**South Pacific Regional Environment Programme (SPREP)**



Draft Report
Environmental Training Needs
Assessment (TNA)

# ACKNOWLEDGEMENTS

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| **ARM** | Atmospheric Radiation Measurement Program |
| **AusAID** | Australian Agency for International Development |
| **CA** | Conservation Area |
| **CASO** | Conservation Area Support Officer |
| **CBEMP** | Capacity Building for Environmental Management in the Pacific |
| **CROP** | Council of Regional Organisations in the Pacific |
| **EEIT** | Environmental Education, Information and Training |
| **EMP** | Environmental Management and Planning |
| **EPA** | Environmental Protection Agency, Guam |
| **EPAC** | Environmental Planning and Conservation Department, Tonga |
| **FAO** | Food and Agriculture Organisation |
| **FFA** | Forum Fisheries Agency |
| **ICM** | Integrated Coastal Management |
| **ICPL** | International Centre for Protected Landscapes |
| **ICRI** | International Coral Reef Initiative, Pacific Strategy |
| **IT** | Information Technology |
| **MPA** | Marine Protected Areas |
| **NEMS** | National Environmental Management Strategies of Members |
| **NGO** | Non-governmental Organisation |
| **NOOA NWS** | US National Oceanic and Atmospheric Administration, Natural Weather Services |
| **NTF** | National Tidal Facility at Flinders University, Adelaide, Australia |
| **NZODA** | **New Zealand Overseas Development Assistance** |
| **PACPOL** | Pacific Ocean Pollution Prevention Programme |
| **PATTAP** | Papua New Guinea-Australia Targeted Training Project |
| **POPS** | Persistent Organic Pollutants |
| **PICs** | Pacific Island Countries |
| **PICCAP** | Pacific Islands Climate Change Assistance Programme |
| **SOPAC** | South Pacific Geoscience Commission |
| **SPSLCMP** | South Pacific Sea Level and Climate Monitoring Programme |
| **SPBCP** | South Pacific Biodiversity Conservation Programme |
| **SPREP** | South Pacific Regional Environment Programme |
| **TEMPP** | Tonga Environmental Planning & Management Strengthening Project |
| **TNA** | (Environmental) Training Needs Assessment |
| **TNC** | The Nature Conservancy |

| **WMO** | World Meteorological Organization |
| **WWF** | World Wide Fund for Nature |

# GLOSSARY

**Capacity Building**

To build and strengthen SPREP's member countries by developing its peoples' skills to enable them to manage their natural resources and environment in a more effective and sustainable manner.

**Environmental Training**

Any form of training eg. workshops, seminars and meetings, that deal with any environmental work programme area covered under SPREP's Action Plan.

**Formal Training**

Training received through an institute or university, acknowledged by some formally recognized certificate.

**Human Resource Development (HRD)**

HRD activities include training employees, developing management, and helping develop careers. These activities are intended to increase employees' abilities so as to facilitate their performance. Concern for employees' careers extends from the organisation to the employees themselves. Training programmes such as orientation, induction and occupational health and safety all contribute to this goal. The focus here is on organisations in all sectors, including NGOs.

**In-service training**

Training organised by an employer, such as a government department, and provided during an individual's term of service. *External* in-service training is provided by an entity other than the employer. *Internal* in-service training is provided by the employer. In-service training provided to new employees before they assume their responsibilities is sometimes called induction training.

**National Focal Point**

The government ministry or department in SPREP's member countries and territories that acts as SPREP's official representative in that country or territory and is SPREP's official contact on any formal and/or informal matter. In most cases, the National Focal Point is either the Ministry/Department of Environment or the Ministry of Foreign Affairs.

**On-the-job Training**

Training received informally during the normal course of work. This sort of training includes guidance from colleagues and supervisors, learning by doing, using library facilities, and learning from predecessors or the notes they leave behind.

**Training**

Training in this context includes *development* (e.g. mentoring and coaching). The emphasis is on courses and programmes designed to increase knowledge, improve skills, and change attitudes whether for present job improvement or for development in the future.

**Training Plan**

A document laying out a structured programme that ensures staff receive adequate training in their line of work.

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# EXECUTIVE SUMMARY

## Background

SPREP's mandate under its existing Action Plan 1997-2000 is to build and strengthen its Members by developing people's skills so they can manage and use their natural resources and environment in a more effective and sustainable manner. Capacity building is a major focus of SPREP's work, and two of SPREP's key capacity building tools are environmental education and training.

With the considerable amount of resources spent on training activities across SPREP's work programme areas, steps were taken to try to coordinate SPREP's training, and to ensure that the training provided addressed priority environmental training needs of Members. The five work programme areas as identified in the current Action Plan 1997-2000 are:

i)      Biodiversity and Natural Resource Conservation
ii)     Climate Change and Integrated Coastal Management
iii)    Waste Management, Pollution Prevention and Emergencies
iv)     Environmental Management, Planning and Institutional Strengthening; and,
v)      Environmental Education, Information/Awareness Raising and Training

These steps included the creation of a new staff position of Training Officer in 1998 funded by New Zealand Overseas Development Assistance (NZODA), which was filled in February 1999. One of the initial tasks of the Training Officer was to conduct an environmental training needs assessment (TNA) for all SPREP Member island states.

NZODA also contributed some funding to the Pacific Regional Conference for Environmental Education and Training held at USP in Suva, Fiji in 1998, the result of which was the Action Strategy for Environmental Education and Training in the Pacific Region 1999-2003. Training (including this TNA) falls under Target Area 1: Formal and Non-Formal Education of the Action Strategy which looks at developing environmental education and training material for various audiences and monitoring, evaluating and refining training materials and practices as part of an ongoing quality control process.

## Training Needs Assessment Project

1       Goal of the Environmental TNA

The purpose of this TNA is to promote and ensure results-oriented training will occur that is driven by Member needs.

2       Objectives of the Environmental TNA were to:

➢ Identify the environment-related knowledge and skills Members need to carry out their jobs effectively
➢ Determine which training needs Members see as priorities
➢ Identify current and potential training opportunities
➢ Identify the constraints to adequate and effective training
➢ Assess the types, amount and frequency of environmental training already conducted and that will be continued to address the needs identified

2       Expected Outcomes of the Environmental TNA would involve:

➢ Developing mechanisms to monitor and evaluate the *impact* of SPREP training in member countries

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

➢ Ensuring that training provided by SPREP *meets the priority needs* of member countries
➢ Ensuring that existing *training opportunities* are utilized and potential training opportunities are identified
➢ Co-ordinating efforts to address long-term *human resource development issues*
➢ Monitoring the *amount and frequency* of environmental training provided by SPREP to member countries by setting up a process and database that will consolidate and continuously update all environmental training provided.

3       Methodology

The methodology for this TNA departs from other training assessments conducted in the region in a number of ways:
➢ The assessment was based on SPREP's five work programme areas, which cut across all sectors such as forestry and tourism.    This was quite different from other needs assessments carried out by other agencies, which were done by sector, such as that done for the Marine Sector by the University of the South Pacific (USP).
➢ The assessment embraced a participatory approach through in-country visits to eight countries in which extensive meetings were conducted with as many agencies as possible, across all sectors and at all levels.
➢ The assessment developed a 'standard' list of technical and generic tasks required under each environmental area, against which Members were assessed as to their current levels of knowledge and skills to carry out those tasks.

The TNA exercise followed a logical sequence of steps in six major phases:

Phase 1:      Desktop research involving document reviews and interviews with relevant stakeholders.
Phase 2:      Developing the TNA Questionnaire which served as a practical and appropriate tool with which to gather and compare information.  Vanuatu kindly agreed to be the pilot country for the TNA.
Phase 3:      In-country visits which were as participatory as possible combining questionnaires with face-to-face meetings.
Phase 4:      Processing and analyses of the TNA questionnaire was done mainly with the assistance of a local consultant.
Phase 5:      Compilation of the TNA Report - putting together the Questionnaire responses together with document reviews and personal interviews into a regional report.
Phase 6:      Circulation and finalisation of the TNA Report – to be circulated to all those involved in the exercise, before the report is finalised.

## The Findings

The findings of the TNA are based on four aspects:

First, was the need to identify what <u>skills and knowledge Members needed to have</u>, to effectively carry out work in environment - the first step before determining the priority training needs.  Thus, in consultation with SPREP Programme Staff, a list of tasks was developed for each environmental area providing the 'standard' that Members were assessed against to determine the current level of knowledge and skills they possessed to carry out the tasks identified, and to determine priority training needs.

Second, based on the list of tasks, which formed the basis of Part B of the TNA questionnaire, respondents identified the following technical areas as <u>"high priority"</u> for further training and support in their respective jobs.  The term ''high priority'' does not refer to programmes that are more important than others, rather it signifies that respondents do not have adequate knowledge and skills to perform the tasks identified.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

*Biodiversity and Conservation of Natural Resources*:
➢ Applying wildlife management techniques, which include monitoring, survey, planning (mitigating disasters in the early stages)
➢ Promoting and marketing Conservation Areas (CAs)
➢ Identifying, establishing and managing income generating activities on a sustainable basis
➢ Accessing other resources in support of CA management

*Climate Change, Sea Level and Climate Monitoring, International Negotiations and Meteorology:*
➢ Geodetic surveying (under SPSLCMP)
➢ Meteorological equipment operation and maintenance
➢ Climate data management
➢ Climate prediction and forecasting
➢ Data analysis and interpretation under meteorological services
➢ Using field sampling techniques

*Coastal Management*
➢ Environmental monitoring
➢ Sustainable tourism
➢ Enforcement and prosecution
➢ Integrated resource management

*Waste and Chemical Management*
➢ Storing and transporting chemicals with their different requirements
➢ Understanding and applying poison treatment
➢ Planning for waste management

*Marine Pollution*
➢ Conducting an introduced marine species (IMS) risk assessment and survey
➢ Developing a media strategy
➢ Knowledge of Marine Pollution Legislation

*Environmental Management, Planning and Institutional Strengthening*
➢ Data management
➢ Developing key environmental indicators

*Environmental Education, Information and Training*
➢ Working knowledge of MS Office tools eg. Word, Excel
➢ Designing and developing databases
➢ Using information sharing processes for the Pacific Environmental Information Network (PEIN)
➢ Imparting environmental awareness to students
➢ Awareness of key environmental issues and involved in environmental education on a 'hands-on' basis
➢ Developing and tailoring public awareness programmes on specific environmental issues of the country
➢ Working knowledge of desktop publishing
➢ Communicating environmental issues to media and the public
➢ Using the media to raise awareness of environmental issues
➢ Collecting and interpreting information on traditional resource use

*Generic knowledge and skills*
Respondents were sufficiently knowledgeable and skilled across the range of tasks listed, but indicated the need for continued training and support in finance and business management, as well as negotiation. These were assessed to be 'medium priority'.

Third, was the need to assess current as well as potential training opportunities that could address the priority training needs identified. Current training sources critical to the acquisition of knowledge/skills of Members were formal training, on-the-job, and in-service training. Potential training opportunities included untapped sources in-country such as business schools and vocational institutes that could help develop business skills like accounting, personnel management, marketing, etc. Potential overseas training opportunities through fellowships, training awards and cross-country exchanges with Pacific Island Territories have not been fully accessed, and are already being explored.

Fourth, to meet Member needs more fully and to ensure sustainability of SPREP's training efforts, it was necessary to identify constraints to the effectiveness of training that need to be addressed by both the Members and SPREP to fully realise and maximise the impact of training in-country and in the region. The majority of problems and constraints to the effectiveness of training were usually caused by a combination of factors e.g. people who did not have the skills or confidence to perform, as well as working environment conditions that make it difficult or impossible to perform. As Rummler (1983) said, ''you pit a good performer against a bad system and the system wins every time.''

The problems were identified under three main categories. The first category relates to constraints of the learning experience or training received, such as the lack of local content and applicability to local conditions and situations. Respondents also highlighted the need to minimize classroom formats with emphasis on fieldwork and the use of vernacular during in-country training whenever possible.

The second category relates to the working environment that trainees return to which affect their ability to apply the skills acquired from training. The major constraints in this category in all countries, for both government and non-government organisations, was the lack of funding and staff, and the lack of government priority to environment- a situation further exasperated by the effects of Public Sector Reform programmes. The third category involves SPREP in its role as training provider. All Members cited the need for SPREP to better coordinate its training activities, to follow-up on its training, as well as to use more local resource personnel to reinforce capacity building in-country.

## Conclusions

The development of a 'standard' task list against which Members' current levels of knowledge and skills were assessed, was extremely useful not only in enabling data gathering and comparison but also in serving as a training tool in and of itself, because it enlightened Member participants on the range of tasks involved in the different environmental fields. Most importantly it highlighted that most jobs held a diverse array of knowledge and skills that current SPREP training does not adequately fulfil, particularly those of conservation practitioners and meteorological staff.

It was also reassuring to note that whilst the list of tasks developed were tailored towards SPREP programmes, they were broad and encompassing enough to be relevant to field practitioners across all sectors, including NGOs.

It was also evident from the priority training needs identified that Members have not acquired the necessary knowledge/skills levels in a number of key areas where SPREP has provided lots of training. E.g. under Environmental Management and Planning, high priority areas for training are in data management and developing key environmental indicators which is the basis for conducting Environmental Impact Assessment (EIA) – an area in which SPREP has provided training since 1992.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

This has implications on the number, type and quality of training SPREP has provided, as well as the working environment to which trainees have returned that may not have enabled the transfer of the skills acquired. Feedback clearly indicated the need for SPREP to better coordinate its training, with consistent follow-up after training, as well as developing a means of regularly assessing the effectiveness of training in-country.

Most importantly, is the responsibility SPREP has in ensuring that an enabling environment exists in-country to facilitate the implementation of training BEFORE it is conducted. This includes ensuring that training is tied to the business needs of organisations, and that it is planned, managed and recorded properly. This entails strengthening the human resource development (HRD) function of key environmental organisations so that the returns on SPREP training is maximized and realized. It also involves closer consultations between SPREP and recipient organisations of training, not just the SPREP National Focal Points.

The continued need for training was clearly expressed and with funding constraints affecting the amount and type of training Members can receive, SPREP has a critical role not only as a training provider, but also as an advisor on how to access quality environmental training programmes and funding sources

## Preliminary Recommendations

The following recommendations are categorised according to actions to be taken by Members, and those by SPREP, bearing in mind that the purpose of this TNA is to ensure results-oriented training will occur that is driven by Member needs.

### 6.1    Measures to be taken by Members

*Working Environment*

i)    Develop training plans – as the first step to establishing training as a long-term process. A key tool is a training plan, which takes into account short/medium-term skills building as well as long-term human resource development objectives. Training plans should be linked to an ongoing process of identifying training needs, and should include a way to monitor and evaluate all training programmes.

Two organisations who had developed clear training plans and were actually implementing them regularly were the Meteorology Services in French Polynesia and the Department of Environment, Planning and Conservation (EPAC) in Tonga.
E.g. The Meteorological Services in French Polynesia has a Training Coordinator, whose responsibility is to develop an annual training plan based on a needs assessment that matches individual needs to sectional and organisation needs. It also has an annual training budget for the provision of specialised and unspecialised training with continued upgrading of peoples' skills and knowledge in Toulouse, France.

The *training plans* should be linked to job descriptions, and where they do not exist, job descriptions should be developed. There should also be, if possible, a Training Officer to implement the plan and maintain the training record. With these plans in place, it is possible to transform on-the-job training to in-serve training programmes using experienced personnel.

ii)    Ensure there is a local resource person working alongside any external trainer to ensure continuity and transfer to others

iii)    Ensure mandatory reporting by the learner to his or her organisation and community, including verbal reporting

iv)  Develop a reward system in the community or organisation following transfer of knowledge/skills

## 6.2    Measures to be taken by SPREP

These measures are to be taken for any SPREP Programme

*Learning Experience*

i)  Address the priority areas for training within the various work programme areas at SPREP which should also incorporate generic training needs.

ii)  To carry out a pre-training survey of Member needs before conducting any workshop/training programme.

iii)  Ensure that gender issues, traditional practices and group values are incorporated into training.

iv)  Ensure that a process or framework of action planning and implementation (including monitoring and evaluation) is developed for the training component of any SPREP project, that then looks progressively at components of this in detail (the methods, issues, appropriateness etc).   For example, the first phase of a major training project may take 3-4 weeks just on conservation planning, covering a wide range of cross-cutting topics like -participation, information collection and management, facilitation, partnerships, etc . The next training may then focus on the implementation stage again revisiting the previous collection of topics.   This has proven to be effective (WWF training IC & D) if done in a progressive way that is not too prescriptive but emphasizes adaptive planning and management.   The value of the approach is that the framework provided a process that allows participants to integrate learnings from not just that training but others as well i.e. something to hang all the different 'pieces' onto.  This also allows for a better outcome as the larger picture is clearer with process emphasized.  This should be clear to the course designers which should then be communicated to trainees or participants at the outset and be revisited throughout the training.

v)  Compile a directory of case studies across all environmental areas, to be used in training. Member countries have repeatedly called for case studies with more local content.   Although there is a considerable amount available under Biodiversity and Conservation, Waste Management etc., there needs to be a central source that can be easily accessed and available.

*Work Environment within Member organisations/governments*

vi)  Identify the client as well as the learner for any training
Revisiting the ''results formula'' - for training to yield results on-the-job, it must be linked to a business need.  SPREP has much control over the ''learning experience'' side of the equation, whereas the client (usually two levels above the learner) controls the work environment side of the equation.

> Learning Experience x Work Experience = Business Results

If training is to have an impact on-the-job, those who have control over the learning experience and whose who can change the work environment must work together as partners i.e. SPREP and its clients in Member organisations.

vii)  Together with Members identify the short-term and long-term follow-up, as well as who will fund it, to be done prior to the training.

viii)   Help strengthen the Human Resource (HR) function of key organisations in Members particularly with regards to developing Training Plans that are tied to business needs, and training records to keep track of training activities in-country.

*Within SPREP Secretariat*

ix)   Ensure the participant selected has the necessary skills to enable them to pass on their knowledge and skills

x)   Develop a monitoring and evaluation mechanism that would help gauge the impact of training in SPREP Members.  E.g. when announcing a training programme or workshop, the Circular could stipulate that:

➢ applicants must advise SPREP of how they aim to implement the training and the type of support they may require to facilitate implementation

➢ one of the criteria for selection of a participant is for them to be prepared to return after their training and implement an activity or project within a given timeframe

➢ applicants will be expected to write a report within one month upon return to their workplace showing how they have made a presentation to others on what they have learned on the course

➢ applicants will be sent a Post-Training Evaluation Form within three months after returning to work.  The Form is to be filled out by the trainees and their supervisors seeking information on how useful the training has been and whether there has been any change in the trainee's performance

➢ applicants will not be considered for any future training if they do not fulfill any of the above requirements

➢ for the selection process, applications are to be forwarded to SPREP for screening and selection, with the endorsement of National Focal Points

*Effect*
The effect of this measure would be to:
▪ discourage those who attend training when it doesn't necessarily fit in with their work
▪ spread the training net wider because applicants who can't commit to the requirements will pass the offer on to others who may
▪ promote the growth of a ''learning organisation'' by ensuring that country participants transfer or impart some of what they have learned to others and not keep it all to themselves
▪ provide SPREP with some formal measure of whether the knowledge and skills acquired is shared or implemented in-country

xi)   Developing and standardizing training forms and processes.  Training is all about setting standards that enable us to measure the effectiveness of any programme. Such actions would include:

➢ documenting the training process from start to finish and having it easily accessible to SPREP Programme Staff for their reference

➢ developing a standard SPREP Pre-Training Questionnaire, Training Evaluation Form and Post-Training Evaluation Form that can be customised to meet the needs of any event, including meetings.  This has been done already but is still being refined.

➢ Developing standard Training Announcement Circulars, Nomination Forms and Course Programme Formats that can also be customized

*Effect*
- SPREP Programme Staff would be better informed about the requirements of a good programme. A lot of resources (funds, time, effort and people) go into running training programmes and workshops, thus training should be treated as an investment, and like any investment, careful planning is mandatory.
- Developing standard forms gives a comprehensive, unified and professional portrayal of SPREP training. Training documentation (forms and even reports) become recognisable as SPREP ''products'' and contributes to the ''branding'' of SPREP in its role as training provider.

These are some of the key recommendations arising out of the report, with a few of them e.g. developing standard training evaluation forms at SPREP, already developed and ready for implementation following further discussions and expressions of commitment.

# INTRODUCTION AND OVERVIEW

**SPREP's Mandate**

In 1992, the South Pacific Regional Environment Programme (SPREP) relocated to Apia, Samoa, from its former base within the South Pacific Commission (SPC), now re-named the Secretariat of the Pacific Community, and became a fully autonomous organisation in 1993.

In the early 1990s, most independent Pacific Island Countries (PICs) with technical support from SPREP, carried out a major consultative planning exercise that culminated in the production of 12 National Environmental Management Strategies (NEMS) aimed at integrating environmental concerns into national development plans. The environmental concerns identified in the NEMS form the basis of the five Strategic Outputs in SPREP's current 1997-2000 Action Plan, which also reflects the Key Result Areas (KRAs) and associated processes/interventions identified for the 2001-2004 Action Plan.

SPREP's mandate in the Action Plan 1997-200 is to build and strengthen its Members by developing people so they can manage and use their natural resources and environment in a more effective and sustainable manner. Capacity building is a major focus of SPREP's work, and two of SPREP's key capacity building tools are environmental education and training.

The term ''Members'' is used throughout this report, to refer to the 22 Pacific Island Countries and Territories that make up SPREP membership, excluding the four developed member countries, New Zealand, Australia, France and the United States.

Members have consistently requested and received training in all work programme areas covered by the SPREP Action Plan. The five work programme areas are:

1   Biodiversity and Natural Resource Conservation
2   Climate Change and Integrated Coastal Management
3   Waste Management, Pollution Prevention and Emergencies
4   Environmental Management, Planning and Institutional Strengthening
5   Environmental Education, Information/Awareness Raising and Training

**SPREP Training**

All SPREP programmes under these five environmental areas have an information, legal, education and training component. The training provided is usually driven by virtue of project implementation needs which in a few instances, may not necessarily be driven by country needs. E.g. the Pacific Islands Climate Change Assistance Programme (PICCAP) undertakes Green House Gas (GHG) Inventory and Vulnerability and Adaptation Assessment (V&A) training for countries because they have little or no capacity to undertake these tasks to fulfil their obligations under the United Nations Framework Convention for Climate Change (UNFCCC).

The strong support of all stakeholders from policy makers to the local community is needed at various phases of the development and implementation of SPREP projects. Hence, the training required ranges from dissemination of basic principles through schools and mass media, to formal courses for professionals and technicians involved in implementing projects.

