system

(2) Maintenance

- Procure general furniture and equipment other than those provided by the Japanese side
- Procure consumables and spare parts required to maintain the Project's facilities and equipment
- Utilize and maintain the Project's facilities and equipment properly and effectively

(3) Administrative Procedures

- Bear commissions for the Banking Arrangement (B/A), payment to contractors, and Authorization to Pay (A/P) and amended A/P
- Acquire development consent and building permission regarding construction works
- Obtain permissions, licenses, and other authorizations necessary for the Project
- Ensure prompt unloading, customs clearance and tax exemption of the construction material and equipment imported for the Project
- Exempt the Japanese nationals and corporate entities and parties concerned from the third country engaged in the Project from customs duties, taxes, and any other levies and charges in Samoa
- Make necessary arrangements for the above-mentioned Japanese nationals and parties concerned from third country enter into and stay in Samoa to engage themselves in the Project
- Bear all expenses, other than those covered by Japanese Grant budget, necessary for the completion of the Project

2-4 Project Operation Plan

2-4-1 Operation and Maintenance System

(1) Operation System

The facility and equipment of PCCC constructed and procured by Japanese Grant Aid will be rented to SPREP from the government of Samoa and utilized and maintained by SPREP, though the Project will be implemented based on the request by the Independent State of Samoa where SPREP is headquartered.

The SPREP contribution from member countries, approx. one million USD per year is appropriated in the budget for corporate services, on the other hand, funds from international organizations and / or donors for respective project or Program is appropriated for the budget for projects and programs. (a part of the funds is appropriated for corporate services.) Annual total budget including both corporate services and project and program has been significantly increasing from 9 million USD in 2010 to 17 million USD in 2015 though it is influenced by timing of commencement and completion of the projects and programs.

Maintenance cost of the facility and the equipment covered by Japanese Grant Aid will be borne from the budget for corporate services, on the other hand, operation cost such as cost for training in PCCC will be borned from the budget for projects and programs.

The number of the post in whole SPREP and CCD is 122 and 33 in 2015 respectively. Both figures are expected to increase significantly.

Management works of trainings and projects and / or programs related to climate change will be conducted by staff stationed in Climate Change Management Office in PCCC.

(2) Maintenance System

A Property Service Officer is assigned to corporate service department as a responsible officer for facility maintenance and management who is in charge of preparation of facility maintenance plan, procurement of services and contracts for outsourcing. Works of security, clearing, gardening, garbage collection, maintenance of air conditioners and emergency generators will be outsourced.

Simple maintenance of equipment is undertaken by CCD staff while in difficult repair works are to be requested to manufacturers or local agents.

2-4-2 Maintenance Plan

(1) Facilities

The maintenance of facilities is categorized into two types: (i) daily cleaning and (ii) repair of parts from wear and tear, damage, and deterioration. The repair of facilities mainly consists of the

renovation and restoration of the interior and exterior finish on the structure. Facilities should be refurbished every decade to retain their functions. Items for regular inspection and repair which affect the lifespan of facilities will be presented in the maintenance manuals submitted by the contractor at the commissioning of the facilities. Detailed inspection and cleaning methods will be also explained.

Regular inspection points are summarized in Table 2-20 below.

Table 2-20 Summary of regular inspection points of facilities

	Inspection and maintenance points	Frequency
Exterior	Restore and repaint exterior walls	Repaint every 5 years; Restore every 3 years
	Inspect and restore roofs	Inspect every 3 years; Restore every 10 years
	Clean gutters and drainage surroundings regularly	Every year
	Inspect and repair exterior door and window seals	Every year
	Inspect and clean ditches, manholes, etc.	Every year
Interior	Renovate the interior	As necessary
	Restore and repaint partition walls	As necessary
	Replace ceiling materials	As necessary
	Adjust doors and windows to fit the openings	Every year
	Replace door handles, hinges, etc.	As necessary

(2) Building Equipment

What is important to maintain building equipment is daily preventive maintenance before there arises a need to repair defects and replace parts. Its lifespan can be extended by normal operation and daily inspection, lubrication, tune-up, cleaning, and repair. Daily maintenance can prevent defects and accidents.

Equipment such as water pumps needs periodical inspection and maintenance. It is important for these kinds of equipment to have annual inspection. The general lifespan of major building equipment is shown below in Table 2-21.

Table 2-21. Lifespan of building equipment

	Equipment	Lifespan
Electrical installations	・ Distribution panel ・ LED lamp ・ Emergency generator	20-30 years 40,000 hours 30 years
Plumbing installations	・ Pump, pipe, and valve ・ Tank ・ Sanitary ware	15 years 20 years 25-30 years
Air-conditioning installations	・ Pipe ・ Exhaust fan ・ Air conditioner	15 years 20 years 10 years

(3) Equipment

SPREP usually concludes supply contract including three-year guarantee for equipment for ICT service. Since items required advanced maintenance skill is not included in the Project, SPREP staff can sufficiently deal with deficiency of equipment which would happen in an everyday work.

In case of difficult failure which SPREP staff cannot cope with, equipment with serious deficiency is sent to vendors located in neighbor country such as New Zealand for its repair.

Generally, local vendors can supply equipment but can’t provide sufficient maintenance services.

2-5 Project Cost Estimation

2-5-1 Initial Cost Estimation

(1) Estimated Cost to be Borne by the Japan Side

This information is closed dut to the confidentiality

(2) Estimated Cost to Be Borne by the Samoa Side

Estimated cost to be borne by the Samoa side during the Project implementation is shown in Table 2-22 below.

Table 2-22. Estimated cost to be borne by the Samoa side

Item	Estimated cost (NZD)	Estimated cost (JPY)
Cutting and removal of existing trees	10,600	860,000
Ground leveling of the Proejct site	6,700	544,000
Planting and gardening	9,000	731,000
Extension of telephone lines	38,100	3,091,000
Procurement and installation of interface to existing server system	6,200	503,000
Procurement of general furniture and equipment	13,300	1,079,000
Acquisition of development consent and building permission	61,000	4,948,000
Commissions for Authorization to Pay, payment to consultant and contractor	12,200	990,000
Total	157,100	12,746,000

(3) Conditions for Estimation

Conditions for estimation is assumed are follows:

1) Estimating time: November 2015
2) Exchange rate: 1NZD = 81.12JPY, 1USD＝122.20 JPY
3) Construction and procurement period: See the Project implementation schedule for the detailed plan and construction / installation work periods.
4) Other: The cost shall be estimated in accordance with Japan's Grant Aid Scheme.

2-5-2 Operation and Maintenance Cost

(1) Operation and Maintenance Cost

Table 2-23 shows operation and maintenance cost of facilities and equipment necessary from 2018 after hand-over.

Table 2-23. Estimated operation and maintenance cost

(Unit: NZD / year)

Item	Estimated expenditures after completion of the Project
1) Electricity	69,627
2) Water	395
3) Fuels	2,784
4) Communication	28,197
5) Facility maintenance	6,000
6) Elevator maintenance	4,000
7) Operation and maintenance of equipment	5,547
Total	116,550 (Approx. 9,091,000 JPY)

※Price escalation up to 2018 when operation of the facilities and equipment will start is included.

[Basis of Calculation]

1) Electricity

The monthly average power consumption of existing buildings is 21,400kWh; hence, the annual power consumption is calculated as follows:

21,400kWh x 12 months = 256,800kWh

The total floor area of existing buildings is approx. 3,075m^2; hence, the annual power consumption of the new buildings is assumed as follows:

256,800kWh / 3,075m^2 x 1,600m^2 ≈ 133,600kWh

On the other hand, annual power generation by 20kW solar power generation system installed under the Project is assumed as 21,600kWh[3]; hence, the difference is as follows: 133,600kWh - 21,600kWh = 112,000kWh.

Based on the unit electricity rate of 0.96WST, the calculation is made as follows considering the inflation rate of 2.79%:

112,000kWh x 0.96WST x 1.0279 x 0.63 NZD / WST ≈ 69,627NZD

2) Water

Existing monthly average water tariff for 122 staff is SAT$114.00.

The capacity of the new building is 54 staff and annual water tariff is calculated as follows considering the inflation rate of 2.79%:

114.00WST / MONTH x 12 / 122 x 54 x 1.0279 x 0.635NZD / WST ≈ 395NZD

[3] Calculated based on solar radiation record in Kanto region in Japan published by New Energy and Industrial Technology Development Organization on 30th March, 2012.

3) Fuels

A) Emergency generator

Operation cost for a diesel generator newly installed under the Project will be needed. Blackout is assumed to occur twice in a month in average so that the calculation is made as follows based on three hours of average operating time per operation and considering the inflation rate of 2.79%:

17.1ℓ/h x 3 hours x 2 operations x 12 months x NZD2.2/ℓ x 1.0279 ≈ 2,784NZD

4) Communication

Considering the inflation rate of 2.79%, the calculation is made as follows:

A) Internet

No change from existing contract is assumed: hence, there will be no increase by construction of the new building under the Project.

B) Telephone

The monthly average of existing telephone maintenance cost (24 units) is 7,200WST, and the additional half amount will be assumed to be required considering the proportion of the staff number.

7,200WST / 2 x 12 x 1.0279 x 0.635NZD / WST = 28,197NZD

5) Facility maintenance

A) Architectural repair cost

Although the building repair cost varies each year, the annual average cost for the first 10 years from the completion of the facilities is assumed to be equal to 0.1% of the construction cost of finishing works.

2,000 NZD / year

B) Building equipment repair cost

Although the cost is rarely incurred for the first five years from the completion of the facilities, the frequency of replacement of spare and defective parts can increase after that. The annual average building equipment repair cost for the first 10 years is assumed to be equal to 0.2% of the building equipment that need to be replaced.

4,000 NZD / year

6) Elevator maintenance cost

Annual regular maintenance is needed for proper maintenance of elevators.

4,000 NZD / year

7) Maintenance costs of equipment

Table 2-24 summarizes the estimation and breakdown of annual maintenance cost of equipment.

5,547 NZD / year

Table 2-24. Breakdown of the maintenance costs of newly procured equipment

Equipment	Qty.	Details (for 1 unit)	Sub-total
Projector	3	Mercury lamp: 50,000JPY / lamp 50,000JPY × 3 lamps=150,000JPY	150,000JPY
Data Storage	1	Approx. 5% of equipment cost is assumed	300,000JPY
Estimation of annual maintenance costs			450,000JPY (5,547NZD)

(2) Program management charge appropriated as operation and maintenance cost

Maintenance costs of facilities and equipment in the whole SPREP headquarters including those of PCCC are disbursed from the budget of corporate services department. All projects and programs are charged approx. 10% of projects or programs cost as a program management fee. It is appropriated as the income for the budget of the department and paid for personnel necessary for management of projects or programs and operation and maintenance of facilities and equipment. Table 2-25 shows incomes as the program management charge in the past six years. Reflecting tendency of business expansion of SPREP average annual increase rate from 2010 to 2015 is 12% and the income in 2015 is 1,129,449 USD (approx. 127,210,000 JPY). Considering further business expansion in the future, it is deemed that Program management charge can be accommodated sufficiently for the operation and maintenance cost for the facilities and the equipment under the Project from 2018 after hand-over.

Table 2-25. Incomes as program management charge in the past six years (USD)

Item	2010	2011	2012	2013	2014	2015
Program management Charge	646,112	755,601	846,214	939,518	1,169,274	1,129,449

Chapter 3 Project Evaluation

Chapter 3 Project Evaluation

3-1 Preconditions

The site for the Project has already been secured within the premises of SPREP, accordingly there are no preconditions for land acquisition. Preparation work (including tree felling and removal of fallen trees) are to be handled under the responsibility of SPREP. In addition, it is supposed that SPREP shall undertake the necessary procedures for development permits, building permits, tax breaks, and items under the responsibility described in chapter 2 in a timely manner so that there are no adverse effects on the implementation of the Project.

3-2 Necessary Inputs by Recipient Country

It is necessary for SPREP to properly implement or prepare the followings in order to accomplish the overall plan of the Project.

- Items under their responsibility previously described in sections 2-3
- Securing the necessary budget for operation and maintenance of the procured equipment and constructed facilities.
- Securing the necessary budget and human resources required for climate change-related affairs, including training activities

3-3 Important Assumptions

As the budget for training activities planned in the PCCC can be secured only by supports from donor agencies for each projects or programs, the project effects and sustainability is conditional upon that SPREP continues to receive donor supports in the climate change field and implements training programs as planned.

Considering the recent international situation in the climate change field, in light of the agreement reached at COP21, it is expected that the priority level of climate change countermeasure investment by donors will increase going forward. UNDP has until this point positioned SPREP as the largest cooperating agency in the Pacific region, and most environment projects are implemented through SPREP. UNEP and WMO also have offices within SPREP and maintain close relations. Furthermore, SPREP was accredited as an implementing entity with intermediary functions to the GCF in 2015, and its budget for activities is seemd significantly increase owing to the capital from the Fund. In light of the above, it is presumed that the prerequisites are highly likely to be fully met.

3-4 Project Evaluation

3-4-1 Relevance

The Project is appropriate as Japan’s Grand Aid in light of the following reasons:

(1) Project Beneficiaries

SPREP training activities are held for 26 affiliated countries and territories over the entirety of the Pacific region (excluding Hawaii). Ordinarily, two to three representatives from each countries and territories participate in the training program, so it can be said that those benefitting from projects are the governments and citizens of those countries and territories. In this way, it is recognized that the appropriateness of the Project is high, owing to the wide range of benefits.

(2) Contribution to Achieving Medium Term Development Plan Targets for Applicable Countries and Territories

As previously stated, SPREP projects clearly handle targets stipulated in high-tier plans such as the “Pacific Islands Framework for Action on Climate Change (2006-2015)” and the succeeding “Strategy for Climate Change and Disaster Resilient Development in the Pacific (2017-2030)”, and by striving to strengthen SPREP functions through the Project, it is presumed that it will greatly contribute to the meeting of these plan targets.

Additionally, in Samoa’s medium term development plan “Strategy for the Development of Samoa (SDS) 2012-2016”, the targets for the environmental sector are the sustainability of the environment and climate change and disaster resiliency. As such, in the “National Environment and Development Sector Plan 2013-2016”, targets include “the sustainability of the environment through green growth and strengthening climate change and disaster resiliency”. Strengthening SPREP functions will contribute to the promotion of adaptability and mitigation measures for PICs climate change, including the Samoan government, and thus is likely to greatly contribute to meeting Samoa’s targets. Therefore, the appropriateness of the Project is fully recognized.

(3) Consistency of Japanese Assistance Measures and Policies

In the Okinawa “Kizuna” Declaration adopted at the PALM 6 held in 2012, “environment and climate change” and “response to natural disasters” were given as pillars of cooperations, and expressing support for the climate change and disaster prevention sectors was emphasized. Additionally, in the “Fukushima Iwaki Declaration” adopted at the PALM 7 held in 2015, the need for comprehensive and long-term approaches to climate change were emphasized. In response, Japan demonstrated its intention to provide comprehensive support through collaboration with SPREP and mentioned the construction of PCCC as well as technical assistance for human resource development and capacity building in the field of climate change throughout the Pacific region. Thus, the Project is consistent with the above-metioned.

Furthermore, the Project serves for the Japanese pledge at COP21 in December 2015, which promised numerical targets of 1.3 trillion yen yearly through governmental and private assistance by 2020 in order to achieve climate change-related support for developing nations.

Additionally, the Project coincide with Environment/Climate Change given as a priority area in

the Ministry of Foreign Affairs' Country Assistance Policy for Samoa, and environmental preservation and disaster prevention given as priority measures of cooperation in the JICA Country Analytical Work for the Pacific Region.

3-4-2 Effectiveness

The target values expected from implementing the Project is shown in the followings.

(1) Quantitative effects

Table 3-1 Quantitative effects

Index	Current Value (2015)	Target Value (2021) Three years after completion of the Project
Utilization rate of Training / multi purpose room (%)	0%	61%
Number of beneficiaries under the demonstration effect of environmental performance of the PCCC (person / year)	1) 0 2) 0	1) 1,400 *1 (number of visiters to the SPREP headquarters participating in training) 2) 23,000 *2 (number of visitors to the website "Pacific climate change portal" managed by SPREP)

*1

A) The number of people who will experience and learn from the PCCC's environmental design by using PCCC for training is 708 per year.

B) TEC trainees who visit PCCC will experience and learn about environmental design. The number will be 685 people per year.

*2

The number of people who will learn about the PCCC's environmental design by visiting the Pacific Climate Change Portal (http://www.pacificclimatechange.net/) run by SPREP.

23,000 people visit the Pacific Climate Change Portal annually. By posting relevant information on the front page of the portal site, the visitors can learn about the PCCC's environmental design, therefore the number of annual visitors is deemed as the number of learners.

(2) Qualitative effects

The following effects are expected by PCCC construction.

- Improvement of SPREP's capability to accumulate/disseminate information regarding the regional actions against climate change
- Strengthening of SPREP's collaboration ability with donors in the field of climate change.
- Promotion of the utilization of climate change funds by SPREP and affiliated nations.

