Ministry of Foreign Affairs
The Independent State of Samoa

BASIC DESIGN STUDY REPORT

ON

THE PROJECT FOR SOUTH PACIFIC REGIONAL ENVIRONMENT

PROGRAMME (SPREP) TRAINING AND EDUCATION CENTRE

IN

THE INDEPENDENT STATE OF SAMOA

JULY, 2000

JAPAN INTERNATIONAL COOPERATION AGENCY

YAMASHITA SEKKEI INC.

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PREFACE

In response to a request from the Government of Independent State of Samoa, the Government of Japan decided to conduct a basic design study on the Project for SPREP Training and Education Centre and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Samoa a study team from November 14 to December 4, 1999.

The team held discussions with the officials concerned of the Government of Samoa, and conducted a field study at the study area. After the team returned to Japan, further studies were made, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Independent State of Samoa for their close cooperation extended to the team.

July, 2000

Kimio Fujita
President
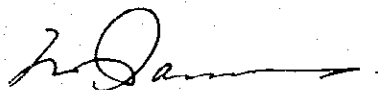Japan International Cooperation Agency

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for SPREP Training and Education Centre in the Independent State of Samoa.
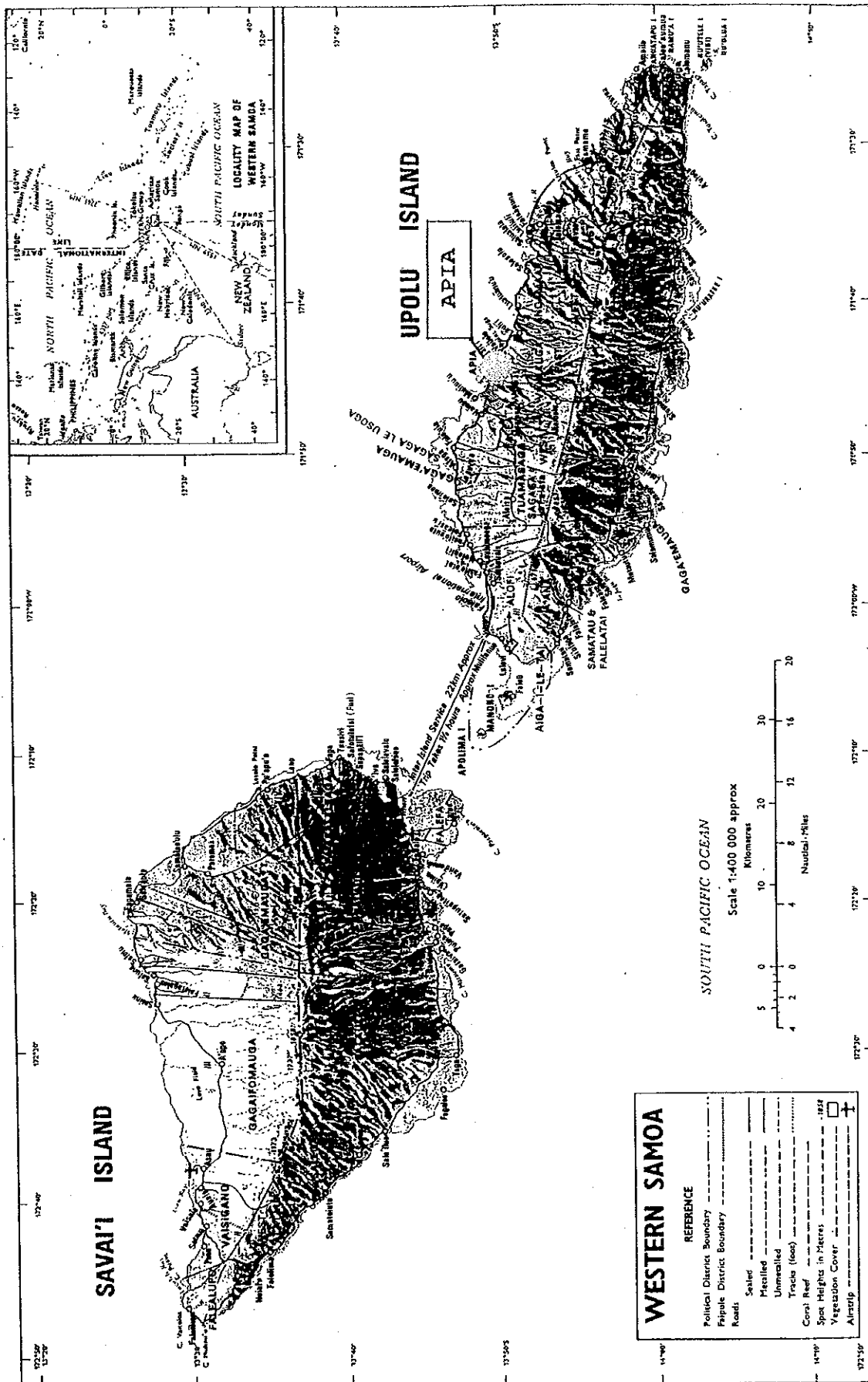
This study was conducted by Yamashita Sekkei Inc., under a contract to JICA, during the period from November 8, 1999 to July 26, 2000. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Samoa and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.
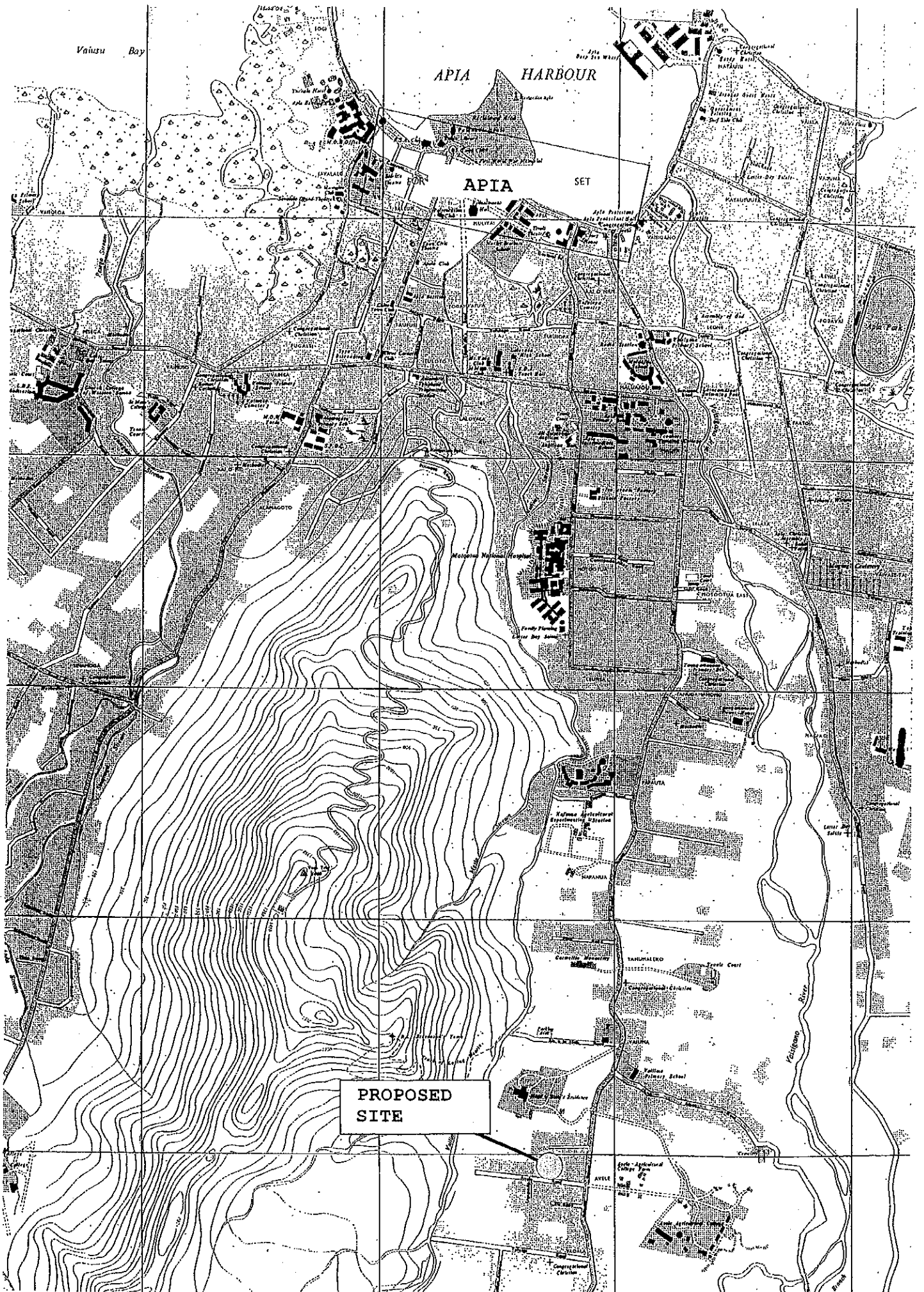
Very truly yours,

Minoru Tanaka
Project manager,
Basic Design Study team on
the Project for SPREP Training and
Education Centre
Yamashita Sekkei Inc.