SPREP mostly provides task-oriented technical training for specific target groups enabling participants to implement a project. There is also a growing emphasis on generic training e.g. teambuilding and personnel management, to further facilitate project management and implementation.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

Some examples of the type of training SPREP provides are:

➢ Teacher training on integrating environmental management in classroom teaching for secondary school teachers under the Environmental Education programme
➢ Municipal Solid Waste Management Workshop for Health Inspectors
➢ Regional Workshop for lawmakers, managers, policy-makers on the implementation of the Convention on Biological Diversity in the Pacific Islands Region
➢ Conservation Area Managers training in income generation through nature conservation
➢ Sea Level and Climate Monitoring Project training at National Tidal Facility (NTF), Australia aimed at graduates in general science, coastal management, environmental science etc.
➢ On-site training of Meteorological technicians and observers on how to maintain, repair and operate equipment by regional maintenance team visits.  Observers and technicians from Meteorological Services and other government departments are also sent to training centres (Fiji Meteorology Services, Bureau of Meteorology in Australia, New Zealand and the United States) for specialised training on operations and observations

In many cases, SPREP Programme Officers organise and conduct training in collaboration with various tertiary and vocational institutions. E.g. the Pacific Ocean Pollution Prevention Programme (PACPOL) collaborated with the Australian Marine Oil Spill Centre (AMOSC), the Australian Maritime Safety Authority (AMSA) and the Queensland Department of Transport, to provide specialised training on marine spill response for government and oil industry representatives from Pacific island countries and territories.

With the considerable amount of resources spent on training activities, steps were taken to try to coordinate SPREP's training, and to ensure that the training provided addressed priority environmental training needs of Members.

These steps included the creation of a new staff position of Training Officer in 1998 funded by New Zealand Overseas Development Assistance (NZODA), which was filled in February 1999. One of the initial tasks of the Training Officer was to conduct an environmental training needs assessment (TNA) for all SPREP Members.

NZODA also contributed some funding to the Pacific Regional Conference for Environmental Education and Training held at USP in Suva, Fiji in 1998, the result of which was the Action Strategy for Environmental Education and Training in the Pacific Region 1999-2003**.**  This TNA exercise falls under Target Area 1:  Formal and Non-Formal Education of the Action Strategy, which looks at developing environmental education and training materials for various audiences and monitoring, evaluating and refining training materials and practices as part of an ongoing quality control process.

## Definition of key terms

The term *training* in this report is used throughout to include *development* (e.g. mentoring, coaching and modeling).  Although a distinction is often made between the two terms, for convenience, they are both referred to here simply as *training.* The emphasis is on courses and programmes designed to increase knowledge, improve skills, and change attitudes whether for present job improvement or for development in the future.  Although the focus of this TNA is on technical training in the environmental field, the concepts, principles and issues can also be applied to supervisory and management, safety and even academic courses.

To further clarify, a distinction is made between the two most common types of training undertaken by SPREP - *workshops* and *training programmes* - two terms that are often used interchangeably.

Workshops and training programmes seek different types of outcomes, thus take a different approach to supporting change and improvements in organisations.  The term ''outcome(s)'' is

used throughout this report to refer to the goals or objectives set for a workshop or training programme.

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| Training Programme | Seeks improvement in 'individual performance'. Individual performance is a function of willingness, ability and opportunity. *Willingness* relates to motivation and attitude. *Ability* relates to knowledge, skill and confidence. *Opportunity* concerns organisational support and barriers. In general, training programmes focus on **ability and willingness,** having little effect on opportunity. Training is conducted to help people improve in areas such as negotiation skills, surveying and monitoring skills, technical report writing skills and even to improve their skills at leading workshops and training programmes. |
| Workshop | Seeks improvement in 'group performance' and focuses on **opportunity and willingness**. Ability is a prerequisite. In other words, the workshops involve efforts at redesigning the workplace and changing support and barriers to performance. |

In summary, workshops focus on group and organisational change, while training programmes focus on individual change and behaviour. In this sense training programmes are more basic to individual performance and effectiveness on the job, whereas workshops are more directly concerned with group and organisational effectiveness.

Training by SPREP is a combination of both workshops and training programmes. Eg. the sub-regional Environmental Education Workshop for Primary School Teachers (27-31 March, 2000) was aimed not only at developing practical skills of teacher trainers to plan and deliver more effective workshop in-country, but also to provide them with the skills to identify and adapt existing resource materials to suit the needs and constraints of each classroom and of the existing school.

**Constraints to adequate and effective training by SPREP**

Several issues have arisen over the years that reinforced the need to review SPREP training activities. Some of these were:

*i)      Lack of co-ordination*

Although SPREP provides good training programmes and workshops, there is a distinct lack of co-ordination of training (and other activities) within and across SPREPs work programme areas and insufficient follow-up and continuity of training provided. E.g. a workshop for media personnel was organised by SPREP in Vanuatu in 1996. In 1999, a workshop for media personnel was proposed again, targeted at the same group, with no connection to the earlier workshop, which had had no follow-up actions taken after its completion.

There have also been instances where two or more SPREP programmes have held activities (not necessarily just training) in the same country at the same time, placing considerable burden on the already limited resources (people, facilities and money) of the host country. SPREP had addressed this issue in its last two annual planning exercises by ensuring no, or minimal overlap of in-country activities.

*ii)      Lack of relevance*

Some training has been provided directly, or in collaboration with advanced countries that do not fully cater to conditions and situations particular to small island nations. Part of SPREP's response involves, where appropriate, transferring and/or adapting training programmes from institutes in metropolitan countries to the island region. A recent case was the successful

transfer and adaptation of the Greenhouse Gas Inventory and Vulnerability and Assessment Course under PICCAP, from the University of Waikato, New Zealand, to USP in Suva, Fiji.

A similar exercise is underway with the Conservation Training project, which is a three-way collaboration between SPREP, USP, and the International Centre for Protected Landscapes (ICPL) based in the United Kingdom (UK). The project aims to develop and establish a practical Pacific Islands Community-based Conservation Course (PICCC) for conservation practitioners across the region, to be based at USP in Fiji, providing continuing education for those working in the field.

*iii)     Lack of feedback on effectiveness of training*

SPREP has provided a considerable amount of training over the years in areas such as Environmental Impact Assessment (EIA). It was noted however, that the same training requests were being received year after year from the same countries. This raised questions of the effectiveness of the training provided, and whether those trained had implemented or transferred to others anything that they had learned – the challenge of any training activity.

*iv)     Lack of follow-up action after training*

One of the reasons for the lack of feedback on the impact of training, is the lack of follow-up after training. Some participants have not been able to implement the knowledge/skills they acquired due to lack of equipment and further support assured to them by SPREP e.g. Fisheries Department in Vanuatu. The whole purpose of providing training is to make a change or improvement in behaviour or actions, and where there has been none, it means that the considerable resources spent on developing and delivering the training has, in a large part, been wasted. E.g. The cost of a one-week regional workshop for over 20 participants in Nadi, Fiji was approximately US50,000. Of that amount, about 80-90% went to paying travel, per diems and accommodations, with around 10% going to the consultants/resource persons, for the design and delivery of the programme - this is a substantial investment. If at the end of the training, nothing happened back in-country, one needs to ask; could that money and effort have been put to better use elsewhere?

*iv)     Inappropriate participants attending training*

Another concern is participants who do not fulfil the selection requirements of training provided by SPREP, usually discovered too late during the training. The selection criteria is set by SPREP Programme Staff, but the selection process, in most cases, is left in the hands of Members, and does not always ensure the attendance of suitable candidates. This is not unusual in training in general, but because of the considerable resources spent on training (regional and national), it is an issue that both SPREP and Members need to address together.

In addition to the selection process in-country, there is also the selection process within SPREP which varies across Programmes. e.g. the Environmental Education Officer, leaves it to National Focal Points to screen and select candidates, with SPREP's concurrence. Others, such as the South Pacific Biodiversity Conservation Programme (SPBCP) stipulate that National Focal Points forward all nominations received, to SPREP, for it to make the final selection. A few projects such as SPSLCMP have developed close relationships with relevant organisations in-country and are sometimes able to confirm suitability of the candidates through direct contact with their organisational heads.

Despite these measures though, there are still many instances where participants attending training are involved in jobs that have nothing or very little to do with the training provided. Then there are participants whose jobs dovetail with the training, but who are constantly attending training with very little to show for it upon their return.

These are some of the key issues that SPREP aims to address through having a Training Officer on board and through the findings of the TNA.

**Number of training programmes and workshops provided by SPREP**

To get a better idea of the amount of training SPREP provides, the number of workshops and training programmes conducted from 1992-2000 is provided below. These exclude the more-than-200 people trained through project-related study tours, attachments, and in-country visits.

**Table 1:** **Number of Training Programmes and Workshops conducted by SPREP from 1992-2000**

| Year | Number of Training Programmes and Workshops |
|------|---------------------------------------------|
| 1992/1993 | 17 |
| 1994/1995 | 14 |
| 1996/1997 | 23 |
| 1998 | 15 |
| 1999 | 22 |
| 2000 | 7 (with 14 more planned) |
| TOTAL | **98** |

# CHAPTER 1

# THE TRAINING NEEDS ASSESSMENT (TNA) PROJECT

It was acknowledged early on that this TNA was quite an ambitious exercise because of the scope of what was to be covered. However, lacking a comprehensive picture of environmental training in the region, it was agreed that gathering some baseline data was needed as a first step to understanding and reconfirming what some of the issues and needs may be.

To put this project into perspective, carrying out a full needs assessment (training included) of just one environmental area for all Members by one individual can take up to six months. The challenge when conducting this TNA for all environmental areas for all Members was in trying to keep the exercise manageable and meaningful without being too general that it becomes ''window dressing,'' or too specific that it becomes unmanageable.

This chapter describes some basic assumptions behind the design of the project, what the project is about and how it was carried out. It outlines underlying assumptions, objectives of the TNA and the expected outcomes, the methodology adopted, the people involved who provided the information, what was actually assessed, the criteria for determining what is a priority training need across all environmental areas, and a reference to other TNAs conducted in the region. It also highlights certain constraints of the project that should be borne in mind when interpreting the findings.

## 1.1 Goal

*The purpose of this TNA is to promote and ensure results-oriented training will occur that is driven by Member needs, as well as SPREP project needs.*

With this goal, the TNA was designed along the fundamental concept that can be summarised with the formular:

**Learning Experience  x  Work environment = Organisational or business results**

Organisational results (in-country) occur when skills taught in a training programme are applied on the job yielding improved performance.

For this to happen, SPREP needs to provide well-designed and skillfully delivered training in which participants learn what was intended; thus the learning experience side of the results may be 100%. The learning by itself is obviously not enough to produce on-the-job results. What must be present is a work environment that reinforces the use of skills gained and by coaching those skills (with follow-up support) when people need additional guidance. If this supportive environment is lacking, then there will be a zero on the ''work environment'' side of the equation. Recalling basic arithmetic, 100 multiplied by zero will yield 0 in terms of organisational or on-the-job results. The inverse can also apply whereby training did not provide the appropriate learning experience, while the working environment was supportive.

As a provider of training, SPREP, acting alone without the assurance of an enabling work environment may experience limited results from training efforts. In most cases, SPREP concentrates on the ''learning experience'' side of the equation with often little effort given to ensuring that the work environment can or will support new or improved skills.

If SPREP wants to see more tangible results from the training it provides, it will have to collaborate much more closely with its Members and vice versa, because if mutual support and partnership are absent, it is highly unlikely that the knowledge/skills acquired through training will be successfully transferred to the job. The basic equation mentioned provides the basis of

the TNA project and design of the TNA questionniare i.e. Part A focuses on the ''Working Environment'' and Part B focuses on the ''Learning Experience''.

## 1.2    Objectives of the Environmental TNA

The objectives of the environmental TNA are to:

➢ Identify the environment-related knowledge and skills Members need to carry out their jobs effectively
➢ Determine which training needs Members see as priorities
➢ Identify current and potential training opportunities
➢ Identify the constraints to adequate and effective training
➢ Assess the types, amount and frequency of environmental training already conducted and that will be continued to address the needs identified

## 1.3    Expected Outcomes of the Environmental TNA

Essentially, the outcome of this TNA exercise would involve:

➢ Ensuring that training provided by SPREP *meets the priority needs* of member countries
➢ Developing mechanisms to monitor and evaluate the *impact* of SPREP training in member countries
➢ Ensuring that existing *training opportunities* are utilized and potential training opportunities are identified
➢ Identifying and co-ordinating activities that will address long-term *human resource development issues*.
➢ Monitoring the *type, amount and frequency* of environmental training that SPREP provides to member countries by setting up a process and database that will consolidate and continuously update all environmental training provided.

## 1.4    Methodology

The methodology for this TNA departs from other training assessments conducted in the region in a number of ways:
➢ The assessment was based on SPREP's five work programme areas which are, i) Biodiversity and Natural Resource Conservation ii) Climate Change and Integrated Coastal Management iii) Waste Management, Pollution Prevention and Emergencies iv) Environmental Management, Planning and Institutional Strengthening; and, v) Environmental Education, Information/Awareness Raising and Training. These work areas cut across all sectors such as forestry and tourism.  This was quite different from needs assessments carried out by other agencies, which were done by sector, such as that done for the Marine Sector by the University of the South Pacific (USP) in 1999.
➢ The assessment embraced a participatory approach with in-country visits made to eight countries in which extensive meetings were conducted with as many agencies as possible, across all sectors and at all levels.
➢ The assessment developed a 'standard' list of technical and generic tasks required under each environmental area, against which Members were assessed as to their current levels of knowledge and skills to carry out those tasks.

The TNA exercise followed a logical sequence of steps in six major phases:

Phase 1:    Desktop research

The desktop research involved the collection and analysis of information on past and existing environmental training programmes from a variety of sources.  The sources included NEMS, SPREP Annual Reports, Training/Workshop and Project Reports, etc.  In addition to document

research, extensive interviews were also conducted with SPREP Programme Staff and Management, donor agencies, regional agencies eg. USP, and other interested parties eg. NGOs.

Phase 2:     TNA Questionnaire

The information gathered from the document reviews and personal interviews assisted in the design of a TNA questionnaire.  The questionnaire approach was adopted for the needs assessment due to the following reasons:
➢ Given the scope of the exercise, the questionnaire served as an efficient and practical way to present the range of skills and knowledge required under the various environmental areas;
➢ The questionnaire provides a qualitative and quantitative means of assessing training needs; and
➢ The questionnaire lends itself well to standardised data extraction, manipulation, comparison, and analyses across and within the member countries.

The TNA questionnaire was first piloted in Vanuatu in August,1999. Following the pilot, it was revised considerably in length and design, particularly Part B of the questionnaire relating to Technical Skills and Knowledge Requirements.

The TNA questionnaire is divided into two parts:
➢ Questions 1-13 under **PART A** relate to organisational capacity focusing primarily on human resource development or work environment.   This part needed to be answered by one person only at decision-making level in each organisation or Conservation Area.  A person with at least three years experience who knew enough about how the organisation or CA functioned.   It was necessary that the person also be able to answer one of the environmental areas under Part B.  He or she was encouraged to consult with relevant personnel when filling out most items under this part.
➢ Questions 14-20 under **PART B** relate to the seven specific environmental areas, as identified under the SPREP Action Plan. Under Part B a similar line of questioning is followed for all environmental areas, except for the list of technical knowledge and skills required. A copy of Part A, and Part B on Biodiversity and Conservation of Natural Resources only is attached as Annex A.

People instrumental in the design and development of the questionnaire included SPREP Management and Programme Staff, Kath Means of World Wide Fund for Nature (WWF), Peggy Dunlop of USP,  and Jim Russell of the US Peace Corps.

Phase 3:     In-country Visits

A four-step approach was adopted in the process of gathering information from  SPREP's Members:
➢ Member countries and territories via the SPREP National Focal Points were informed of the new Training Officer and of the TNA exercise.  Information was sought from them as to other training assessments already undertaken in-country.
➢ Contact lists for each environmental work area in all countries were compiled from SPREP Programme Staff eg. under the South Pacific Biodiversity Conservation Programme (SPBCP) key contact persons were the Conservation Area Support Officers (CASOs) in each country.
➢ National Focal Points were then requested to advise us of an appropriate time for an in-country visit to conduct the TNA.   SPREP's suggested Contact List, the TNA Questionnaire, and an information sheet on the TNA exercise accompanied this letter. They were also requested to organise/coordinate the in-country meetings with any costs incurred to be met by SPREP.

➢ The in-country visits involved a full meeting with everyone on the contact list, followed by more intensive follow-up meetings with individual agencies. The Contact list was often revised/updated by the National Focal Point.

All SPREP member countries were sent letters requesting a visit to conduct the TNA. Most of those approached responded and a time schedule was arranged that was suitable to them as well as to SPREP. A round of visits was scheduled for 1999, and those countries that did not find it appropriate requested they be visited this year. However due to the scale of this project, time constraints, as well as other training priorities, it was necessary to put together a preliminary report of the training needs identified from the eight Members visited thus far with follow-up TNAs to be carried out for the remaining Members where appropriate. The eight Members visited for this exercise were, in chronological order: Vanuatu, French Polynesia, American Samoa, Tonga, Guam, Papua New Guinea, Fiji and the Cook Islands.

Phase 4:      Processing and Analyses of the TNA questionnaire

This phase of the questionnaire was done largely by a local consultant hired from October 1999 to March, 2000, to design and develop the TNA database, and to enter, process and help analyse the data received from the TNA questionnaires. She was ably assisted in this regard by SPREP's Information Technology (IT) staff, both for advice and support.

Phase 5:      Compilation of the TNA Report

Questionnaire responses together with document reviews and personal interviews were compiled into a report, by environmental area, and by country. The local consultant as well as our IT staff also assisted in this process.

Phase 6:      Circulation and Finalisation of the TNA Report

Country reports are to be circulated to all those involved in the exercise, whereby they would be given 3 weeks in which to make any comments and suggestions before the report is finalised.

## 1.5    The people involved

The assessment (questionnaire and interviews) included more than 250 people working for environment agencies and other government and non-governmental organisations in eight countries and territories, using the complete TNA methodology except for American Samoa, Guam and the Cook Islands, due to time constraints.

The TNA derived its data primarily from the questionnaire and interviews. Quantitative data was extracted from the questionnaire using Microsoft Access, whilst Microsoft Excel was used to analyse the information. Qualitative data from the interviews supplemented the quantitative findings. Table 2 shows the number of questionnaires participants completed in each country.

**TABLE 2.      Number of Questionnaires Completed by Country**

| Country | Completed questionnaire(s) |
|---|---|
| American Samoa | 1 |
| Fiji | 45 |
| Guam | 14 |
| Papua New Guinea | 20 |
| Tonga | 34 |
| Vanuatu | 35 |
| **Total** | **149** |

Note:    There were no questionnaires received from French Polynesia and the Cook Islands.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

## 1.6    What needs to be assessed?

Part B of the TNA Questionnaire included a 'standard' list of technical and generic tasks which Members were then asked to rate based on whether or not they had the necessary knowledge and skills to carry out the tasks.  This enabled comparison of findings across countries. Respondents were given the opportunity to change, add or delete any of the knowledge and skill requirements listed in the questionnaire.   Several respondents answered that a fair amount of the knowledge/skills listed were not applicable to their work.  This was partly owing to the fact that Part B of the TNA questionnaire was aimed at people directly and actively involved in those environmental areas with its specific knowledge/skills requirements. Therefore respondents from NGOs or government departments which dealt only marginally with environment-related issues found only some aspects of the knowledge/skills listed relevant to what they did.

The technical and generic tasks list was developed through extensive discussions with SPREP programme staff responsible for the five work programme areas.  The purpose of devising this list with programme staff was to ensure a closer match between what SPREP carries out, against what is, or should be carried out by Members at national level.   The underlying assumption is that SPREP has the technical expertise to identify and determine the technical (and generic) task requirements within the various environmental fields.

Had a ''blank sheet'' been used to elicit what Members' needs were, there existed a very real danger of getting a training ''wish list'' that SPREP would be unable to fulfil under its programmes.  The purpose of this exercise is to address Members' needs better, hence the identification of required tasks by SPREP programme staff who are already in a position to fulfil the needs identified.

Determining the priority training needs for each environmental area were derived mainly from Part B of the TNA Questionnaire.  From the eight countries visited, questionnaire forms were received from five of them except French Polynesia and the Cook Islands, with only one questionnaire received from American Samoa.  As such, the scatter diagrams showing current level of skills and knowledge do not include these three countries.  Information on them has been derived largely from the interviews.

The findings are illustrated on a regional basis for each environmental area. The findings on generic training needs for all environmental areas for the 5 countries are illustrated at the end of <u>Chapter 2</u>.

## 1.7    Criteria for determining (High-Low) priority for training

The criteria for determining priority training needs was based on developing a ''normal'' or standard value for the total frequency of responses of each task under each environmental area.  These standard values formed the basis of the weighting scale (4-0) used to determine priority training needs or areas of weaknesses.  The table below is self-explanatory.

| Level of confidence for knowledge and skill areas | Weight | Priority for training |
|---|---|---|
| Currently unable to perform the task; lack basic knowledge of it | 4 | High |
| Able to perform the task; have some knowledge of it but still need some support | 3 | |
| Able to perform the task without further help or support; have sufficient knowledge of it | 2 | |
| Able to help others perform the task; highly satisfied with self skill and knowledge | 1 | |
| Not applicable to my job | 0 | Low |

Therefore, the closer to 4 the points on the scatter diagram are, the less knowledgable or skilled respondents were in that task, and the higher the priority for training and support. Conversely, the closer to 1, the points are, the more knowledgeable and skilled respondents were in that task, giving it lower priority for training and support. This criteria was used to assess the training needs of all environmental areas. Summarised as Annex B is the number of respondents for each environmental area per country.

## 1.8 Other (Training) Needs Assessments conducted for the region

An important step in the first phase of the TNA was to seek out TNAs already conducted by, or in association with SPREP. These were:

i) *The Rural Development Training Needs Assessment for the Pacific* conducted by Bikenibeu Paeniu and Keith Leonard in 1988 for the South Pacific Commission (SPC)

ii) *The Coastal Management Training Needs* in 1995 by Andrew Smith, Coastal Management Officer and Lucille Apis-Overhoff, Assistant Coastal Management Officer (SPREP)

iii) *The Marine and Coastal Protected Area Management Training Needs* in 1997 at the Workshop on a Framework for Future Training in Marine and Coastal Protected Area Management organised by the International Centre for Living Aquatic Resources Management (ICLARM) in Manila, Philippines

While conducting this TNA, several other needs assessments were also being conducted under SPREP Programmes and by USP. These were:

iv) *The Needs Assessment for Post-Fisheries Harvest* conducted by Dr Irene Novacek in 1999 for USP

v) *The Training Needs Assessment for the Marine Sector* conducted by Dr Dick Watling in 1999 for USP in association with other regional organisations such as SPREP. This was a joint initiative by the Council of Regional Organisations in the Pacific (CROP)

vi) *The Draft Agricultural Training Policy Needs Assessment Report* conducted by Mr Don Stewart inn 1999 for the Food and Agriculture Organisation (FAO) Sub-regional Representative for the Pacific, based in Apia, Samoa

vii) *The Assessment of possible Climate Change and Sea-level rise activities undertaken in Pacific Island Countries in cooperation with Japan* conducted under PICCAP in collaboration with the International Global Change Institute based at the University of Waikato in Hamilton, New Zealand. The report was drafted in May 2000

viii) *The Needs Analysis and Strategic Directions for Meteorological Services* conducted for 21 countries by SPREP's Meteorological Officer in collaboration with the sub-regional World Meteorological Organization (WMO) representative and an AusAID sponsored team of experts in 2000. The report was recently drafted in June 2000

The list is not exhaustive and as this report goes out, there are similar activities being undertaken under other programmes. Some of the findings from these TNAs, particularly the human resource issues, are similar to those that came out of this exercise and will be covered in more detail in Chapter 3 Training Opportunities.