(The use of climate change funds is facilitated by capacity building of project formation)

[Appendices]

1. **Member List of the Survey Team**
2. **Survey Schedule**
3. **List of Parties Concerned in the Recipient Country**
4. **Minutes of Discussions**
5. **Other Relevant Data**
6. **References**

1. Member List of the Survey Team

Member List of the Survey Team

Field Survey Schedule 1-1 : 11th May 2015～31st May 2015

No	Name	Position	Organization
1	Mr. Yutaka FUKASE	Mission Leader	Japan International Cooperation Agency
2	Mr. Takahiro IKENOUE	Cooperation Planning	Japan International Cooperation Agency
3	Mr. Hiroaki MOCHIZUKI	Project Manager /Environmental Building Planning	Yamashita Sekkei Inc.
4	Ms. Junko TOYOSHIMA	Environmental Capacity Building Planning /Operation Planning	PADECO Co., Ltd.
5	Ms. Pisaina Leilua-Lei Sam	Capacity Building Management Planning	Yamashita Sekkei Inc.
6	Mr. Tadayoshi TSUMOTO	Environmental Equipment Planning 1	Yamashita Sekkei Inc.
7	Mr. Masatsugu SUZUKI	Environmental Equipment Planning 2	Yamashita Sekkei Inc.
8	Mr. Motoharu YOKOYAMA	Architectural Design 2	Yamashita Sekkei Inc.

Field Survey Schedule 1-2: 27th June 2015～5th July 2015

No	Name	Position	Organization
1	Mr. Hiroaki MOCHIZUKI	Project Manager /Environmental Building Planning	Yamashita Sekkei Inc.
2	Mr. Shingo KURODA	Deputy Project Manager /Architectural planning	Yamashita Sekkei Inc.
3	Ms. Junko TOYOSHIMA	Environmental Capacity Building Planning /Operation Planning	PADECO Co., Ltd.
4	Ms. Pisaina Leilua-Lei Sam	Capacity Building Management Planning	Yamashita Sekkei Inc.

Field Survey Schedule 1-3 : 25th August 2015～3th September 2015

No	Name	Position	Organization
1	Mr. Hiroaki MOCHIZUKI	Project Manager /Environmental Building Planning	Yamashita Sekkei Inc.
2	Ms. Pisaina Leilua-Lei Sam	Capacity Building Management Planning	Yamashita Sekkei Inc.

Field Survey Schedule 2: 18th Oct 2015～1st Nov 2015

No	Name	Position	Organization
1	Mr. Hiroaki MOCHIZUKI	Project Manager /Environmental Building Planning	Yamashita Sekkei Inc.
2	Mr. Shingo KURODA	Deputy Project Manager /Architectural planning	Yamashita Sekkei Inc.
3	Ms. Pisaina Leilua-Lei Sam	Capacity Building Management Planning	Yamashita Sekkei Inc.
4	Mr. Takao KONDO	Construction Planning /Cost Estimation	Yamashita Sekkei Inc.
5	Mr. Ryoji HARADA	Equipment Planning /Procurement Planning /Cost Estimation	Earl Consultants, Inc.

Field Survey Schedule 3: 21st May 2016～26th May 2016

No	Name	Position	Organization
1	Mr. Kazunao SHIBATA	Mission Leader	Japan International Cooperation Agency
2	Ms. Ai MARUBAYASHI	Cooperation Planning	Japan International Cooperation Agency
3	Mr. Hiroaki MOCHIZUKI	Project Manager /Environmental Building Planning	Yamashita Sekkei Inc.
4	Mr. Shingo KURODA	Deputy Project Manager /Architectural planning	Yamashita Sekkei Inc.
5	Ms. Pisaina Leilua-Lei Sam	Capacity Building Management Planning	Yamashita Sekkei Inc.
6	Mr. Ryoji HARADA	Equipment Planning /Procurement Planning /Cost Estimation	Earl Consultants, Inc.

2. Survey Schedule

Field Survey Schedule 1-1: 11th May 2015～31st May 2015

No.	Date	Day	JICA Official	Consultants					
			Mission Leader Mr. Yutaka FUKASE Cooperation Planning Mr. Takahiro IKENOUE	Project Manager /Environmental Building Planning	Environmental Capacity Building Planning /Operation Planning	Capacity Building Management Planning	Environmental Equipment Planning 1	Environmental Equipment Planning 2	Architectural Design 2
				1	2	3	4	5	6
				Mr Hiroaki MOCHIZUKI	Ms Junko TOYOSHIMA	Ms Pisaina Leilua-Lei Sam	Mr Tadayoshi TSUMOTO	Mr Masatsugu SUZUKI	Mr Motoharu YOKOYAMA
1	11-May	Mon					Tokyo →		Same as 5)
2	12-May	Tue					→ Auckland Construction Material Survey (Auckland)		Same as 5)
3	13-May	Wed					Construction Material Survey (Auckland) → Apia		Same as 5)
4	14-May	Thu					Survey on SPREP existing building		Same as 5)
5	15-May	Fri					Survey on Building Permission and EIA		Same as 5)
6	16-May	Sat	Tokyo→		Same as 1)		Survey on Construction situation and Cost Estimation	Tokyo →	Same as 5)
7	17-May	Sun	Auckland →Apia		Same as 1)		Preparation	Auckland →Apia	Preparation
8	18-May	Mon	Courtesy call on JICA, and MoF and MoFA SPREP Meeting		SPREP Meeting & Survey	Same as 1)	Survey on SPREP existing building	SPREP Survey (Mech, Elec and Plumbing)	Same as 5)
9	19-May	Tue	SPREP Meeting		SPREP Meeting & Survey	Same as 1)	Survey on SPREP existing building	SPREP Survey (Mech, Elec and Plumbing)	Same as 5)
10	20-May	Wed	Signing on Minute of Meeting and technical notes, Apia→	Signing on Minute of Meeting and technical notes	SPREP Meeting & Survey	Same as 1)	Survey on Building Permission and EIA	Survey on Permission for water supply, and electricity	Same as 5)
11	21-May	Thu	Auckland → Tokyo	technical notes meeting	SPREP Meeting & Survey	Same as 1)	Survey on Building Permission and EIA	Survey on Permission for water supply, and electricity	Same as 5)
12	22-May	Fri		Report to JICA and Embassy of Japan	Relevant Government Agency Survey	Same as 1)	Survey on Building situation	Survey on Building situation	Same as 5)
13	23-May	Sat		Team meeting Preparation	Team meeting Preparation		Team meeting Apia →	Team meeting Same as 5)	Team meeting Same as 5)
14	24-May	Sun		Preparation	Preparation		Auckland → Tokyo	Same as 5)	Same as 5)
15	25-May	Mon		SPREP Survey, discussion on technical notes	SPREP Meeting & Survey	Same as 1)			
16	26-May	Tue		SPREP Survey, discussion on technical notes	SPREP Meeting & Survey	Same as 1)			
17	27-May	Wed		SPREP Survey, discussion on technical notes	SPREP Meeting & Survey	Same as 1)			
18	28-May	Thu		Signing on technical notes	SPREP Meeting & Survey	Same as 1)			
19	29-May	Fri		Report to JICA and Embassy of Japan	SPREP Meeting & Survey	Same as 1)			
20	30-May	Sat		Apia →	Same as 1)				
21	31-May	Sun		Auckland → Tokyo	Same as 1)				

Field Survey Schedule 1-2: 27th June 2015～5th July 2015

No.	Date	Day	Consultants			
			Project Manager /Environmental Building Planning	Deputy Project Manager /Architectural planning	Environmental Capacity Building Planning /Operation Planning	Capacity Building Management Planning
			1	2	3	4
			Mr Hiroaki MOCHIZUKI	Mr Shingo KURODA	Ms Junko TOYOSHIMA	Ms Pisaina Leilua-Lei Sam
1	27-June	Sat	Tokyo →			
2	28-June	Sun	Auckland →Apia			
3	29-June	Mon	Courtesy call on JICA SPREP Meeting			
4	30-June	Tue	SPREP Survey and meeting Survey on Construction situation and Cost Estimation		SPREP Survey and meeting	
5	1-July	Wed	SPREP Survey and meeting, Survey on Construction situation, Visit and survey on EPA office		SPREP Survey and meeting	
6	2-July	Thu	SPREP Survey and meeting			
7	3-July	Fri	Report to JICA and Embassy of Japan			
8	4-July	Sat	Apia →			
9	5-July	Sun	Auckland →Tokyo			

Field Survey Schedule 1-3 : 25th August 2015～3th September 2015

No.	Date	Day	Consultants	
			Project Manager /Environmental Building Planning	Capacity Building Management Planning
			1	2
			Mr Hiroaki MOCHIZUKI	Ms Pisaina Leilua-Lei Sam
1	25-Aug	Tue	Tokyo →	
2	26-Aug	Wed	Auckland →Apia	
3	27-Aug	Thu	Courtesy call on JICA SPREP Meeting	Same as 1)
4	28-Aug	Fri	SPREP Meeting	Same as 1)
5	29-Aug	Sat	Preparation	
6	30-Aug	Sun	Preparation	
7	31-Aug	Mon	SPREP Meeting	Same as 1)
8	1-Sep	Tue	SPREP Meeting, Report to JICA and Embassy of Japan	Same as 1)
9	2-Sep	Wed	Preparation Apia →	
10	3-Sep	Thu	Auckland → Tokyo	

Field Survey Schedule 2: 18th Oct 2015～1st Nov 2015

No.	Date	Day	Consultants				
			Project Manager /Environmental Building Planning	Deputy Project Manager /Architectural planning	Capacity Building Management Planning	Construction Planning /Cost Estimation	Equipment Planning /Procurement Planning/Cost Estimation
			1	2	3	4	5
			Mr Hiroaki MOCHIZUKI	Mr Shingo KURODA	Ms Pisaina Leilua-Lei Sam	Mr Takao KONDO	Mr Ryoji HARADA
1	18-Oct	Sun	Narita →			Same as 1)	
2	19-Oct	Mon	→ Auckland Construction Material Survey (Auckland) →Apia			Same as 1)	
3	20-Oct	Tue	Courtesy call on JICA SPREP Meeting			Same as 2)	Narita →
4	21-Oct	Wed	SPREP meeting, Arrangements for Top Survey			Survey on Construction situation and Cost Estimation	Auckland → Apia
5	22-Oct	Thu	SPREP Survey and meeting			Survey on Construction situation and Cost Estimation	SPREP Survey on Equipment Procurement
6	23-Oct	Fri	SPREP Survey and meeting			Survey on Construction situation and Cost Estimation	SPREP Survey on Equipment Procurement
7	24-Oct	Sat	Visit and survey on EPA* office	Narita →	Same as 1)	Same as 1)	Preparation Team Meeting
8	25-Oct	Sun	Preparation	Auckland →Apia		Preparation	Preparation
9	26-Oct	Mon	SPREP Survey and meeting		Same as 1)	Survey on Construction situation and Cost Estimation	SPREP Survey on Equipment Procurement
10	27-Oct	Tue	SPREP Survey and meeting		Same as 1)	Survey on Construction situation and Cost Estimation	SPREP Survey on Equipment Procurement
11	28-Oct	Wed	SPREP Survey, discussion on technical notes		Same as 1)	Survey on Construction situation and Cost Estimation	SPREP Survey on Equipment Procurement
12	29-Oct	Thu	SPREP Survey, discussion on technical notes		Same as 1)	Survey on Construction situation and Cost Estimation	Same as 1)
13	30-Oct	Fri	Signing on technical notes Courtesy call on Embassy of Japan, JICA		Same as 1)	Same as 1)	Same as 1)
14	31-Oct	Sat	→Auckland			Same as 1)	Same as 1)
15	1-Nov	Sun	Auckland→Narita			Same as 1)	Same as 1)

* EPA: US Environmental Protection Agency

Field Survey Schedule3: 21st May 2016～26th May 2016

No.	Date	Day	JICA Official	Consultants			
			Mission Leader Mr. Kazunao SHIBATA Cooperation Planning Ms. Ai MARUBAYASHI	Project Manager /Environmental Building Planning	Deputy Project Manager /Architectural planning	Capacity Building Management Planning	Equipment Planning /Procurement Planning/Cost Estimation
				1	2	3	4
				Mr Hiroaki MOCHIZUKI	Mr Shingo KURODA	Ms Pisaina Leilua-Lei Sam	Mr Ryoji HARADA
1	21-May	Sat	Tokyo →				Same as 1)
2	22-May	Sun	Auckland →Apia				Same as 1)
3	23-May	Mon	Courtesy call on JICA, and MoF SPREP Meeting				
4	24-May	Tue	SPREP Meeting				
5	25-May	Wed	Courtesy call on MoF, Signing on Minute of Meeting, Apia →			Signing on Minute of Meeting	Same as 1)
6	26-May	Thu	Auckland → Tokyo				Same as 1)

3. List of Parties Concerned in the Recipient Country

List of Parties Concerned in the Recipient Country

■Ministry of Foreign Affairs and Trade

Mr. Aiono Mose Sua	Chief Executive Officer
Ms. Sharon Georgina Potoi - Aiafi	Assistant Chief Executive Officer, Scholarships, Bilateral & Training

■Ministry of Finance

Mr. Sili Epa Tuioti	Minister
Mr. Lavea Tupa'imatuna Iulai Lavea	Chief Executive Officer

■SPREP（Secretariat of the Pacific Regional Environment Programme)

Mr. Kosi Latu	Director General
Mr. David Sheppard	Director General (2009~2015)
Ms. Audrey Brown-Pereira	Executive Officer

・Climate Change Division

Ms. Netatua Pelesikoti	Director Climate Change
Mr. Espen Ronneberg	Climate Change Adviser
Mr. Tommy Moore	Pacific Islands Global Ocean Observing System (PIGOOS) Officer
Mr. Salesa Nihmei	Meteorology & Climate Officer,

・Biodiversity and Ecosystem Management Division

Mr. Stuart Chape	Director, Biodiversity and Ecosystem
Ms. Easter Galuvao	Biodiversity Adviser

・Environmental Monitoring & Governance Division

Mr. Jope Davetanivalu	Planning and Capacity Development Adviser

・Waste Management and Pollution Division

Mr. Antony Talouli	Pollution Adviser

・Corporate Services

Mr. Christian Slaven	IT Manager
Mr. Epeli Tagi	IT Network and Systems Support Engineer
Ms. Alofa Tuuau	Finance and Administration Adviser
Mr. Lawrence Warner	Property Services Officer
Ms. Miraneta Williams Hazelman	Information Resource Centre Manager

Ms. Simeamativa Leota Vaai	Human Resources Adviser

■MWTI (Ministry of Works, Transport & Infrastructure)

Ms. Anne Milbank	Assistant Chief Executive Officer

■PUMA(Planning Urban Management Agency)

Ms. Ferila Blown	Principal sustainable department officer

■EPC (Electric Power Corporation)

Mr. Faumuina Iese Toimoana	Legal & Quality Assurance Manager

■FESA(Fire and Emergency Service Authority)

Mr. Lelevaga Faafouina Mupo	Commissioner

■UNDP (United Nations Development Programme)

Sala Georgina Bonin	Assistant Resident Representative

■Asian Development Bank

Ms. Maeva Betham Vaai	Liaison Officer

■WMO (World Meteorological Organization)

Mr. Henry taiki	WMO Officer for the South-West Pacific

4. Minutes of Discussions

MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY
OF THE PACIFIC CLIMATE CHANGE CENTRE PROJECT
IN THE INDEPENDENT STATE OF SAMOA

In response to the request from the Government of the Independent State of Samoa (hereinafter referred to as "Samoa"), the Government of Japan decided to conduct a Preparatory Survey of the Pacific Climate Change Centre Project (hereinafter referred to as "the Project") and entrusted the Preparatory Survey to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") to Samoa, which is headed by Mr. Yutaka FUKASE, Director, Environmental Management Team 1,Environmental Management Group, Global Environment Department, JICA, and is scheduled to stay in the country from 13th to 30th May 2015.

The Team held a series of discussions with the concerned officials of the Government of Samoa and the Secretariat of the Pacific Regional Environment Programme (hereinafter referred to as "SPREP"), and conducted a field survey.

In the course of discussions, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Apia, 20th May, 2015

Mr. Yutaka FUKASE
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

Mr. Lavea Tupa'imatuna Iulai Lavea
Chief Executive Officer
Ministry of Finance
The Independent State of Samoa

Mr. Kosi Latu
Acting Director General
Secretariat of the Pacific Regional
Environment Programme (SPREP)

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the function of the Secretariat of the Pacific Regional Environmental Programme (SPREP) as the Centre for training and human resource development for the Pacific island countries and territories on climate change through the construction and equipping of the Pacific Climate Change Centre.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey of the Pacific Climate Change Centre Project."

3. Project Site

Both sides confirmed that the site of the Project is in the existing campus of SPREP in Vailima, Apia, which is granted to SPREP by the Government of Samoa (shown in Annex 1).

4. Line Agency and Executing Agency

4-1 The Line Agency is the Ministry of Finance, Government of Samoa.
The Executing Agency is SPREP.
The Organization chart of SPREP is shown in Annex 2.

4-2 The Government of Samoa would act as the agency responsible for the facilitation of the Project. SPREP will execute the necessary works as directed by the Government of Samoa.

4-3 The Government of Samoa would be responsible for monitoring the proper and effective use and maintenance of all the facilities and equipment provided under the Project through coordination with SPREP.

4-4 SPREP would act as the managing and operating body for the facilities and equipment provided under Japan's Grant Aid, while all the facilities and equipment remain the property of the Government of Samoa, in accordance with due arrangement and agreement to be set forth between the Government of Samoa and SPREP

5. Items requested by the Government of Samoa

5-1 As a result of discussion, both sides confirmed that the items requested by the Government of Samoa are as follows :

- Construction of the PCCC with environment friendly equipment; and
- Equipment for PCCC activities.

5-2 JICA will assess the appropriateness of the above requested items through the survey and will report findings to the Government of Japan. The final components of the Project would be decided by the Government of Japan.

6. Japan's Grant Aid Scheme

6-1. The Government of Samoa and SPREP understands the Japan's Grant Aid Scheme and its procedures as described in Annex 3 and Annex 4, and necessary measures to be taken by the Government of Samoa.