SAVAI'I ISLAND

UPOLU ISLAND

APIA

LOCATION MAP (1)

LOCALITY MAP OF
WESTERN SAMOA

NORTH PACIFIC OCEAN

SOUTH PACIFIC OCEAN

INTERNATIONAL DATE LINE

AUSTRALIA

NEW ZEALAND

PHILIPPINES

SOUTH PACIFIC OCEAN

Scale 1:400 000 approx

Kilometres

Nautical Miles

GAGAIFOMAUGA

VAISIGANO

FALEALUPO

TUAMASAGA

GAGA'EMAUGA

GAGA'IFO GAGA'I LE USOGA

SAMATAU &
FALELATAI

AIGA-ILE-TAI

APOLIMA I

MANONO I

WESTERN SAMOA

REFERENCE

Political District Boundary	
Faipule District Boundary	
Roads	
Sealed	
Metalled	
Unmetalled	
Tracks (foot)	
Coral Reef	
Spot Heights in Metres	
Vegetation Cover	
Airstrip	

APIA HARBOUR

Vaiusu Bay

APIA

PROPOSED
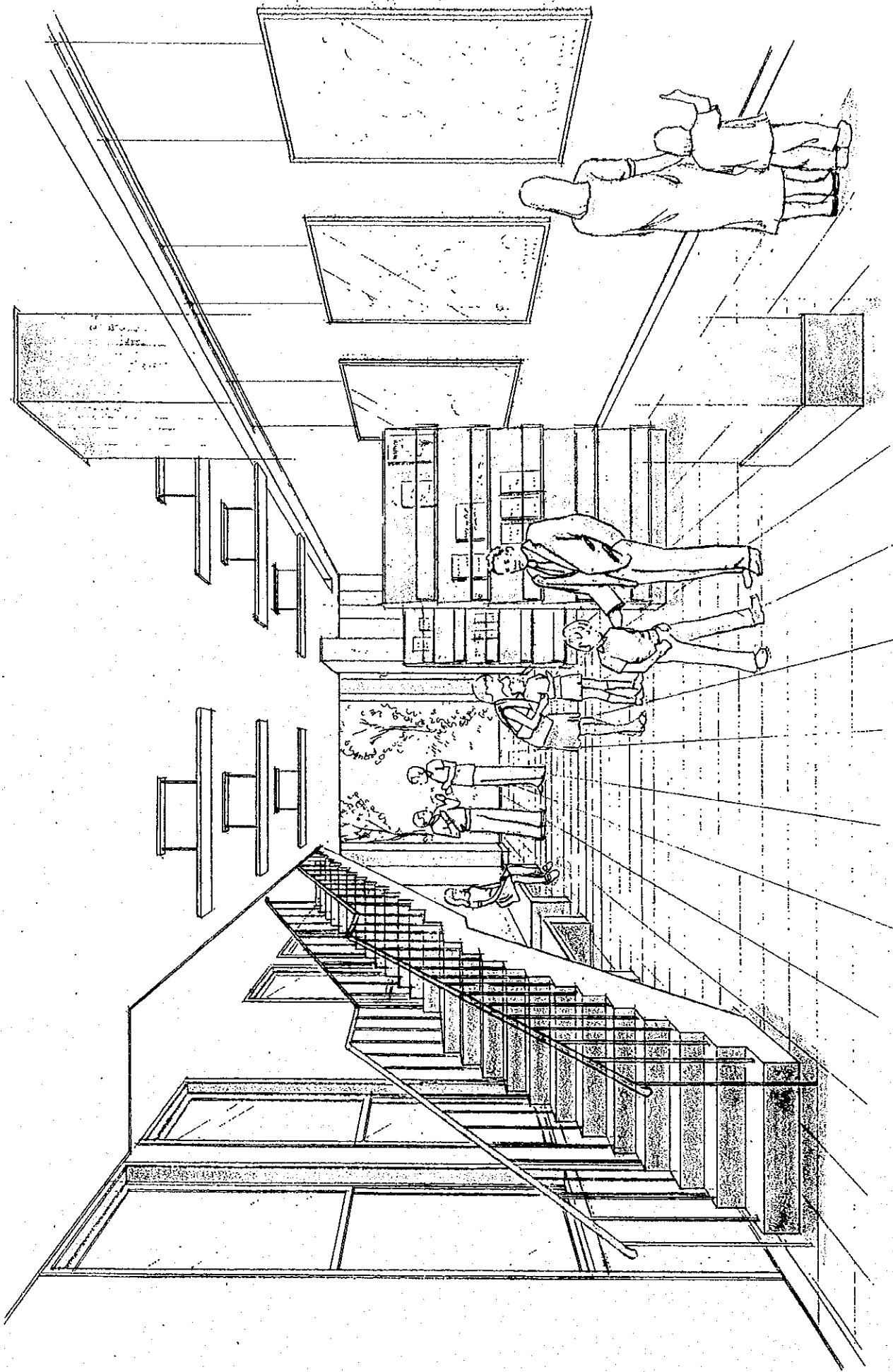SITE

LOCATION MAP (2)

ENTRANCE HALL

PERSPECTIVE (3)