## 1.9 Constraints of the project

Quite apart from the scope of the TNA exercise, there two other constraints in the implementation of this project. These were:

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

*i)      Expectations of Members*

One or two persons did not see any real benefits of this exercise to them, suggesting that it was more to SPREP's benefit than theirs - this obviously was a barrier to having open discussions.   Another reaction was that this was just another exercise that would end up in a report gathering dust on a shelf – a justified concern given past practices in the region. Generally, most participants were pleased to be part of the exercise, due partly to their expectations that SPREP will provide more training if they articulated their needs. They were assured that an in-country approach would be taken, where suitable, bearing in mind that some training is more appropriate undertaken on a regional basis.

*ii)      Part B of the TNA questionnaire*

Another constraint was that part B of the TNA questionnaire was designed not based on sectors, but according to SPREP's five work programmes broken down to seven environmental areas.   Thus some government agencies in sectors such as Agriculture, Tourism, Forestry or Marine had some difficulty with Part B of the questionnaire because their work cuts across several environmental areas.  E.g. Forestry dealt with Biodiversity and Conservation, as well as Climate Change, and even Waste.  This meant they had to answer two or more of forms under Part B which is one of the drawbacks of questionnaires – the amount of questions to answer can put people off.

# CHAPTER 2

# REGIONAL ENVIRONMENTAL TRAINING NEEDS

This section presents the core findings of the TNA from the eight countries reviewed and is structured according to the seven environmental areas that form the basis of the TNA questionnaire.   Thus under each environmental area, the following findings are presented that meet the five objectives of the TNA exercise:

➢ Identification of tasks under each environmental area was developed and Members were asked to rate, through a questionnaire, whether or not they had the necessary knowledge/skills to carry out these tasks effectively.  The list of technical, as well as generic, tasks is coded in the diagrams for each environmental area with their feedback analysed and priority areas for training identified – thus satisfying the first objective of the TNA, which is to identify the environment-related knowledge/skills required by Members to do manage their environment more effectively as part of their jobs.

➢ Identification of priority training needs for each environmental area – this satisfies the second objective of the TNA, which is to identify the gaps where Members didn't have enough knowledge and skills to perform the necessary tasks and to determine which needs Members see as priority

➢ Findings from interviews and other sources are presented that supplement and complement findings from the TNA questionnaire.   This also satisfies the second, as well as the third and fourth objectives of the TNA by identifying needs, training opportunities available, and issues/constraints.

➢ Summary of SPREP training in each environmental area – this partly satisfies the fifth and last objective of the TNA which is to assess the types, amount and frequency of environmental training required by Members to function effectively

➢ Summary of current problems identified by Members, and their suggestions for improvement in each environmental area – thereby satisfying the fourth objective of the TNA, which is to identify constraints to adequate and effective training

## 2.1  BIODIVERSITY AND NATURAL RESOURCE CONSERVATION

Findings gathered from the TNA Questionnaire identify the technical tasks required by Members in the biodiversity and conservation of their natural resources.  This is listed clearly in the scatter diagram captioned Diagram 1, fulfilling the first objective of the TNA.

The next part identifies priority needs for training and support beginning with a visual analysis showing general patterns that can be discerned for Fiji, Guam, PNG, Tonga and Vanuatu. Further analysis of Diagram 1 reveals the collective areas of weaknesses of the five countries, which form the priority areas for training and support.  This is supplemented with evidence from various other sources that are described and analysed, followed by a description of training that SPREP has offered, and continues to offer, in this area.

### 2.1.1    Findings from the TNA Questionnaire

**Priority needs for training and support**

A visual analysis of Diagram 1 on the following page shows the following trend:

▪ From the knowledge/skills listed from 1-11, there is a consistent need for training across all the countries, particularly for Vanuatu and Tonga.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

- Due to the normalising effect, the needs expressed between 2.00-3.00 (low to medium priority for training) can still be considered high on the priority list (rating above 3.0) for some, but not all the respondents.
- Respondents from Guam are sufficiently knowledgeable and skilled enough to carry out most of these tasks without further help or support.
- For Vanuatu, there is also a consistent need for training across the generic knowledge/skills listed from 17- 29.

The assessment of technical knowledge and skills found that most practitioners felt weakest in these 4 areas;

➢ Applying wildlife management techniques, which include monitoring, survey, planning (mitigating disasters in the early stages)
➢ Promoting and marketing CAs
➢ Identifying, establishing and managing income generating activities on a sustainable basis
➢ Accessing other resources in support of CA management

These areas identified through the questionnaire reflect some of the needs also expressed by Conservation Area Support Officers (CASOs) during a workshop conducted with them in May 1999 in Nadi, Fiji.

## DIAGRAM 1:  B1     Biodiversity and Natural Resource Conservation
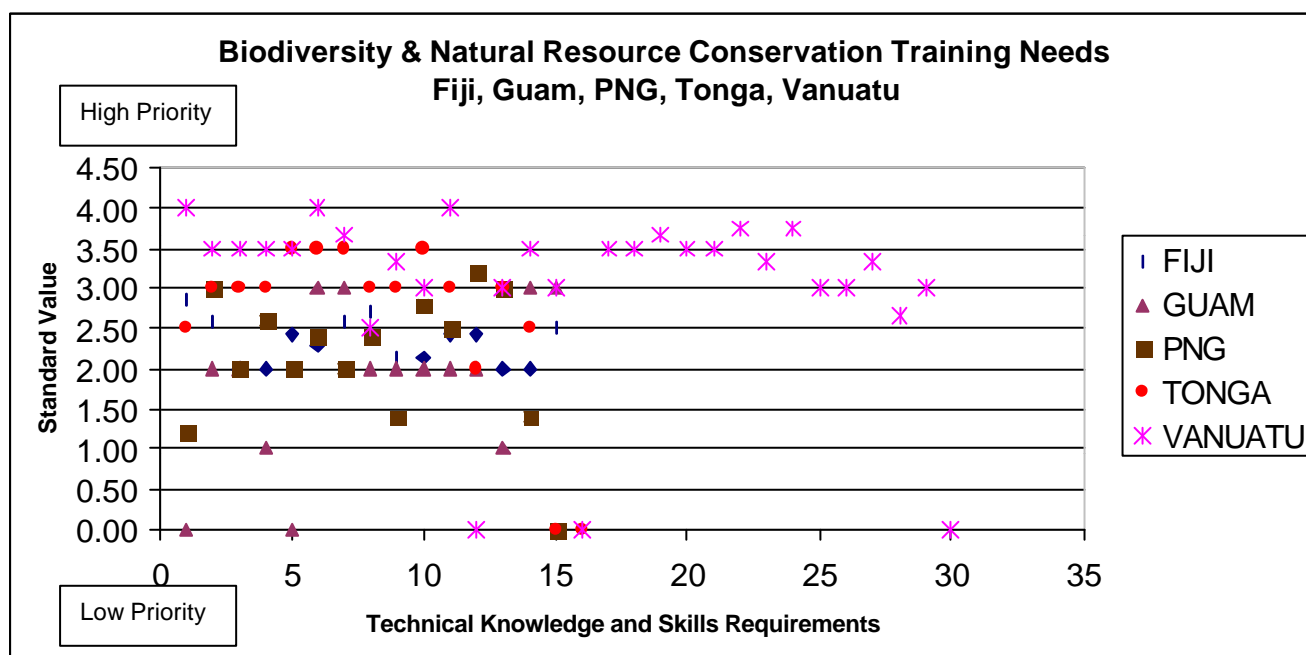


## Key
## Code    Technical Knowledge and Skills

1    Plan for Conservation Areas (CAs) through consultation with relevant parties
2    Incorporate gender related concerns/issues in biodiversity and natural resource conservation plans
3    Develop effective tools  for community-based resource management and conservation
4    Develop and identify appropriate links between species conservation and CA management

5      Apply wildlife management techniques, which include, monitoring, survey, planning (mitigating early disasters in the early stages)

6      Promote and market Conservation Areas (CA)

7      Assess, identify, establish and manage income generating activities on a sustainable basis

8      Evaluate and monitor CAs on a regular basis

9      Raise public awareness using appropriate tools

10     Access other resources in support of CA management

11     Build capacity to network with others in and outside the CA site

12     Coordinate and conduct training programmes for different groups in the community

13     Understand National Biodiversity Action Plans and apply lessons learned from the CA in the implementation of such plans

14     Operate computers and MS Office tools e.g. MS Word, Excel

15     Other (please specify) – Wetland Conservation

16     GIS training

**GENERIC SKILLS** for Vanuatu only as the pilot had an extended knowledge/skills list that was then revised/refined.

17     Conflict management

18     Negotiation

19     Development of management plans

20     Finance and business management

21     Supervision and personnel management

22     Project management

23     Time management

24     Communication

25     Information management

26     Facilitation

27     Human resource management

28     Public speaking

29     Other (please specify)

U.S. and French Territories, such as Guam, American Samoa, French Polynesia and others, have not received much assistance or input from SPREP until recently. This was due partly to them having easier and more direct access to opportunities of training, financial assistance etc., from their more advanced patron countries. Therefore, the Territories visited for this study (Guam, American Samoa and French Polynesia) were generally more sufficiently skilled and knowledgeable across all environmental areas and were very receptive to providing assistance through exchange of personnel and expertise with their independent Pacific Island neighbours.

Please note:

The TNA questionnaire piloted in Vanuatu was slightly longer because it combined generic tasks together with technical tasks. Following the Vanuatu in-country visit, generic tasks were presented as a separate question in the revised version of the TNA questionnaire.

## 2.1.2        Findings from interviews and other relevant sources

A lot of work has already been done, and is still being done, on assessing the training needs for Biodiversity and Conservation of Natural Resources.  For the purpose of coordination and consistency, an attempt has been made to pull together all the needs identified whether they were through workshops or strategic planning documents – a brief overview of the multiple sources is also provided.

**Document reviews**

*i)        Framework for Future Training in Marine and Coastal Protected Area Management Summary Report, 1998.*

A Workshop on a Framework for Future Training in Marine and Coastal Protected Area Management was organised by the Coastal Zone Management Centre (CZMC), the Netherlands, and the International Centre for Living Aquatic Resources Management (ICLARM), held from 3-7 November 1997 in the Philippines.

For the South Pacific Training Needs Assessment, basic training needs for each level of the Conservation Area model under the South Pacific Biodiversity Conservation Programme (SPBCP) at SPREP were:

*Conservation Area Coordinating Committee (CACC)*
▪ Introduction to marine ecosystems and relevance to management, eg. principles, components, local aspects and how they function
▪ Introduction to personnel management eg. leadership, communication, decision making, teamwork
▪ Introduction to tools of management eg. planning concepts, project management, community education and participation

*Conservation Area Support Officer (CASO)*
▪ Introduction to marine ecosystems and relevance to management, eg. principles, components, basic biology, physical structures, relationship with land-based activities.
▪ Introduction to personnel management skills eg. work planning, reporting, financial management, budgeting and office-based skills

*Communities*
▪ General introduction to marine ecosystems, eg. what are Marine Protected Areas (MPAs); why establish them, their potential benefits; the community role, public education programme to raise community awareness.

*ii)       Action Strategy for Nature Conservation in the Pacific Islands Region*

An Action Strategy for Nature Conservation in the Pacific Islands Region was developed through a widely consultative process led by SPREP.  The Action Strategy document was formally published and printed in 1997 and has a life span of about 5 years.  In the current Action Strategy under Objective 4 on Capacity Building, skills that need to be strengthened under Local and National Key Actions in the region include:

• Community-based resource planning, management and monitoring;
• Terrestrial and marine conservation operations and techniques;
• Proposal and report writing, using formats from major funding agencies;
• Gender-based skills; and
• Other skills identified by each country's training needs assessment

These action areas are reflective of the needs identified from this TNA study and differ perhaps in their emphasis i.e. needs identified from this study focused a lot on how to make CAs financially sustainable as a key consideration in their management and operation.

### iii)   Conservation Area Support Officers (CASO) Workshop (17-28 May,1999) conducted by SPBCP of SPREP

A training needs analysis was carried out during and after the CASO Workshop based on a short training needs form.  The findings are summarised below together with findings extracted from the evaluation form.

*Areas where more training is required*
- Monitoring and Evaluation of CAs
- Public awareness
- Skills in how to organise and deliver training
- Income generating activities to ensure continued financial support for the CA
- Marketing of CAs
- CA Management – time management (how to prioritise), problem solving and negotiation
- Financial record keeping

The findings of the TNA and past studies/workshops conducted form the basis of a regional training programme under the Conservation Training Project run jointly by SPREP, USP and ICPL already mentioned earlier.  The first course was to have been conduced from 14 June – 19 July 2000 at the USP in Suva, Fiji.  However due to the political crisis in Fiji the programme has been postponed until February 2001.  A summary of the needs is provided below.

**Box 1:** Draft Pacific Islands Community-based Conservation Course (PICCC) based on the needs identified from various sources.

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**i)        Context and Awareness: Approaches to Management**

*Community-based resource planning, management and monitoring*
- How global conventions are being implemented regionally
- Protected Areas – types and roles, examples from the region and from other regions
- Values – economic, social, aesthetic, economic valuation etc. Concept of ''cultural landscapes''
- Community-based action plans developed through consultation with relevant parties
- Developing and identifying appropriate links between species conservation and CA management
- Developing effective tools for community-based resource management and conservation
- Applying wildlife management techniques, which include, monitoring, survey, planning (mitigating disasters in the early stages)

**ii)       Management – systems and skills**
- Introduction to tools of management eg. planning concepts, project management, community education and participation
- Integration of conservation and development
- Sate of Environment reporting and environmental impact assessments (EIA)
- Raising public awareness using appropriate tools
- Accessing (other) resources in support of CA management
- Incorporating gender concerns into biodiversity and natural resources conservation plans and developing Gender-based skills
- Introduction to personal management eg. leadership, communication, decision making, teamwork, time management (how to prioritise), problem solving, negotiation, work planning, reporting, financial management, budgeting and office-based skills
- Proposal and report writing, using formats from major funding agencies
- Skills in how to organise and deliver training

**iii)      Sustainable Enterprise Development and Planning**
- Assessing, identifying, establishing and managing income generating activities on a sustainable basis to ensure continued financial support for the CA
- Promoting and marketing CAs
- Financial record keeping

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Although the priority training needs identified in this study strongly reflect the knowledge and skills required by CASOs under SPBCP, they also apply to conservation practitioners region-wide with some variation. This was evidenced by feedback received from applicants to PICCC, including those working for NGOs. When asked to identify other areas they would like to see included in the draft course programme, there was merely positive reinforcement of the existing topics.

v)      Papua New Guinea's Conservation Melanesia, Inc. 1997-1998 Annual Report (May 1999)

Conservation Melanesia (CM) is a non-governmental organisation (NGO) based in Boroko, PNG. Its goal is to develop and promote community focused conservation and sustainable livelihood strategies and practices that are economically viable, culturally appropriate, socially fair and equitable, and environmentally sound. Two of its objectives in this endeavour is to contribute to the development of an information exchange and training network in the field of conservation and sustainable development, as well as to build, strengthen, and monitor CM's own capacity to meet its goals and objectives.

Training carried out and organised by CM during this reporting period included:
➢ Small business training for the Maisin Community
➢ Three environmental education material production workshops and training involving 20 regional NGOs from PNG, Vanuatu and Solomon Islands
➢ Five workshops in PNG on Intellectual, Biological and Cultural Property Rights bringing together scientists, lawyers, and other specialists from around the world
➢ Management and execution of the Conservation and Sustainable Development Fellowship Programme Awards. This program is designed to build the capacity of Papua New Guineans to manage and conserve their globally outstanding natural resources and biological diversity e.g. a grant was made available to Eastern Highlands Provincial Administration Division of Natural Resources to provide technical training in orchid conservation etc.

vi)      Corporate Plan of the National Trust of Fiji (1997-2000)

The National Trust of Fiji is responsible for the protection, management and preservation of national heritage sites in the country in close cooperation with other governmental and statutory organisations. Its objectives include educating and strengthening community awareness of conservation and preservation requirements of natural and cultural heritage in Fiji as well as to strengthen the institution through the employment of additional staff.

## 2.1.3      Training provided by SPREP in biodiversity and conservation

Under SPREP's Action Plan 1997-2000, one of SPREP's five output areas is Strategic Output Area 1 – Biodiversity and Conservation of Natural Resources. This output area has various programmes and projects:

➢ South Pacific Biodiversity Conservation Programme (SPBCP)
➢ Regional Avifauna Conservation Management Programme (RMTCP)
➢ Regional Marine Mammal Conservation Programme (RMMCP)
➢ Regional Invasive Species Project (RISP)
➢ Wetlands Programme,
➢ Integrated Coastal Management Programme (ICM) including Coral Reef monitoring clinics etc.
➢ Surveying and Monitoring Coastal Habitats project

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

Training has been provided under each of the programmes listed above with over 20 workshops, and training programmes conducted in this environmental area from 1994 to 2000. A sample of such workshops and training programmes include:

➢ Whale Watching Operator and Guides Workshop (August, 1996)
➢ SPBCP Project Monitoring and Evaluation Workshop (1996)
➢ Scuba Diving Course for Conservation Officers (1996/1997)
➢ Sub-regional Workshop on Eco-tourism (July 1997)
➢ Small Business Management Workshop (July 1998)
➢ Natural Resource-based Income Generating Activities Training Workshop for the SPBCP- supported Conservation Areas (1998)
➢ Conservation Area Management Workshop for CASOs (since 1994 to present)
➢ Regional Marine Eco-Tourism Workshop (2000)

The standard length of these workshops is from one to three weeks, no longer. The average size is usually 20 participants. An exception is the Conservation Area Management Workshop held in May 1999 that had approximately 50 participants for three weeks.

The workshops are usually conducted by a combination of SPREP staff and outside resource personnel. External resource persons are consultants from private firms, lecturers from tertiary institutions in the region such as USP or members of collaborating organisations such as WWF.

There is a selection process to help ensure that the most appropriate participants attend, and the development of a workshop programme that tries to fulfil the varied needs of SPREP member countries whilst also fulfilling the SPREP programme requirements. An evaluation form is usually handed out at the end of workshops and a workshop report written up at the end stage.

Follow-up of workshops however is not consistent and most countries visited for this study cite lack of follow-up support as one of SPREP's weaknesses. There is also no mechanism in place to gauge effectiveness of the workshop or training in the long term. Success is measured mainly by general performance of the SPREP project in-country.

## 2.1.4    Problems and Constraints faced by those involved in biodiversity and conservation

Respondents to the TNA Questionnaire have highlighted problems that particularly affect biodiversity and conservation in their countries and have also provided suggestions on how to deal with some of these problems.

**Conservation Management problems**
1    Lack of data on terrestrial and marine ecosystems
2    Lack of, or absence of, resources (people, budgets) for conservation
3    Lack of planning of protected species - no proper habitat population viability assessment of fauna and non-timber plants used in international trade
4    Need for monitoring of scientific research and commercial exploration on seabed for organic and non organic substance especially when this organism is new to science
5    Improve current computer project to determine the potential CAs
6    Different agencies not co-ordinating well
7    Duplication of work

*Some key issues faced by Conservation Area Support Officers (CASOs) under SPBCP*
8    Lack of cooperation and consultation between the CA Coordinating Committee (CACC) and CASO
9    Lack of support from the community and CACC

**10**    Geographic dispersion of the community makes it difficult to plan and implement activities

**Development-related problems**
11    Rapid increase of human population and urbanisation translating to increased pressure on agricultural land, and the environment
12    Urban development eliminating natural habitats/land use
13    Introduced species eg. Brown Tree Snakes
14    Coastal/wetland reclamation
15    Indiscriminate chemical use, particularly in fishing
16    Deforestation
17    Logging
18    Mining
19    Sea level rise
20    Native land tenure
21    Unsustainable subsistence & commercial farming systems

**Social and Political problems**
22    The local communities and the public lack knowledge and awareness on environmental issues, particularly biodiversity and conservation
23    Relevant policies not implemented
24    Inadequate legal protection and enforcement of environmental policies and legislation
25    Political climate not always stable and supportive

## 2.1.5    Suggestions provided by countries for improving biodiversity and conservation

*Management of Biodiversity and Conservation*
*1*    Set up Trust Funds
*2*    Set up more income generating projects/activities, such as Eco-tourism
*3*    Less reliance on the ''top-down'''approach and alien ideologies imposed on local authorities that can confuse village community members.

*Education and awareness raising*
4    Raise the awareness of local communities (involved in Biodiversity and Conservation) on the advantages and disadvantages of having a CA in place
5    Encourage young children and youth to get involved in conservation by organising environmental conservation clubs
6    Incorporate biodiversity and conservation into the school syllabus to teach and raise awareness on the importance of conserving biodiversity
7    Develop appropriate teaching materials on local resources

*Training*
8    Relevant training to be provided in the vernacular to the village community so they can better manage their natural resources
9    Training programmes to combine government and NGO efforts so areas of concern could be addressed similarly
10    Better co-ordination of training activities (regional/international) to reduce current high levels of overlap and duplication and to ensure training activities match recipients' ability to undertake and implement skills gained.  This would help minimise time spent by trainees overseas
11    More high level consultations with Heads of Departments (HODs) to encourage dissemination of information and skills gained by participants amongst their collegues (e.g distribution of training completion reports, presentation of seminars etc)

Some of these suggestions for improvement reflect the priority training needs identified, particularly with regards to more income generating activities and CA promotion and marketing as well as accessing other resources in support of CA. Awareness raising across all environmental areas was a strongly expressed need by all respondents. Training issues such as better co-ordination and the need for more local content/flavour also reflects the need for more relevance and applicability to local conditions and situations.

## 2.1.6 Summary

A key feature of this environmental area is the array of diverse skills required of conservation practitioners to carry out their work. CASOs for instance, wear many hats and need to:

➢ Be competent in a range of scientific and technical skills to sustain the natural resources they are charged with protecting
➢ Be competent with finance and business matters to ensure that money generated from activities such as tourism is collected and accounted for responsibly
➢ Be spokespersons for the interests of their CA
➢ Understand the needs, cultural practices and rights of the communities living near and in the CAs
➢ Work and interact with the communities

Training provided by SPREP does try to cover the breadth of skills required through its short courses. But this needs to be well coordinated so that a comprehensive set of skills is taught and shared across the region, forming the basis for more specialised training. One of the steps taken in this direction is the establishment of the Pacific Islands Community-based Conservation Course (PICCC) at USP under the three-way partnership of SPREP, USP and ICPL (refer to page 13, first paragraph). This provides continuing education for those in the field whilst enabling them to obtain formal qualifications. It must be noted though that formal training cannot possibly cover everything that Conservationists need to know throughout their careers, as they will need different skills as time goes on. To establish training as a long-term process, SPREP needs to work with other active players in the region, and help strengthen existing institutions such as the USP Extension Centres, to address specialist needs as and when required.

The problems/constraints identified by respondents were split between technical (e.g. lack of data management) developmental, social and political issues. Training is obviously not the appropriate solution to all the problems/constraints raised and really only address some (not all) of the technical problems e.g. lack of monitoring or planning of protected species.

## 2.2 CLIMATE CHANGE, SEA LEVEL RISE AND CLIMATE MONITORING, INTERNATIONAL NEGOTIATIONS AND METEOROLOGY

As already mentioned (refer page 7), in addition to this TNA a more in-depth regional needs assessment for 21 countries was conducted for Meteorological Services by SPREP's Meteorology Officer, in partnership with the sub-regional World Meteorological Organization (WMO) representative and an AusAID sponsored team of experts.