6-2. The Government of Samoa and SPREP understands to take the necessary measures, as described in Annex 5, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented. The detailed contents of the Annex 5 will be worked out during the survey and shall be agreed no later than when the 4th Mission is dispatched to Samoa around December2015 to explain the Draft Preparatory Survey Report

7. Schedule of the Survey

7-1. The Team will proceed with further survey in Samoa until 30th May, 2015.

7-2. Dispatch of 2nd mission and 3rd mission are scheduled in June and September 2015 respectively.

7-3. JICA will prepare a draft Preparatory Survey Report in English and dispatch a 4th mission to Samoa in order to explain its contents around December 2015.

7-4. If the contents of the draft Preparatory Survey Report is accepted in principle and the Undertakings are fully agreed by the Government of Samoa and SPREP, JICA will complete the final report in English and send it to Samoa around February 2016.

7-5. The above schedule is tentative and subject to change.

8. Environmental and Social Considerations

8-1. The Government of Samoa and SPREP confirmed to give due environmental and social considerations during implementation of the Project, and after completion of the Project,in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010), where applicable.

8-2. The Government of Samoa and SPREPconfirmed to conduct the necessary procedures required under Environment Impact Assessment Regulation 2007 and PUMA (Planning and Urban Management Agency Act 2004) with the design drawing and site map of the PCCC to be provided by the Team. A copy of the Project Development Consent Approval should be submitted to JICA .

9. Other Relevant Issues

9-1. Inception Report

The contents of the Inception Report that the Team explained was understood and accepted in principle by the Government of Samoa and SPREP.

9-2. Undertakings of the Government of Samoa and SPREP

While general undertakings are shown in Annex-5, it is reconfirmed that following matters are undertaking of the Government of Samoa and SPREP.

(1) Land acquisition

Both sides agreed that the Government of Samoa and SPREP will take necessary measures regarding land acquisition for implementation of the Project according to the relevant Laws and Acts of Samoa and JICA's Guidelines for Environmental and Social Considerations (April, 2010).

(2) Tax Exemption

Both sides agreed that import tax, customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services will be exempted. The Government of Samoa will take necessary measures for tax exemption, if any.

(3) Operation and Maintenance of facilities and equipment

The cost necessary for the Project, in addition to those described in Annex-5, such as operation and maintenance will be assessed in the Survey. The Government of Samoa assures that appropriate cost will be funded by SPREP in accordance with due arrangement and agreement to be set forth between the Government of Samoa and SPREP.

9-3 Arrangements for the Survey

As a response to the request by the Team, SPREP agreed to assign necessary number of counterpart personnel for the Survey and provide all the data and information relevant to the Project for the smooth implementation of the Survey. SPREP also agreed to provide an appropriate office space for the Team.

9-4 Safety and Security

The Government of Samoa agreed to take measures to secure the safety of members of the Team over the survey period in accordance with due arrangement and agreement to be set forth between the Government of Samoa and SPREP.

9-5 Information to be provided by SPREP

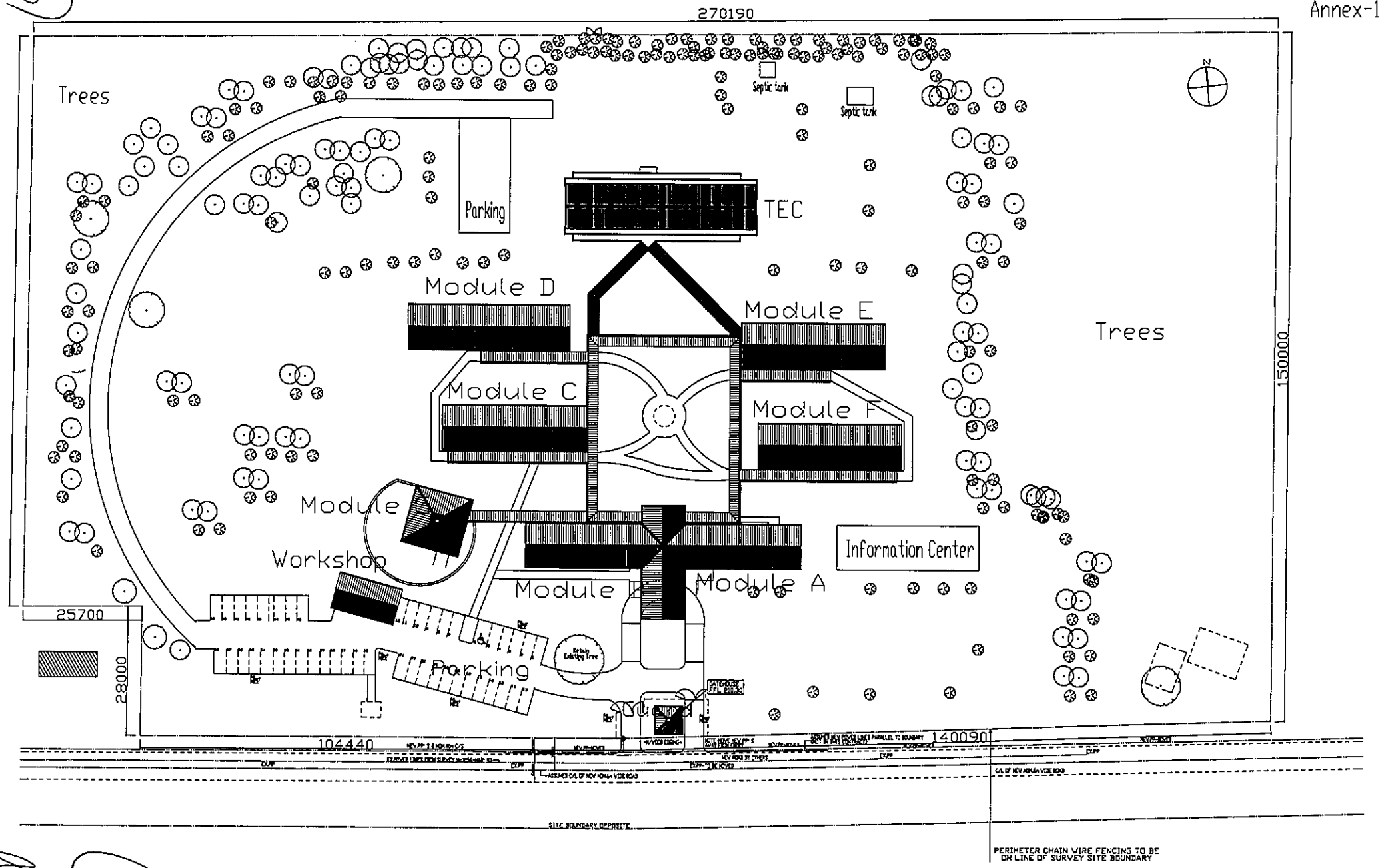
SPREP agreed to provide the Team by 27 May 2015 with all requested Information in consultation with the Team including the following:

(1) Past use of the SPREP Training and Education Centre (at least 5 years)
(2) Future usage of PCCC (at least 5 years)
(3) SPREP Organization Chart (at least past 5 years)
(4) Climate Change Division Organization Chart (at least past 5 years)
(5) SPREP Budget breakdown including budget breakdown for the Climate Change Area (at least past 5 years)
(6) Outline of Business Plan (Budget, Human Resource, organization etc.) for achieving the Project Objectives. The final version will be provided by 5th June.
(7) Any other information requested by the Team.

End

Annex-1 Map of Project site on existing SPREP Campus
Annex-2 SPREP current Organization Chart including Climate Change Division
Annex-3 Japan's Grant Aid
Annex-4 Flow Chart of Japan's Grant Aid Procedures
Annex-5 Major Undertakings by Each Government

Annex-1

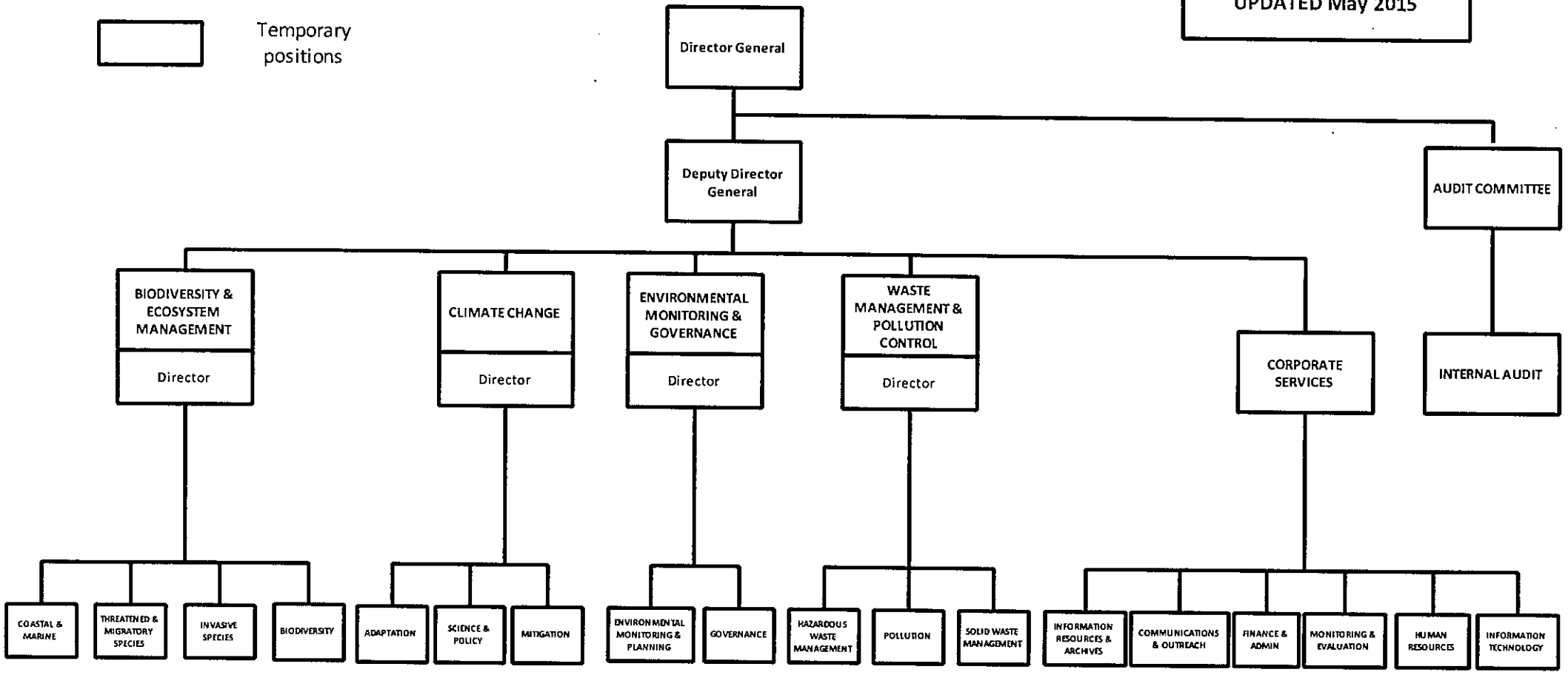

270190
150000
Trees
Septic tank
Septic tank
Parking
TEC
Module D
Module E
Trees
Module C
Module F
Module
Workshop
Information Center
Module B
Module A
25700
28000
Parking
104440
140090
SITE BOUNDARY OPPOSITE
PERIMETER CHAIN WIRE FENCING TO BE ON LINE OF SURVEY SITE BOUNDARY