Abbreviation

CACC   Conservation Area Coordinating Committee

CASO   Conservation Area Support Officer

CBEMP   Capacity Building for Environmental Management in the Pacific

E/N   Exchange of Notes

EU   European Union

GDP   Gross Domestic Product

GIS/RS   Geological Information System/Remote Sensing

PACPOL   Pacific Ocean Pollution Prevention Programme

PEIN   Pacific Environment Information Net-work

PENRIC   Pacific Environment and Natural Resource Information Centre

PICCAP   Pacific Islands Climate Change Assistance Programme

SOPAC   South Pacific Applied Geoscience Commission

SPBCP   South Pacific Biodiversity Conservation Programme

SPC   South Pacific Commission

SPF   South Pacific Forum

SPREP   South Pacific Regional Environment Programme

UNDP   United Nation Development Programme

UNEP   United Nation Environment Programme

UNFCCC   United National Framework Convention on Climate Change

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Chapter 1 BACKGROUND OF THE PROJECT
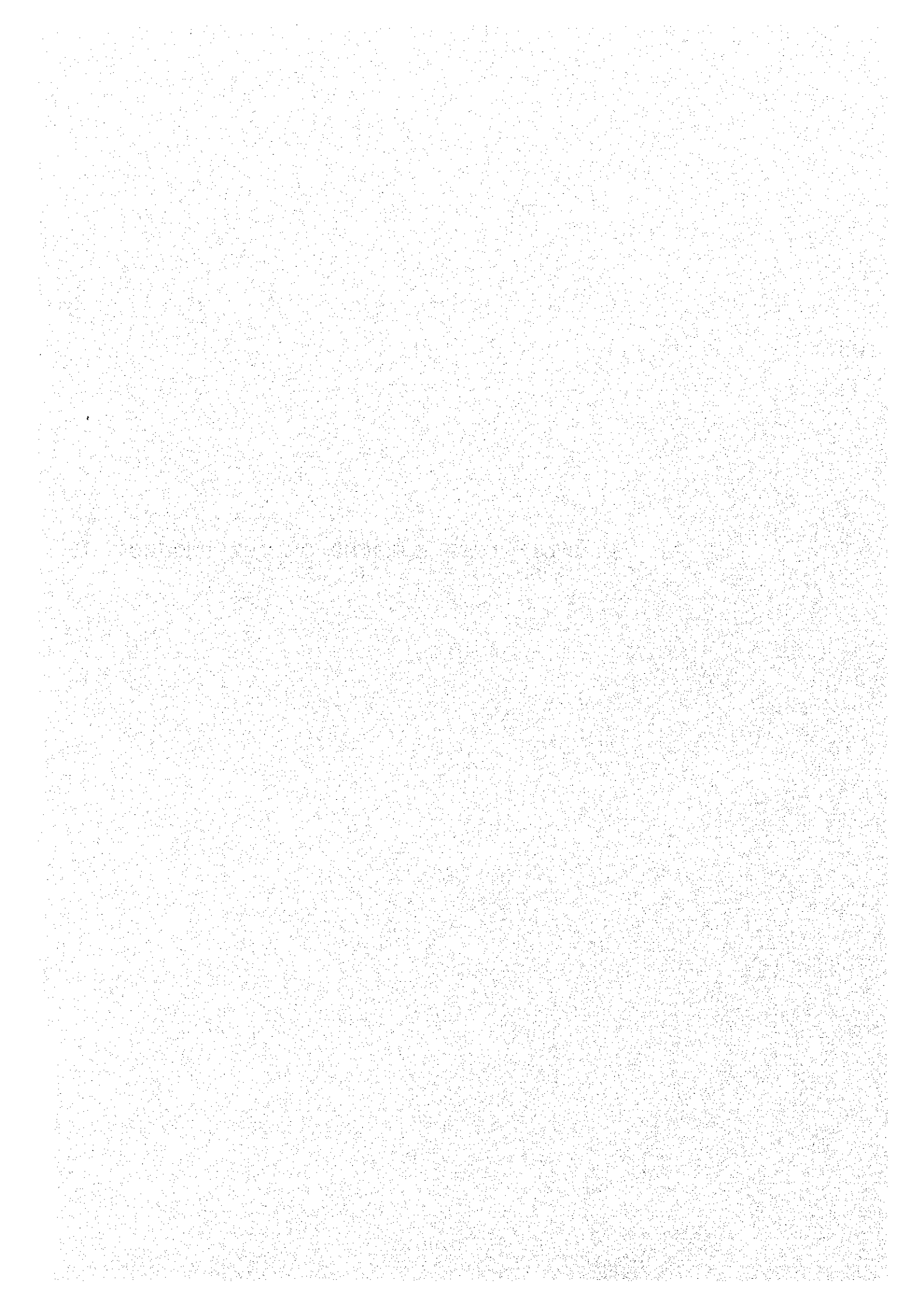
Chapter 1 BACKGROUND OF THE PROJECT

The Government of Samoa has raised following environmental problems in the Statement of Economic Strategy 2000-2001, the National Development Plan of Samoa.

- Deforestation
- Loss of soil fertility
- Widespread presence of exotic weed species
- Degradation of lagoons and reefs
- Industrial and urban pollution management
- Accumulation of modern wastes

In addition to above, since tourism, one of the main industry in Samoa, has relied on its natural resources, the strengthening of laws and standards on environmental protection has become urgent in the environmental conservation activities in the country.

On this circumstances, the Government of Samoa has been drown out the environmental protection policies and standards, collecting basic environmental data, giving environmental educational training to teachers in primary and secondary levels, and carrying out an enlightenment activities for community residents, in collaboration with the South Pacific Regional Environment Programme (SPREP).

The South Pacific Regional Environment Programme (SPREP) is a regional intergovernmental organisation with its headquarter in Apia, the Independent State of Samoa. Its members are the Governments and Administrations of 22 Pacific island countries and four developed countries with direct interest in the Pacific region. Samoa is therefore a member of the SPREP and at the same time is the host country. The SPREP has National Focal Points in each member country. In Samoa, the National Focal Points consist of the Ministry of Foreign Affairs and the Department of Lands Surveys and Environment.

Table 1-1 SPREP Member Countries

Samoa, American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Solomon Islands, Tokelau, Kingdom of Tonga, Tuvalu, Vanuatu, Wallis and Futuna, Australia, New Zealand, France, United States of America

The SPREP was established in 1982 as part of a joint initiative by the South Pacific Forum (SPF) and the South Pacific Conference (SPC). The SPREP was a programme of SPC with its headquarters in New Caledonia, a territory of France. In keeping with the expansion of its organisation, the SPREP decided, in 1991, to be an independent regional intergovernmental organisation, and in 1993 it formally became independent. At the request of member governments, and following an offer to host the organisation by the Government of Samoa, SPREP's headquarter was relocated in Samoa in 1992.

Despite the fact that as environmental issues in the South Pacific region have diversified, the SPREP's organisation has grown, its activities have diversified and its workload has increased, its headquarters has remained poorly equipped, a warehouse being converted into its main facility and containers being used ancillary facilities, which is a major stumbling block to the SPREP'S current operations. For this reason, the construction of a new SPREP headquarters building (administration building) was started at Avele in the district of Tuamasaga in the city of Apia in June 1999 with the financial assistance from the following countries, Australia, New Zealand, France, United States of America, People's Republic of China, Papua New Guinea and Samoa. The construction work is scheduled to be completed in July 2000.

On the other hand, the training of experts in dealing with environmental issues in the member island countries, which is one of the SPREP's important agendas, is being carried out through training and seminar/workshops. At present, however, the SPREP has no training facilities. It has no alternative but to rent other facilities such as hotels etc. in Samoa or training

facilities in the other member countries (Fiji, New Zealand, Australia, etc.) for training purposes. This means that the scope of the SPREP environmental expert training programme is very limited.

On this circumstances, the Government of Samoa has requested the Government of Japan, the grant aid co-operation on the construction of training and education centre and procurement of related equipment for SPREP's training and education activities.

Chapter 2 CONTENTS OF THE PROJECT

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2-1 Object of the Project

The objective of this project is, to contribute to environmental protection in the Pacific island countries by constructing facilities required on the premises of the SPREP's headquarters and also by procuring necessary items of equipment to give training/education courses and seminars/workshops as means to enhance the quality of environmental administration in the Pacific island countries, to improve the capabilities of experts dealing with environmental issues in the region and to increase public awareness of environmental issues.

For this objective of the Project, the Government of Samoa has requested the Government of Japan, the grant aid co-operation on the construction of Training and Education Centre and procurement of related equipment for SPREP's training and education activities. The contents of the request is as follows.

1. Construction of facilities

   - 1 Training Room (50 seater) collapsible into 2 small rooms (25 seater each)

   - 4 Small Group Discussion Rooms (10 Seater each)

   - Workshop/Secretariat Room

   - Open Learning Resource Room

   - Multi-media Room containing a small sound-proofing booth

   - Fire-proof Strong Room

   - Computer Laboratory/Training room

   - Storeroom

   - Resource Staff Space

2. Training Equipment

   - Training Room/small rooms

4

- Small Group Discussion Room

- Video/Radio programme production

- Open Learning Resource Room

- Computer Laboratory/Training Room

- Publication/Editorial/Public Relations

- Information Technology

- Satellite communication Component

- GIS/RS and Mapping

- Workshop/Secretariat

2-2 Basic Concept of the Project

2-2-1 Education and Training Programmes

The SPREP is implementing a wide variety of education and training programmes for the purpose of creating a broad pool of experts in the area of environmental protection in the region. The current education and training programmes are broadly divided into general training programmes, in which general environmental issues are dealt with, and computer training programmes, which are aimed at improving the information processing ability of environmental experts.

Other activities of SPREP are publishing environment related pamphlets/ reports, production of videos as teaching materials, disclosure of data and information and exchange of views and information among education staff.

Details of the SPREP's past education and training programmes and those to be implemented in the future are as described below.

(1) General Training Programmes

The general training programmes are grouped, according to subject matter, into the following four types.

- Workshops on environmental protection issues

- Training in operation and management of environmental protection organisations

- Workshops on environmental policies

- Training in development and maintenance of networks of environmental information

The general training programmes, which are offered to SPREP staff members, government officials concerned and representatives of environmental NGOs in the member Pacific island countries, consist mainly of lectures, presentations by representatives of public and private organisations

concerned with environment protection, exchanges of information on the latest environmental indicators, field surveys, and computer training courses (in the case of subject matters relating to information technology). SPREP has implemented seminars/training to a total of 732 trainees for a total of 160 days in 1999. In SPREP's annual seminar/training schedule, they are planning to implement seminars/training to a total of 760 trainees for a total of 300 days. These training programmes form the basis of SPREP's activities, and are therefore much in demand and very important.

Table 2-1 shows a summary of the seminar/training programmes and workshops implemented by SPREP in 1999.