A needs assessment was also recently conducted for the Pacific Island Climate Change Assistance Programme (PICCAP), sponsored by the Japanese International Cooperation Agency (JICA) in collaboration with International Global Change Institute (IGCI) based at the University of Waikato in Hamilton, New Zealand.

For a more comprehensive look at what training is needed for this environmental area, reports on the two studies above, as well as the report on the AusAID review of Phase II of the South Pacific Sea Level and Climate Monitoring Project (SPSLCMP) can be made available upon request from SPREP.

The format for this environmental area is similar to that of biodiversity and conservation i.e. it identifies the technical tasks required in this area for five countries (Fiji, Guam, PNG, Tonga and Vanuatu) listed in **Diagram 2,** followed by an assessment of priority areas for further training and support, which is supplemented with findings from interviews and document reviews. Also provided is an overview of the type of training SPREP provides in this area, followed by problems and suggested solutions to climate change and a summary.

### 2.2.1    Findings from the TNA Questionnaire

**Priority areas for training and support**

A visual analysis of Diagram 2 shows the following trend:

- On the tasks listed from 1-11under the South Pacific Sea Level and Climate Monitoring (SPSLCM) project, respondents are sufficiently knowledgeable and skilled in this area but still need some support, indicating it is as medium priority for training.
- On the tasks listed from 12-16 under the Pacific Island Climate Assistance Programme (PICCAP), responses varied markedly across countries with Vanuatu respondents needing more training and support than Fiji and Guam.
- On the tasks listed from 17-22 under International Negotiations on Climate Change, Sea Level Rise and Climate Monitoring, respondents are adequately knowledgeable and skilled in this area identifying it as medium priority for training.
- On the tasks listed from 23-35 under Meteorological Services Cooperation and Strengthening, respondents lack sufficient and basic knowledge/skills with indications that this is an area of high priority for training.
- Respondents from Guam are sufficiently knowledgeable and skilled enough to carry out most of the tasks without further help or support.

The assessment found that most practitioners felt weakest in areas relating to meteorology:

- ➢ Geodetic surveying (under SPSLCMP)
- ➢ Meteorological equipment operation and maintenance
- ➢ Climate data management
- ➢ Climate prediction and forecasting
- ➢ Data analysis and interpretation under meteorological services
- ➢ Use of field sampling techniques

These *high priority* needs in meteorology, seem to support feedback from the in-country visits, suggesting several things:
- The diversity and complexity of skills involved in meteorology which current training cannot fulfil – particularly in the area of data analysis and interpretation
- Rapidly changing technology means regular training and refresher courses are needed
- Turnover of staff, especially in the Weather Forecasters section
- Difficulty in recruiting and retaining graduates
- A high workload which means it is difficult to release people for any length of time (for training)
- Lack of proper management
- Lack of resources (people, money) to send people on training, or to hire more people

With regards to the other climate programmes, findings seem to support the fact that a lot of training has been done under SPSLCMP and PICCAP, both of which adopt quite different training approaches i.e.
- SPSLCMP –spreads the training net far and wide by training a cross-section of government officials (4 main groups –surveyors, hydrographics, meteorological, electronics) from the 22 Island Countries and Territories in database uses, etc.
- PICCAP – set up and developed country teams led by a country co-ordinator in 10 countries (Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Samoa, Solomon Islands, Tuvalu and Vanuatu).  It has a smaller target group to develop with most of the opportunities going to PICCAP Country Coordinators and Team members.

There are pros and cons of both approaches e.g. whilst PICCAP has a smaller circle to develop and strengthen, there is the danger of ''putting all your eggs into one basket'' unless there is a continuous transfer of the knowledge and skills gained to help ensure a multiplier effect in-country.

One of the advantages of training under SPSLCMP is that it reaches a broad cross-section of government officials, which serves to increase awareness of climate issues per se.  On the other hand, some members have suggested that rather than targeting a wide audience with the same types of training each year, that it concentrate on a smaller group that they can develop with different levels of training, whilst ensuring they are well equipped with the ideas and concepts to be able to conduct training back home.

This environmental area is executed largely by national and local government ministries and departments, unlike biodiversity and conservation which is undertaken in equal parts by government as well as NGOs and local communities.   There are considerable opportunities for training within government departments that include in-service training, scholarships, in-country training, and attachments under bilateral aid programmes, as well as on-the-job training. Respondents working in this environmental field were mainly from the government departments of Environment, Meteorology, Lands, Survey and Natural Resources, Marine and Ports, and national institutes such as the Water and Environmental Research Institute (WERI) in the University of Guam as well as a few NGOs.

There was one respondent from Tonga who indicated lack of any of the knowledge/skills listed and who might have more appropriately rated it as not applicable to his job.  His response has been left in and is reflected in the diagram, but from a statistical basis, should be seen as invalid.

## DIAGRAM 2:  B2(A)   Climate Change, Sea Level Rise and Climate Monitoring, International Negotiations and Meteorology



Climate Change, Sea Level, Climate Monitoring, International Negotiations, Meteorology
Fiji, Guam, PNG, Tonga, Vanuatu
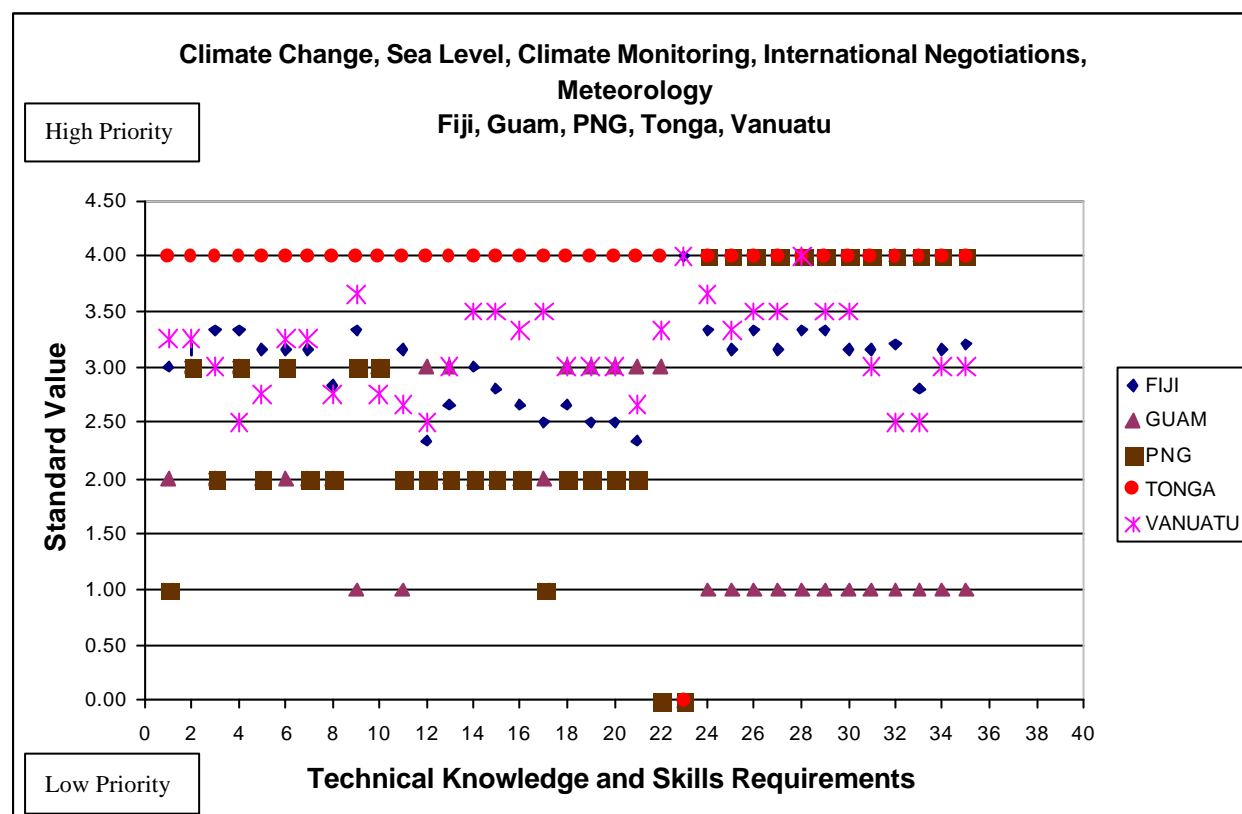
**Key
Code      Technical Knowledge and Skills**

**CLIMATE CHANGE AND SEA LEVEL RISE AND CLIMATE MONITORING
(UNDER THE SOUTH PACIFIC SEA LEVEL RISE AND CLIMATE
MONITORING – SPSLRCM Project)**

1    Understand CC/SLCM issues
2    Operate and maintain CC/SLCM equipment and tools
3    Incorporate CC and SLR Science into Policy Development
4    Develop models and software for developing scenarios on CC/SLCM
5    Train teachers and students on CC/SLCM
6    Project writing and development
7    Monitoring
8    Data analysis and interpretation
9    Geodetic surveying
10   Curriculum development
11   Networking
     **CLIMATE CHANGE (UNDER PICCAP)**
12   Methodologies of inventory of GHG sources and removal by sinks
13   Vulnerability and Adaptation Assessment – methodologies and model development
14   Mitigation Analysis
15   Policy Framework development – interpretation of climate change considerations into planning and project development
16   Development planning and climate change

**INTERNATIONAL NEGOTIATIONS ON CLIMATE CHANGE, SEA LEVEL RISE AND CLIMATE MONITORING**

17    Knowledge of the technical and scientific aspects of CC/SLCM issues

18    Conduct international climate change negotiations

19    Organise training attachments

20    Organise internships

21    Confidence building of national representatives, focus group meetings

22    Other (please specify) – Need SPREP information as provided to Island Countries

**METEOROLOGICAL SERVICES COOPERATION/ STRENGTHENING**

22    Able to hire/reward graduates with first degree or diploma in science, meteorology, hydrology or computing

23    Equipment operation and maintenance

24    Weather or hydrology forecasting and tropical cyclones or flood forecasting

25    Climate data management

26    Climate prediction and forecasting

27    Management of national meteorological and hydrological services

28    Data analysis and interpretation

29    Use of field sampling techniques

30    Networking

31    Use of internet services

32    Planning and risk management

33    Severe weather mitigation and response

34    Knowledge of operational procedures for extremes, etc.

35    Other (please specify)

## 2.2.2    Findings from interviews and other relevant sources

**Climate Conference**

The Pacific Islands Conference on Climate Change, Climate Variability and Sea Level Rise was held in the Cook Islands on 3-7 April 2000. The Conference was a culmination of all previous conferences and its purpose was mainly to:

➢ Develop a Pacific Island Framework for Action on Climate Change, Climate Variability and Sea Level Rise as a sound basis and foundation for developing an ongoing coordinated approach to enable Pacific Island countries to respond to climate change, climate variability, and sea-level rise at local, national, regional and international levels;

➢ Recognise the importance of continued constructive dialogue between all stakeholders on climate change, climate variability, and sea-level rise, in particular, to improve understanding and to strengthen partnerships, as well as sound science and relevant policy development; and

➢ Encourage all partners to participate in the Roundtable to develop an effective mechanism for donors, agencies, and organisations to coordinate their existing and future efforts in support of country priorities (as reflected in the Draft Framework for Action) and for the outcomes from these, to be disseminated widely.

The draft regional framework is being circulated amongst Members for their comments. A major component of the Framework is capacity building and training which forms the backdrop to any training initiative resulting from this TNA.

A significant initiative of the Conference was the implementation of its Agenda by PICCAP Country Coordinators, with the support of SPREP Climate staff, NTF staff and individuals from

other regional and international agencies.  This was part of a capacity building effort aimed at strengthening and improving their facilitation skills while raising their confidence by helping to lead a conference at regional level.

**Document reviews**

i)      *Strategic Action Plan for the Development of Meteorology in the Pacific Region 2000-2009.*

This is already published and falls under the umbrella of the Draft Framework for Action on Climate Change, Climate Variability and Sea Level Rise mentioned below.  It identifies capacity building as a major issue, further recognising human resource issues similar to that uncovered in this TNA e.g.
➢ Shortage of staff in meteorological offices
➢ Lack of trained and qualified staff who need to have a wide range of skills from management at various levels, professional meteorology, engineering, technical maintenance, product delivery and presentation skills, weather observation skills and computer skills.  Knowledge and skills in hydrology are also necessary for flood forecasting and water resources management
➢ Need for periodic refresher training and training on use of new techniques
➢ More effective training and adequate documentation is needed to improve retention of vital knowledge
➢ Structural changes in the public services which impose further challenges due to the reduction of resources, especially funding

ii)     *Draft Pacific Island's Framework for Action on Climate Change, Climate Variability and Sea Level Rise*

As already mentioned, this was an outcome of the Climate Conference held in Rarotonga, Cook Islands from 3-7 April 2000 and its goal is ''To catalyse action and strengthen partnerships and response at all levels to enable the Pacific Island's region understand and respond to climate change, climate variability and sea level rise.''

Capacity Building is a common thread throughout the priority actions identified and is seen as critical to the sustainability of policies etc.  Education and training were also identified as a means of *linking science and policy*, one of the five priorities for action.

**Interviews**

Interviews with Members raised the following human resource development issues:

➢ The dependency on one or two persons in-country meant the same person(s) attended most of the training under the various programmes.  In some cases, there is no-one deemed appropriate enough to which that person can transfer the knowledge/skills – or in many cases the transfer of knowledge and skills just does not happen
➢ Training is generally viewed as a ''reward'' and the competition for training opportunities can be quite intense due to the lack of incentives for civil servants in general.  Thus those ''in the loop'' are not willing to let others equally eligible, have a chance to attend training
➢ Need for more short courses tailored to the specific needs of Met Services, preferably in-country
➢ The need to keep a record of those who attend training to see whether or not they have implemented the training or have transferred the knowledge and skills gained.
➢ The need to annually assess the training needs of each organisation.
➢ The need to develop a training plans
➢ The need to have a clear idea of specialised versus non-specialised training.

## SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

The Meteorological Services in French Polynesia sets a good example of an organisation that has a Training Co-ordinator, whose responsibility is to develop an annual training plan based on a needs assessment that matches individual needs to sectional and organisation needs. It also has an annual training budget for the provision of specialised and unspecialised training with continued upgrading of peoples' skills and knowledge in Toulouse, France.

### 2.2.3    Training provided by SPREP in Climate Change, Sea Level Rise and Climate Monitoring, International Negotiations and Meteorology

Under the SPREP Action Plan 1997-2000, one of SPREP's five output areas is <u>Strategic Output Area 2</u>. This output area is comprised of various programmes and projects as follows:
➢ Pacific Islands Climate Change Assistance Programme (PICCAP)
➢ South Pacific Sea Level Rise and Climate Monitoring Project (SPSLRCMP)
➢ International Negotiations on Climate Change Programme
➢ Atmospheric Radiation Measurement (ARM)
➢ Meteorological Services Cooperation and Capacity Building Project
➢ Sub-regional office of the World Meteorological Organization (WMO)

Some examples of the workshops and training programmes conducted or sponsored by SPREP include:
➢ SPSLCMP training at NTF, Flinders University in Adelaide, Australia (1994-2000)
➢ Tropical Cyclone Awareness Workshop in 1994
➢ Climate Change Awareness Workshop in 1994
➢ In-country training and assistance of Meteorological Staff from American Samoa, Cook Islands, Solomons, Tonga and Vanuatu (1996/1997)
➢ PICCAP National Greenhouse Gas Inventory Methodology Training Workshop (1998)
➢ Year 2000 (Y2K) Workshop for Meteorological Services (1998)
➢ Facilitation Training for PICCAP Coordinators (1999-2000)
➢ Vulnerability and Adaptation Assessment PACCLIM Training Workshops (1999)
➢ Atmospheric Radiation Measurement (ARM) National Education Workshop (planned for August 2000)

The workshops are conducted by a combination of SPREP staff and outside resource personnel. External resource persons are usually experts from institutions and organisations such as the University of Waikato in New Zealand, the National Tidal Facility (NTF) at Flinders University in Adelaide, Australia or the US National Oceanic and Atmospheric Administration National Weather Service (NOAA NWS).

### 2.2.4    Problems and constraints facing those involved in Climate Change, Sea Level Rise and Climate Monitoring, International Negotiations and Meteorology

Respondents to the TNA Questionnaire have highlighted climate and management-related problems in their countries and have also provided suggestions on how to deal with some of the problems.

**Climate related problems**

1. The rising of sea level in smaller islands
2. Effects of La Nina
3. Climatic changes causing flash floods
4. Lack of coastal management

- Lack of a seashore Protection Plan and Guidelines
- Low lying inundation
- Coastal erosion

**Management and training-related problems**

1       Area of climate change is given low priority by government
2       Lack of information to planners and decision makers
3       Need for more multi-sectoral co-ordination
4       Lack of understanding of climate change issues
5       Lack of human resources, especially established skilled staff
6       Lack of funds
7       Difficulties in practical implementation of overseas training

### 2.2.5 Suggestions provided by Members for improving Climate Change, Sea Level Rise and Climate Monitoring, International Negotiations and Meteorology

*Management*

1       More expertise/attention be given to monitoring stations by in-country implementing agencies such as the Office of Environment and Conservation and Meteorological Services in PNG

2       Provide more funding to be directed at employing additional staff to assist with the climate change programme

3       Provide technical information to planners in government offices and SPREP to keep providing information on international actions and protocols to the Focal Points

*Training*

4       SPREP to identify or put together several intensive management courses (short term) for climate change coordinators and project staff.  Areas of importance are:
  ➢ Financial and business management
  ➢ Negotiations
  ➢ Environmental law
  ➢ Information management

5       Long term specific training for GHG Inventories, Mitigation, V&A and response strategies. However training should be geared not only for technicians but also for policy makers whose decisions might not be compatible with practical climate change impacts

6       Training of personnel by the SPSLCMP at NTF, Flinders University of South Australia has been very helpful.  However, rather than targeting a wide group of people, the project could also concentrate on a smaller group of people, ensuring that they are well equipped with the ideas and concepts to be able to conduct further training. Furthermore, in- country coordination of this big group of trainees is difficult as they spread across a wide area/field work

### 2.2.6 Summary

A lot of training has been conducted under three of the four climate programmes at SPREP (PICCAP, SPSLCM and Meteorology).  Efforts continue to better address Member needs through these programme initiatives e.g. competency-based training under SPSLCMP, and institutionalising the Greenhouse Gas Inventory and Vulnerability and Assessment Course at regional level (USP) under PICCAP (see page 12, last para).

This trend is set to continue with training forming the cornerstone of existing cilmate programmes, comprising as much as 70% of a project's outputs.  Additional findings under this

area reinforce the need for better human resource planning and management in our Members. The trend in most countries follows a basic pattern of formal training, followed by very informal on-the-job-training. The ethic of training as a process that occurs throughout one's career has not been firmly established yet within most sectors.

## 2.3 COASTAL MANAGEMENT [CLIMATE CHANGE AND INTEGRATED COASTAL MANAGEMENT]

The Coastal Programme started in the very early days of SPREP (around 1983) and is very closely linked with other SPREP programme areas, especially Climate Change (e.g. possible sea level rise associated coastal problems), Biodiversity and Conservation (e.g. MPAs) and Waste Management, Pollution Prevention and Emergencies (e.g. SPREP Convention). The Programme also co-operates with and complements the work of other regional agencies active in coastal and marine areas including Forum Fisheries Agency (FFA), SPC, South Pacific Applied Geoscience Commission (SOPAC) and USP.

The format for this section differs slightly to the two environmental areas already covered. It provides the range of technical tasks in this area for <u>four</u> countries (Fiji, Guam, PNG and Tonga) illustrated in **Diagram 3**. The diagram for Vanuatu is separate (Diagram 3a) due to the longer and different ordering of tasks in the piloted questionnaire. The assessment of priority areas though is done collectively. This is supplemented with findings from interviews and document reviews. Also presented is an overview of the type of training SPREP provides in this area and the problems and suggested solutions provided by the countries, followed by a summary.

### 2.3.1 Findings from the TNA Questionnaire

**Priority areas for training and support**

A visual analysis of <u>Diagram 3</u> shows the following trend:

- Training and support is required right across the range of knowledge and skills listed particularly for Vanuatu and PNG.
- The response from Tonga differs markedly across the range of knowledge and skills.
- Guam respondents are sufficiently knowledgeable and skilled in all technical areas

The assessment found that most practitioners felt <u>weakest</u> in areas relating to:

- Environmental monitoring
- Sustainable tourism
- Enforcement and prosecution
- Integrated resource management
- Coral reef monitoring methods

These findings are consistent with meeting results from the in-country visits, especially the need for environmental monitoring and sustainable tourism which was closely linked to the need for more enforcement and prosecution – particularly for ''predators'' or holiday fishermen i.e. those who fish for sport rather than profit (French Polynesia).

The <u>high priority</u> training needs are also compatible with feedback from the Seminar on Marine Biodiversity and Sustainable Coastal and Marine Development in the Pacific held in Nadi, Fiji, June 1998. Participants outlined major coastal and marine biodiversity problems that fell into two clusters: (a) those concerning policy instruments and approaches e.g. enforcing regulations; and (b) those concerning policy support e.g. planning, finance and HR. The Seminar was attended by 13 Pacific Countries and Territories (American Samoa, Federated States of Micronesia, Fiji, Guam, Kiribati, Nauru, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu).

SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

**DIAGRAM 3:  B2(B)  Coastal Management [Climate Change And Integrated Coastal Management]**



Climate Change & Integrated Coastal Management [Coastal Management] Fiji, Guam, PNG, and Tonga

**Key**
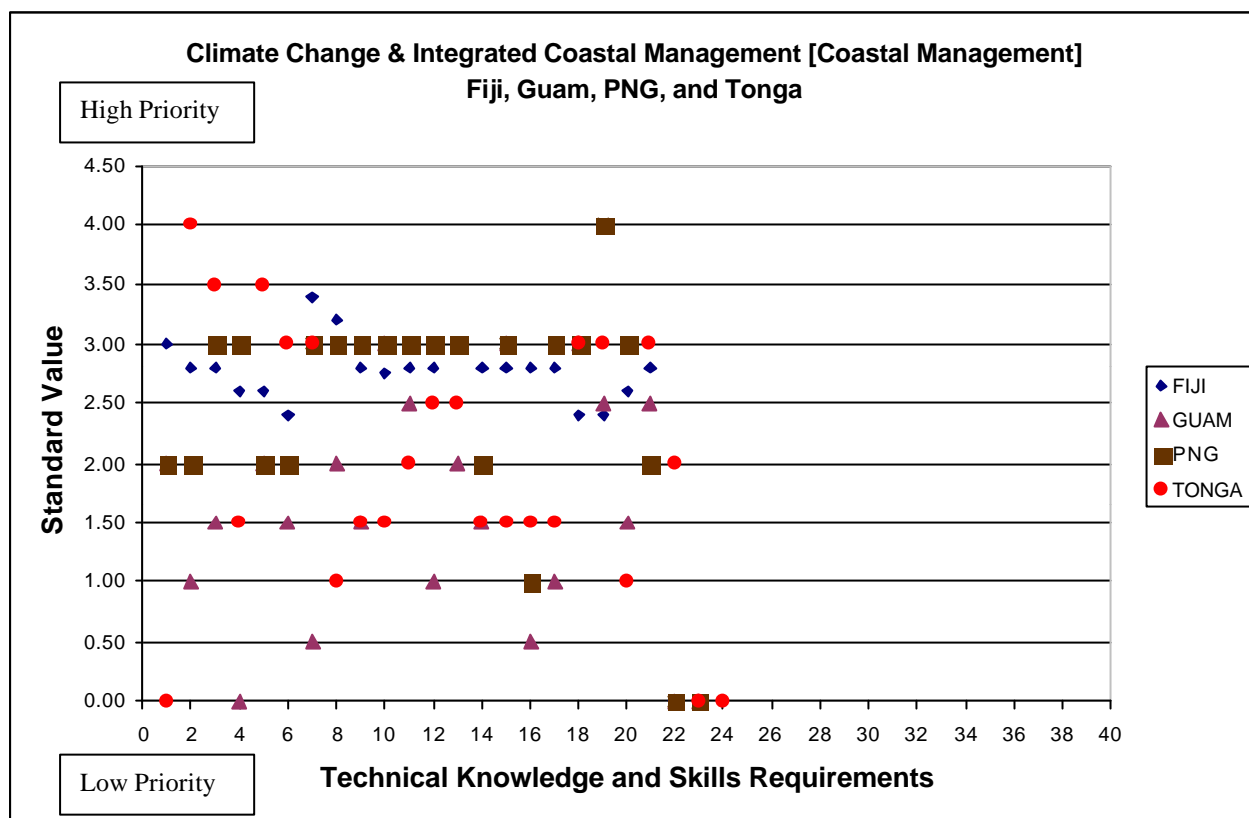
**Code    Technical Knowledge and Skills**

1 Marine ecology
2 Environmental monitoring
3 Sustainable tourism
4 Environmental Impact Assessment (EIA)
5 Enforcement and prosecution
6 Public education campaigns
7 SCUBA diving
8 Coral reef monitoring methods
9 Mangrove monitoring methods
10 Extension skills
11 Risk management
12 Resource assessment and mapping
13 Marine Protected Area (MPA) design and management
14 Equipment maintenance
15 Participatory Rural Appraisal (PRA) techniques
16 Basic seamanship and boat handling
17 Integrated resource management
18 Media training
19 Occupational health and safety
20 Legislation
21 Community mobilisation

22 Other - Geographic Information Systems (GIS)

**DIAGRAM 3a:** **B2(B) Coastal Management [Climate Change And Integrated Coastal Management]**



**Key**
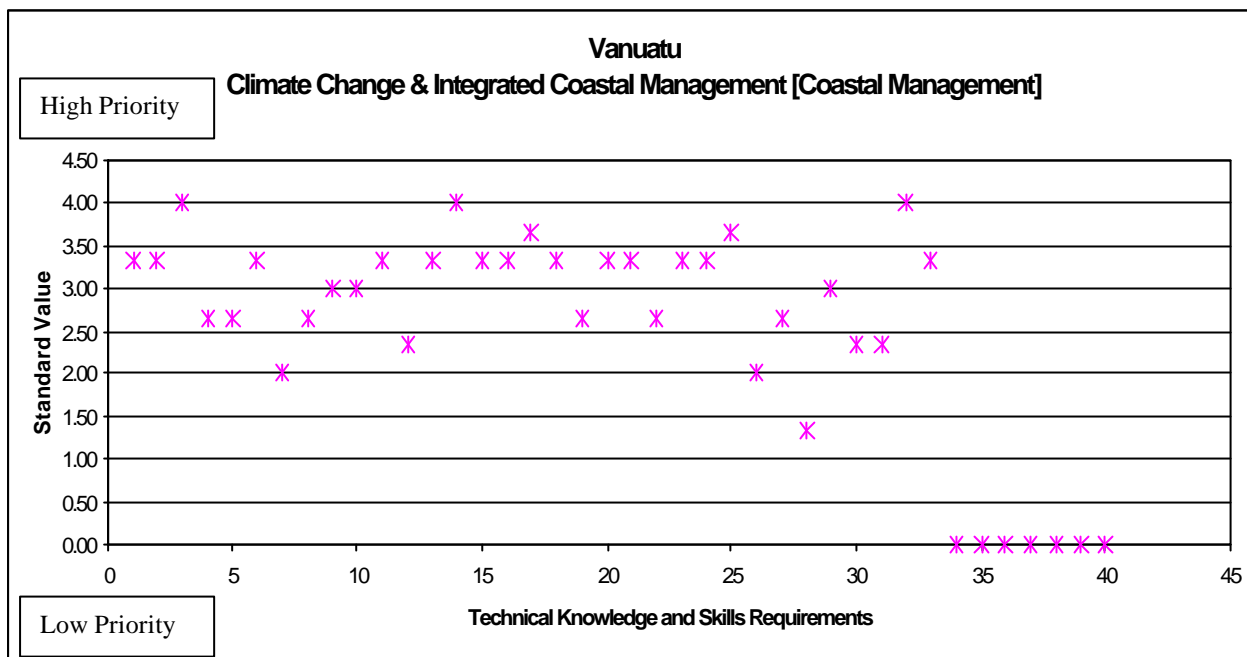
**Code** **Technical Knowledge & Skills**

**GENERIC KNOWLEDGE AND SKILLS**

1   Conflict management

2   Negotiation

3   Development of management plans

4   Finance and business management

5   Supervision and personnel management

6   Project management

7   Time management

8   Communication

9   Information management

10  Facilitation

11  Human resource management

12  Public speaking

13  Marine ecology

14  Environmental monitoring

15  Sustainable tourism

16  Environmental Impact Assessment (EIA)

17  Enforcement and prosecution

18  Public education campaign

19  SCUBA diving

20  Coral reef monitoring methods

21  Mangrove monitoring methods

22  Extension skills

23  Risk management

24  Resource assessment and mapping

25  Marine Protected Area (MPA) design and management

26      Equipment maintenance

27      Participatory Rural Appraisal (PRA) techniques

28      Basic seamanship and boat handling

29      Integrated resource management

30      Media training

31      Occupational health and safety

32      Legislation

33      Community mobilisation

34      Other (Please specify)

## 2.3.2      Findings from interviews and other relevant sources

This environmental area is executed by a cross-section of government ministries/departments as well as international and regional NGOs.   Key government departments in member countries involved in coastal management activities include the Departments of Environment, Lands, Survey and Mineral Resources, Women's Affairs and Culture, Marine and Ports, and Fisheries. Statutory organisations and national/regional NGOs involved in this area include the National Trust for Fiji, Pacific Concerns Resource Centre (PCRC) in Fiji and Conservation Melanesia in PNG.   A vocational training institute, the Fiji Institute of Technology (FIT) was also a respondent.

**Document reviews**

i)    End-of-project <u>Coastal Management Report, 2000</u> by SPREP's former Coastal Management Officer, Mr James Aston, identified the key target areas in the Coastal Programme -  coral reefs, near shore areas and wetlands with the  programme likely to extend to sea turtles and marine mammals under SPREP's new organisational structure.

Key components of the programme are: Training; Co-ordination and Networking; Brokerage of Best Practices and Technical Expertise; Catalytic Demonstration Projects; and, Awareness Raising. Under training it recognizes that particular skills that require strengthening are;
- Coastal planing
- Management policy
- Resources assessment
- Information management

Group values and gender issues should be incorporated in the training and with the best results realised through national or local level in-country training. An important statement in the report that serves to reinforce the importance of training and education is:

*''The key to environmental management is to get people to change their behavior. People are most likely to change their behavior when they understand and appreciate the rationale for decisions that are made in the course of managing precious natural resources''.*

ii)   <u>1997 Pacific Year of the Coral Reef Campaign</u>, a *Pacific Region International Coral Reef Initiative (ICRI)* was launched on 11 February, 1997 to raise public awareness about the plight of coral reef in  SPREP's Members.   Workshops were later held to train local communities and eco-tourism operators who depend on the economic and sustainable use of coral reefs for their development.

iii)  <u>Activity Plan for the Conservation of Coral Reefs in the Pacific Islands Region 1998-2002</u> was also part of the outcomes of the 1997 Pacific Year of the Coral Reef.  Capacity building is a major component of this plan which provided training in;

- Information gathering techniques,
- Problem solving
- Data management (analysis and interpretation)
- Producing educational materials for awareness raising
- Monitoring and evaluation including development of performance indicators
- Collecting and cataloguing traditional knowledge and practices

iv) Feedback from a workshop <u>Report Series No. 1 on Coral Reef Survey and Monitoring Training Courses</u> in Koror, Palau, 4-15 August, 1997, were as follows:
- Different levels of knowledge and skills of participants which meant the need to bridge a substantial gap during training
- Need for more field work and group discussions
- Need for more time for more practicals
- Need to have a previously trained local counterpart from the host nation to provide supervisory and teaching assistance to the trainer, particularly with a large group
- Difficulties with absence of a local trainer

vii) <u>The American Samoa Coastal Management Program – Administrative Code (July 7, 1997</u>)

The government Authority responsible for implementing this Administrative Code is the Department of Commerce under the American Samoa Coastal Management Act of 1990.
The Act mandates the establishment of a system of environmental review, along with economic and technical considerations at the territorial level intended to ensure that environmental concerns are given appropriate consideration in the land use decision-making process.

The code calls for interagency coordination under the establishment of the Project Notification and Review System which is managed by a Board comprising the Department of Commerce, American Samoa EPA, American Samoa Historic Preservation Office, American Samoa Power Authority, and the Departments of Health, Marine and Wildlife Resources, Parks and Recreation, and Public Works.

viii) <u>American Samoa Conservation Corps</u>

AmeriCorps is a national service movement that challenges people of all ages and backgrounds in giving back to their communities by volunteering to help meet education, public safety, environmental, and human needs.

AmeriCorps volunteers in every program perform services that promote the AmeriCorps Ethic which has four components; getting things done;strengthening communities;encouraging responsibility and; expanding opportunity.  In return for each year of service of up to 2 years dedicated to an AmeriCorps Program one can earn a monthly living allowance of up to $500 and an education award of up to $4,725.

ix) <u>Report on the Sub-Regional Meetings to Identify Coastal Management Training Needs, 1995</u>.  The **training needs** arising out of the three sub-regional meetings support and complement findings of this report. For example, the need to:
- Develop and enforce coastal management laws and regulations
- Train Members in coastal processes and monitoring
- Conduct public and community awareness campaigns to promote understanding of coastal zone management
- Develop and implement a coastal management plan and all aspects of Integrated Coastal Management (ICM)
- Provide formal training for certificate level, first degrees and post graduate qualifications with and outside the region
- Provide technical training in GIS, and in environment, coastal engineering and design,

> Environmental education techniques, Environmental Impact Assessment (EIA), Natural Resource damage assessment

- Establish a network of technical scientific and practical database information on coastal management to be based in the region and easily accessible

The meetings also addressed **training formats** with the following feedback:
- Whether training should be conducted on a regional, sub-regional or in-country level. For effectiveness, participants strongly recommended in-country training, whilst recognising the key limiting factor being costs involved with in-country training across several countries. Training at regional and sub-regional levels should be followed-up in-country and be as relevant as possible to the situations existing in the countries/territories of each participant.
- Need for training to be conducted in the field and to minimise classroom formats with maximum use of case studies and the use of vernacular during in-country training where whenever possible
- Trainers must be skilled communicators with the use of local trainers encouraged although they must have the necessary skills
- Training through the exchange of staff should be encouraged, particularly with many graduates in the region badly needing practical experience (e.g. in conducting or assessing EIA)
- Training should be objective-oriented i.e. have specific, practical tasks to be achieved during training
- Donor driven training of little relevance to member needs should be rejected
- Any training materials (books, manuals, etc.) should be made available in the countries/territories for later reference.

**Interviews with SREP Programme Staff**

Interviews with various individuals revealed the following;
- Need for more ''talking'' amongst the key stakeholders
- Workshops need to be more creative with emphasis on field exercises
- Most follow-ups is in marine habitat
- Constraints at SPREP are in Administration when it comes to processing funds, consultancies and travel
- Some National Focal Points do not ensure that information on training offers are disseminated widely resulting in the same people attending training programmes
- Demonstration pilot projects are effective tools e.g. Samoa Coral Reef Pilot Monitoring Project (1998)
- The Coastal Programme has a directory of Training both at vocational and tertiary levels which is in the process of being published

### 2.3.3 Training provided by SPREP in Coastal Management

Under the SPREP Action Plan 1997-2000, the Coastal Programme, like Climate, falls under Strategic Output Area 2. This output area is comprised of the following projects:
- Integrated Coastal Management (ICM) which includes Coral Reef monitoring clinics etc.
- Surveying and Monitoring Coastal Habitats project

Under these programmes approximately 70% of the work involves training. Some of the workshops and training programmes provided or sponsored included:
- Funding participants to attend an Integrated Coastal Management Workshop held in the Netherlands in 1996
- Funding participants to the Pacific Year of the Coral Reef Campaign Planning Workshop in 1996/1997
- Supporting the workshop on Community-based Management of Marine Reserves in Fiji in 1996

> Funding participants to a one day Coral Reef Awareness Workshop for the Great Council of Chiefs in Fiji in 1996
> A workshop on utilizing Geographic Information Systems (GIS) for Population and Coastal Zone in the Federated States of Micronesia (FSM) in 1997
> Train the Trainer Coral Reef Survey and Monitoring Workshop in Tonga in 1996/1997
> Advance Training Coral Reef Monitoring (1998)
> Seminar on Marine Biodiversity and Sustainable Coastal Marine Uses in the Pacific (1998)
> Sub-regional Workshop on Community-based Marine Protected Areas (MPAs) (1999)

The workshops are usually conducted by a combination of SPREP staff and outside resource personnel. External resource persons are usually experts from tertiary institutions in the region such as the School of Marine Studies at USP, Suva, Fiji.

## 2.3.4 Problems and constraints facing those involved in Coastal Management

The following are coastal management related problems identified by member countries through the questionnaire:

**Coastal management-related problems**

1 Lack of integrated approach (multi-disciplinary)
2 Lack of monitoring of coral reefs
3 Lack of coastal management
   - Coastal erosion
   - Coastline inundation
   - Coastal resource exploitation (e.g. removal of sand/coral for cement manufacture)
   - Resource depletion
   - Coastal reclamation
   - Lack of a legally required Seashore Reserve Plan & Guidelines
4 Marine impacts from major land-based development e.g. logging and quarrying
5 Cutting of mangroves and destruction through plastic waste and pollution
6 Sea level rise
7 Over-fishing
8 Urban development impacting environmental quality
9 Infrastructure needs (sewage, stormwater, erosion controls)
10 Wetland resource impacts – filling

**Management and human resource development-related problems**

11 Lack of resources (staff and funds)
12 No proper planning
13 Lack of knowledge & experience on how to manage coastal areas

## 2.3.5 Suggestions provided by countries for improvement in Coastal Management

1 There is insufficient funding for Coastal Management training in the country. Therefore funding must/needs to be sourced from outside/overseas
2 Projects carried out in many parts of Fiji should be followed up at very basic level
3 Training could be taken to the villages/communities along the coast and ways of blending traditional conservation methods and modern conservation methods and scientific knowledge be developed and implemented
3 Proper planning

4       Urgent need for environmental legislation to come into force.

5       There should be more community awareness programmes

6       It is very important that resource owners are also given trainings on how best to manage their coastal areas. Specific training should be focused on sustainable and integrated coastal management.

## 2.3.6    Summary

As in the climate area, a lot of training has been carried out under coastal management and recurring themes that need to be addressed involve: lack of institutional capacity and mechanisms, legislation, trained personnel and financial resources in-country for coastal management.  The responsibility for coastal management, (as in most other environmental areas), falls across several government agencies, between which there is minimal coordination. One recommended means of ensuring that there is ''more talking'' amongst the different stakeholders is by holding more in-country training activities that involves everyone.

Most of the problems identified related to developmental issues and to a lack of an integrated approach to coastal management, which cuts across many sectors such as tourism and agriculture  - strongly calling for better coordination across the relevant agencies in-country.

There is some integration of coastal management in training across other environmental fields e.g. Joint Coastal Zone Management and Climate Change workshops held by USP, Marine Studies Programme Facility in association with SPREP from 5-9 October 1998, which can be increased further.

## 2.4 WASTE AND CHEMICAL MANAGEMENT

The format for this environmental area is similar to those covered previously. Beginning with the present level of technical knowledge and skills in the tasks identified for five countries (Fiji, Guam, PNG, Tonga and Vanuatu) illustrated in **Diagram 4,** followed by an assessment of priority areas for further training and support, which is supplemented with findings from interviews and document reviews including strategy reports. This is followed by an overview of the type of training SPREP provides in this area, problems and suggested solutions provided by Members, and a summary.

### 2.4.1 Findings from the TNA Questionnaire

**Priority areas for training and support**

A visual analysis of the Diagram 4 shows the following trend:

➢ There is a need for training and support across the range of knowledge and skills, particularly for Vanuatu and Tonga.
➢ PNG is sufficiently knowledgeable and skilled in most of the technical areas
➢ Vanuatu lacks basic knowledge and skills in the technical areas listed from 1-6.

The assessment found that respondents felt weakest in areas relating to:

➢ Storage and transportation of chemicals bearing in mind their different requirements
➢ Understanding and applying poison treatment
➢ Public awareness raising

These high priority areas are consistent with findings from in-country visits, especially on the need for public awareness raising – an issue brought up in every country ie. the need to break the habits of people so they don't throw rubbish.

Chemical management, particularly storage and disposal, was something to be addressed in all sectors especially in schools and industries, and the need for stronger enforcement of legislation and regulations.

Some of the needs identified by the Territories (American Samoa, French Polynesia and Guam) were similar, but with a different emphasis from that of independent PICs. E.g.
▪ Solid waste diversion (form of waste minimization)
▪ Landfill permitting
▪ Corrective actions in the event of spills
▪ Composting
▪ Tire management

The independent PICs expressed a strong need for more education and awareness raising, and the basics in chemical management.

Waste and Chemical Management are executed by a cross-section of agencies at all levels. These include Departments of Environment and Conservation, Lands, Quarantine and Livestock, Women's Affairs, Marine and Ports, Health, Central Planning, Public Works, and Labor and Industrial Relations. Also involved were municipalities (local government), NGOs and vocational institutes (FIT).

## DIAGRAM 4: B3(A) WASTE AND CHEMICAL MANAGEMENT



**Waste Management, Pollution Prevention and Emergencies [Waste & Chemical Management]**
**Fiji, PNG, Tonga, Vanuatu**

High Priority

Low Priority

Standard Value

Technical Knowledge and Skills Requirements

FIJI
PNG
TONGA
VANUATU
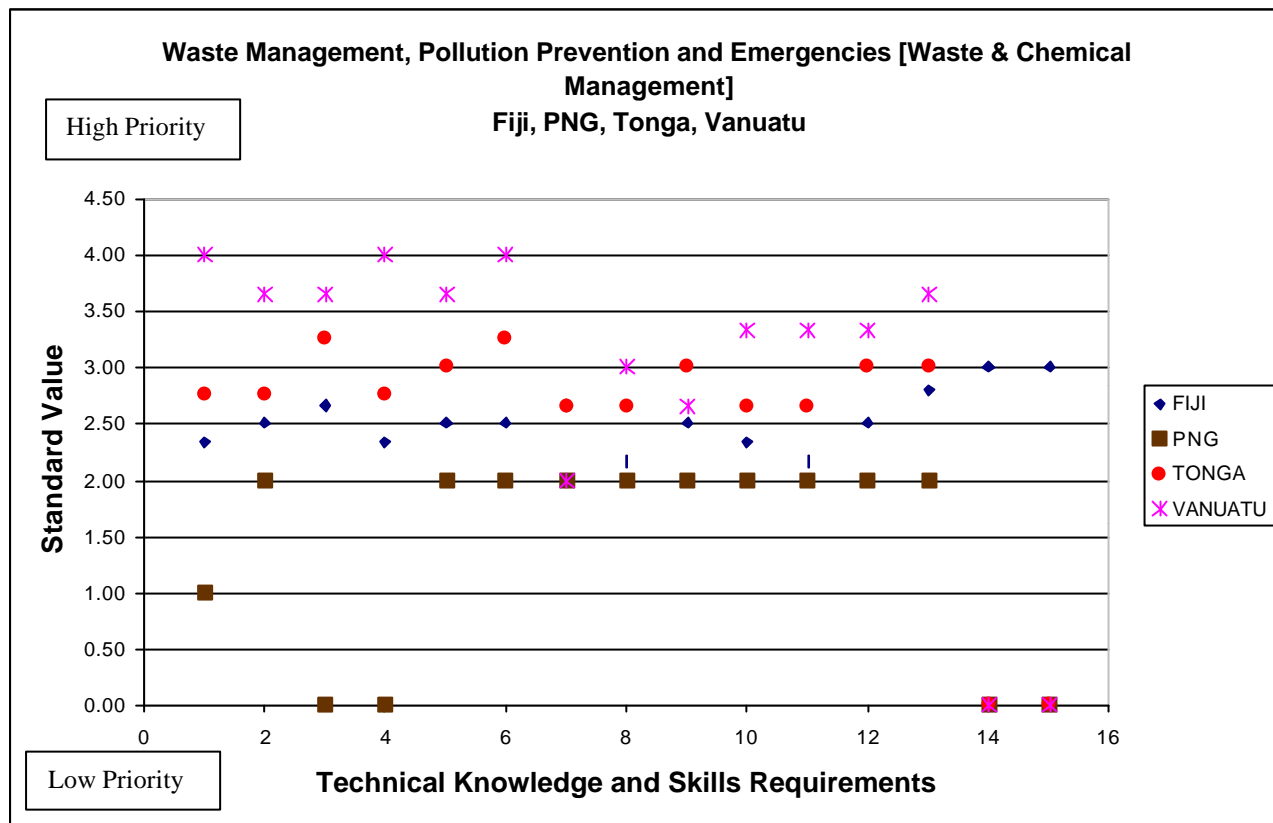
## Key
## Code    Technical Knowledge and Skills

1    Knowledge of the range of chemicals used in-country
2    Knowledge of the properties of chemicals used in-country
3    Storage and transportation of chemicals bearing in mind their different requirements
4    How to follow safety procedures in handling and use of chemicals
5    How to develop remediation procedures in case of spillage
6    Understanding and application of poisoning treatment
7    How to dispose of waste that includes transboundary considerations
8    How to access information
9    How to develop alternatives and make them easily accessible
10   Waste minimization
11   Waste management using the 3Rs (Reduce, Reuse and Recycle)
12   Landfill management
13   Planning for waste management
14   Other – Public awareness

## 2.4.2    Findings from interviews and other relevant sources

**Document reviews**

Country surveys were conducted for Waste and Chemical Management in the process of developing projects.  A key document under Waste Management is the:

i)     <u>Guidelines for Municipal Solid Waste Manaegment Planning in Small Island Developing States in the Pacific Region</u>, published in 1999.  The Guidelines outline the key phases of solid waste management, the importance of having a solid waste management plan, how to go about the planning process, and factors which influence the solid waste management planning. It also provides a list of case studies that countries can draw from.
Under *Factors that influence solid waste management planning*, people, resources and equipment are key factors highlighting the need for training staff in areas such as:
➢ Proper landfill procedures
➢ Special waste identification and handling
➢ Producing localised education material

Under Chemical Management there are three key documents that form the basis of programme activities:

ii)    <u>The South Pacific Regional Pollution Prevention, Waste Minimization & Management Programme</u> - Draft Report of April 1994

Under this Report, training was particularly important as it had the following objectives:
▪ to create a broad awareness of pollution problems and their sources and to motivate all sectors of society to commit to pollution prevention and control
▪ to incorporate pollution prevention concepts into already existing educational programmes and institutions
▪ to train governmentt officials and private industries to apply pollution prevention measures
▪ to enhance national capacities to deal with pollution and waste management issues
▪ to increase understanding of the link between population growth, migration and pollution

iii)   In the <u>Draft Project Design Document on Management of Persistent Organic Pollutants (POPS) in PICs</u>, Annex B, Output 8 included a Log frame Matrix entitled ''Management of Persistent Organic Chemical in PICs''.  This identified specific activities with indicators and verifiable indicators etc., against training-related outputs e.g.

| Code | Narrative Summary | Verifiable Indicators | Means of Verification | Assumptions |
|------|------------------|----------------------|----------------------|-------------|
| Output 8 | Reduction of future hazardous waste & site contamination problems thru education & awareness & capacity building | Hazardous waste and contamination sites do not again become an issue in participating countries.<br><br>Number of training and awareness programmes conducted, locations and participants. | Training evaluation, project records | Commitment to controls by participating governments |
| Activity 8.1 | Competency based training programmes in management of POPS & contaminated sites for people responsible for | Training courses by country, participants, departments & gender.<br>Evaluation of training and awareness programmes for | Country Feedback | |

| | regulating and enforcing mgt procedures. | effectiveness. | | |
|---|---|---|---|---|
| | | | | |

iv)    A Guidance Document by UNITAR on Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals is also being used by member countries to develop their chemical profiles.