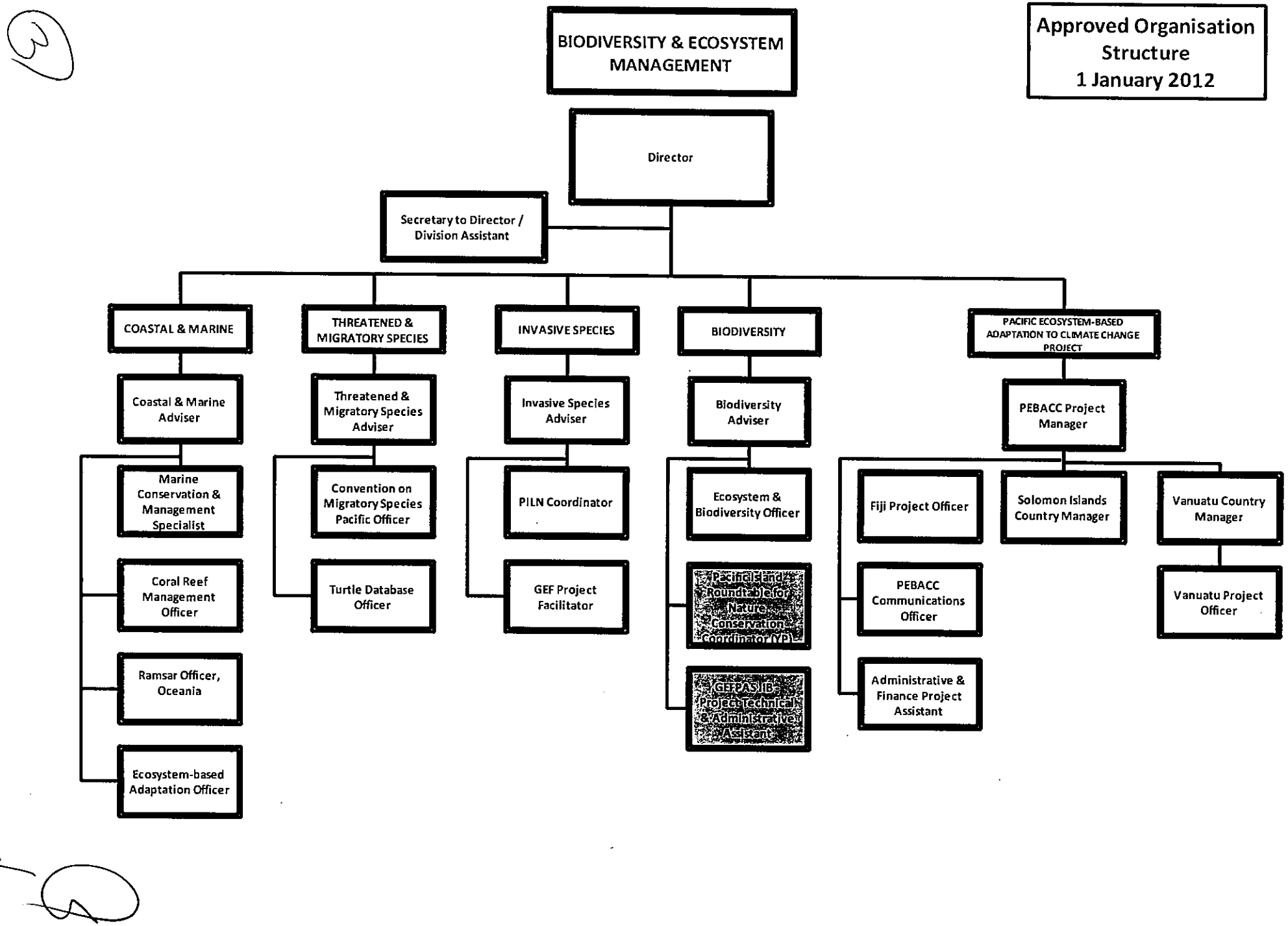
ANNEX 2

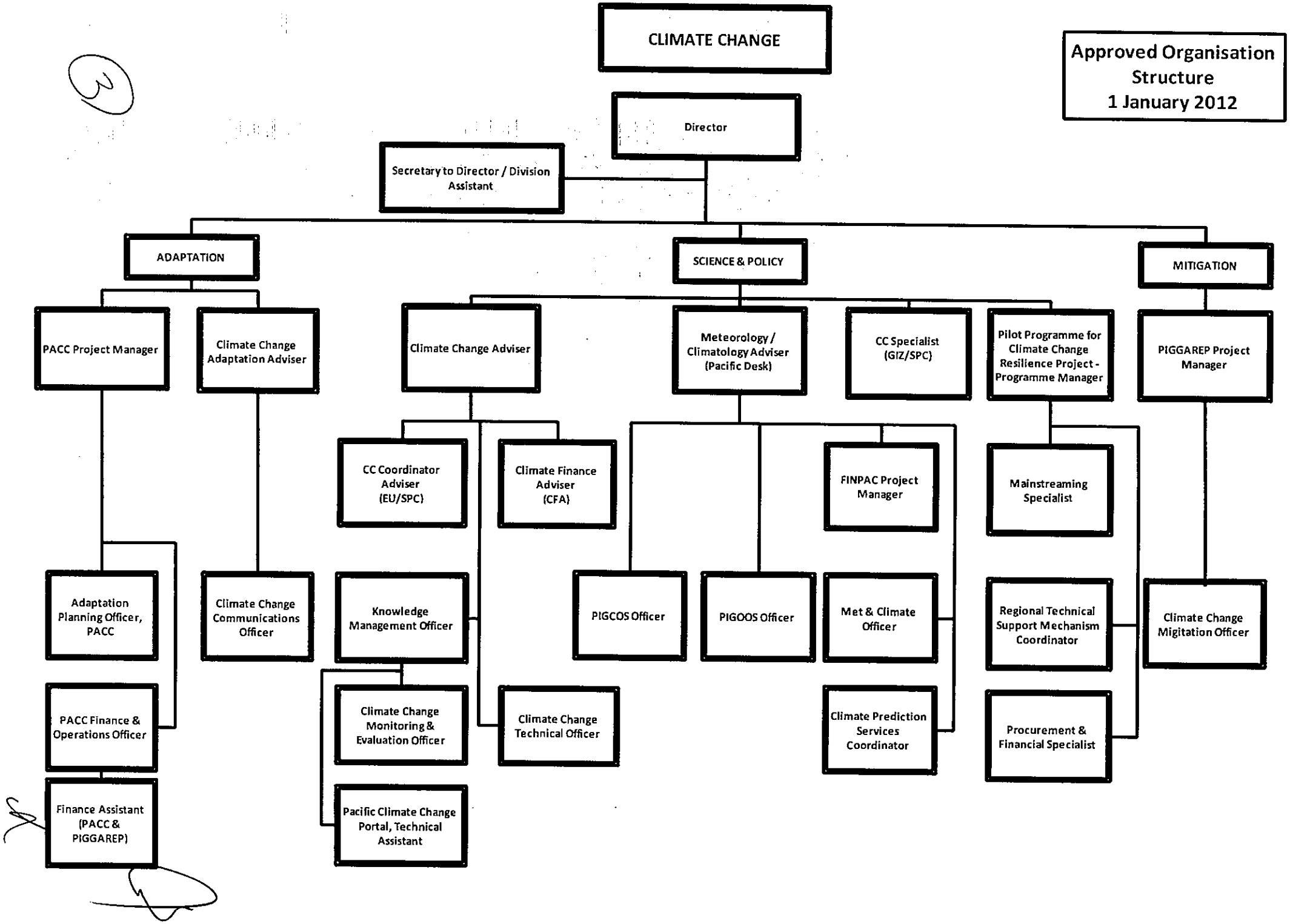
3

APPROVED ORGANISATION STRUCTURE
1 January 2012
UPDATED May 2015

Temporary positions

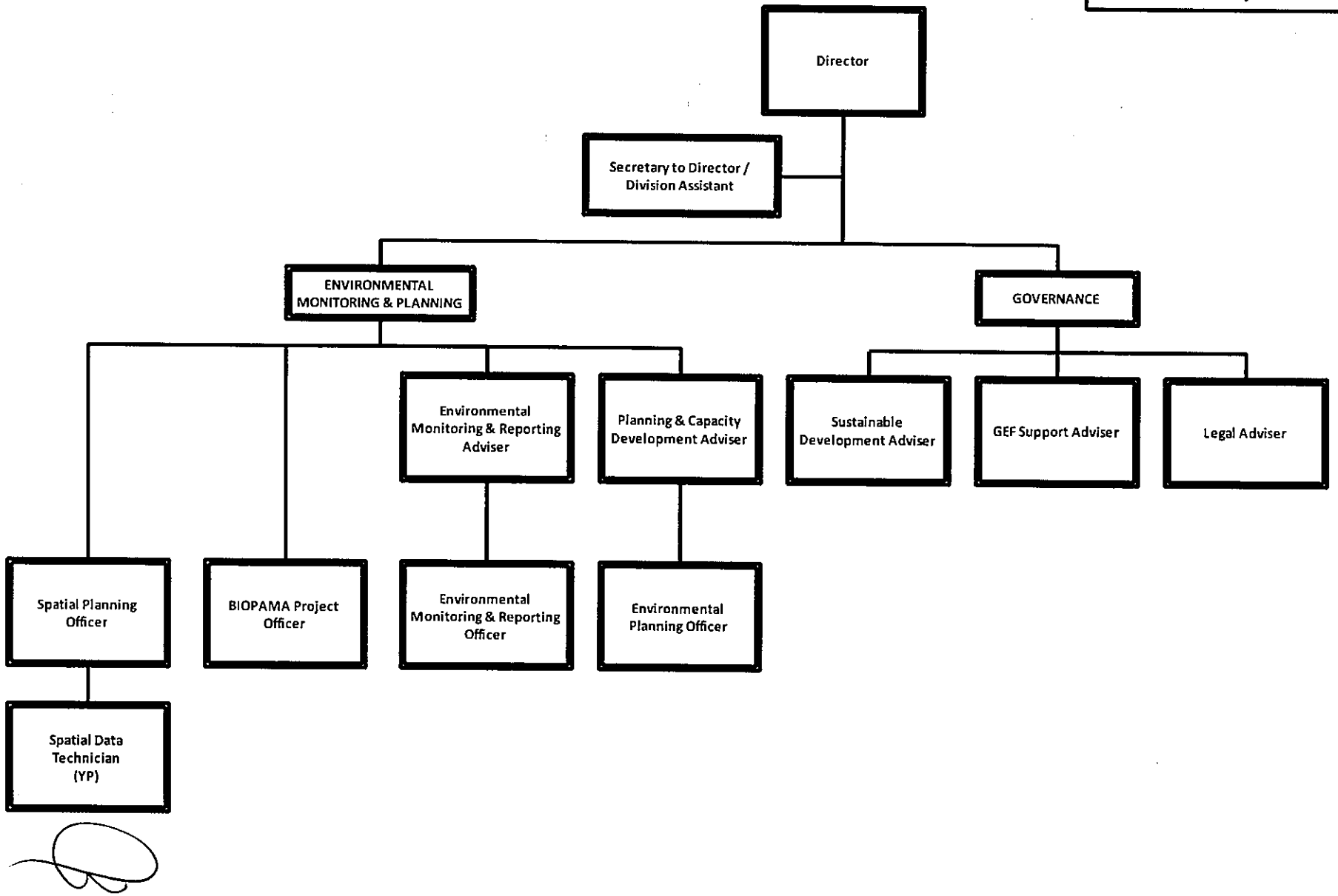


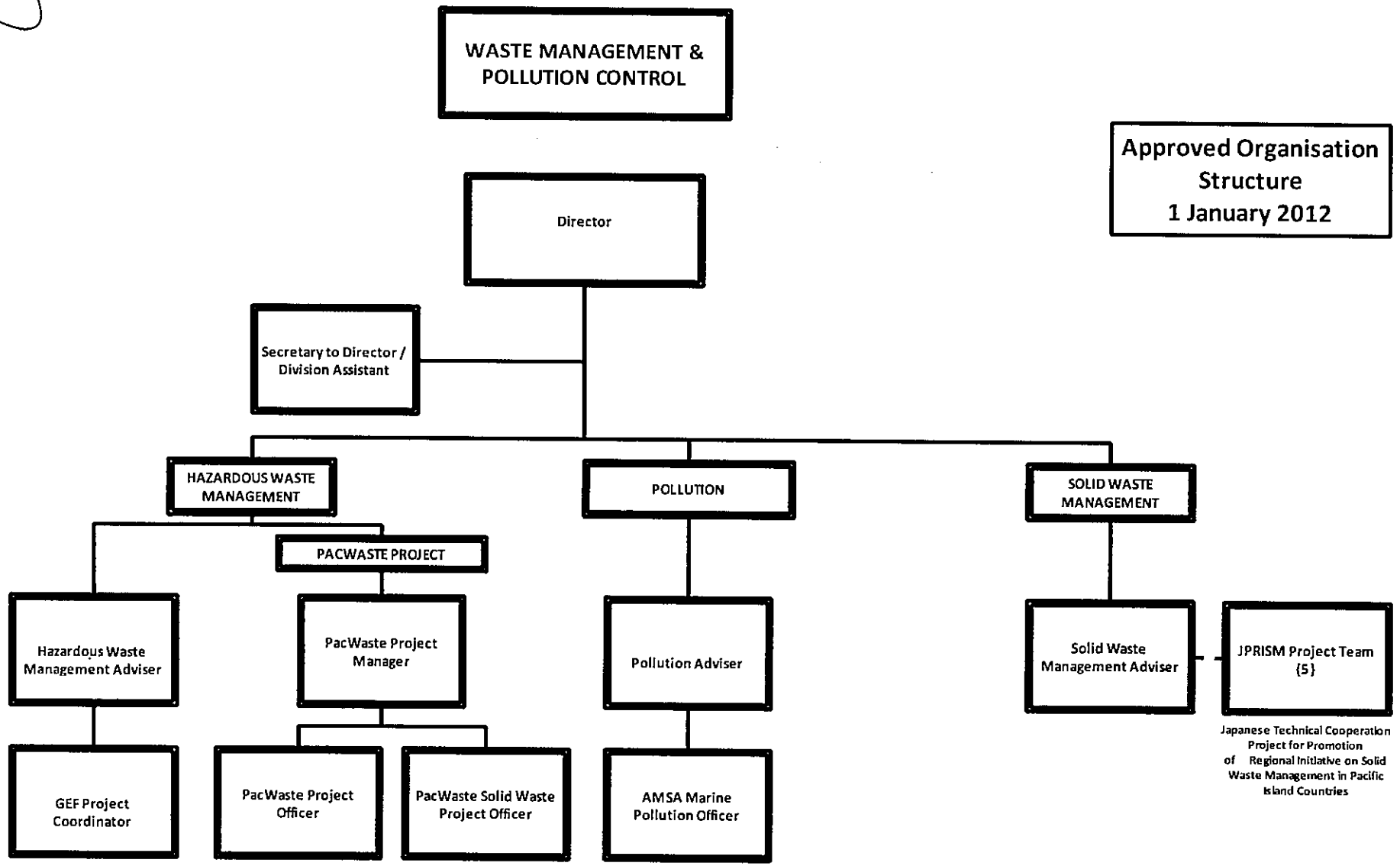

Approved Organisation Structure
1 January 2012
BIODIVERSITY & ECOSYSTEM MANAGEMENT
Director
Secretary to Director / Division Assistant
COASTAL & MARINE
Coastal & Marine Adviser
Marine Conservation & Management Specialist
Coral Reef Management Officer
Ramsar Officer, Oceania
Ecosystem-based Adaptation Officer
THREATENED & MIGRATORY SPECIES
Threatened & Migratory Species Adviser
Convention on Migratory Species Pacific Officer
Turtle Database Officer
INVASIVE SPECIES
Invasive Species Adviser
PILN Coordinator
GEF Project Facilitator
BIODIVERSITY
Biodiversity Adviser
Ecosystem & Biodiversity Officer
Pacific Island Roundtable for Nature Conservation Coordinator (VP)
GEF PAS IB: Project Technical & Administrative Assistant
PACIFIC ECOSYSTEM-BASED ADAPTATION TO CLIMATE CHANGE PROJECT
PEBACC Project Manager
Fiji Project Officer
PEBACC Communications Officer
Administrative & Finance Project Assistant
Solomon Islands Country Manager
Vanuatu Country Manager
Vanuatu Project Officer

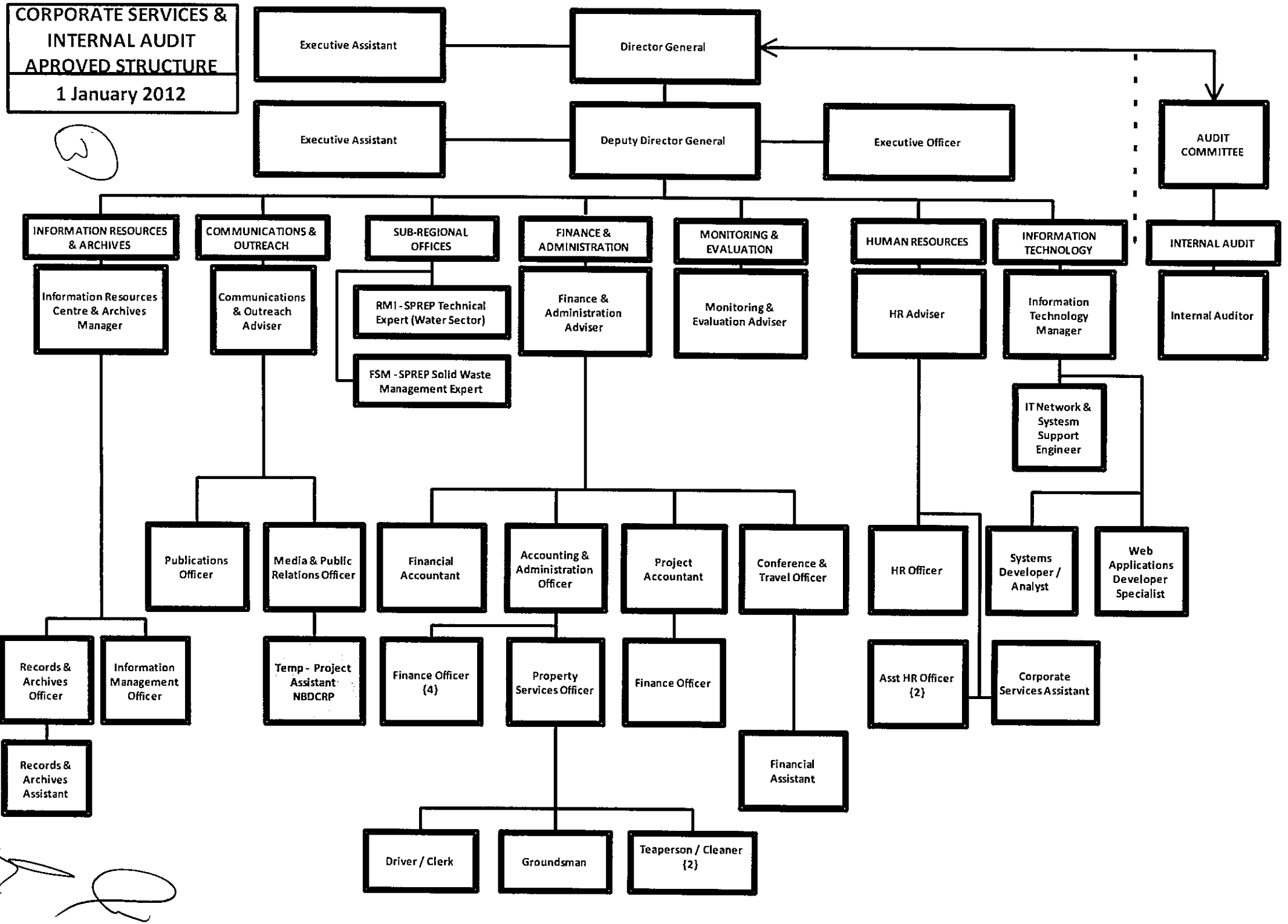

CLIMATE CHANGE
Approved Organisation Structure
1 January 2012
Director
Secretary to Director / Division Assistant
ADAPTATION
SCIENCE & POLICY
MITIGATION
PACC Project Manager
Climate Change Adaptation Adviser
Climate Change Adviser
Meteorology / Climatology Adviser (Pacific Desk)
CC Specialist (GIZ/SPC)
Pilot Programme for Climate Change Resilience Project - Programme Manager
PIGGAREP Project Manager
CC Coordinator Adviser (EU/SPC)
Climate Finance Adviser (CFA)
FINPAC Project Manager
Mainstreaming Specialist
Adaptation Planning Officer, PACC
Climate Change Communications Officer
Knowledge Management Officer
PIGCOS Officer
PIGOOS Officer
Met & Climate Officer
Regional Technical Support Mechanism Coordinator
Climate Change Migitation Officer
PACC Finance & Operations Officer
Climate Change Monitoring & Evaluation Officer
Climate Change Technical Officer
Climate Prediction Services Coordinator
Procurement & Financial Specialist
Finance Assistant (PACC & PIGGAREP)
Pacific Climate Change Portal, Technical Assistant

ENVIRONMENTAL MONITORING & GOVERNANCE

Approved Organisation Structure
1 January 2012




WASTE MANAGEMENT & POLLUTION CONTROL
Approved Organisation Structure 1 January 2012
Director
Secretary to Director / Division Assistant
HAZARDOUS WASTE MANAGEMENT
POLLUTION
SOLID WASTE MANAGEMENT
PACWASTE PROJECT
Hazardous Waste Management Adviser
PacWaste Project Manager
Pollution Adviser
Solid Waste Management Adviser
JPRISM Project Team (5)
Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries
GEF Project Coordinator
PacWaste Project Officer
PacWaste Solid Waste Project Officer
AMSA Marine Pollution Officer


CORPORATE SERVICES & INTERNAL AUDIT APROVED STRUCTURE
1 January 2012
Executive Assistant
Director General
Executive Assistant
Deputy Director General
Executive Officer
AUDIT COMMITTEE
INFORMATION RESOURCES & ARCHIVES
COMMUNICATIONS & OUTREACH
SUB-REGIONAL OFFICES
FINANCE & ADMINISTRATION
MONITORING & EVALUATION
HUMAN RESOURCES
INFORMATION TECHNOLOGY
INTERNAL AUDIT
Information Resources Centre & Archives Manager
Communications & Outreach Adviser
RMI - SPREP Technical Expert (Water Sector)
FSM - SPREP Solid Waste Management Expert
Finance & Administration Adviser
Monitoring & Evaluation Adviser
HR Adviser
Information Technology Manager
Internal Auditor
IT Network & Systesm Support Engineer
Publications Officer
Media & Public Relations Officer
Financial Accountant
Accounting & Administration Officer
Project Accountant
Conference & Travel Officer
HR Officer
Systems Developer / Analyst
Web Applications Developer Specialist
Records & Archives Officer
Information Management Officer
Temp - Project Assistant NBDCRP
Finance Officer (4)
Property Services Officer
Finance Officer
Asst HR Officer (2)
Corporate Services Assistant
Records & Archives Assistant
Financial Assistant
Driver / Clerk
Groundsman
Teaperson / Cleaner (2)

JAPAN'S GRANT AID

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for Projects for construction of facilities, purchase of equipment, etc.

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

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures :

- Preparatory Survey
  - The Survey conducted by JICA
- Appraisal &Approval
  - -Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
  - -The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
  - -Agreement concluded between JICA and a recipient country
- Implementation
  - -Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of a outline design of the Project.

- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient

country are to be purchased. The Grant Aid may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by 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 Annex -5. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant Aid fund comes from the Japanese taxpayers.

(6) "Proper Use"

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

(7) "Export and Re-export"

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

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant Aid by making payments in Japanese yen, in principle, to cover the obligations incurred by the 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 JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment

commissions paid to the Bank.