Table 2-1   Seminar/training Implemented in 1999

Title	Country	Duration (day)	Place	No. of trainee	Target Group
Training & Meeting held outside Samoa					
PICCAP Advisory Group Meeting	NZ, Auckland	2	Hotel	20	Group for PICCAP
Biodiversity Strategic Action Plan Workshop (BSAP)	Fiji, Coral Coast	5	Hotel	15	BSAP Coordinators
Third Roundtable for Nature Conservation in the Pacific Island Region	Fiji, Suva	4	–	30	Regional Conservation Org. & Donor Agencies
Birds Avifauna, Polynesian Sub-regional Workshop	Cook Islands	5	Hotel	20	Conservation Officers Polynesia
SPBCP/CASO/CACC Workshop on Project Management	Fiji, Nadi	12	Hotel	30	CASO/CACC & Community Representatives
Communicating Environmental Information UNESCO/SPREP (w/ computer training)	Marshall Is., Majuro	3	–	18	Government officials, NGO Representative & Journalists
Sub-regional Workshop on Community Based Resource Management	Fiji, Nadi	12	Hotel	24	SPBCP, CASO, CACC Members and Project Management
Climate Information, Predictions, and Services (CLIPS) Training Workshop	French Polynesia	5	Hotel	30	Directors from SPREP Member countries
Communicating Environmental Information UNESCO/SPREP (w/computer training)	Fiji, Suva	4	Hotel	21	Government officials, NGO Representative & Journalists
Sub-regional Primary School Teacher Training Resources Workshop	Nuku'alofa, Tonga	5	USP	15	6 PICs
NZODA/SPREP Inaugural South Pacific Guide Training Workshop	Fiji, Korotogo	5	Hotel	20	Tour guides, participants from SPBCP
Regional PACCLIM & Consultation under PICCAP	NZ, Auckland	5	Hotel	75	Scientific Experts World Bank, UNDP, UNEP, Reg. Organisation
Communicating Environmental Information UNESCO/SPREP (w/computer training)	Cook Is., Rarotonga	5	–	27	Government officials, NGO Representative & Journalists

Title	Country	Duration (day)	Place	No. of trainee	Target Group
Regional Invasive Species Strat3egy for the South Pacific Is. - Regional Workshop	Fiji, Nadi	5	Hotel	20	Conservation & quarantine Officers
Sub-regional workshop on Community-based Marine Protected Areas	Palau, Koror	5	Hotel	20	Fisheries, Environment Officers, Micronesia
Training Workshops under PICCAP on V & A PACCLOIM, Vanda Islands	Germany, Bonn	5	-	20	SIS, Donor Countries & Organisations
Fourth Roundtable for Nature Conservation in the Pacific Is. Region	Hawaii, Honolulu	5	East West centre	20	Regional Conservation Organisations & Donor Agencies
Sub-regional workshop on Community-based Marine Protected Areas	French Polynesia, Papeete	5	Hotel	20	Fisheries, Environment Officers, Polynesia
Vanuatu National Information Sharing Workshop	Port Vila, Vanuatu	5	-	20	Information Officers (Govt), Librarians, Teachers, Media
Communicating Environmental Information UNESCO/SPREP (w/computer training)	Tonga, Naku'alofa	5	International Deteline	25	Government officials, NGO Representative & Journalists
Climate Change Conference Planning Meeting	Cook Is., Rarotonga	1	Hotel	20	Countries-PICs, Organisations, Regional, Donors including Japan
Pacific Is. Regional Workshop on Ships' Waste Reception Facilities	Brisbane, Australia	3	Hotel	20	POR Authority Staff from PCI
Training and Meeting held in SPREP/Samoa					
PICCAP/SPREP/UNDP Multipartite Review Meeting and Regional Meeting on National Communications	Samoa, Apia	1	Samoa Central Bank	25	Country Coordinators PICCAP Stakeholders (SPREP, UNITAR, UNDP)
Communicating Environmental Information UNESCO/SPREP (w/computer training)	Samoa, Apia	3	FAO Conference Room	55	Government officials, NGO Representative & Journalists
Conservation Enterprise Management Training for SPBCP	Samoa, Apia	12	SEBEC	22	Conservation Area staff, CASOs Community Members
CBEMP Regional Training for Peace Corps Volunteers and CBEMP National Counterparts & Multipartite Review Meeting	Samoa, Apia	19	USP	30	CBEMP Peace Corps Volunteers Counterparts & National participants
Global Programme of Action (GPA)/Hazardous Waste Management Workshop	Samoa, Apia	5	Hotel	20	PICs
Annual Pacific Ocean Pollution Prevention Programme (PACPOL) Workshop	Samoa, Apia	6	Hotel	20	Oil Industry, Maritime Administrations
Work Programme & Budget Sub Committee Meeting	Samoa, Apia	3	UNESCO Conference Room	30	Work Programme & Budget Sub Committee & SPREP Members
Total		160		732	

Below is given an outline of the general training programmes to be organised
and implemented by SPREP at the facilities that will be constructed under
this project.

Table 2-2 Seminar/training Programme (Annual)

Title	Duration	No. of trainee	Target Group
1. Environmental Awareness Training of Community Leader	5days	25	NGOs and Community groups of Pacific Island countries
2. Community-based Resource Management Planning workshops	10days×4	17×4	Conservation Area Support Officers (CASOs)
3. Community Coral Reef Survey and Monitoring Training Workshops	5days	15	NGOs and community groups
4. Eco-tourism Workshops	8days×2	15×2	Community personnel involved in managing their own Conservation Ar4ea.
5. Small-scale Income Generating Activity Workshops	5days	20	Community personnel involved in Conservation Area management
6. Wildlife Management Techniqu4ews Workshop	5days	17	Conservation Area Support Officers
7. Media Production Workshops (w/computer training)	15days×2	25×2	NGO representatives, community groups and Environment Department personnel from Pacific Island Countries
8. Waste Management Awareness Workshops	5days×2	25×2	NGOs and community groups
9. CBEMP Peace Corps/Counterpart Training	15days	20	National counterparts
10. Teacher Training Workshops	10days×4	15×4	Environmental Education In-service Teacher
11. Environmental Impact Assessment (EIA) Training Workshops	5days×2	30×2	Government officials and NGO representatives
12. Meteorological Services Training	5days×2	35×2	Government Meteorological Service personnel from Pacific Island Countries
13. Climate Change Vulnerability Assessment and Adaptation Planning	10days×3	10×3	Government officials from Environment Department
14. Information Technology Training Workshops (w/computer training)	5days×2	15×2	Government Officers from Environment Departments and NGO representatives
15. Geographical Information System (GIS) Training workshops (w/computer training)	10days×4	15×4	Government Officers from Environment Departments and other related Departments
16. CBEMP Training Knowledge Database Training (w/comput3er training)	5days×3	12×3	People from Environment, Education and other Governments of Pacific Island Countries
17. CBEMP Legislation Development Training	5days	12	Judicial officers from twelve Pacific Island
18. Regional Marine Spill Response Workshops (w/computer training)	5days	44	Pacific Island Government maritime and environmental personnel and oil and shipping industry personnel
19. Regional Marine Pollution Legislation Workshops	3days	44	Pacific Island Government maritime, environmental and legal personnel
20. Chemicals Awareness Workshop	5days	20	Government personnel and users of chemicals on 4environmental and occupational health and safety issues
Total	304days	757psn.	

(2) Computer Training Programmes

The computer training programmes are broadly divided into the following five types.

- Training in environmental information analysis software

- Training in teaching material production software

- Training in environmental information network software

- Training in presentation software for use in lectures and training courses

- Training in organisational operation and management software

The computer training programmes are offered to SPREP staff members, government officials in charge, representatives of NGOs in the member island countries as in the case of the general training programmes.

Generally, it is most efficient to organise computer training courses, each with a lecturer and 10 to 20 trainees. After completion of the planned facilities, each computer training course is to be offered to a class of 15 trainees. Training courses are to be divided broadly into practical computer technology (environmental information management/processing system and the like) training courses and those which are centred around lectures. These activities are essential to the SPREP's routine operations and are expected to have positive effects on every SPREP member country.

Table 2-3 shows a summary of the computer training programmes organised thus far by the SPREP, and Table 2-4, provides Planned Computer Training to be organised by the SPREP after completion of the planned facilities.