Chapter 11 of the Guidance is entitled *"Awareness/Understanding of Workers and the Public"* in which countries are asked to provide an overview of the mechanisms available to provide information to workers and to the public concerning the potential risks associated with chemical production, import, export, handling, use & disposal.

Of the eight PICs to which UNITAR applies, only two countries have completed their profiles; Kiribati and Vanuatu, with PNG's draft profile also finished.  Tonga is next on the list with other Members to follow.

The required training outlined in the documents reviewed above, cover much more than that identified as high priority in this TNA.  Although a consistently strong message in the document reviews, interviews and TNA is the need for more education and awareness raising to change peoples' attitudes and behaviour.

v)    Waste Oil Collection Program and Waste Management Program of American Samoa

American Samoa Environmental Protection Agency (EPA) has established a waste oil collection programme whereby waste oil from cars and other equipment can be taken to a local collection centre where it will then be burned by Samoa Packing in an approved boiler.

American Samoa EPA has developed awareness raising material on this programme explaining the benefits of collecting waste oil and the steps involved in waste oil collection.

American Samoa EPA also has developed awareness raising material on Waste Management entitled 'Protecting our Environment for Future Generations'.

vi)    Guam's Solid Waste Management Plan

Guam has a very simple information sheet providing an overview of its solid waste management plan with regards to managing post-typhoon solid waste or Disaster Debris Management.

It also has a Free Household Hazardous Waste Collection program which lists the types of hazardous waste found in households, the benefits of properly disposing of the hazardous waste and how this can be done.

Both the programs above are presented as awareness raising material that is given wide distribution with contact numbers provided for the public.

**Interviews**

i)    Fiji's Ministry of Labour and Industrial Relations (MLIR)

The Ministry of LIR is responsible for the recently passed National Occupational Health and Safety Act (OHS Act) which includes a Chemical Management component that led to the

setting up of a Chemical Assessment Unit within the Ministry. A training attachment for the Officer responsible for chemical management was coordinated and funded by SPREP under the Chemical Management programme. The attachment was for 6 weeks with Worksafe Australia

The Ministry's Factory Inspection Unit is responsible as well for waste and chemical dumping practices of factories in a range of industries e.g. disposal of dye in Garment industries.

i)      Other interviews

➢ SPC as part of its mandate carries out training on pesticides, which complements SPREP work.
➢ Government priorities being in other directions
➢ Governments not encouraging private enterprise e.g. export duties on recycling of cans by businesses.
➢ Short-sightedness and bad decisions made by governments e.g. glass bottles in Coca Cola packaging is easy to re-use. However, entry was also granted to Pepsi, which packages its drinks in plastic bottles - introducing another pollutant into the country (Samoa).
➢ SPREP's role as a regional organisation is an inherent obstacle in effective implementation of training/programmes in-country - under this overriding framework other associated problems are;
  ▪ whether or not training hits the mark, and if not, how do we reassess?
  ▪ SPREP often does not have any control over selection of participants
  ▪ the inherent assumption that SPREP gets the right person
  ▪ application of learning - which requires follow-up
  ▪ resources for follow-ups needs to be clarified
  ▪ regional workshops (1 week) are not the way to go, national workshops are more appropriate, although regional training is a good compromise
  ▪ training is seen as a junket
  ▪ capacity building in the form of training is usually short-term - PICCAP is one of the few programmes of a long-term nature (with regards to training)
  ▪ for now capacity building is the 'flavour of the month'
  ▪ a need to look at various forms of 'training'; In-country training vs. Attachments vs. Scholarships.

The training-related issues raised above are similar to those identified in previous sections of the report and consistent right throughout all environment areas.


### 2.4.3      Training provided by SPREP in Waste and Chemical Management

Under the SPREP Action Plan 1997-2000, Waste and Chemical Management falls under Strategic Output Area 3. This output area is comprised of various programmes and projects as follows:

➢ Persistent Organic Pollutants (POPs)
➢ Pacific Regional Waste Awareness and Education Programme (WASTE)

 Some examples of the workshops and training programmes include:

➢     NEMS Pollution Awareness Raising in Niue and Tuvalu in 1992/1993
➢     Global Programme of Action (GPA)/Hazardous Waste Management Workshop (1999)

Most training activities under WASTE are conducted in-country by the relevant agencies. Otherwise, SPREP training is usually provided by it's Programme Staff in collaboration with expertise from regional or international organisations.

### 2.4.4 Problems and constraints facing those involved in Waste and Chemical Management

**Waste and Chemical management-related problems**

1  Inadequate sewage treatment and storage
2  Poor management of waste disposal e.g. marine waste oil, used battery (dry & wet) disposal
3  Litter
4  Poor septic tank management in low lying areas
5  Dump sites and the need for proper equipment
6  Poor collection service and dump management
7  Lack of implementation of recycling scheme
8  Waste treatment - non existent
9  Harbor areas water quality
10 No proper drainage on roads.
11 Chemical dumping from industries
12 Banned and out of date chemicals to be identified and destroyed
13 Use and control of agricultural chemicals
14 Lack of commitment and awareness from manufacturers and industries
15 Small squatter settlements

**Management-related problems**

16 Lack of data on chemicals used
17 Inadequate legislation & poor enforcement
18 People's attitudes
19 Lack of resources (human, financial, equipment)
20 Poor Management

### 2.4.5 Suggestions provided by countries for improving Waste and Chemical Management

1  It is very important that training and education on chemical management & waste should cover the full life span of the chemical/waste  i.e from production, packages transport, storage and disposal. The target group should be importers/sellers, users and relevant government agencies such as Environment & Conservation, Health and City Authorities who have responsibilities in this area.
2  All sectors of the public government, NGOs, schools, churches groups, and corporate sector should work together on education and public awareness programmes.
3  The Waigani Treaty needs to be reviewed and more member island governments to sign.
4  Training should be provided to industries/manufacturers who use chemicals, to make them realise that  waste and chemical management will benefit them.
5  Training should be provided to officers who are 'litter officers' under the Litter Decree on how to effectively book and prosecute offenders.
6  Train government officials who consult with the private sector, so they can then advise and train them on how to minimise chemical emissions and manage waste.
7  Training should be targeted to rural areas
8  All roads mush have proper drainage and proper waste treatment plants, especially Vanuatu
9  Involve NGOs and charitable organisations such as the Lions Club, Rotary, Kiwanis etc. in Waste Management

## 2.4.6    Summary

Waste management was identified as a critical environmental issue in all the Members visited with particular emphasis on the need for more education and awareness raising of the general public, local communities and school children.  Because responsibility for waste management cuts across all sectors e.g. marine, agriculture and tourism, in addition to technical training needs, Members also identified a strong need for

- Better coordination amongst the relevant stakeholders; and
- Better integration of enviornmental concerns into (national) development plans

NGOs and municipalities (local government) have been active players in this area and efforts to coordinate their activities with national government programmes need to be strengthened, as well as supported.

## 2.5   MARINE POLLUTION

The format for this environmental area is similar to those covered previously.  Beginning with the identification of technical tasks listed in this area for <u>four</u> countries (Fiji, PNG, Tonga and Vanuatu) listed in **Diagram 5.**   This is followed by an assessment of high priority areas for further training and support, supplemented with findings from interviews and document reviews and followed by an overview of the type of training SPREP provides in this area, problems and suggested solutions provided by Members, and a summary.

### 2.5.1    Findings from the TNA Questionnaire

**Priority areas for training and support**

A visual analysis of the <u>Diagram 5</u> shows the following trend:
➢   The responses differ markedly across countries
➢   Tonga needs training and support for almost all technical areas except in: Establishment of a regional marine pollution surveillance system; and, Marine Pollution education and awareness raising
➢   Almost all the countries need help with developing a media strategy

The assessment found that respondents felt <u>weakest</u> in areas relating to:
➢   How to conduct an introduced marine species (IMS) risk assessment and survey
➢   Developing a media strategy
➢   Knowledge of Marine Pollution Legislation

<u>**DIAGRAM 5**</u>:  **B3(B)  Marine Pollution**
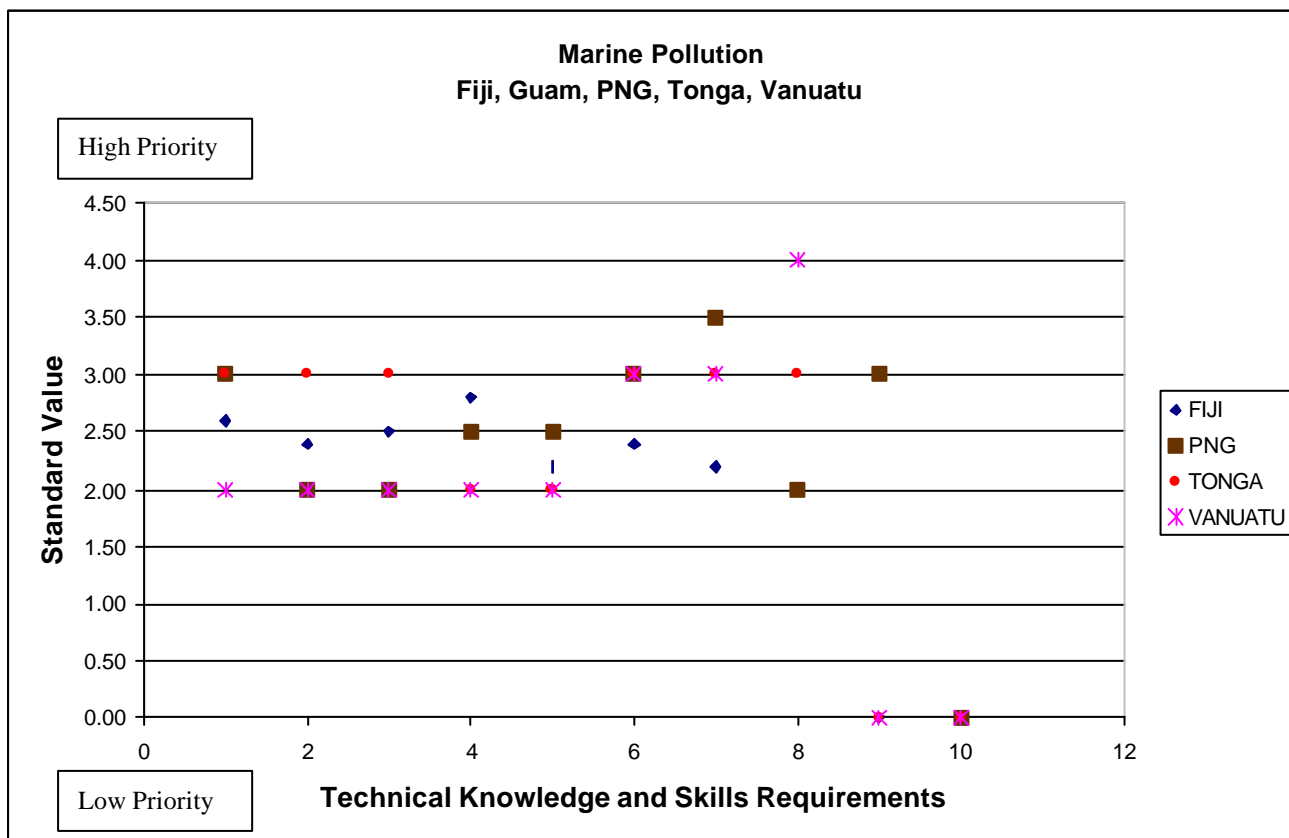
# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

**Key
Code    Technical tasks**

1    Marine pollution risk assessment for the region

2    Development of a regional marine spill contigency plan (PACPLAN) and
     a national marine spill contingency plan (NATPLAN)

3    Marine spill response

4    Establishment of a regional marine pollution surveillance system
     (PACPOL Patrol)

5    Marine pollution education and awareness raising

6    How to conduct an introduced marine species (IMS) risk assessment
     and survey

7    Media strategy

8    Knowledge of Marine Pollution Legislation

9    Other – need financial support to participate in PACPOL meetings and
     training

This environmental area is executed by a number of agencies in different sectors.  These
include Departments of Environment, Fisheries, Transport Maritime, Marine and Ports and
Woman Affairs.  NGOs as well as a vocational institute (FIT) also took part in this exercise.

## 2.5.2    Findings from interviews and other relevant sources

**Document reviews and interviews**

i)    Pacific Ocean Pollution Prevention Project Strategy and Workplan, 1999

PACPOL was developed from a series of initiatives between SPREP and International Maritime
Organisation (IMO) during the early 1990s.  Part of PACPOL's strategy is the use of PACPOL
National Counterparts in Members to assist with the delivery and implementation of in-country
projects.  These counterparts coordinate links with and support for PACPOL.   Time spent by
PACPOL National Counterparts on PACPOL projects is part of the official normal workload,
provided by Members as support in-kind for PACPOL, along with logistical, organisational  and
other assistance to PACPOL projects.

Under its workplan, annual PACPOL regional workshops are planned, particularly for training in
marine oil spill.

ii)    Meeting Report on the International Convention relating to Marine Pollution Activities,
      1996

The HRD-related issues for Members arising out of the meeting included:
➢  Lack of trained personal to enforce legislation as well as lack of financial support.
➢  Lack of expertise and resources to solve their PCB (PolyChlorinated Biphenyte) problem
➢  Shortage of skilled staff (both technical and legal) in management of territorial waters.

iii)    Pacific Island Regional Workshop on Marine Spill Response (1998)

Key statements on training in this area were:
➢  Due to the limits on resources and limits on the capacity of small island countries to absorb
   multiple training activities, detailed training in specialist areas (e.g. first level responder,
   environmental and scientific support coordinator etc..) under PACPOL is not proposed.
➢  It is considered to be more cost-effective to instead take advantage of the numerous
   specialist spill training activities that are offered in countries adjacent to the region, by

sending Members delegates to these specialist courses on opportunistic and needs basis rather than duplicated these courses within the region.

➢ This combination of an annual regional workshop with attendance at specialist courses in countries adjacent to the region should provide the optimum level of marine spill training for the region, within the limits of available resources.

The high priority training needs identified for Marine Pollution in this TNA are not strongly reflective of the documents reviews and interviews. Marine spill response regional training has been conducted twice already, which may explain why it hasn't been identified as a high priority in this study. The priority areas; marine species risk assessments, understanding marine pollution legislation and developing a media strategy, might be best addressed through the specialist courses proposed under PACPOL.

## 2.5.3    Training provided by SPREP in Marine Pollution

Under the SPREP Action Plan 1997-2000, Marine Pollution falls under <u>Strategic Output Area 3</u>. The main programme under this output is the Pacific Ocean Pollution Prevention Programme (PACPOL)

Examples of workshops and training programmes include:

➢ Annual Pacific Ocean Pollution Prevention Programme (PACPOL) Workshop (1999)
➢ Pacific Island Regional Workshop on Ships' Waste Reception Facilities (1999)

## 2.5.4.    Problems and constraints facing those involved in Marine Pollution

**Marine Pollution related problems**

1   Sedimentation from mining
2   Plastic and Industrial waste
3   Sewage dumping and discharge
4   Ballast Water Dumping
5   Soil Erosion Impacts & Non Point Source runoffs
6   Dumping of waste in the harbor
7   Lack of proper facilities for response
8   Lack of equipment to combat pollution and Chemical spillage from proposed oil mill in Luganville Harbor (Vanuatu)
9   Logging spillage from saw mill in Luganville (Vanuatu)

**Management and training problems**

10  Lack of manpower
11  Lack of funding
12  Lack of training facilities

## 2.5.5    Suggestions provided by countries for improving Marine Pollution

1   To push for the adoption of the Sustainable Development Bill (Fiji)
2   The current regulations/law in the Marine Act need to be enforced
3   Marine Pollution should be part of the curriculum in schools and tertiary institutions. At present only science students are aware of environmental issues
4   Awareness programs through media for the general public. The information should reach all citizens in an effective manner, and follow up teams should monitor effectiveness of the campaign

5   Improve teaching capacity at University of Guam (UoG) for this subject
6   Training programme should be established focussing on "How to change people's attitude' and to be environmentally conscious.

## 2.5.6   Summary

Recurrent themes in this area related specifically to the need for:
➢ Appropriate legislation
➢ Enforcement of legislation
➢ Education and awareness raising
➢ More training to address the needs

At present, the sources of training in this field within Members is very limited hence the recourse to advanced neighbouring countries for specialist training.  The private sector is a major stakeholder in this area thus more partnership building between both the public and private sectors may open up lots of opportunities for training, awareness raising and information sharing.

Compared to other environmental areas, marine pollution is managed by a relatively small group in-country, thus coordination and integration which were strongly expressed needs in other environment fields were not considered an issue here.

## 2.6 ENVIRONMENT MANAGEMENT/PLANNING AND INSTITUTIONAL STRENGTHENING

The format for this environmental area is similar to those covered previously. Starting with the identification of technical knowledge/skills for tasks required in Environmental Management/Planning and Institutional Strengthening for four countries (Fiji, Guam, Tonga and Vanuatu) listed in **Diagram 6,** followed by an assessment of priority areas for further training and support, which is supplemented with findings from interviews and document reviews. This is followed by an overview of the type of training SPREP provides in this area and problems and suggested solutions provided by SPREP's Members, and a summary.

### 2.6.1 Findings from the TNA Questionnaire

**High priority areas for training and support**

A visual analysis of  Diagram 6 shows the following trend:
➢ Need for training and support right across the range of technical knowledge and skills, particularly for Vanuatu and Tonga
➢ The Guam respondent did not find this environmental area applicable to his job

Respondents felt weakest in areas relating to:
➢ Data management; and,
➢ Development of key environmental indicators.

The two high priority needs above reflect meeting results from in-country visits, as well as other important issues raised, including the need for:
▪ Accurate and timely environmental information that is easily accessible and available
▪ Training in environmental economics
▪ Environmental plans

**DIAGRAM 6:  B4 -Environmental Management/Planning and Institutional Strengthening**
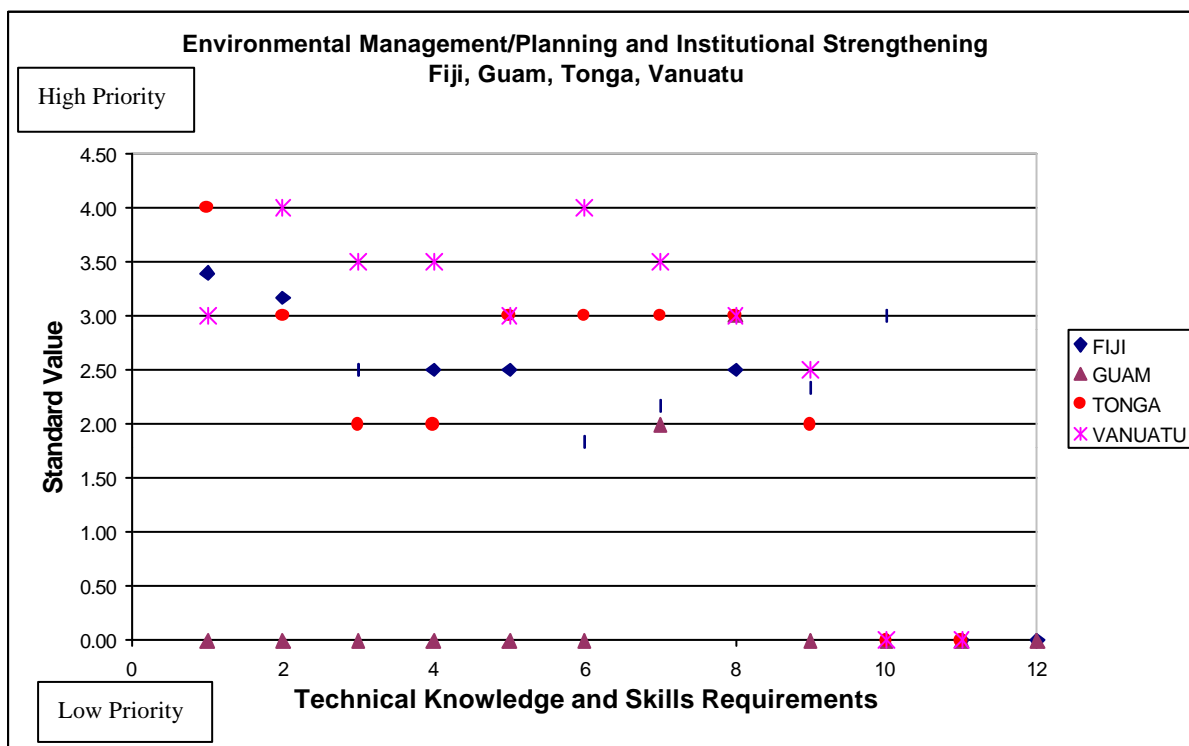
**Key**
**Code**   **Technical Knowledge & Skills**

   1     Data management
   2     Development of key environmental indicators
   3     Knowledge of reporting procedures and formats
   4     Linking environmental information to development
   5     Monitoring the environment
   6     Environmental Impact Assessment (EIA) procedures and legislation
   7     Conducting Environmental Impact Assessments (EIAs)
   8     Knowledge of other techniques for environmental assessment
   9     Negotiation techniques
   10    Other (please specify)

## 2.6.2       Findings from interviews and other relevant sources

**Document reviews**

i)      Pacific Islands Environmental Outlook (1999)


The report provides an assessment of the state of environment in the Pacific, helps identify regional environmental concerns and highlights policy provisions.  Some of the key findings relate to:
- Lack of enforcement or implementation of many policies and legislations - ''implementation gap'' regarding environmental policies that are on paper or in the statute book but may not be implemented in a consistent way or worse, may be completely bypassed
- The low priority given to environmental considerations that is vital to sustainable development
- Weaknesses with regards to protection of indigenous property rights in the region
- Implementation of small, focused policies is generally far more effective than large comprehensive policies

To address the gaps identified above, some measures proposed were:
- Further increase capacity in the public sector to deal with environmental issues, especially in the departments of planning and resource use (e.g. agriculture, fisheries, tourism and finance)
- Promote effective partnerships among all stakeholders, in particular local communities, NGOs and the private sector
- Further develop skills training, basic and higher education opportunities for sustainable development
- Build upon efforts to integrate environment and development within Members
- Gather basic information that establishes baselines or benchmarks and ongoing systems for monitoring and assessment of key indicators

iv)     Tonga-Australia Environment Planning and Management Strengthening Project (TEMPP) Working Paper 3 (Institutional Analysis)

Tonga's Ministry of Lands, Survey and Natural Resources (MLSNR) and the Environmental Planning Unit (EPU), now known as the Environmental Planning and Conservation Department (EPAC) of MLSNR, underwent an institutional strengthening exercise  sponsored by AusAID in 1996.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

Prior to this institutional strengthening exercise, several institutional assessments had been carried out to identify constraints to public sector performance as a basis for improvement. A New Zealand Overseas Development Assistance (NZODA) study of human resource (HR) issues in 1994 identified a number of constraints, including over-staffing within the Civil Service, excessive leave provisions, unwieldy promotion procedures and insufficient management skills. Priority areas requiring intervention were identified as strategic planning, improved human resource management systems (job descriptions, performance management and review of salary gradings), gender analysis, change management and team development strategy as well as change management related skills training.