(10) Social and Environmental Considerations

The Government of the recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

(11) Monitoring

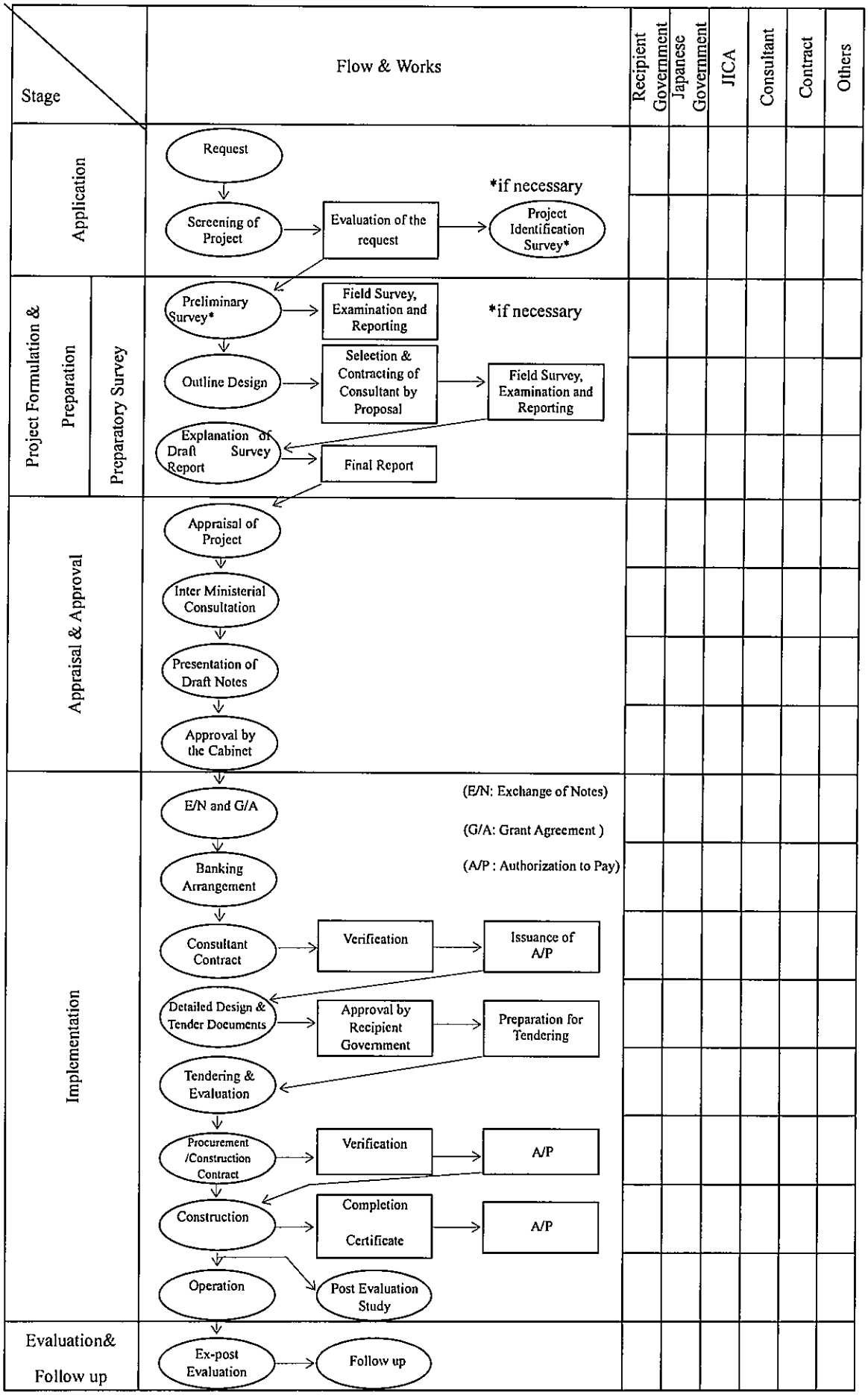
The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

Annex 4

FLOW CHART OF JAPAN's GRANT AID PROCEDURES



Annex 5

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 lot(s) of land necessary for the implementation of the Project and to clear the site(s)		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)		
	1) Electricity		
	a. The distributing power 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 elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. 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	●	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	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	(●)	(●)
5	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 products and the services be exempted		●
6	To accord Japanese physical persons and / or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that the Facilities and the products be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

(B/A : Banking Arrangement, A/P : Authorization to pay)

(3)

Minutes of Discussions
on the Preparatory Survey for the Project for
Pacific Climate Change Centre Project
(Explanation on Draft Preparatory Survey Report)

On the basis of the discussions and field survey in the Independent State of Samoa (hereinafter referred to as "Samoa") in 2015, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") on the Pacific Climate Change Centre Project (hereinafter referred to as "the Project").

In order to explain the Draft Report and to consult with the concerned officials of the Government of Samoa and the Secretariat of the Pacific Regional Environment Programme (hereinafter collectively referred to as "the Samoan side") on its contents, JICA sent to Samoa the Preparatory Survey Team for the explanation of the Draft Report (hereinafter referred to as "the Team"), headed by Mr. Kazunao Shibata, Director, Environmental Management Group, Global Environment Department, JICA, and is scheduled to stay in the country from 22 May to 25 May, 2016.

As a result of the discussions, both sides confirmed the main items described in the attached sheets.

Apia, 25 May, 2016

柴田 和直

Mr. Kazunao Shibata
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

Lavea Tupa'imatuna Iulai Lavea
Chief Executive Officer
Ministry of Finance
The Independent State of Samoa

Mr. Kosi Latu
Director General
Secretariat of the Pacific Regional
Environment Programme (SPREP)

ATTACHMENT

1. Objective of the Project

   The objective of the Project is to strengthen the function of the Secretariat of the Pacific Regional Environmental Programme (SPREP) as the lead agency on climate change in the region, through the construction of the Pacific Climate Change Centre, thereby contributing to the development of the human resources and the enhancement of countermeasures to address climate change.

2. Title of the Preparatory Survey

   Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Pacific Climate Change Centre Project".

3. Project Site

   Both sides confirmed that the site of the Project is in the existing campus of SPREP in Vailima, Apia, which is granted to SPREP by the Government of Samoa shown in Annex 1.

4. Responsible Agency and Executing Agency

   Both sides confirmed the Responsible Agency and Executing Agency as follows:

4-1 The Responsible Agency is the Ministry of Finance, Government of Samoa, which would be responsible for the facilitation of the Project as well as monitoring the proper and effective use and maintenance of all the facilities and equipment provided under the Project (hereinafter referred to as "the Facilities") through coordination with SPREP.

4-2 The Executing Agency is the Ministry of Finance and SPREP. The Executing Agency shall coordinate with all the relevant agencies to ensure smooth implementation of the project and ensure that the necessary undertakings are taken by relevant agencies properly and on time. The Ministry of Finance is in charge of the contract with contractors and/or consultants. After completion of the Project, SPREP would act as the managing and operating body for the Facilities, while all the Facilities remain as the property of the Government of Samoa, in accordance with due arrangement and agreement to be set forth between the Government of Samoa and SPREP. The organization chart of SPREP is shown in Annex 2.

5. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Samoan side agreed in principle to its contents.

6. Cost Estimation

Both sides confirmed that the Project cost estimation described in Annex 3 was provisional and would be examined further by the Government of Japan for its final approval.

7. Confidentiality of the Cost Estimation and Specifications

Both sides confirmed that the Project cost estimation and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts of the Project are concluded.

8. Japan's Grant Scheme

The Samoan side understands the Japan's Grant Scheme and its procedures as described in Annex 4, Annex 5 and Annex 6, and necessary measures to be taken by the Samoan side.

9. Project Implementation Schedule

The Team explained to the Samoan side that the expected implementation schedule is as attached in Annex 7.

10. Expected Outcomes and Indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Samoan side has responsibility to monitor the progress of the indicators and achieve the target in year 2021.

[Quantitative Effect]

Indicators	Curent value (2015)	Target value (2021) (3 years after completion of the project)
Utilization rate of Training / Multipurpose room (%)	0	61
Number of beneficiaries under the demonstration effect of environmental performance of the PCCC (person / year)	0	1) 1400 (Number of visitors to SPREP headquarter participating in training)

	0	2) 23,000 (Number of visitors to the website "Pacific Climate Change Portal" managed by SPREP)

[Qualitative Effect]

In addition to the quantitative effects mentioned above, the establishment of the Pacific Climate Change Centre (PCCC) will have benefits of:

1. Information accumulation and dissemination on the regional actions against climate change
2. Enhancement of the donor cooperation in the field of climate change
3. Facilitating the utilization of the climate change fund

11. Environmental and Social Considerations

11-1. The Samoan side confirmed to give due environmental and social considerations during implementation of the Project, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April 2010) , where applicable.

11-2. The Samoan side confirmed to conduct the necessary procedures required under Environment Impact Assessment Regulation 2007 and Planning and Urban Management Agency Act (PUMA 2004) with the design drawing and site map of the PCCC to be provided by the Team. A copy of the Project Development Consent Approval should be submitted to JICA within one month after signing of Grant Agreement.

12. Undertakings Taken by Both Sides

Both sides confirmed to take undertakings described in Annex 8. The Samoan side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions for implementation of the Project. It was further agreed that Annex 8 would be the attachment to the Grant Agreement and the costs are indicative, i.e. at Outline Design level.

13. Monitoring during the Implementation

The Project will be monitored every three (3) months by the Executing Agency and using the Project Monitoring Report (PMR), as attached in Annex 10.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation three (3) years after the project completion with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability) of the Project. Result of the evaluation will be publicized. The Samoan side is required to provide necessary support.

15. Schedule of the Preparatory Survey

JICA will complete the Final Report of the Preparatory Survey in accordance with the confirmed items and send it to the Samoan side around August 2016.

16. Other Relevant Issues

16-1. Operation and Maintenance of the Facilities (Equipment)

The Team explained the importance of operation and maintenance of the Facilities considering the fact that proper asset management impacts greatly on life-span of the Facilities and its maintenance cost. The Samoan side shall secure enough staff and budgets necessary for appropriate operation and maintenance of the Facilities. The annual operation and maintenance costs are estimated and shown in Annex 9.

16-2. Promotion of the PCCC Utilization

SPREP and the Government of Samoa shall cooperate together and consider concrete methods to promote the utilization of the PCCC.

16-3. Confirmation of the Facilities Use Policy

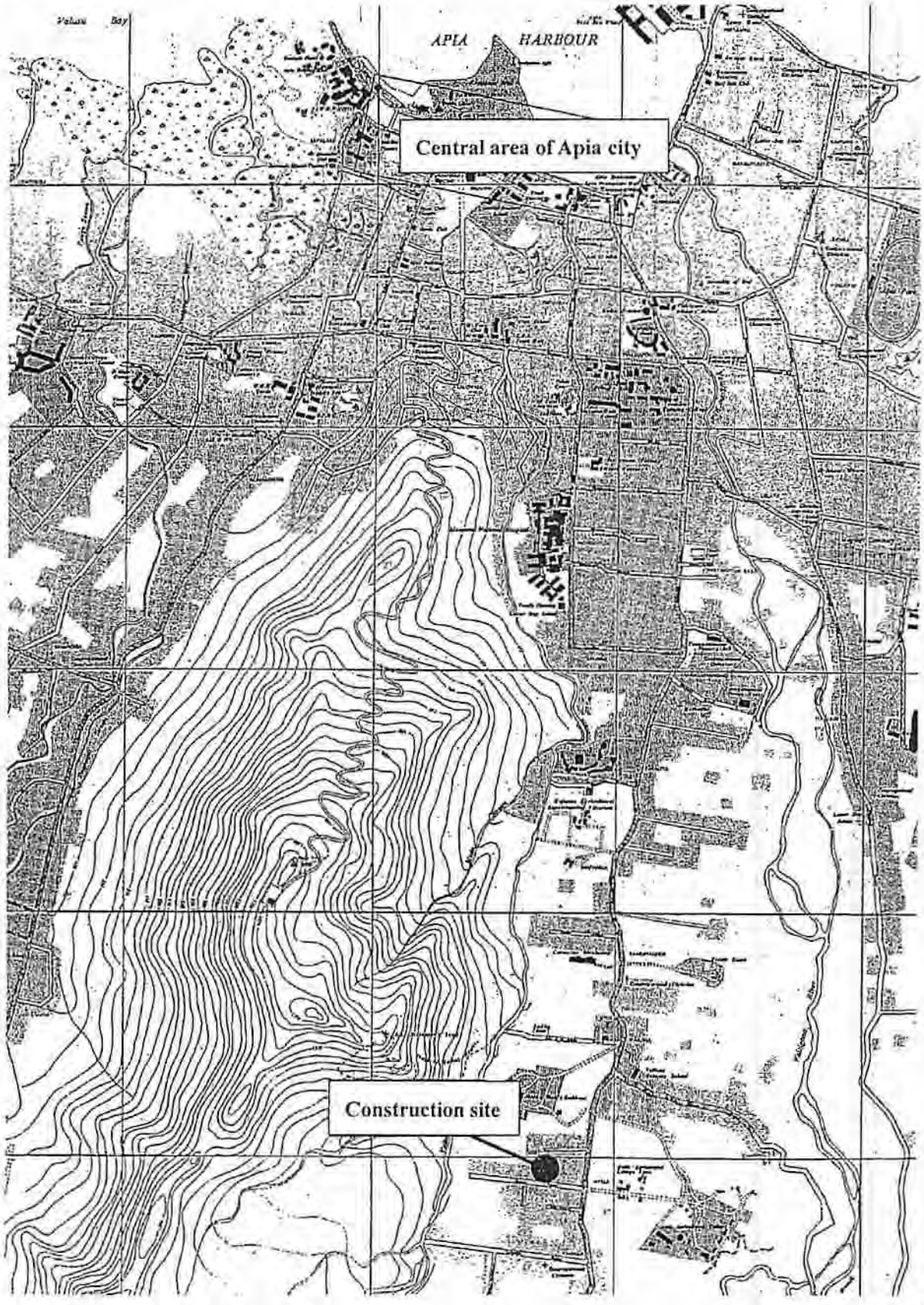
The volume of SPREP business related to the climate change has been expanding with accompanying increased support from donor organizations over the past several years. SPREP expected continuation of the positive trend and requested the expansion of the facility capacity in order to enhance their operation and activities. Based on the situation, SPREP shall make active fundraising efforts for realization of potential future projects. Also, in the implementation of the projects, SPREP commits to effectively utilize PCCC and make greater contribution to the region as a leading organization to address climate change.

16-4. Augmentation of Personnel in the Climate Change Department of SPREP

As shown in the preceding paragraph, the increase of the personnel in Climate Change Department is necessary in order to respond to the business expansion. SPREP shall employ personnel in a planned manner and augment the function of the Climate Change Department by utilizing the Facilities to the maximum extent.