Table 2-3   Computer Training Implemented

Year	Training Title	Target Group	No. of Trainee	Length (days)	Annual No. of Training Course	Total No. of Trainee	Nos. of days used
1994	Arc/Info Training	SPREP Country	22	14	1	14	14
1996	Sub-regional GIS Workshop	SPREP Country	18	7	1	7	7
1997	Power Point	SPREP Country	15	2	1	15	2
1997	Publisher	SPREP staff	15	5	4	60	20
1997	PEIN Workshop	SPREP Country	15	5	4	60	20
1997	Arc/Info Training for Civil Servant	SPREP Country	12	7	1	12	12
1998	SPREP/SOPAC Joint GIS Workshop	SPREP Country	30	14	1	30	14
1998	Environment Information Clearinghouse Workshop	SPREP Country	15	7	1	15	15
1998	ACCPAC	SPREP staff	15	2	4	60	20
1998	Corporate Database	SPREP staff	15	2	4	60	20
1999	In-house	SPREP staff	10	1	6	60	6
1999	CBEMP Course	SPREP Country	8	2	1	8	2
1999	Communication Environmental Information	SPREP Country	18	4	1	18	4
1999	Communication Environmental Information	SPREP Country	21	4	1	21	4
1999	Communication Environmental Information	SPREP Country	27	7	1	27	7
1999	Communication Environmental Information	SPREP Country	27	7	2	54	14
1999	CBEMP Course	SPREP Country	30	5	1	30	5
1999	Communicating Environmental Information	SPREP Country	25	5	1	25	5
1999	Communicating Environmental Information	SPREP Country	22	2	3	66	6
1999	Communicating Environmental Information	SPREP Country	17	3	5	85	15
1999 Total					24	424	76

Table 2-4   Planned Computer Training (Annual)

Training Title	Target Group	No. of Trainee	Length (days)	Annual No. of Training Course	Total No. of Trainee	Nos. of days used
GPA Clearinghouse	SPREP Country	15	3	1	15	3
Climate Change Clearinghouse	SPREP Country	15	3	1	15	3
Biodiversity Clearinghouse	SPREP Country	15	3	1	15	3
Legal Environment Clearinghouse	SPREP Country	15	3	1	15	3
In Magic Course	SPREP Country	15	5	1	15	5

Training Title	Target Group	No. of Trainee	Length (days)	Annual No. of Training Course	Total No. of Trainee	Nos. of days used
GIS Course	SPREP Country	15	5	1	15	5
Conservation Database	SPREP Country	15	5	1	15	5
State of Environment	SPREP Country	15	5	1	15	5
Internet Networking	SPREP Country	15	1	10	150	10
Page Layout	SPREP Country	15	3	1	15	3
EIA/Coastal Environment	SPREP Country	15	4	2	30	8
Media Production	SPREP Country	25	15	2	50	30
Information Technology	SPREP Country	15	5	2	30	10
GIS	SPREP Country	15	10	2	30	20
CBEMP Training Knowledge, Database	SPREP Country	12	5	3	36	15
Regional marine Spill Response	SPREP Country	44	5	1	44	5
Total				31	505	133

(3) Production of Teaching Materials

As part of its public relations activities for environmental protection, the SPREP produces and publishes a wide variety of publications, audio-visual aids and multimedia teaching materials.

Each year the SPREP produces about 30 different publications, including newsletters (published four times a year), teaching materials for use in environmental education, meeting reports and posters. The SPREP Publication Section is responsible for planning, writing and editing of all of these publications. After being printed and bound by private printers and bookbinders, these publications are distributed to all member governments and the organisations concerned. Production of these publications as well as T-shirts and stickers are to be continued after completion of the planned facilities.

Publications produced by the SPREP in 1998 and 1999 are as listed in Table 2-5 and Table 2-6, respectively.

Table 2-5   Production of Publications (1998)

No.	Title	No. of pages	No. of copies printed
1	PICCAP Brochure	7	1,000
2	Popuiensen mo Resoses Vanuatu	1	2,000
3	Environmental Education Teachers Manual (2 ed.)	168	1,500
4	Capacity 21: Regional Heads of Planning Meeting on Sustainable Development. Meeting Report	167	400
5	Fourth Regional Information Technology Strategies Meeting 1997	27	500
6	Pacific Year of the Coral Reef Their Health Our Future. Factsheet No.14	4	30,000
7	Pacific Year of the Coral Reef Their Health Our Future. Factsheet No. 14(French)	4	5,000
8	Capacity 21: Workshop Proceedings Community Resource Conservation Workshop. Tuiaghi, Central Province. Solomon Islands 17-19 July 1996	20	100
9	Capacity 21: Fasin blong Luklukgud Wantaem jong saed blong Invaeromen, Laef blong Man mo Ikonomi blong mekim se Vanuatu hemi save Kam Antaplong wan rod we hemi Sastenbol	32	250
10	Neuvieme Conference du PROE: Rapport de la Conference des Officiels 27-28 November 1996 Nuualofa, Royaume des Tonga	32	200
11	Lukaotem Gud Korel Rif Biong Vanuatu	25	2000
12	Environment Newsletter No.50	20	2,000
13	CASO Link Newsletter No.7	20	2,000
14	Environmental Impact Assessment (EIA):Report on the Augmentation Phase of the Afulilo Hydro Power Scheme in Samoa	47	400
15	Haapai Conservation Stickers	1	3,000
16	Haapai Brochure	4	3,000
17	South Pacific Handbook of Treaties and Other Legal Instruments in the field of Environmental Law	491	1,000
18	Ship Groundings in the South Pacific Islands Region: Issues and Guidelines	112	500
19	Annual Report 1996/1997	72	2,000
20	Rapport annual 1996/1997	72	500
21	The Second Meeting of the SPREP Working Group on Climate Change: Meeting Report, Apia	19	400
22	The Science and Impacts of Climate Change in the Pacific Islands: Meeting Report, Apia, Samoa 29 April -3 May 1996	32	400
23	Strategic Action Programme for International Waters of the Pacific Islands Region	67	1,950
24	Tuvalu NEMS	30	
25	Climate Change and Sea Level: Curriculum Modules for the Pacific Schools Part One: Physical Science	121	
26	Climate Change and Sea Level: Curriculum Modules for the Pacific Schools Part Two: Social Science	121	
27	Pacific Islands at Risk: Our Islands Our Lives factsheet	4	1,000

Table 2-6   Production of Publication (1999)

No.	Title	No. of pages	No. of copies printed
1	Tenth SPREP Meeting Report	80	1,000
2	Tenth SPREP Meeting Report (French version)	80	200
3	The Status of Birds. Peka and Rodents on Niue 1994-1995	47	400
4	Environmental Information Clearinghouse Sub-regional Workshop: Workshop Report 9-11 February 1998 Apia, Samoa	24	400
5	Pacific at Risk: Our Islands, our Lives (Factsheet) reprint	4	
6	Participatory Monitoring and Evaluation in SPBCP Conservation Areas: workshop Report	52	400
7	Marine Mammals in the Area served by the South Pacific Regional Environment Programme (SPREP)	55	1,000
8	Marine Mammals in the Area served by the South Pacific Regional Environment Programme (SPREP) French version	55	200
9	Guide to the Birds of Niue	100	400
10	Guidelines for Municipal Waste in Small Island Developing States in the Pacific Islands Region	83	
11	Workshop on the Year 2000 Problem: Implication for Meteorological Services	40	400
12	International Conventions on Marine Pollution Activities in the Pacific Islands Services	66	400
13	Environmental Education and Training Conference proceedings	113	500
14	Environmental Education and Training Action Strategy	56	2,000
15	CASOL Link 9	20	500
16	CASOL Link 10	16	500
17	Action Strategy for Nature Conservation in the Pacific islands region 1999-2002	50	2000
18	Haapai brochures on Snorkelling	15	2000
19	A Pilot Information Management Workshop for PICCAP National Coordinators, Apia, Samoa, 29-30 January 1998	26	400
20	A Pilot Information Management Workshop for PICCAP National Coordinators Phase II, Port Vila, Vanuatu, 3-4 D3edcember 1998	29	400
21	PACPOL brochure	23	400
22	Fourth SPREP Meeting of Regional Meteorological Services Directors, 8-10 July 1997, Apia, Samoa	20	5,000
23	Car sticker on PACPOL	1	5,000
24	French Environment Newsletter 51	16	
25	Regional Wetlands Action Plan	32	1,000
26	Coastal Management Training Directory (a "Pre-publication draft" send to countries for input)	210	150
27	Coral Reef survey and Monitoring Training Courses Report Series: National Training Courses in Koror Palau, 4-15 August 1997, Report No.1	24	400
28	Directory of Coastal Zone Management Profiles in Pacific (Island Countries	205	400
29	Proceedings of the Sea-level Rise, Noumea, New Caledonia, 18-23 August 1997	329	400
30	SPREP Annual report 1998	67	2,000
31	Pacific Islands Counti4res Regional Statement to the Fifth Conference of the Parties of the UNFCCC	16	1,000
32	Initial National Communications to the UNFCCC: Kiribati		
33	Initial National Communications to the UNFCCC: Republic of the Marshall Island		
34	Initial National Communications to the UNFCCC: Samoa		
35	PACPOL Strategy and Work Programme	67	1,000
36	Pacific Islands Countries Regional Statement to the Fifth Conference of the Parties of the UNFCCC, Reprint	15	2,000

On the other hand, audio-visuals are considered to be more effective public relations tools than publications since they are easier to understand and are more acceptable to the general public. As shown in Table 2-7, the SPREP has so far produced about 25 audio-visuals in total over the past nine years. As SPREP does not own video equipment other than a video camera for home use, it contracts out editing of audio-visuals, preparation of master tapes and dubbing films in French and the vernacular language.