SPREP's review of the environmental strategy for Tonga in 1993 (NEMS) identified four main institutional issues which constrained environmental management:

- Insufficient trained personnel in the MLSNR EPAC for it to carry out its prescribed functions
- Inadequate infrastructure with insufficient physical resources for the task expected of EPAC
- Budget constraints which restrict the ability of civil service units concerned with environmental planning to carry out their functions; and,
- The low level of environmental awareness of many Civil Service personnel generally, and specifically, the lack of defined responsibility within each department for environmental protection responsibilities.

The NZODA review of environmental legislation also concluded that the size of the then EPU and the narrowness of its skill base was a matter of concern for enlarging its mandate.

With the public sector reform and environmental legislation now in place at the broad, macro level, TEMPP aimed to reinforce these efforts and to make them more effective through complementary intervention to strengthen the capacity of environmental planning and management functions at the day-to-day operational level. The focus of TEMPP is to improve work practices and procedures from the bottom up to reinforce and support the overall public sector rationalisation program by demonstrating new work practices and procedures for core functions across several agencies.

A key aspect of this exercise was HRD/Training that involved developing a training program or component within the implementation project design. This is covered in more detail in the next section on Environmental Education, Information and Training.

iii)     Papua New Guinea's 1997 Annual Management Report

The Department of Environment and Conservation (DEC) had undergone a lot of changes in its organisational set up and management until 1997 with more change still to be undertaken within major changes of the whole government machinery including restructuring. 1997 has been the year in which DEC had recorded its highest number of resignations in any single year, attributed mainly to the restructuring process as well as a direct effect of the overall government reforms.

The total number of staff as of 1999 was approxiamately 87 (70 men and 17 women). PNG's Environment Office had the largest staff numbers compared to the rest of the Members surveyed.

iv)     Corporate Plan of Fiji's Department of Environment (1999-2002)

The Corporate Plan of Fiji's Department of Environment (DOE) addressed seven (7) Key Result Areas e.g. Strengthening environment policy and planning capabilities, EIA procedures, standards, monitoring and enforcement capabilities, Educational awareness, public information and external relations capabilities etc., as well as training of DOE staff to undertake duties efficiently in respective areas of responsibilities. The Performance Indicator for staff training

included workshops attended on the Performance Management System, Conflict Management, Administration/Financial Management, Time Managemen, as well as staff participation in regional and international workshops/meetings.

**Interviews and meetings**

Agencies involved in this environmental area included: Departments of Environment, Woman Affairs, Marine and Ports, Central Planning, Native Land Trust Board (Fiji), FIT. The following are comments on institutional capacity, that were raised in group meetings and interviews during in-country visits:

**Fiji**

- The NEMS as a planning document was not referred to by Fiji in implementing its programmes, nor was it referred to when reviewing its Sustainable Development Bill (SDB) and the role of the Department of Environment (DOE).
- The department was seriously understaffed due largely to funding constraints. There was a need for at least one to two more staff in each of the 6 technical units (Environment Impact Assessment and Monitoring, Waste Minimisation and Pollution, Conservation Management, National Environment Policy, Monitoring and Coordination, Environment Education and Information)
- There is a lot that is learned on-the-job e.g. the Waste and Pollution Minimisation & Management Unit covers a very wide area including mining and forestry sectors thus the staff who come in with specific qualifications expand their knowledge and skills on-the-job by attending meetings, dealing with industries, etc.
- At the time of the interview, DOE's Corporate Plan had been developed however, the individual workplans were still being developed.
- As part of the Public Sector Reform programme, DOE was reviewing its operations and structure, having developed a Corporate Plan and being introduced to the Performance Management System as in most other government departments.

**Vanuatu**

*Need for more coordination*
➢ Some government departments claimed that 'environment' was not really their mandate but that they did a 'little bit' of it. Eg. When women are trained on how to set up small business enterprises, Women's Affairs (Vanuatu) also try to instil sustainable use of natural resources in their training. Similarly the Quarantine Departments' work in pesticide control involves chemical management under Plant Protection. The issue raised was how all these little bits and pieces of environmental management could be better coordinated to ensure a comprehensive integrated approach.

*Institutional arrangements*
➢ The Environment Unit in Vanuatu sometimes uses women field officers in the rural areas to impart environmental training/awareness. However the women did not always agree to do this because the task does not come within their job description – a recurring constraint in trying to get the environmental message as widely as possible

*Need for more commitment*
➢ The Environment Unit in Vanuatu is largely externally funded, which in part reflects the need for more commitment to environment by national governments
➢ The importance of having environmental legislation in place to give 'teeth' to environmental issues (Fiji)

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

*Public Sector Reform Programmes*
- ➢ 'Downsizing' under Reform initiatives in PICs and territories has led to redundancies in most government departments leading to serious staff shortages right across the public service, making it difficult for departments to meet their goals
- ➢ In addition to reduction in staff is the reduction in budgets which has seriously affected achievement of outputs as well
- ➢ The corporatisation of departments and the accompanying laying off of workers has further contributed to the low morale of the existing workforce
- ➢ Recruitment of new staff in departments has a lot of implications on training i.e. new people will need to be trained to carry out existing functions
- ➢ Institutional strengthening projects in key ministries e.g. Health, Finance, should facilitate activities relating to environment e.g. encouragement of multi-skilling
- ➢ Performance management systems being introduced in most public services are a positive start towards making the direct link between improving performance (via training etc.) and achievement of organisational or business goals

*Need to strengthen relationships between NGOs, government and the private sector*
- ➢ For NGOs to get a piece of the pie, they need to go through government to seek external funding and in many cases proposals do not get through, which can adversely affect the very existence of the organisation
- ➢ In the area of public education there is a need for government to recognise what NGOs do or can do, and to support them in this area
- ➢ Need for more involvement of the private sector, although a recent development in Fiji was the establishment of a new corporate body called the Association of Green Productivity

*SPREP and donors to better address country needs*
- ➢ SPREP and its Members should draw more on existing expertise of locals in-country
- ➢ Need for SPREP projects to be better coordinated and managed so that it doesn't come to member countries mid-year when agencies have already planned their activities for that year.  The time lag is an important consideration in project planning.
- ➢ SPREP also needs to coordinate and organise its training better so that the following can be avoided:
  - ▪ last minute notice given for training programmes
  - ▪ lack of follow-up by SPREP on training outcomes
  - ▪ some SPREP training programmes need to be reviewed.  E.g. the SPSLCMP runs two training sessions per year at NTF and each time a different nominee is required from country members.  Sometimes this is difficult or impossible for countries to take on because there are not enough 'appropriate' people to send each time.  As a result one or two people have been sent mainly because of their availability, rather than the appropriateness of the training to their job.  An alternative proposal was suggested that it may be more effective, if instead of sending someone different each time, to structure the training in such a way that the same people can attend training at a higher level so that the existing pool is strengthened/developed further.
  - ▪ training undertaken that cannot be followed-up in-country due to lack of resources (people, equipment, money)
  - ▪ Donors also have a lot to answer for i.e. they dictate a lot of what goes on, which may not be appropriate or possible for countries to carry out - given existing capacity and REAL needs

*Lack of awareness about SPREP*
- ➢ Most organisations in the various countries were aware of SPREP and its activities but beyond the SPREP projects they were involved with - they did not really have a full appreciation of other SPREP programmes or of the extent of SPREP activities and how we may assist/support them.   There were suggestions on the need for more communication in-country between the Environment agencies, other government agencies and NGOs. Something that SPREP should facilitate as much as possible

The issues raised from in-country visits, interviews and document reviews carry similar messages heard in the other environmental areas e.g. lack of commitment, need for enforcement of legislation, lack of follow-up and coordination, lack of organisational capacity due to staff and budget constraints, need to strengthen partnerships between the various stakeholders etc. Only some of these issues can be resolved with the help of training, whilst the majority of them can be addressed through other means e.g. better management, leadership and cooperation.

### 2.6.3 Training provided by SPREP in Environmental Management, Planning and Institutional Strengthening

Under the SPREP Action Plan 1997-2000, this area falls under <u>Strategic Output Area 4</u> and consists of the following programmes:
➢ State of Environment (SOE) report
➢ Support for International Environmental Negociations
➢ Regional Environmental Law Coordination

Some examples of workshops and training programmes conducted include:
➢ Planning for Sustainable Development in the Commonwealth Pacific Island Countries (1998)
➢ Environmental Impact Assessment training (1992/1993 - 1998)
➢ NEMS NGO Environment Awareness (1992/1993)
➢ Sub regional Workshop on EIA training for trainers (1996)
➢ Workshop for Development Bank Officers on Environment and Sustainable Development (1996)

### 2.6.4. Problems and constraints facing those involved in Environmental Management/Planning and Institutional Strengthening

**Environmental Management/Planning and Institutional Strengthening related problems**

1 Lack of coordination of environmental activities between relevant agencies
2 Reclamation of land for development of marine and other resources
3 Environmental Management is sectoral
4 Under pressure to reorganise all natural resource Depts.
5 Need for EIA statue or law
6 Lack of any land use planning mechanisms
7 Lack of public participation in environmental decision making
8 Lack of understanding of legislation-fisheries/forestry
9 Lack of trained personel to undertake strategic planning for the Departments
10 Lack of legal support
11 Department of Environment is not seen as income generating, therefore, resources are limited

### 2.6.5. Suggestions by countries for improving Environmental Management/Planning and Institutional Strengthening

**1** Planning - through EIA
**2** Training and education is needed in Environmental planning/management techniques should be taken to the villages, communities where the trainer can spend time in the community itself.
**3** Drawing up management plan
**4** Develop environmental indicators/standards for monitoring

**5**  EIA laws to be passed and better institutionalised

**6**  School children should be made environmentally aware from an early age.

## 2.6.6    Summary

A strongly expressed need by Members, donors as well as SPREP was the need to integrate environment into national/sectoral development plans.  As well the need to put an economic value on environment with calls for environmental economics training.

This environmental area is critical to the success of other environmental programmes in the region.  Training which is basically a tool for Members to better manage their environment cannot be entirely successful in the long-term if organisations in-country don't have the required number of skilled people, as well as funds and proper management, processes and systems – in other words institutional capability to facilitate environment programmes.

Thus institutional strengthening in the form of making sure HRD is properly planned, managed and administered in-country should also be a focus of follow-up actions of this report.

## 2.7. ENVIRONMENT EDUCATION, INFORMATION AND TRAINING

The format for this environmental area is similar to those covered previously. Beginning with the identification of technical tasks required in Environmental Education, Information and Training for five countries (Fiji, Guam, PNG, Tonga and Vanuatu) illustrated in **Diagram 7,** followed by an assessment of high priority areas for further training and support. This is supplemented with findings from interviews and document reviews, followed by an overview of the type of training SPREP provides in this area, problems and suggested solutions provided by the countries, and a summary.

### 2.7.1 Findings from the TNA Questionnaire

**Priority areas for training and support**

A visual analysis of the <u>Diagram 7</u> shows that:

➢ There is need for training and support right across the range of knowledge and skills particularly for Vanuatu and Tonga
➢ The respondent from Guam indicates that most of the knowledge and skills are not applicable to her job except for areas under Information and Technology Infrastructure
➢ Fiji is sufficiently knowledgeable and skilled in Environmental Education

The assessment found that respondents felt <u>weakest</u> in areas relating to:

*Information and Technology Infrastructure*
➢ Working knowledge of MS Office tools e.g. Word, Excel
➢ Design and development of database

*Development of clearinghouse mechanisms for environmental information*
➢ Use of information sharing process for the Pacific Environmental Information Network (PEIN)

*Environmental Education*
➢ Imparting environmental awareness to students
➢ Awareness of key environmental issues and involved in environmental education on a 'hands-on' basis
➢ Developing and tailoring public awareness programmes on specific environmental issues of the country

*Publications*
➢ Working knowledge of desktop publishing

*Media Liaison*
➢ Communication of environmental issues to media and the public
➢ Use of the media to raise awareness of environmental issues

*General Capacity Building*
➢ Collecting and interpretating information on traditional resource use

Because these are cross-cutting areas in themselves, almost all the agencies responded including Departments of Environment, Fisheries, Marine and Ports, Health, NLTB (Fiji). There were many NGOs e.g. the Vanuatu Rural Development and Training Centres Associations (VRDTCA) and the Wan Smol Bag Theatre in Vanuatu; the Pacific Concern Resources Center (PCRC) and South Pacific Action for Human Ecology and Environment (SPACHEE) in Fiji; and, Conservation Melanesia in PNG.

## DIAGRAM 7:  B5 - Environmental Education, Information and Training
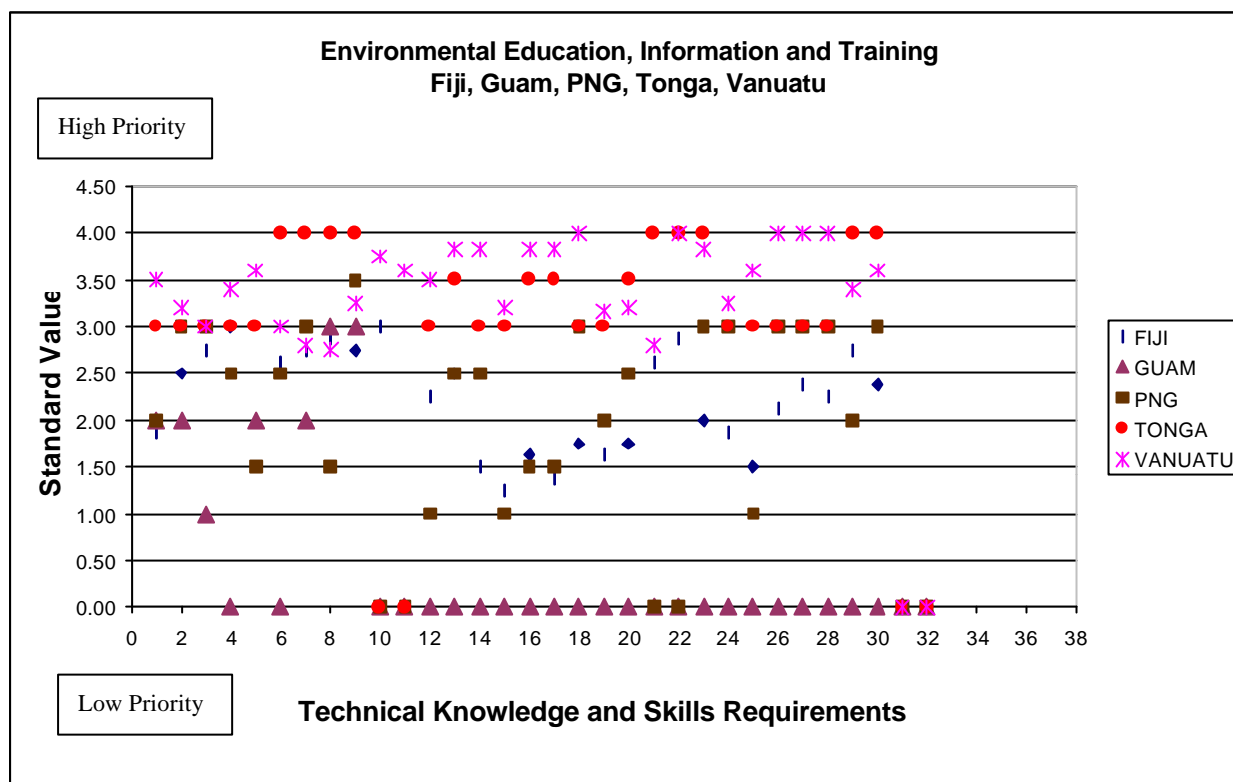


**Key**
**Code     Technical Tasks**

### INFORMATION AND TECHNOLOGY INFRASTRUCTURE

1     Working knowledge of MS Office tools e.g. Word, Excel

2     Information Management (i.e. how computers could be used to better store, manage and retrieve information for decision making) and IT Planning

3     Maintenance of PCs and IT equipment (e.g. printer, server)

4     Design and development of database

5     Use of the Internet (e.g. SIDSNet) to access and disseminate information outside of the department/organisation

6     Geographic Information Systems (GIS)

### DEVELOPMENT OF CLEARINGHOUSE MECHANISMS FOR ENVIRONMENTAL INFORMATION

7     Working knowledge of INMAGIC software (information sharing via internet etc., downloading, searching, printing and sorting, cataloguing using the software)

8     Working knowledge of Information/Collection building (cataloguing and indexing; collection management; information usage)

9     Use of the information sharing process for the Pacific Environmental Information Network (PEIN) e.g. procedure of borrowing via the network.

10    Other (please specify)

**ENVIRONMENTAL EDUCATION**

11    Collation and development of an inventory of all environmental education resources available in each country

12    Repackaging of resources to make them available for use in existing school curricula and by NGOs

13    Skills and knowledge to impart environmental awareness to students

14    How to communicate environmental information effectively

15    Communicate with other environmental educators to share experiences and knowledge

16    Fully aware of key environmental issues and involved in environmental education on a ''hands-on'' basis

17    Develop and tailor public awareness programmes on specific environmental issues of the country

18    Identify priority areas for environmental education and identify appropriate target groups

19    Access environmental education materials either on the Internet or through national resource centres

**PUBLICATIONS**

20    Working knowledge of Desktop Publishing which involves:
   ➢  Editing and design
   ➢  Computer layout
   ➢  Proofing
   ➢  Printing preparation
   ➢  Archives/back-up/storage

21    Commercial printing which involves:
   ➢  File preparation
   ➢  Scanning and image manipulation
   ➢  PDF (Portable Document Format) production for on-line publishing

**MEDIA LIAISON**

22    How to communicate environmental issues to media and the public

23    How to use the media to raise awareness of environmental issues

24    Understanding of environmental issues

**GENERAL CAPACITY BUILDING**

25    Awareness raising on the importance of traditional resource usage

26    Development of appropriate resource materials on traditional resource practices

27    Incorporation of traditional knowledge and practices in national legislation and regulations

28    Use of database systems

29    Collection and interpretation of information on traditional resource use

30    Other (please specify)

## 2.7.2    Findings from interviews and other relevant sources

**Document reviews**

i)    Action Strategy for Education and Training in the Pacific Region 1999-2003

The Strategy was developed  at the Pacific Regional Conference for Environmental Education and Training in Suva, Fiji 1998, by more than 170 representatives from 21 of SPREP's island Members.  The Four Target Areas are (i) formal and non-formal education (ii) planning and decision-making (iii) public awareness; and, (iv) networking, communication and collaboration. The goal of Target Area 1 is to incorporate Environmental Education and Training into all formal and non-formal education in SPREP's island Members, integrating cultural, traditional and contemporary knowledge to target local, regional and international environmental issues. This also involves monitoring, evaluating and refining education and training materials and practices for further use as part of an ongoing quality control process – such as this TNA exercise.

ii)    Tonga-Australia Environment Planning and Management Strengthening Project (TEMPP) Working Paper 4 (HRD/Training)

As mentioned in the previous section (refer page 56 (iv)), the TEMP Project also included an HRD or training component.  Numerous studies undertaken in Tonga over the past 20 years focused on various aspects of environmental issues and environmental management and they all stressed the need to strengthen the capacity of the relevant government authority in its environmental planning and management capacity.

The target group for this strengthening project includes all members of EPAC (formerly EPU) of the MLSNR, other officers of the Division of Natural Resources, Physical Planning Unit (PPU) and of the Division of Lands as well as officials from the ministries of Health, Fisheries, Ports and Marine, Works, Agriculture and Forestry, Central Planning and the Water Board.  This target group all have some environmental planning or management responsibilities.

One of the first steps in the HRD component of TEMPP was to conduct a Training Needs Assessment (TNA) by means of structured interviews using a question form.  The tasks/job duties identified against which staff were assessed included:

➢  Environmental data collection and analysis
➢  External data interpretation
➢  Special technical skills e.g. computing, GPS, GIS, SCUBA diving
➢  Communication training and skills transfer
➢  Working with communities
➢  Work planning
➢  Supervisory capacity
➢  Level of general environmental awareness
➢  Capacity to undertake EIA, EMP

Most of the training needs identified relate to practical or "hands-on" application of the theoretical concepts covered in formal training programmes.  Most of the gaps identified were to be addressed through on-the-job training as well as targeted workshops, work attachments and reinforced in project activities.  The training process envisaged involves the following steps:

➢  One of counterpart support or mentoring i.e. in each project activity Tongan counterparts will work with a project team member to work through each task and to establish steps and procedures.

➢ On second occasion the Tongan counterpart would undertake the work with ''mentor'' supervision
➢ On subsequent occasions, the Tongan counterpart would undertake the work alone, but with the knowledge that the trainer is available, or will return to address problems which may arise.
➢ Repeated visits of project ''trainers'' each of about 2 months, with a longer break between visits should ensure this process of establishing steps and procedures and developing confidence is effective.

A major constraint identified was the poor level of communication between Ministries, which could be improved through joint participation in proposed workshops and on-the-job training programmes.

A training strategy and training plans were also developed accompanied by an indicative budget for the implementation of the training plan that was estimated at approxiamately Aus$300,000.

A significant outcome of this project was the development of a monitoring mechanism through a memo sent out by the Secretary for MLSNR to all Heads of Divisions. A copy of that memo is attached as Annex D outlining requirements for those attending overseas conferences, study tours and training courses.

iii)      Papua New Guinea-Australia Targeted Training Project (PATTAP)

PATTAP was an AusAID sponsored initiative and part of a broader 5-year institutional strengthening exercise from 1995. There was a HRD component that involved a training needs assessment (TNA) conducted for the Office of Environment and Conservation (OEC) in 1998. Although the TNA was conducted, the actual results were not formally written up and implemented, thus training is still largely an ad hoc activity despite the training plan submitted annually by OEC to the National Training Council.

Whilst HRD systems seem to be in place in PNG (more so than in other countries visited), these systems were not really working e.g. those attending workshops had to fulfil certain requirements upon return to the office and this rarely or never happened, nor was it enforced. A possible reason is prevailing belief that ''knowledge is power'' and therefore transferring that knowledge to others was not seen to be in one's best interest. Other constraints identifed during interviews included the lack of support from top management, lack of resources (money and skilled personnel), attitudinal problems, and the lack of political will to implement HRD initiatives.