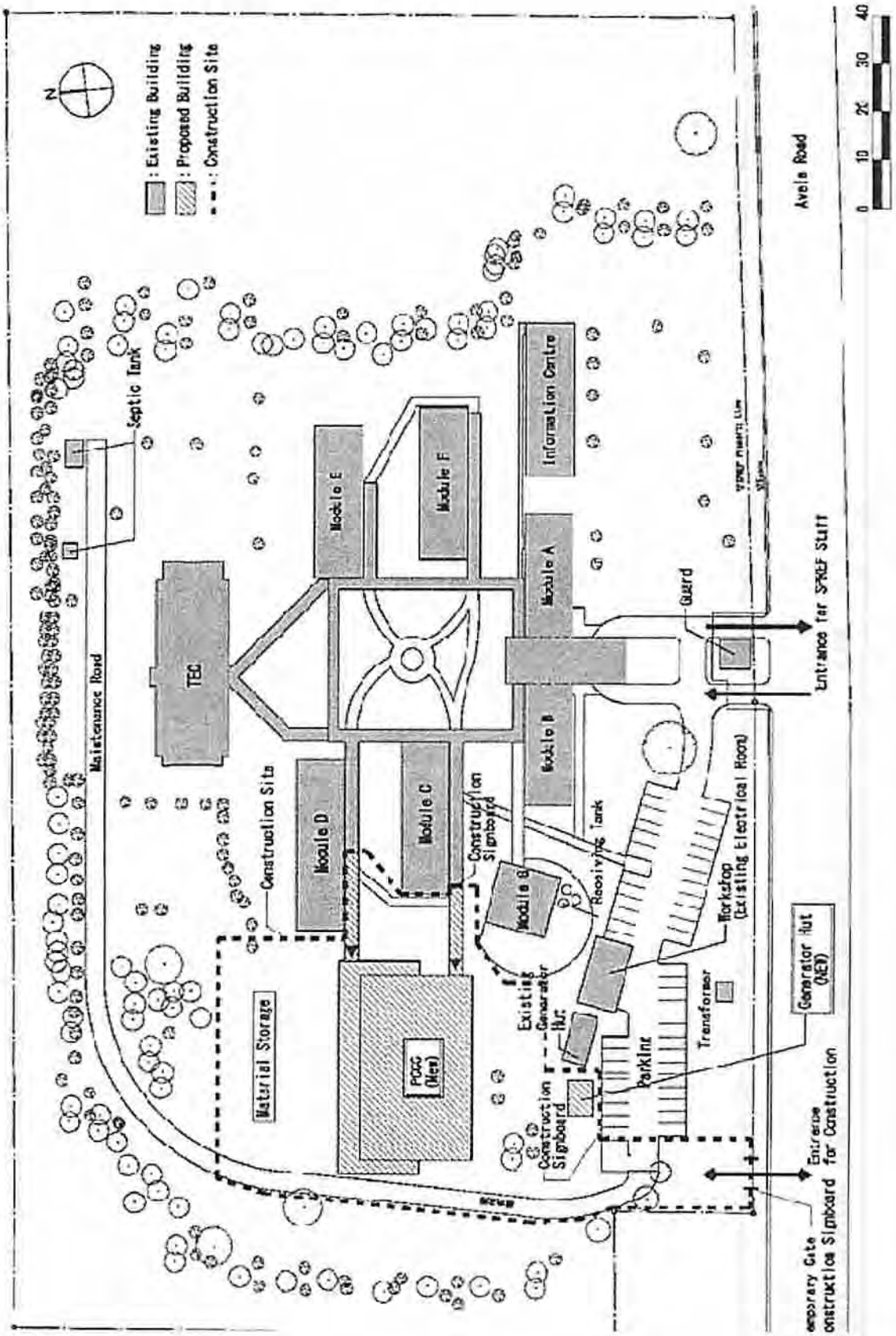
ANNEX 1

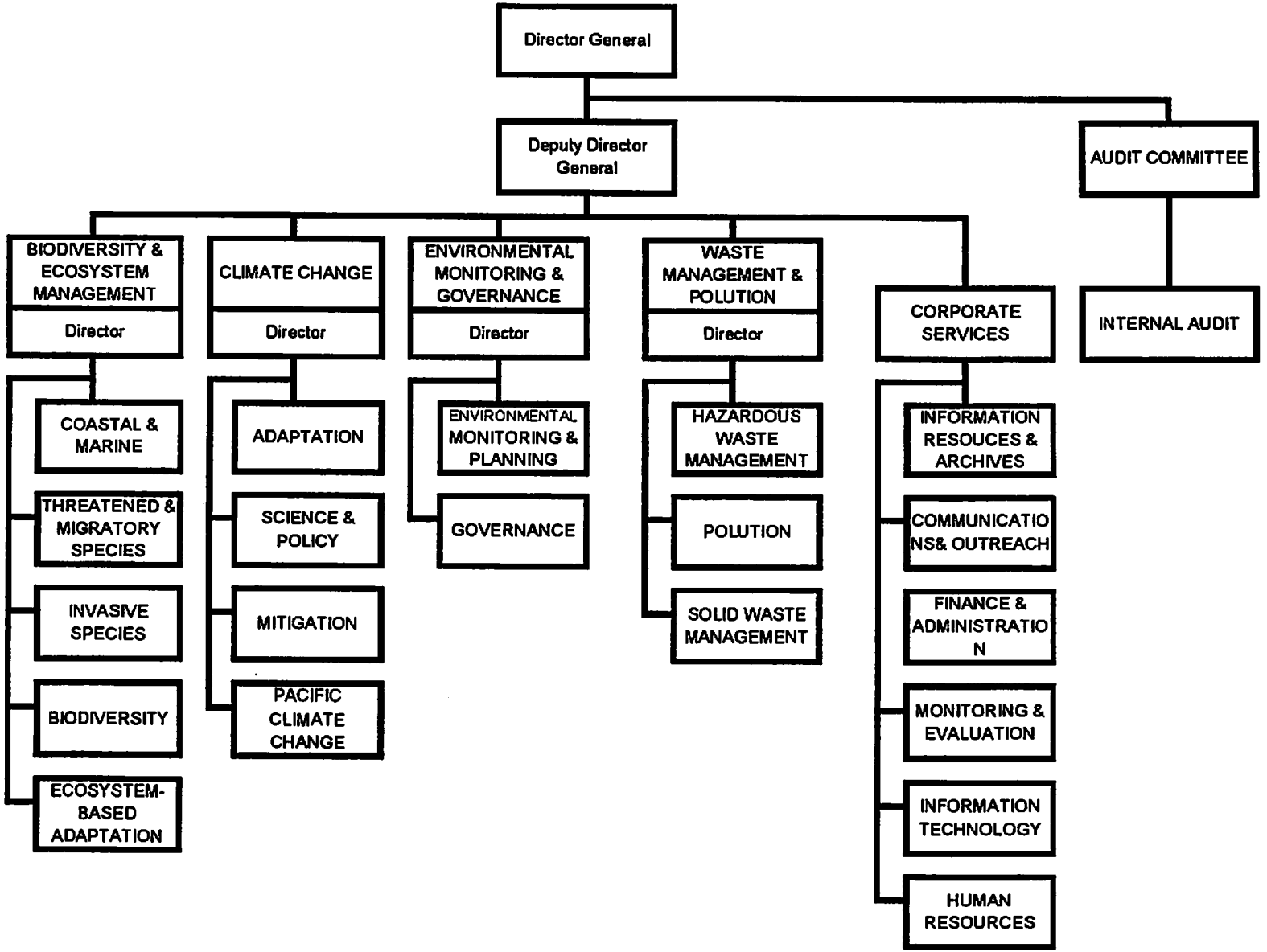
Site map A: City map of Apia/ Construction site



ANNEX 1

Site map B: Construction site of PCCC




Director General
Deputy Director General
AUDIT COMMITTEE
BIODIVERSITY & ECOSYSTEM MANAGEMENT
Director
COASTAL & MARINE
THREATENED & MIGRATORY SPECIES
INVASIVE SPECIES
BIODIVERSITY
ECOSYSTEM-BASED ADAPTATION
CLIMATE CHANGE
Director
ADAPTATION
SCIENCE & POLICY
MITIGATION
PACIFIC CLIMATE CHANGE
ENVIRONMENTAL MONITORING & GOVERNANCE
Director
ENVIRONMENTAL MONITORING & PLANNING
GOVERNANCE
WASTE MANAGEMENT & POLUTION
Director
HAZARDOUS WASTE MANAGEMENT
POLUTION
SOLID WASTE MANAGEMENT
CORPORATE SERVICES
INFORMATION RESOUCES & ARCHIVES
COMMUNICATIONS& OUTREACH
FINANCE & ADMINISTRATION
MONITORING & EVALUATION
INFORMATION TECHNOLOGY
HUMAN RESOURCES
INTERNAL AUDIT

ANNEX 2

JAPAN'S GRANT AID

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for Projects for construction of facilities, purchase of equipment, etc.

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

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures:

- Preparatory Survey
  - The Survey conducted by JICA
- Appraisal &Approval
  - -Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
  - -The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
  - -Agreement concluded between JICA and a recipient country
- Implementation
  - -Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.

- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant Aid may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by 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 Annex. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant Aid fund comes from the Japanese taxpayers.

(6) "Proper Use"

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

(7) "Export and Re-export"

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

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant Aid by making payments in Japanese yen, in principle, to cover the obligations incurred by the 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 JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

The Government of the recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

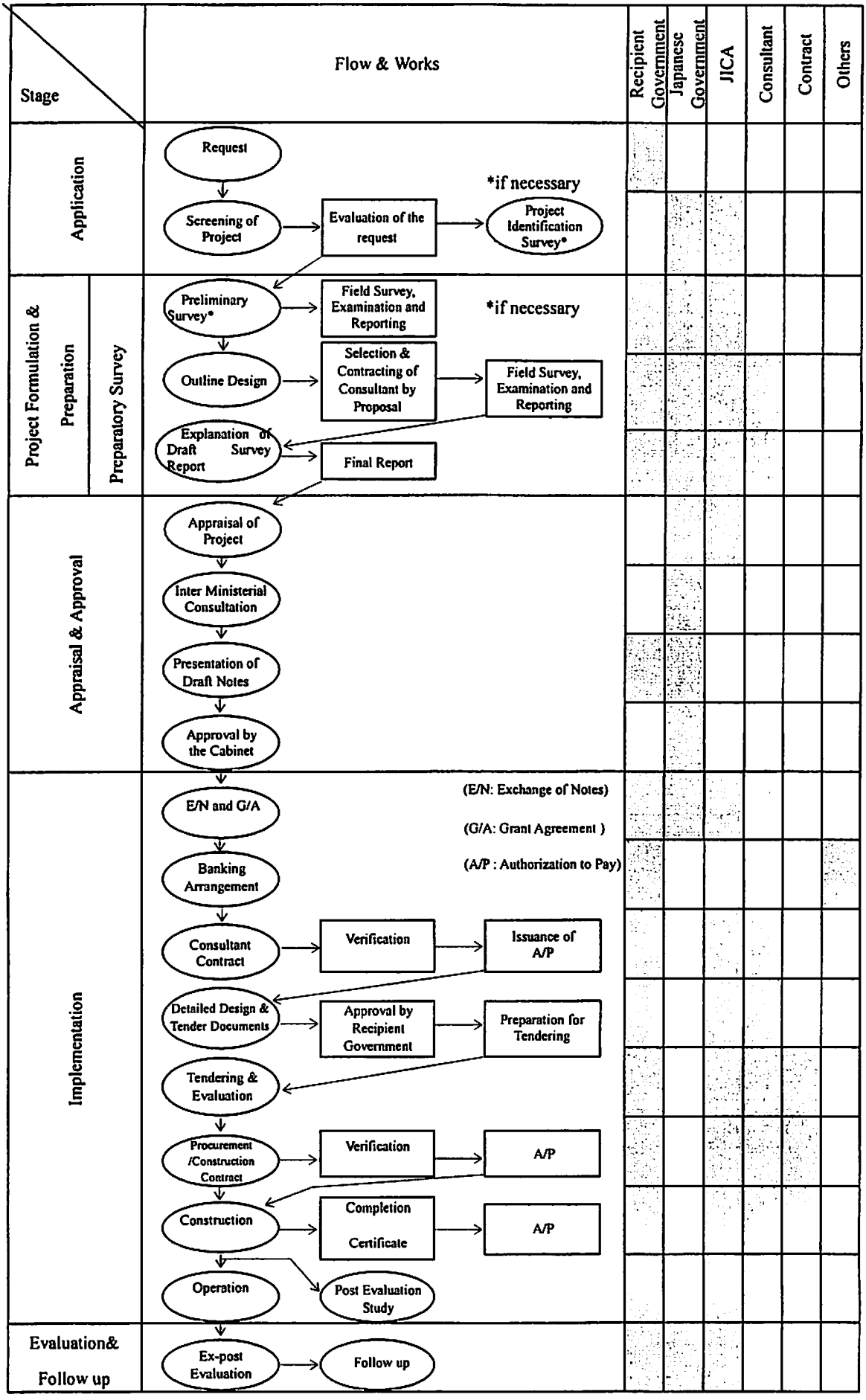
(11) Monitoring

The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

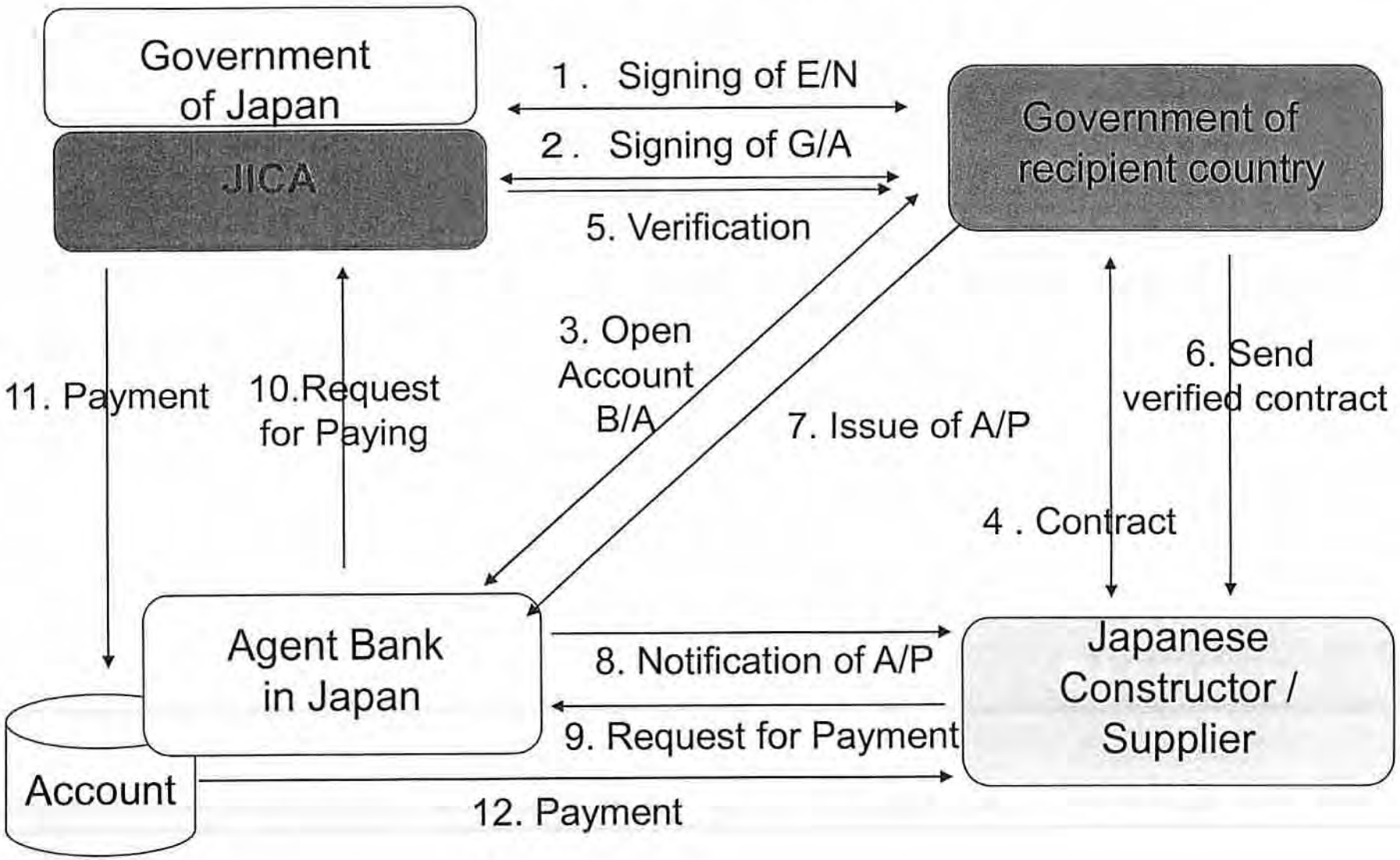
The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

FLOW CHART OF JAPAN's GRANT AID PROCEDURES



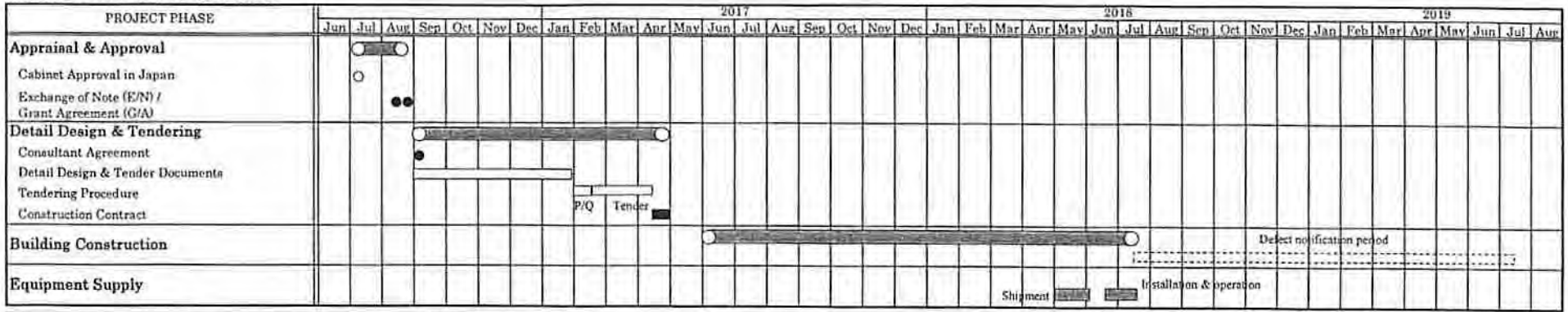
ANNEX 6

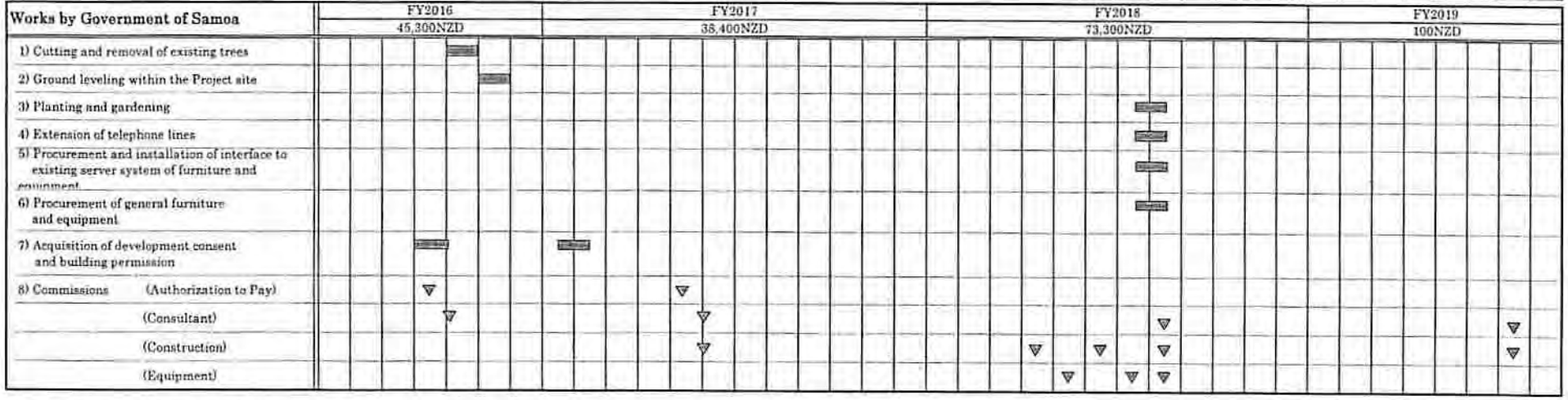
Financial Flow of Grant Aid



PROJECT IMPLEMENTATION SCHEDULE

PROJECT IMPLEMENTATION SCHEDULE





※ schedule may be subject to change.