Table 2-7 Production of Audio-visuals (1991-1999)

No.	Title, Hour	Format	Yr. Of Production	Duplicated Number	Where to be Distributed
1	'The Fury of Val'	PAL	1991	30(English)	Pacific Island Countries, Regional Organisations
2	'West Not, want Not' 13 minutes	NTSC	1991	40(English)	Pacific Island Countries, Regional Organisations
3	'Our Changing Island Environment' 30 minutes	PAL	1991	50(English) 20(French)	Pacific Island Countries, Regional Organisations
4	'The Pacific Way' 30 minutes	NTSC PAL	1992	100(English) 50(French)	Pacific Island Countries, Regional Organisations
5	'SPREP Treaty Meeting'	PAL	1992	20(English)	Pacific Island Countries, Regional Organisations
6	'For Our Children' 20 minutes	NTSC PAL	1993	200(English)	Pacific Island Countries, Regional Organisations
7	'The Coastal Environment of the South Pacific' 17 minutes	PAL NTSC	1993	200(English)	Pacific Island Countries, Regional Organisations
8	'National Environmental Management Strategy, Western Samoa' 15 minutes	PAL NTSC	1994	40(English) 30(Samoan)	Pacific Island Countries, Regional Organisations
9	'National Environmental Management Strategy, Kiribati' 15 minutes	PAL	1994	40(English) 30(Kiribati)	Pacific Island Countries, Regional Organisations
10	'National Environmental Management Strategy, Tokelau' 15 minutes	PAL	1994	40(English) 30(Tokelauan)	Pacific Island Countries, Regional Organisations
11	National Environmental Management Strategy, Tuvalu' 15 minutes	PAL	1994	40(English) 30(Tuvaluan)	Pacific Island Countries, Regional Organisations
12	'Environmental Impact Assessment: A Tool for a Better Future'	PAL	1994	50(English)	Pacific Island Countries, Regional Organisations
13	'On the Reef' 10 minutes	PAL	1994	100(English)	Pacific Island Countries, Regional Organisations
14	'National Environmental Management Strategy, Niue' 15 minutes	PAL	1995	40(English) 30(Niuean)	Pacific Island Countries, Regional Organisations
15	'Let Our Turtle Family Live' 20 minutes	PAL NTSC	1995	200(English)	Pacific Island Countries, Regional Organisations

No.	Title, Hour	Format	Yr. Of Production	Duplicated Number	Where to be Distributed
16	'Reef Report' 10 minutes	PAL NTSC	1995	100(English)	Pacific Island Countries, Regional Organisations
17	'Meeting the Changes, Ministerial Level Conference on Environment and Development in Asia and the Pacific' 15 minutes	PAL	1995	50(English)	Pacific Island Countries, Regional Organisations
18	'SPREP Conference Opening Ceremony September 29, 1997'	PAL	1997	30(English)	Pacific Island Countries, Regional Organisations
19	'Coral Reefs: Their Health-Our Future' 10 minutes	PAL NTSC	1997	100(English)	Pacific Island Countries, Regional Organisations
20	'The coral reef music video: 1997 Pacific year of the coral reef' 3 minutes	PAL NTSC	1997	200(English)	Pacific Island Countries, Regional Organisations
21	'Problems in the Pacific Islands Environment' 15 minutes	PAL NTSC	1997	100(English)	Pacific Island Countries, Regional Organisations
22	'Conserving Pacific heritage (covers & conservation areas of SPBCP'	PAL NTSC	1998	100(English)	Pacific Island Countries, Regional Organisations
23	'SPREP/UNESCO workshop on media and environment, March 24-26' 9 minutes	PAL	1999	1 master copy (to be reproduced)	Pacific Island Countries, Regional Organisations
24	'SPAREP/UNESCO workshop Suva, Fiji, July 27-30' 10 minutes	PAL	1999	1 master copy (to be reproduced)	Pacific Island Countries, Regional Organisations
25	'PEIN Marshalls' 2nd copy (Marshallese) 10 minutes	NTSC	1999	1 master copy (to be reproduced)	Pacific Island Countries, Regional Organisations

Table 2-8 shows the SPREP's annual video teaching materials production schedule. After completion of the planned facilities, the SPREP plans to carry out all video production work – from video shooting to editing, master tape production and copying – at its headquarters. It is expected that the SPREP will continue to produce video teaching materials with contents as shown in Table 2-8.

Table 2-8   Annual Video Teaching Materials Production Schedule

Event	Times/Year	Description of event	Required no. of duplications/record
Workshop	10	Training and seminars on Environmental issues (1. Biodiverwsity and Natural Resources Conservation; 2. Climate Change and Integrated Coastal Management; 3. Waste Management, Planning and Institutional Strengthening; 5. Environmental Education, Information and training	Master; library (2 copies); based on requests (@10 copies)
High-level consultation	4	Ministerial/officials level e/g/ 11 SPREP Meeting in Guam 2000	Master; library (2 copies); member countries (26)
Information and requests on environmental issues	6	Based on events requests and events in 1999. Without an editing/production facility there hasn't been the effort to capture footage. This would increase if the facility is available.,	5 per event
News media	20	As above	Master; library (2); TV Samoa ;and other to be identified
Global, regional and national event	4	Based on schedule for Year 2000. April 2000 Conference on climate Change (Global); October 2000, Ministerial SPREP Meeting (Regional); COP6 of the UNFCCC November 2999 (Global); Samoa Environment week October 2000	Master; library (2) requests from member countries (est. 30)
Training of video and multi-media production	5	Media training in Niue, PNG, Solomon Is., Kiribati, Tuvalu. Training to take place in 2000	Master; Library (2); participant and trainers (approx. 190)

It is expected that the three technical officers in charge of information and publications will engage in production of these publications and multimedia teaching materials. At the SPREP, a DTP computer and a colour printer have long been used in editing publications and writing manuscripts. Judging from the past records of production of these materials and the ability of the technical officers in charge to operate these items of equipment, there should be no problem with the operation and maintenance of these items of equipment.

On the other hand, the information technology manager is to supervise the technical officers in charge on production of audio-visual aids.

The SPREP plans to incorporate the computer-aided non-linear editing system in the procedures for the production of these audio-visual aids. Unlike the traditional editing system, in which two videocassette recorders and two videocassette players are used, the non-linear system is a system in which

images and voices are stored and edited in a computer, so the existing input/out equipment can also be used for the production of these audio-visual aids. In addition, it is easy to operate with relevant commercial software. For these reasons, the National University of Samoa and University of the South Pacific are already using this editing system in production of audio-visual aids. The SPREP's technical officers in charge of information and publications have been exchanging information with their counterparts at these institutions. At the SPREP, teaching materials are edited using mostly the existing editing equipment of the National University of Samoa, so there should be no problem with the operation of these items of equipment.

The multi-media production room is to be equipped with the above-mentioned items of equipment for production of manuscripts for printed matter and a set of audio-visual aid production devices.

The set of audio-visual aid production devices is to include a digital camera and a 35mm camera in addition to a DTP personal computer and color printer (A3 size).

Furthermore, a personal computer for video editing, a video cassette recorder/player, a display monitor, a monitor speaker system, a table for use in discussions/meetings and a cabinet are to be included in the set of audio-visual aid production devices so that production activities may be better coordinated. Since dubbing of films is to be conducted in the multi-media production room, a recording booth is to be attached to this room. The booth is to be equipped with a desk and a chair for the narrator, a display monitor and a microphone.

All the above-mentioned facilities and items of equipment are to be used also in training programmes aimed at raising the technical level of audio-visual aid production in the member nations.

(4) Training in GIS/RS

The SPREP has utilised Geographical Information System/Remote Sensing (GIS/RS) in analysing geographic information, such as information on natural resource/environmental protection, marine pollution, the rise of the sea surface due to climate changes, as well as mapping, since the establishment of Pacific Environment and Natural Resource Information Centre (PENRIC) in the early 1990s by SPREP with the financial assistance of the United Nations Environment Programme (UNEP). The PENRIC has been giving training in the usage of geographic information analysis software and geographic data and information training in GIS/RS every year since it was launched in 1994 for the government officials in charge of shoreline management of the member countries. The project manager of the PENRIC Project has been responsible for geographic information analysis and organising of, and giving guidance on training programme from the beginning, and will continue to perform these responsibilities.

The SPREP obtains GIS/RS information mainly from the South Pacific Applied Geoscience Commission (SOPAC), which is headquartered in Suva, Fiji. The SOPAC, whose members are two developed countries, namely, Australia and New Zealand, and 16 island countries in the South Pacific region, is promoting the spread and effective use of GIS/RS data in the member countries as by retaining and disclosing satellite pictures from PEACESAT and ERDAS and images and digital map information which were developed by other organisations. The data owned by the committee concern mainly with water resources, other natural resources, fishing boats' routes, oceans, coral rocks, island shorelines and roads. These data are supplied through DVD-ROMs, CD-ROMs and DAT tapes. In principle, these data have to be paid for. When they are processed and reused by government agencies like the SPREP for the public benefit, they are supplied free of charge.

At present, the SPREP owns a personal computer, an input digitizer (A1 size) and a color printer (A1 size) as GIS/RS-related items of equipment. But both

the digitizer and the colour printer were procured about eight years ago. Due to depreciation, however, neither of them is in use now. As a result, neither high-precision data entry for data processing nor output of large-size drawings is possible. It is desirable, therefore, to replace these items of equipment under this project.

(5) Open Learning Programmes

The open learning programmes are self-teaching programmes in which audio-visuals, brochures and display panels on environment protection, which are in the possession of the SPREP, are utilised. These educational programmes are targeted at schoolchildren, schoolteachers and other educators. In recent years, cultural exchanges through sports events and so forth among the island countries have been promoted actively. The open learning programmes are aimed at enhancing public awareness of regional environmental issues by providing schoolchildren in the region with opportunities to utilised the planned facilities.

However, the planned facilities are intended only for the participants in prospective training programmes, not for an unspecified number of the general public. Under this project, only spaces for displaying and perusing panels and brochures are to be secured. Videos and computers are to be used in the training rooms as part of actual training programmes.

2-2-2   Facility Plan

(1) SPREP Headquarters Master Plan

The master plan of new SPREP headquarters facilities were made by Ave Arap in 1993 and were approved by the SPREP Meeting.

The following facilities were planned in the master plan.

1. Headquarter Building (A-F module, staff amenities, workshop)
2. Conference Centre
3. Library Module
4. Training and Education Centre

Above which, the construction of the "Headquarter Building" started in June, 1999 under the financial assistance of countries as previously outlined. The "Library Module", the request for financial assistance were made to EU.

The request which was made to Government of Japan regarding the Construction of the "Training and Education Centre" is in accordance with this master plan.

(2) New SPREP Headquarters Construction Plan

At present, the new SPREP headquarters facilities are being constructed with the financial assistance of countries, as previously outlined. The facilities are scheduled to be completed in July 2000. The contents and scale of these facilities are as shown in Table 2-9.

Table 2-9   Contents/Scale of New SPREP Headquarters Facility

| Facilities	Floor Area (m²)	Remarks
Module A	181.44	Director room, VIP conference room
Module B	181.44	Reception and Administration
Module C	209.88	Finance & Administration Div.
Module D	235.80	Environmental Management & Planning Div.
Module E	209.88	Education, Information & Capacity Building Div.
Module F	209.88	Conservation of Natural Resources Div.
Entrance Hall	165.00	Including canopy area
Staff Amenities	125.44	Tea space with simple kitchen
Workshop	72.00	Working space including car parking space
Connecting Corridor	457.20	Only Corridor with roof is included
Total	2,047.96	
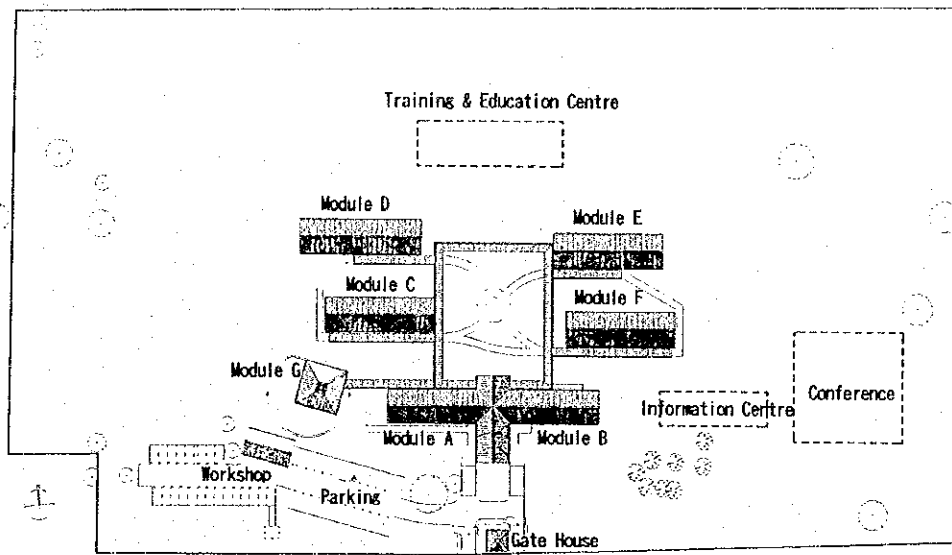
Fig.2-1 Site Plan of New Headquarters Facilities

Main Construction Materials for the New SPREP Headquarters Buildings are as follows.

    Structure :   Reinforced concrete structure with steel frame roof
    Roof   :   Corrugated steel sheet
    Wall   :   Painted concrete block
    Floor   :   Floor tile on concrete slab on grade

All the building are one-storied buildings and are connected with each other by means of roofed passages. The new SPREP headquarters facilities do not include education/training facilities or office space for the staff members to take charge of affairs related to education/training programmes. So there is no overlap of uses between the new SPREP headquarters facilities and the facilities to be constructed under this project.

(3) Basic Concept of the Facility Plan

1) Training Facilities

* General Training room

The SPREP offers seminar/workshop programmes to SPREP staff members, government officials in charge and NGO members in charge in the 22 Pacific island countries, which are member nations of the SPREP. At present, each training course is offered to a class of 20 to 30 trainees or a class of 50 trainees. Each training course is either a session in which all trainees take part, or a panel discussion session, in which a specific subject matter is discussed by a small group (2 to 4 working group).

According to the past records of the SPREP's seminar/workshop programmes, medium-scale training courses for 10 to 20 or 21 to 30 trainees have accounted for more than 90 percent of the total number of seminar/workshop programmes. In consideration of the past records and the possible overlap of training schedules, a training room for 20 trainees and one for 30 trainee are to be planned under this project. As a step to increase the rate of use of the training rooms, these training rooms is to be partitioned with movable wall. When the movable wall is removed the training rooms can be used for training of 31 to 50 trainees. The Government of Samoa has requested four small-size training rooms for the use of discussion by working groups. As working groups will be able to use the two medium-size training rooms, only two small-size training rooms are to be planned under this project. The small-size training rooms may be used also as meeting rooms for the staff members.

Table 2-10 Seminar/Workshop Implemented in 1999 (by scale)

Seminar scale	Nos. of seminar	Nos. of trainee	Total days	Ratio of room use
11~20	16	308	70	
21~30	11	294	82	$\frac{70+82}{2}+8=84$days
30~50				
50~	2	130	8	$\frac{84}{240}=35.0\%$
Total	29	732	160	

Table 2-11   Annual Seminar/Workshop Schedule (by scale)

Seminar scale	Nos. of seminar	Nos. of trainee	Total days	Ratio of rooms use
11~20	27	414	231	$\frac{231+55}{2}+18=161$days
21~30	7	185	55	
30~50	4	158	18	$\frac{161}{240}=67.1\%$
Total	38	757	304	

From the Table 2-10, "Seminar/Workshop Implemented in 1999", providing 2 training rooms for 20 - 30 trainees, the ratio of use of rooms will be 35%. This figure is the result from not having own training facilities and training were carried out with limited conditions. Examine from the Table 2-11, "Annual Seminar/Workshop Schedule", the ratio of use of rooms will become 67%. Judging from the above examination, providing 1 training room with 20 seated and 1 with 30 seated will considered to be appropriates.