[Annex 8]Major Undertakings to be taken by Each Government

Major Undertakings to be taken by Recipient Government

1. Before the Tender

NO	Items	Deadline	In charge	Cost (NZD)	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MoF		
2	To complete necessary procedure under Samoan Environmental Impact Assessment Regulation 2007 and Planning and Urban Management Agency Act 2004, and obtain Project Development Consent Approval from the Planning and Urban Management Agency, the Ministry of Natural Resources and Environment.	within 1 month after G/A	SPREP	27,200	
3	To secure and clear the following lands 1) Proposed construction site including temporary construction yard and stock yard in the existing Campus of SPREP in Vailima, Apia. 2) Land for the Gate at west side of the existing Campus of SPREP for temporary access during construction.	before notice of the tender document	SPREP		
4	To obtain building permission from Ministry of Works, Transport & Infrastructure	before invitation to the tenderer	SPREP	33,800	
5	To clear, level and reclaim the following sites Existing garden including trees within construction site.	before notice of the tender document	SPREP	17,300	

2. During the Project Implementation

NO	Items	Deadline	In charge	Cost (NZD)	Ref.
1	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	within 1 month after the singing of the contract and the agreement	MoF	200	
	2) Payment commission for A/P	every payment	MoF	12,000	
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country				
	1) Tax exemption and customs clearance of the products at the port of disembarkation	during the Project	MoF		
3	To accord the Japanese physical persons and /or physical persons of the third countries whose services may be required in connection with the supply of the product and /or the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work. and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	MoF		
4	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted;	during the Project	MoF		

5	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project.	during the Project	SPREP		
6	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities necessary for the implementation of the Project outside the site		SPREP		
	1) Planting and gardening To conduct planting and gardening work within and/or around construction site	1 month after completion of the construction	SPREP	9,000	
	2) Extension of telephone lines To Increase the number of contract for IP phone system	1 month after completion of the construction	SPREP	38,100	
	3) Procurement and installation of interface to existing server system To make connection with data storage procured under the Project	1 month after completion of the construction	SPREP	6,200	
	4) Procurement of general furniture and Equipment To procure furniture and equipment, not included in Japanese work	1 month after completion of the construction	SPREP	13,300	

3. After the Project

NO	Items	Deadline	In charge	Cost (NZD)	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost	After completion of the construction	SPREP	116,550 (annual)	
	2) Operation and maintenance structure	After completion of the construction	SPREP		
	3) Routine check/Periodic inspection	After completion of the construction	SPREP		

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

Major Undertakings to be taken under the Japanese Grant

No	Items	Deadline	Cost Estimated (Million Japanese Yen)*	
1	To construct facilities (or To procure equipment)		This page is closed due the confidentiality	
	Facilities			
	Equipment			
	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country			
	a) Marine(Air) transportation of the products from Japan to the recipient country			
	b) Internal transportation from the port of disembarkation to the project site			
	2) To construct the temporary building if necessary			
	3) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities			
	a) Electricity			
	The main circuit breaker			
	b) Water Supply			
	The supply system within the site (receiving and/or elevated tanks)			
	c) Drainage			
	The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site			
	d) Furniture and Equipment			
	Project equipment			
2	To implement detailed design, tender support and construction supervision (Consultant)			
3	Contingencies			
	Total			

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan.

Annex 9

Annual Operation and Maintenance Costs

Estimated annual operation and maintenance costs

Item		Estimated expenditures after completion of the Project (NZD)
(i)	Electricity	69,627
(ii)	Water	395
(iii)	Fuels	2,784
(iv)	Communication	28,197
(v)	Facility maintenance	6,000
(vi)	Elevator maintenance	4,000
(vii)	Operation and maintenance of equipment	5,547
Total		116,550

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

20XX, Month

Organization Information

Authority (Signer of the G/A)	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Line Ministry	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

Outline of Grant Agreement:

Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:

1: Project Description

1-1 Project Objective

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

1-3 Effectiveness and the indicators

- Effectiveness by the Project

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	**Original:** *(M/D)* **Attachment(s):Map**	**Actual:** *(PMRand PCR)* **Attachment(s):Map**

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D)	*(M/D)*	*(PMR and PCR)*

2-1-2 Reason(s) for the modification if there have been any.

(PMR and PCR)

2-2 Implementation Schedule
2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
[M/D] Project Completion Date*	*(M/D)*		*(PMR,PCR)* As of (Date of Revision) Please state not only the most updated schedule but also other past revisions chronologically.

*Project Completion was defined as _____ at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

(PMR and PCR)

2-3 Undertakings by each Government
2-3-1 Major Undertakings
See Attachment 2.

2-3-2 Activities
See Attachment 3.

2-3-3 Report on RD
See Attachment 4.

2-4 Project Cost
2-4-1 Project Cost

Table 2-3-1 Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

Items			Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction Facilities (or Equipment)				
Consulting Services	- Detailed design -Procurement Management -Construction Supervision			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

Table 2-3-2 Comparison of Original and Actual Cost by the Government of XX

Items			Cost (Million USD)	
	Original	Actual	Original	Actual
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR, PCR)

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: *(M/D)*

Actual, if changed: *(PMR and PCR)*

2-6 Environmental and Social Impacts

Report based on the agreed environmental checklist and monitoring form (See Attachment 4)

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: *(M/D)*
Actual: *(PCR)*

3-2 **O&M Cost and Budget**
- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: *(M/D)*

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): *(M/D)*	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L

(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR and PCR)	

5: Evaluation

5-1 Overall evaluation

Please describe your evaluation on the overall outcome of the Project.

(PCR)

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Report on RD
5. Monitoring report on environmental and social considerations
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Completion Report Only)

5. Other Relevant Data

5-1. Calculation of utilization rate of the Training / Multi-purpose Room

Other Relevant Data

2-2-2-1 Examination of Request

A) Training / Multi-purpose Room

Activities at the Training / Multi-purpose Room

The utilization rate of the Training / Multi-purpose Room is calculated as follows;

(1) The composition of Training / Multi-purpose Room

In the light of the use of the existing facilities of SPREP, it is appropriate to install movable partitions to divide the room evenly into three to make the room size adjustable to meet the number of participants. As shown in the schematic drawing in Figure A, the room will be arranged to be size-adjustable for 30, 60 and 90 participants with movable partitions.

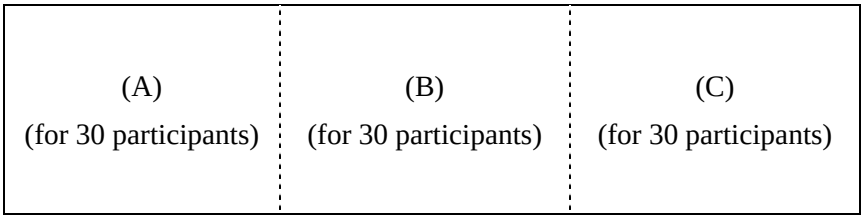


Figure A: Schematic drawing of the Training / Multi-purpose Room

(2) Activities at Training / Multi-purpose Room

Planning for the Activities outlined below in Table A for the Training / Multi-purpose Room

Table A: Activities at Training / Multi-purpose Room

No	Activities	Description
1	Training	The Training / Multi-purpose Room will be used for training courses of 50 to 90 participants, which cannot be accommodated at the existing Training and Education Centre (TEC)
2	Meeting	Meeting for CCD and all staff of SPREP including CCD
3	Meeting and training by other organization	Meeting and training related to climate change by other organizations, such as UNEP and WMO.
4	Workshop for school children	Environmental training and education for primary to secondary school children in Apia
5	Exhibition targeting at visitors participating in trainings held at TEC	Exhibition targeting at officials in charge of environmental issues from the Pacific countries and region

Items of No.1 to 4 in the Table A are activities occupying the Training/Multi-purpose Room at the time of respective trainings and meetings are held. On the otherhand, Item No.5 in the Table A is the exhibition utilizing the available areas which are not used for training or meetings, on the days when trainings are held at TEC. Annual operating days of TEC are assumed to be 107days.

(3) Utilization rate of the Training / Multi-purpose Room by trainings and meetings, etc.

1) Utilization rate by trainings

Table B shows utilization rate of the Training / Multi-purpose Room by trainings with 50-90 participants[1], according to the future training plan.

Table B: Utilization rate of the Training / Multi-purpose Room by trainings

Number of Participants	Training Period (day) (a)	Number of Trainings / year (b)	Training (days / year) (a x b)	Total Training days	Working day / year[2]	Utilization rate
50 to 90	1day			25 day	235 day	10.6%
	2day					
	3day	2	6			
	4day	1	4			
	5day	3	15			

2) Utilization rate by meetings

Demand of future meeting is shown in Table C. The prediction of demand for future meetings is difficult, however, the number of meetings conducted by CCD is assumed to increase by 1.5 times more than the current demand in the light of the fact that climate change related training in 2012 was the highest with 695 persons/times a year and it is 2,100 persons/times in the future plan, which is 3 times more than 2012. In addition, frequency of SPREP all staff meeting including CCD assumed to be the same as the acutural record.

There are various types of meetings, including those by individual teams of CCD, CCD as a whole, all staff members of SPREP, and TV conferences with member countries and donor.

[1] The annual number of training courses expecting 50 or less participants at TEC has been estimated in the following formula: ((the number of training courses with 50-90 participants scheduled in five years in future, whose budgets have been already earmarked by donors) x 1.0 + (the number of training courses with 50-90 participants which are scheduled by SPREP but whose budgets have NOT been earmarked) x 0.8 / 5 x 43.7%, which is the average executing rate of training courses at the SPREP headquarters obtained from the records in the previous three years.

[2] As same as the working days of SPREP, the annual operable days will be set as 235 days of the year, which exclude Saturdays, Sundays, Holidays, Christmas, year-end and New Year holidays, and Easter.

Table C: The number of meetings held by CCD in the past and the utilization rate in the future

Meeting size[3]	Size of the Training / Training / Multi-purpose Room	No. of meetings in 2015[4]	Increment of frequency in the future	No. of meetings in the future	Annual no. of meetings that can be held[5]	Utilization rate
Small meetings (for CCD)	Up to 10 participants (Small meeting space in the Climate Change Management Office will be used)	51	1.5 times	77	As necessary	
Medium-sized meetings (for CCD)	Meetings of 11 to30 participants (One-third of the Training / Multi-purpose Room will be used.)	15	1.5 times	45	470	4.9%
Large meetings (for CCD)	Meetings of 31 to 60 participants (Two-thirds of the Training / Multi-purpose Room will be used.)	36	1.5 times	54		11.5%
General meetings (for all SPREP staff members)	Meetings of 61 to 90 participants (The entire Training / Multi-purpose Room will be used.)	27	-	27		5.7%

3) Utilization rate by meeting and training by other organization

UNEP and WMO have expressed their intention to use the Training / Multi-purpose Room of PCCC. Whereas UNEP has specific activity programs, WMO has not yet prepared such programs. Accordingly, the utilization rate has to be calculated by the proposed programs of UNEP. UNEP is planning to use 3-day regional meetings with about 30 participants twice a year, 3-day international workshops with about 25-30 participants twice a year. Table D shows the utilization rate of the Training / Multi-purpose Room by meetings and trainings related to climate change by other organizations.

[3] Currently meetings by CCD are held in TEC. Small meetings, medium-size meetings and large meetings listed in meeting size in Table C are meetings held in small group discussion room1, computer laboratory/training room and the training room in the respectively.

[4] The survey data available was for four months only, from May to August 2015. The annual number has been calculated by multiplying the figure for four months by 3.

[5] At present, SPREP receives reservation for meeting rooms for the morning and afternoon sessions per day. Because SPREP has the annual working days of 235, the annual number of meetings that can be held has been calculated by multiplying 235by 2: that is 470.

Table D: The utilization rate by meeting and training by other organization

UNEP meetings and workshops	12 days per year
Utilization rate	12 days/ 235 days = 5.1%

4) Utilization rate by workshop for school children

SPREP regularly conducts awareness raising and open day activities for primary to secondary school children in Apia. Environmental education for school children is deemed important in Samoa. Accordingly, SPREP plans to continue awareness activities. More specifically, SPREP invites 50 children each from two schools in every quarter, providing them with opportunities to learn the basic points of climate change.

Table E shows the utilization rate of the Training / Multi-purpose Room by workshop for children.

Table E: Utilization rate by workshop for school children

Workshop for students	4 days /year
Utilization rate	4 days / 235 days = 1.7%

(4) Utilization rate of the Training / Multi-purpose Room

Table F summarizes the utilization rates of the Training / Multi-purpose Room by activities 1 to 4 listed in Table A in the light of room size and Spaces (A) to (C) divided by movable partitions shown in Figure A “Schematic Drawing of the Training / Multi-purpose Room”. The table confirms that the room is expected to have annual average utilization rates of 28%.

Table F: Utilization Rate of the Training / Multi-purpose Room

		Operating rate of Space (A) (%)	Operating rate of Space (B) (%)	Operating rate of Space (C) (%)	Remarks
Training		10.6	10.6	10.6	Area (A) to (C) are simultaneously used.
Meeting	Medium-sized meeting			4.9	Area (C) alone is used.
	Large meeting	11.5	11.5		Area (A) and (B) are simultaneously used.
	Overall meeting	5.7	5.7	5.7	Area (A) to (C) are simultaneously used.
Meeting and training by other organization				5.1	Area(C) alone is used.
Workshop for school children		1.7	1.7		Area(A) and (B) are simultaneously used.
Total		29.5	29.5	26.3	Average utilization rate 28%

In addition, considering that exhibition targeting at visitors participating in training held at TEC, as item no. 5 listed in Table A, will occupy the area not used for trainings or meetings, whose working day is assumed to be 107 days, utilization rate of the Training / Multi-purpose Room during the said 107 days is regarded as 100%. Thus, total utilization rate of Training / Multi-purpose Room is calculated as follows;

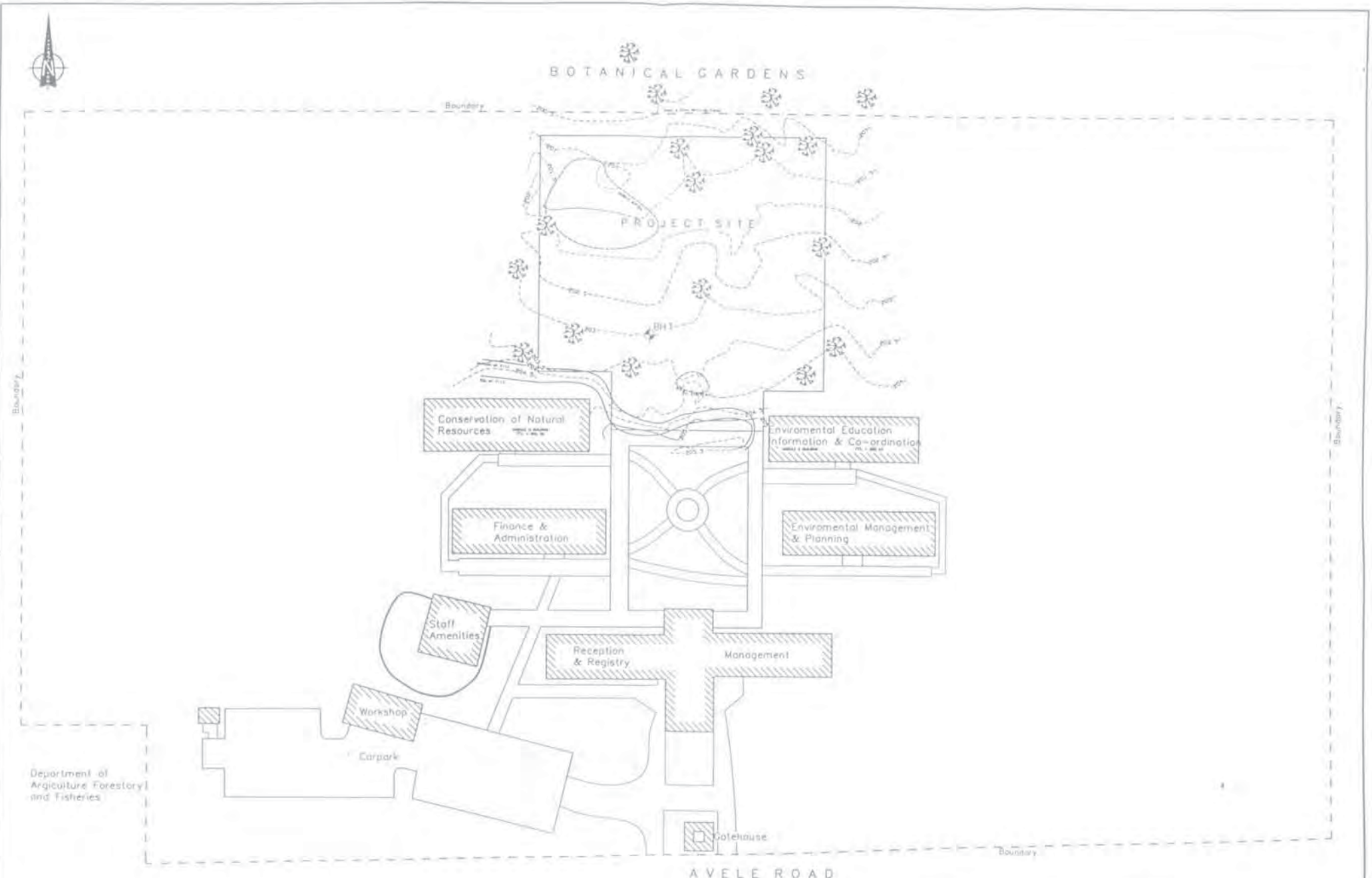
{28% x (235-107) +100% x 107}/235=61%[6]

Ministry of Internal Affairs and Communications in Japan conducted a survey on staff training facilities belonging to Ministries in 2010. Average of annual utilization rate of training rooms in the 16 training facilities which are concluded that it is not necessary to abolish or shrink is 46% according to the report of the survey

5-2. Result of Geological Survey

SITE PLAN

YAMASHITA SEKKEI INC.
SPREP TRAINING & EDUCATION CENTRE, APELI ROAD, VAILIMA, APIA, SAMOA
REFERENCE NUMBER: 750273 January 2000


BOTANICAL GARDENS
Boundary
PROJECT SITE
BH1
Conservation of Natural Resources
Enviromental Education Information & Co-ordination
Finance & Administration
Enviromental Management & Planning
Staff Amenities
Reception & Registry
Management
Workshop
Carpark
Department of Argiculture Forestory and Fisheries
Gatehouse
Boundary
Boundary
Boundary
AVELE ROAD
KEY
BH1
Tonkin, Gordon & Associates Ltd
Machine Borehole (Dec 99)
SCALE 1:750
0 15 30 45 60 75 (m)
TONKIN & TAYLOR
ENVIRONMENTAL & ENGINEERING CONSULTANTS
AUCKLAND
DRAWN AMM JAN 00
DRAFTING CHECKED
APPROVED
CADFILE: L:\750273\750273-01
SCALES (AT AS SIZE) 1:750
YAMASHITA SEKKEI Inc
PROPOSED TRAINING & EDUCATION CENTRE
AVELE ROAD, VAILIMA, APIA, WESTERN SAMOA
SITE PLAN

A-11

BOREHOLE LOG

TONKIN & TAYLOR LTD

BOREHOLE LOG

BOREHOLE No: BH1
Hole Location: Refer to site plan
SHEET 1 OF 1

PROJECT: SPREP Training & Education Centre | LOCATION: Avele Rd, Vaiima, Apia, Western Samoa | JOB No: 750273

CO-ORDINATES: mN, mE | DRILL TYPE: N/A | HOLE STARTED: 07/12/99

R.L.: m | DRILL METHOD: Tripple Tube | HOLE FINISHED: 07/12/99

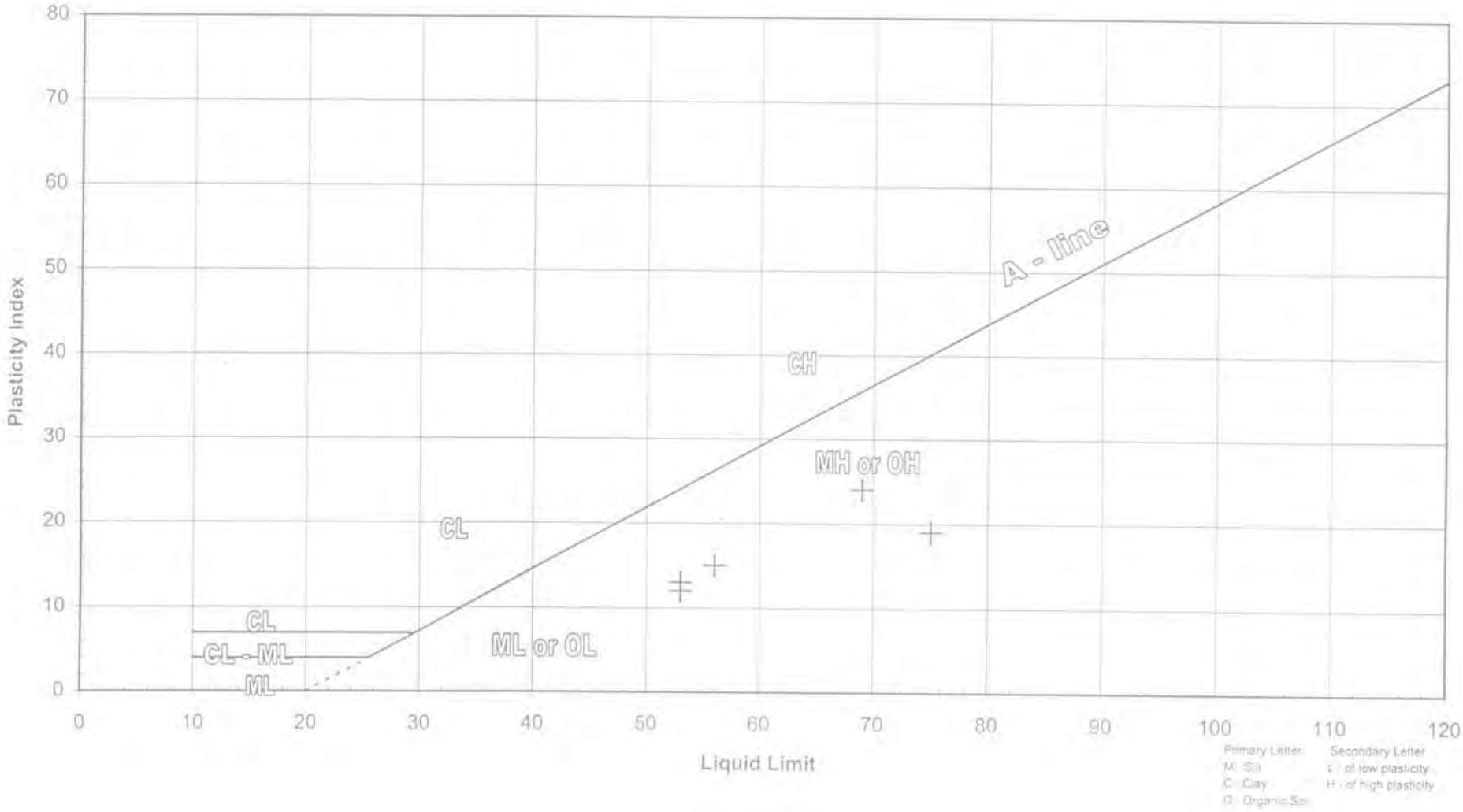
DATUM | DRILL FLUID: Water | DRILLED BY: Refer Note Below

LOGGED BY: Refer Note | CHECKED:

GEOLOGICAL										ENGINEERING DESCRIPTION							
GEOLOGICAL UNIT GENERIC NAME ORIGIN MINERAL COMPOSITION	FLUID LOSS	WATER	CORE RECOVERY	METHOD	CASING	TESTS	SAMPLES	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MOISTURE / WEATHERING CONDITION	STRENGTH/DENSITY CLASSIFICATION	SHEAR STRENGTH (kPa) 10 50 100 200	COMPRESSIVE STRENGTH (MPa) 1 5 10 50 100	DEFECT SPACING (mm) 50 200 600 2000	SOIL DESCRIPTION: Soil type, minor components, plasticity or particle size, colour ROCK DESCRIPTION: Substance: Rock type, particle size, colour, minor components; Defects: Type, inclination, thickness, roughness, filling
TOPSOIL											OL						TOPSOIL, organic
VOLCANIC ASH		Dry on Completion	?	HQ3					1		CL/GP						SILT/CLAY matrix with BASALT rock fragments (10-450mm diameter, angular to sub-angular fragments, minor weathering)
			?	SPT		2/9/10 N=21											-rocks becoming larger, 40% angular BASALT fragments (5-300mm), 60% volcanic silty CLAY
			?	HQ3					2								-rock content increases with depth, hard drilling with soft patches, 0% recovery
			0%	SPT		5/16/19 for 50mm N=40+											
			?	HQ3													
VOLCANIC BASALT FLOW			?	NQ3					3								BASALT, dense, few vesicles, jointed typically at 50-150mm intervals
			?	SPT		10 for 0mm Rebound											BASALT rock, solid drilling, jointed 30-80mm, (too hard for SPT test)
			?	NQ3													BASALT rock, jointed 30-140mm, (top section of core crumbled)
																	BASALT rock, dense, few vesicles and vugs, jointed 10-130mm, (middle and base sections of core crumbled)
									4								BASALT rock, dense, few vesicles and vugs, jointed, (Top portion of core crumbled)
																	END OF BOREHOLE AT 4.3m Note Borehole log based on summary log supplied by Tinai, Gordon & Associates

LABORATORY RESULTS

SPREP TRAINING CENTRE, AVELE ROAD, APIA, WESTERN SAMOA
ATTERBERG LIMIT RESULTS



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GEOTECHNICS LTD
19 MORGAN ST. NEWMARKET, AUCKLAND.
TELEPHONE (09) 3556020 FAX (09) 3070265

Form No.:	M 2
Form Date:	April 1999
Authorised by:	Anderson

T&T CONTACT: CJF
PROJECT MANAGER: CJF
JOB NAME: JICA - SPREP
SITE: Samoa

Page of
JOB No.: 750273
DATE: 12/01/00

TEST RESULTS SUMMARY

BOREHOLE / TEST PIT No.		1	1	1	1	1	1	1	1	1			
SAMPLE No.		1	2	3	4	5	6	7	8	9			
DEPTH (m)		0.5 – 1.0	1.0 – 1.5	1.0	1.5 – 2.0	2.0	2.75 – 3.0	3.0 – 3.25	3.25 – 3.6	3.6 – 3.85			
WATER CONTENT	(%)	45.9	50.0	46.4	45.9	59.3	2.9	2.4	2.3	2.0			
ATTERBERG LIMITS	LL (%)	69	53	56	53	75	–	–	–	–			
	PL (%)	45	40	41	41	56	–	–	–	–			
	PI (%)	24	13	15	12	19	–	–	–	–			
BULK DENSITY	(t/m³)						2.87	2.94	2.84	2.86			
DRY DENSITY	(t/m³)						2.79	2.87	2.78	2.80			
SOLID DENSITY	(t/m³)	3.10	3.19	–	3.20	–							
LABORATORY VANE (kPa)	Peak												
	Residual												
MAXIMUM DENSITY	(kg/m³)												
MINIMUM DENSITY	(kg/m³)												
ORGANIC CONTENT	(%)												
ALLOPHANE CONTENT	(%)												
DESCRIPTION													
GRADING - SIEVE (wet / dry)													
GRADING - HYDROMETER													
COMPACTION													
CBR													
ONE DIMENSIONAL CONSOLIDATION													
DIRECT SHEAR													
UNCONFINED COMPRESSION (kPa)							100.5	157.5	81.5	81.5			
TRIAXIAL (UU)													
TRIAXIAL (CUP / CD)													
TRIAXIAL PERMEABILITY													
~~PINHOLE DISPERSION~~ Bulk sp. gravity							2.85	2.88	2.79	2.71	}	AS 1141	
Bulk sp. gravity (Sat. Surface Dry)							2.92	2.93	2.87	2.82	}	ASTM C127	
Apparent sp. gravity							3.06	3.05	3.05	3.05	}		
Absorption							2.3	2.0	3.0	4.0	}		

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GEOTECHNICS LTD
19 MORGAN ST, NEWMARKET, AUCKLAND.
TELEPHONE (09) 3556020 FAX (09) 3070265

Form No.:	M5
Form Date:	Dec. 1997
Authorised by:	[illegible]

Page of

Site: Sandy Job Name: SICA - SPREP Job No.: 750273

SAMPLE DESCRIPTION

BOREHOLE? TEST PIT No.	SAMPLE No.	DEPTH (m)	DESCRIPTION (Primary constituent, secondary constituent, strength, colour, miscellaneous)
1	1	0.0 - 1.0	SILT, clayey, soft to firm, dark brown, high plasticity, dilatant, gravelly (coarse-fine) some roots present.
1	2	1.0 - 1.5	SILT, s. clayey, soft to firm, dark brown med. plasticity, dilatant, gravelly (coarse-fine),
1	3	1.0	SILT, s. clayey, soft to firm, dark brown med. plasticity, dilatant, gravelly (coarse-fine).
1	4	1.5 - 2.0	SILT, s. clayey, soft to firm, dark brown med. plasticity, dilatant, gravelly (coarse-fine).
1	5	2.0	SILT, clayey, soft to firm, dark brown, high plasticity, dilatant, gravelly (coarse-fine).

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GEOTECHNICS LTD
19 MORGAN ST. NEWMARKET, AUCKLAND.
TELEPHONE (09) 3556020 FAX (09) 3070265

Form No.:	M5
Form Date:	Dec. 1997
Authorised by:	S.Anderson

Site : Samoa   Job Name: JICA -SPREP   Page of   Job No.: 7502-23

SAMPLE DESCRIPTION

BOREHOLE / TEST PIT No.	SAMPLE No.	DEPTH (m)	DESCRIPTION (Primary constituent, secondary constituent, strength, colour, miscellaneous)
1	6	2.75 – 3.0	Rock – BASALT, grey, very strong, Vesicular
1	7	3.0 – 3.25	Rock – BASALT, grey, very strong, Vesicular.
1	8	3.25 – 3.6	Rock – BASALT, grey, strong, Vesicular
1	9	3.6 – 3.85	Rock – BASALT, grey, strong, Vesicular

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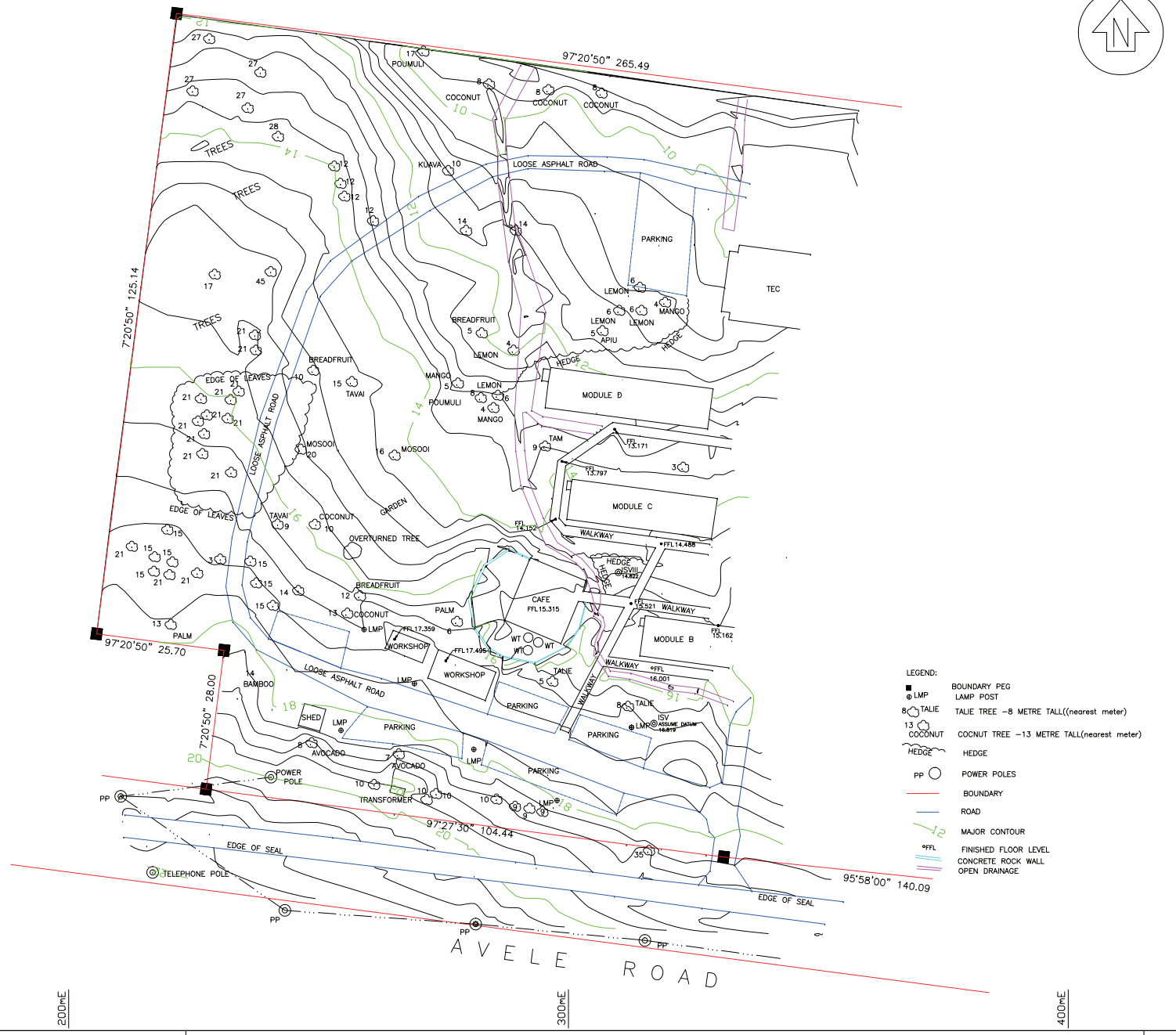
5-3. Result of Topographic Survey



Approvals

LAND DISTRICT TUAMASAGA

TOPOGRAPHICAL SURVEY OF SITE A FOR SPREP AT VAILIMA

Surveyed by PIKI SURVEYING FIRM

Scale 1: 600 Date 24 NOV 2015

6. References

References

Collected material
Secretariat of the Pacific Regional Environment Programme Pacific Climate Change Centre Business Plan (DRAFT) 26 October 2015 (SOFT COPY)