The SPREP had implemented twice, a large-scale training course for more than 50 trainees in 1999. When organising such large-scale training courses, the SPREP should adjust the total number of trainees for each course with under 50 trainees or rent other facilities as it presently does.

● Computer Laboratory Room

The computer training programmes are offered to SPREP staff members and government officials/NGO members in charge of operation of computer system. The computer training courses are either practical computer technology training courses (environmental information management

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system and so forth) and those centred around with seminars.

Generally, it is efficient to offer computer training courses, each with a lecturer and 10 to 20 trainees. The past records and the annual training plans shows that total 400 to 500 trainees for 80-130 days take part in these training courses every year. The average number of days of training is four. If a computer training course is to be offered to a total of 15 trainees on average, the total annual number of computer training courses will be 27 to 33 (400 to 500 trainees/15). This means that there will be 2-3 (8-12 days) computer training courses a month and that the rate of use of facility will be 40 to 60 percent. It is thus judged to be reasonable to offer a computer training course to an average of 15 trainees at a time. For this reason, a computer laboratory room for 15 trainees with 15 computers is to be procured under this project.

• Open Learning Resource Centre

The open learning resource centre is to serve as a self-teaching facility where environmental protection teaching materials and other related materials owned by SPREP are provided for public reading or a displayed. Since the new SPREP headquarters facilities do not include such facility, the entrance hall of the Centre is to be provided with a space for displaying panels and brochures. Video teaching materials can be accessed through the display monitor installed in the small-size training room and computer materials through computer training room in accordance with the planned training and education schedule.
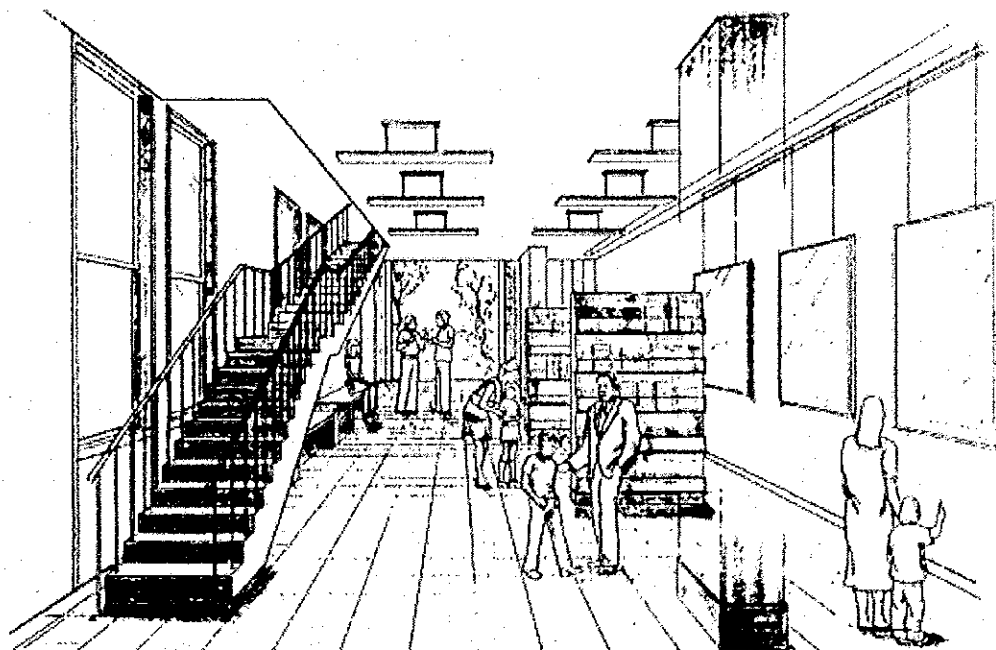
Fig.2-2 Image Drawing of Entrance Hall

2) Teaching Material Production Facilities

- Multi-media Production Rooms

    A multi-media production room where printed teaching material editing
    equipment and video teaching material editing equipment are to be
    installed with a recording room where dubbing of video teaching
    materials is to be conducted will be procured in the project.

- Mapping Room

    This is a room where GIS/RS (Geographic Information System/Remote
    Sensing) and mapping equipment is to be installed and where analytical
    work by the use of a computer and mapping are to be conducted. This
    room should be an independent room with necessary work spaces since
    A0 to A1 size maps and nautical charts are to be handled in this room.

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3) Staff Room

As shown in Table 1-12, the working space for each staff member is 11 to 13 m² for the existing staff room and it is 13 to 15m² for the new SPREP headquarters' staff room. In the case of the staff room to be procured under this project, 13m² per staff, the minimum working space taken in new Headquarters, will be adopted. This space is a little larger than that for an average working space in Japan. In consideration of the dimensions of the furniture to be moved to the planned staff room from the existing office, this space is considered to be reasonable.

Table 2-12 Comparison of Staff Working Space

SPREP New Headquarters	Existing SPREP	Japanese Standard	Adopted Figure
13~15 m²/staff	11~13 m²/staff	9 m²/staff	13 m²/staff

It should be noted that the SPREP's staffing plan for the training/education centre to be constructed under this project envisages a staff of 17, including an information technology manager. The total number of the staff station in this room will be 14, excluding 1 secretary who will be stationed in reception/preparation room, 1 from country attachment and 1 from technical cooperation expert who are proposed to be recruited.

4) Infrastructure

Since the project site is located on the premises of the new SPREP headquarters, electric power and city water are to be supplied to the planned facilities from the SPREP headquarters infrastructure. For this reason, the construction work plan for the new SPREP headquarters facilities was checked and then the problems involved in the implementation of this project were discussed during the field survey. The main points discussed for each infrastructure are as follows.

- Electric Power

  Under the construction work plan for the new SPREP headquarters facilities, 200kVA electric power is to be supplied from outside the project site. It is estimated that the facilities to be constructed under this project will require about 120 kVA electric power, and the new SPREP headquarters facilities, about 80kVA electric power. This means that power supply to the SPREP premises has no allowance for future expansion. Generally, electric power to be supplied should have the allowance of 20 percent of total load for future load expansion. It is desirable, therefore, that a transformer with a capacity of about 250kVa should be installed for the new SPREP headquarters facilities. As only transformers with a capacity of 200kVA or 500kVA are available in Samoa, the capacity of the transformer should be changed to 500kVA.

  Electric power is to be supplied to the training/education centre directly from the main distribution board installed in the workshop of the new SPREP headquarters. Underground pipes to house the power line from workshop to training/education centre should be laid in advance by the Samoan side at its own expense.

- Emergency Generator

  The emergency generator (with a capacity of 77kVA) now in use at the existing SPREP is to be relocated in the project site. Under the master plan, the generator is to cover the main computers, the communication equipment and 20 percent of the general lighting fixtures, which are to be installed in the headquarters buildings, the information centre and the training centre. There will be no problem, therefore, with the capacity of the emergency generator.

- Fire Alarm System

  A fire alarm panel is to be installed in the guard house of the new SPREP headquarters. It will therefore be necessary that the Samoan

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side install an interface for the planned training/education centre in the Module E building.

- Septic Tank

The planned septic tank has a capacity large enough only for the present size of the SPREP staff of 70. The average number of trainees (70) was not taken into consideration when its capacity was calculated. Since it is difficult to install an additional septic tank after completion of the new SPREP headquarters facilities, it is necessary that the capacity of the planned septic tank be doubled and that the septic tank with an increased capacity be installed within the period of new SPREP Headquarters construction.

- Water Supply

Under the initial water supply plan, a service pipe is to be connected to the water main (with a diameter of 50mm) installed along Avele Road running on the southern side of the project site. Due to capacity problems, however, it is necessary for the Samoan side to modify the water supply plan so that city water will be supplied to the project site direct from Cross Island Road, which runs about 200 meters away from Avele Road.

It was decided that SPREP should promptly make necessary changes to the infrastructure plan, taking the above-mentioned problems into account, after due consultation with the Government of Samoa.