Other feedback received in meetings on problems include:
➢ Lack of confidence by returning trainees to implement or transfer what was learned
➢ Lack of support from management, colleagues and SPREP
➢ Lack of commitment of the individual and the institution
➢ Lack of proper planning leading to uneven distribution of workload
➢ Absorption capacity i.e. can only take in so much.

iv)      National Human Resources Development Policy Framework for the Cook Islands (July 1997)

The HRD Framework was developed in 1997 within the context of the public service reform agenda with the aim of strengthening HRD in four key areas:
➢ Education
➢ Health
➢ Post-secondary
➢ Management training

This would achieve the dual goal of helping Cook Islanders attain a standard of living better than or equivalent to any other country in the region by the year 2010; and equipping Cook Islanders with the skills and training they need to succeed in an environment characterised by limited government intervention in the economy and wider community.

Some of the action points identified under the Framework included identifying management training needs and priorities, conducting an audit of courses and providers, preparing training plans, coordinating the implementation of that plan and building up a directory of providers of training.   The implementing agency for the Framework is the Cook Islands Public Service Commission (PSC) which coordinates training at a national level for both government and non-government organisations including the Cook Island Environment Services.

v)      Vanuatu Training Act (Final Draft as at 21 June 1999)

The Vanuatu Training Act was to establish the Vanuatu National Training Council to basically coordinate training at a national level.  The functions of the Council would include:
➢ Promoting and coordinating effective vocational education and training at all levels within the community
➢ Providing advice to the Minister on allocation of funds from foreign donors in the area of vocational education and training
➢ Adopting relevant and inclusive national training structure, incluidng multiple skill levels and associated qualifications
➢ Encouraging adoption of national skill standards with advice from appropriate industry based groups
➢ Accrediting courses and authorising course providers (both public and private) to display a seal denoting nationally accredited quality training for accredited courses.

vi)     Workshop Reports

➢ *Travel Report for Sub-regional Teacher Training Workshop on Environmental Education in Fiji (1999)* provided following feedback on the training:
  ▪ discussions brought out more clearly the links between environment and economics
  ▪ difficulty in using teachers as local resource persons during school term because they are unlikely to be released
  ▪ future workshops should have a mixed bag of participants such as teachers, teacher trainers and representatives from the environment department – this may be an issue since environment workers tend to dominate discussions because of their prior knowledge, plus it means tailoring the programme to suit the needs of two very different groups
  ▪ involvement of American Samoans temporarily caused a slight polarisation between them and the other participant – the different dynamics may have been due to American Samoan participants not having an understanding of the challenges faced by primary school teachers in other island states e.g. all schools in American Samoa had computers and access to the internet while other PICs don't have enough chairs for children to sit on.

➢ *Report on Communicating Environmental Issues to the public: Training for media and environmental officials in the Cook Islands (1999)*
  ▪ More time for practicals e.g. camera operating and maintenance
  ▪ Conduct training in two languages (English and indigenous)
  ▪ Need to allow participants to experience all form of media instead of staying with one
  ▪ More field trips
  ▪ Holding plenaries each morning to inform participants of the day's programme

**Interviews (mainly gathered from the Cook Islands Group Meeting)**

In-country meetings highlighted the following HRD issues:

➢ The availability of training but the difficulty in getting time off work
➢ Lack of communication between organisations (including governments and NGOs) regarding training opportunities
➢ Insufficient notice of timing of workshops
➢ Lack of coordination and overlapping of workshops
➢ Trainers are not always sufficiently qualified
➢ Lack of follow-up after training leading to reduced interest
➢ Political interference with selection of participants
➢ Inappropriate selection of participants who are unable to pass on their knowledge or skills gained from the training
➢ Uninteresting methods of training
➢ Lack of funding i.e. tends  to hinder involvement of outer island participation
➢ Lack of integration of local and offshore expertise (Cook Islands)
➢ Full information must be passed on to either the organisation or participant regarding the training
➢ Coordinators/facilitators of training session should be empowered to evaluate participants, and this information to be passed to the relevant authorities
➢ Environmental issues are not a priority to government
➢ After training, consultants are still asked to carry out the task participants have been trained for


*How best to apply and transfer skills following training*

➢ Mandatory reporting to organisations and community including verbal reporting

➢ Short-term and long term follow-up identifying who is to do the follow-up and who will fund it.  This identification should occur prior to the training.

➢ Reward system in the community or organisation following transfer of knowledge/skills

➢ Ensuring the appropriate selection of participant i.e. he or she has the necessary skills to pass on their knowledge to others

➢ SPREP should prepare a format as a guideline for the transfer of knowledge and skills

➢ One of the criteria for selection of a participant is for them to return after their training and implement an activity or project within a given timeframe


The training related issues raised above were gathered mainly from the group meeting in the Cook Islands and reflect similar sentiments expressed in all the other Members.  With reference back to the equation in Chapter 1, a few of the suggestions related to the ''learning experience'' e.g. trainers are not always sufficiently qualified.  Whilst the majority of the comments related to the ''work environment'' e.g. After training, consultants are still asked to carry out the task participants were trained in.  This is explored further in Chapters 3 and 4.

## 2.7.3  Training provided by SPREP in Environmental Education, Information and Training

Under the SPREP Action Plan 1997-2000, Environmental Education, Information and Training falls under Strategic Output Area 5. This output area comprises the following programmes:

- ➢ Capacity Building in Environmental Management in the Pacific (CBEMP)
- ➢ Pacific Environment Information Network Project for Media and Library (PEIN)
- ➢ Environment Training Need Assessment
- ➢ Institutional Capability Assessment
- ➢ Environmental Education
- ➢ Conservation Training Project

Training provided in this area included:

- ➢ Environmental Education Workshops for Teachers and Community Workers (1992-1994)
- ➢ Environmental Awareness Workshops for NGOs (1996)
- ➢ Environmental Education Curriculum Development Workshop (1994)
- ➢ Training attachment of a legal officer
- ➢ Training of Conservation Department staff in Library Software and Management Skills (1996)
- ➢ Regional Teachers' Curriculum Workshop for Forum Countries under SPSLRCMP (1996/97)
- ➢ Environmental Information Clearing-house Sub-regional Workshop (1998-1999)
- ➢ Capacity Building for Environmental Management in the Pacific (CBEMP) – 1998
- ➢ Environmental Education Conference (1998)
- ➢ Sub-regional Primary School Teacher Training Resources Workshop (1999)

SPREP also has an attachment programme across the various environmental areas. In recent months, Environmental Education and IT have hosted attachments from the Departments of Environments of American Samoa, Niue and Solomon Islands. The IT attachments gained practical skills in the maintenance of IT systems which has enabled them to provide similar services back in their departments, whilst the Environmental Education attachments developed education and awareness raising materials for their countries.

## 2.7.4  Problems and constraints facing those involved in Environmental Education, Information and Training

**Environmental education and awareness-related problems**

1. Lack of education/awareness & publicity
2. Environmental education – need to look at both modern and traditional perspectives
3. Implementing procedures
4. Need for more training of teachers
5. Need to restructure environmental education curriculum
6. Politicians and developers need to understand and comply with environmental guidelines and impact assessment studies/reports.
7. Lack of local content - need more
8. People leaving school at Grade 6

**Information related problems**

9. Need for better and wider dissemination of information
10. Skills in developing awareness materials
11. Lack of comprehensive environmental resource information
12. Poor TV/Video editing facilities in Tonga

**Management and human resource problems**

13. Shortage of materials to carry out environmental education
14. Lack of financial support
15. Lack of consistency and follow-up
16. Timing constraint-tight schedule for projects
17. Lack of coordination between the various agencies
19 Lack of proper planning
20 Lack of assessment of effectiveness

### 2.7.4 Suggestions by countries for improving Environmental Education, Information and Training

1. The PNG government approved an Education, Awareness Publicity Programme in 1996 to carry out major awareness through PNG on environment & conservation issues, however this was not carried out due to funding constraints – need for better planning and funding assistance
2. Information dissemination through TV Advertisements is quite effective
3. Establish Community Groups who work with support from a host organisation to make resources to conduct environmental projects in their area.
4. Introducing Action Component along with environmental education and awareness program
5. Train Pre-School and Primary School Teachers
6. Provide seminars for High Level Decision Makers
7. Promote awareness through Educational Videos; TV shows
8. Follow-up workshops
9. We could improve by having more materials available in language people can understand to be integrated into in-country training programmes

Again the suggestions above are common to other environmental areas as well, particularly the need for more education and awareness raising. A recent initiative as part of this TNA project is the establishment of the Environmental Training Announcement Package with which to disseminate environmental training offers to SPREP's Members and collaborating organisations across the region. Dissemination of training information was initially trialed using a monthly circular but this proved ineffective both in cost and timeliness. Thus a mailing list for each environmental area was drawn up with input from all Programme Staff at SPREP and information was then packaged and sent out via e-mail, reaching not only SPREP Focal Points but other relevant persons in-country also, hitting a wider audience. Feedback from Members thus far has been very positive.

### 2.7.5 Summary

This environmental area is somewhat different from other environmental fields because they are processes in themselves e.g. training, information, legal, education. These areas cut across, and support, all other environmental work programme areas identified by Members as critical e.g. waste management, and they also serve as support functions within SPREP Secretariat itself.

Thus having IT attachments at SPREP may not deal specifically with environment issues, but addresses IT needs of Members to *facilitate* their work in environment. Similarly with training, if SPREP were to assist Members in developing training plans, this doesn't directly address environment issues, rather it address human resource development issues in-country that will in turn facilitate and strengthen Members' (and SPREP's) environmental programmes. These cross-cutting areas help provide the HR foundation of organisations in-country that environment programmes/initiatives can then build upon and use.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

The high priority training needs identified for this environmental area are reflective of high priority needs expressed in other areas e.g.

➢ Design and development of databases – is similar to  priority needs in Environmental Management/Planning & Institutional Strengthening, as well as Climate Change, Sea Level and Climate Monitoring, International Negotiations and Meteorology
➢ Education and awareness raising – this need cuts across all environmental areas
➢ Use of media to raise awareness – is similar to needs expressed in Marine Pollution i.e need to develop a media strategy.

Other issues relate to the need for more follow-ups after training, better coordination across relevant stakeholders, better planning and less political interference.

## 2.8 GENERIC KNOWLEDGE AND SKILLS REQUIREMENTS

The format for this generic area is similar to those covered previously. Beginning with the identification of technical knowledge/skills required to carry out general management tasks for <u>four</u> countries (Fiji, Guam, PNG, and Tonga) listed in **Diagram 8,** followed by an assessment of <u>priority</u> areas for further training and support. This is supplemented with findings from interviews and document reviews and ends with a summary.

The findings for the four countries have been combined and provides a regional perspective of generic training needs. As mentioned earlier in the report, the TNA questionnaire for Vanuatu, (pilot project) had combined the technical and generic skills, particularly in the areas of Biodiversity and Conservation, and Coastal Management.

### 2.8.1 Findings from the TNA Questionnaire

**Priority areas for training and support**

A visual analysis of the <u>Diagram 8</u> shows the following trend:

➢ Although there is no area considered <u>high</u> priority, there is still a need for some training and support right across the range of generic knowledge/skills

Most respondents felt <u>weakest</u> in areas relating to:

➢ Financial and business management; and,
➢ Negotiations.

**DIAGRAM 8: Generic Knowledge and Skill Requirements**
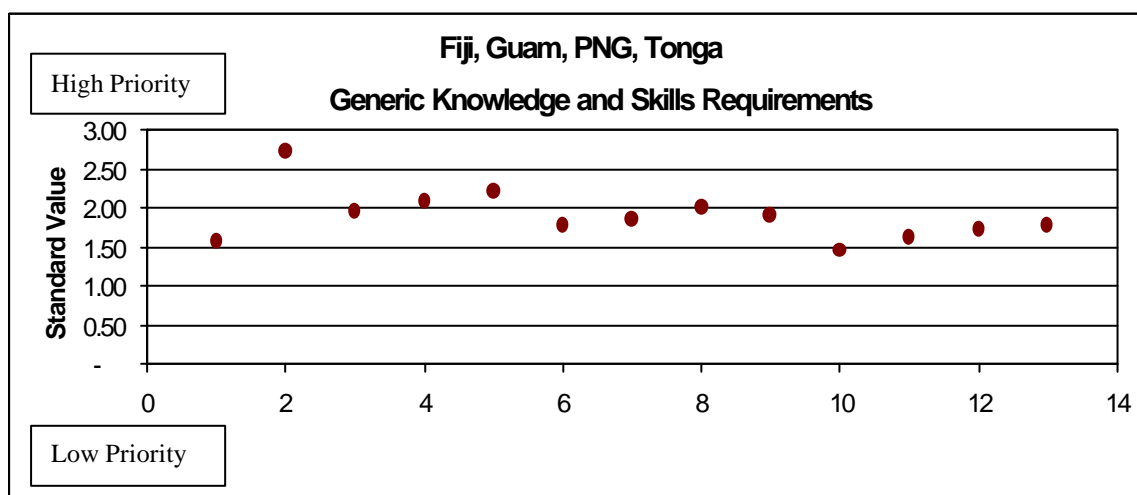


**Key**
**Code  Generic knowledge and skill requirements**

1       Development of management plans

2       Finance and business management

3       Meeting management including Facilitation

4       Conflict Management

5       Negotiations

6       Communication - Making Presentations

7       Communication - Interviewing

8       Human resource management

9       Supervision and personnel management

10      Developing and supporting teamwork

11      Leadership skills

12      Time management

13      Information Management

14      Other (please specify)

### 2.8.2      Findings from interviews and other relevant sources

**Interviews**

It is well recognised that generic/management tasks are needed to complement the technical tasks required of Members. In fact, some projects which have technically competent personnel ran into problems because of lack of basic project management skills such as time management, problem solving and decision making, book keeping etc.

Knowledge and skills in finance and business management is considered essential for conservation practitioners in particular, as well as technical personnel in other fields e.g. meteorology, in which technical personnel may rise to managerial positions and are often ill-prepared to take on management or supervisory posts. Some in-country projects have suffered due to competent technical persons lacking financial management skills.

Negotiation was also identified as an important need (followed closely by conflict management), which is likely due to current work practices having moved towards a more participatory approach through team work, collaboration and partnerships requiring the ability to solve problems in groups.

It is widely recognized that all projects should have a balance of technical and management skills training to fully prepare participants of the range of responsibilities involved.

Developing generic knowledge/skills can be readily provided through various management consultancies, business schools or vocational institutes across the region, something covered more fully in the following Chapter.

### 2.8.3      Summary

SPREP has focussed predominantly on technical training because of the types of tasks required under the key environmental fields and projects. Developing technical skills alone is quite a challenge in itself, and projects are usually designed to address basic (and not-so-basic) technical know-how with management-related needs an important but secondary consideration.

The inclusion of generic knowledge/skills areas to the list of tasks required for each environmental area is now the norm for SPREP projects, reinforcing the fact that most jobs call for a balance of technical as well as generic skills.

# CHAPTER 3
# TRAINING OPPORTUNITIES

In addition to identifying priority training needs in environment, the assessment also briefly reviewed the opportunities provided by effective human resource development (HRD) practices, what institutions provide environment-related training in the region, and what other sources of training might be tapped.

## 3.1     Human Resource Development

To have effective human resource development, the goal of any well-functioning organisation is to ensure employees carry out their jobs to the best of their abilities.  This is most effectively achieved by using a training plan in conjunction with the following tools:

Job descriptions

These detail the expectations organisations hold for a particular position.  They should provide enough information so job holders and their supervisors can use them to improve performance whilst personnel/admministration can use them for evaluating performance and analyzing training needs.

In most countries reviewed, job descriptions existed but were regarded more as an administrative/management tool and not a prerequisite to effective HRD

A Training Officer

These are the individuals within an organisation responsible for organizing and overseeing staff training.

Several government departments interviewed had Training Officers, particularly the larger or specialised departments e.g. the Meteorological Services in French Polynesia and Fiji, and the Fisheries Departments in Vanuatu.

Some of the Training Officers' jobs involved mostly planning and managing the training process and less on actual delivery.   The public service reform initiatives in the region has had mixed impacts in this area.  On the one hand, the drastic cut in resources meant training was adversely affected since it is considered an overhead that is usually one of the first to go when organisations cut back.  On the other hand, reform programmes have highlighted the importance of human resource management and development and the need to have an in-house HR professional.  In Vanuatu the reform is both an opportunity and a threat, because whilst it proposes to establish a Training Officer position in each ministry, it also cut back on wage earners who carry out the day-to-day work of many departments e.g. in Department of Marine.

Training records

These are formal charts listing chronologically and systematically the type of training each staff member has received.  This was a general weakness right across government departments and some NGOs.  Most record keeping was inconsistent and related mainly to keeping track of those attending overseas courses.

A few respondents to the TNA questionnaire (Annex A) were able to list short courses, seminars and formal training that were usually received abroad.

Training Plan

This is a structured timetable that ensures that all staff receive adequate and appropriate training.  It should enable staff to begin their jobs well-prepared and allow refresher courses to be offered regularly.  If supported by job descriptions, training officers and training records – this would greatly enhance an organisation's ability to address its peoples' needs.

Less than half of the government departments and NGOs surveyed either did not have a training plan or a few of those who knew that a training plan existed, were not familiar with it.

In some Members, development and implementation of training plans are left to the Training Division of the Public Service Commissions (PSC), which are central government agencies responsible for HRM right across most public services e.g. in the Cook Islands, Vanuatu and Fiji.  The Training arm of the PSC in most countries usually provide supervisory and management type training e.g. Performance Appraisal, Project Management, etc.  In Fiji a training survey is conducted by PSC's Centre for Training and Development (CTD) for all government ministries and departments, which will form the basis of a Training Plan to be implemented for the whole public service.   Having central agencies plan training does not preclude individual departments from planning their own staff training and development.  The problem is usually that there is no HR professional within each department to carry out this function.  The training role is often administered by a Personnel Officer who might handle a host of HR activities eg. recruitment, salary administration, benefits, labor relations (if there is a union) and training.

Unless member country governments and NGOs plan for their training, it will remain a heavy expenditure of time, money and productivity and will continue to be an ad hoc activity that does not contribute to overall organisational effectiveness.

Two organisations who had developed clear training plans and were actually implementing them regularly were the Meteorology Services in French Polynesia and the Department of Environment Planning and Conservation (EPAC) in Tonga.  Guam Environmental Protection Agency (EPA) was also in the process of developing a Training Plan based on a TNA conducted in-house by a HR professional.

SPREP as well as member countries suffer from a lack of planning for training.   This is now being addressed through a Staff Development Survey Form which will provide the basis of a Staff Development Plan.

## 3.2        Sources of Training

Given the diverse groups of people interviewed in-county, these are broken into two broad categories:

**Community workers including NGO respondents** – whether or not they have formal qualifications, most receive some pre-service training through short courses, followed by on-the-job training.  When formal training occurs, it typically takes place at colleges or universities or wildlife institutions usually through a project.

**Government officials** – whether or not they have formal qualifications, most receive some form of induction training when they join the public service either within their departments or through the Training Division of their Public Service Commission e.g. Cook Islands, Fiji and Vanuatu.  This is followed by on-the-job training, and short courses.  Formal training also occurs after recruitment through scholarships or attachments via projects.

Formal Training

Generally in SPREP's Members, training that is ''certified'', or ensures a promotion is looked upon highly.  Carrying prestige and value, a degree or diploma also makes recipients eligible for positions that were previously unavailable.  There is a premium on formal training because of the opportunities it provides.

For both groups of people identified above, the most often attended are the regional universities:

➢ University of the South Pacific
➢ University of Guam
➢ University of PNG
➢ University of Technology, Lae, PNG
➢ The French Polynesia University Centre

Other formal institutes that provide environment-related training include the University of Waikato in Hamilton, New Zealand which provides Climate training under PICCAP.  There is also Ballarat University in Australia which provides training in Occupational Health and Safety including Chemical Management.

On-the-job Training

On-the-job training includes both trial-and-error learning, advice, recommendations and instructions from colleagues and superiors.  Although on-the-job training is unstructured and informal, it is a critical source of skills acquisition for both government officials as well as community workers.

For CASOs under SPBCP a lot of the skills acquired is often through regional short courses organised by SPBCP and other agencies, as well as in-country training providers, or overseas wildlife institutes e.g. the Australian Conservation Training Insitutue (ACTI).

In-service Training

In-service training can help consolidate job experience and provides an opportunity to train staff in skills needed in the future.  Although the premium is on formal training, given the competition involved, most respondents try to take advantage of workshops, seminars, conferences and other forms of in-service training.

In all the Members surveyed there are many sources of in-service training available particularly to meet generic knowledge and skills requirements e.g.

## 3.3   Potential Sources of Training

Training does not necessarily involve huge amounts of time or money e.g. in-service training upgrades and reinforces skills over a course of a career.  There are still untapped sources of training within some of the Members reviewed.  Table 3 outlines just some of the training sources to be found in-country or within the region.  The Ross Trust Programme in Australia is a fully funded training progamme for Community Educators that is held once a year and covers various fields including environment.

**Table 3      Training Opportunities**

| Needs | Sources |
|---|---|
| Bookkeeping skills | ▪ Accounting firms<br>▪ Industries<br>▪ Vocational institutes |
| Finance and Business Management | ▪ Business schools<br>▪ Management consulting companies<br>▪ Industries |
| Legal skills | ▪ Law firms |
| Environmental Management | ▪ Pacific Centre for Environment and Sustainable Development at USP |
| Community-based Conservation Training | ▪ School of Marine Studies at USP |
| Training of Community Educators | ▪ Ross Trust Programme (Australia)<br>▪ Continuing Education at USP |

# CHAPTER 4
# CONCLUSION AND RECOMMENDATIONS

## 4.1    Conclusion

The assessment supported many commonly held views about the problems and constraints to the effectiveness of training.  The assessment findings are clustered around the four main objectives and the specific concrete recommendations they lead to are articulated below.

### 4.1.1    Identification of the tasks required

A 'standard' list of technical and generic tasks for each environmental area was developed, against which Members were assessed based on whether or not they had the necessary knowledge and skills to carry out those tasks.  This was extremely useful not only in enabling data gathering and comparison but also in serving as a training tool in and of itself, because it enlightened Member participants on the range of tasks involved in the different environmental fields.   Most importantly it highlighted that most jobs held a diverse array of knowledge and skills that current SPREP training does not adequately fulfil, particularly those of conservation practitioners and meteorological staff.

It was also reassuring to note that whilst the list of knowledge/skills developed were tailored towards SPREP programmes, they were broad and encompassing enough to be relevant to field practitioners across all sectors, including NGOs.

### 4.1.2    Training Needs

It was also evident from the priority training needs identified that Members have not acquired the necessary knowledge/skills levels in a number of key areas where SPREP has provided lots of training.  E.g. under Environmental Management and Planning, high priority areas for training are in data management and developing key environmental indicators which is the basis for conducting Environmental Impact Assessment (EIA) – an area in which SPREP has provided training since 1992.

This has implications on the number and quality of training SPREP has provided, as well as the working environment to which trainees have returned that may not have enabled the transfer of the skills acquired.  Feedback clearly indicated the need for SPREP to better coordinate its training, with consistent follow-up after training, as well as developing a means of regularly assessing the effectiveness of training in-country.

Most importantly, is the responsibility SPREP has in ensuring that an enabling environment exists in-country to facilitate the implementation of training BEFORE it is conducted. This includes ensuring that training is tied to the business needs of organisations, and that it is planned, managed and recorded properly.  This entails strengthening the human resource development (HRD) function of key environmental organisations so that the returns on SPREP training is maximized and realized.  It also involves closer consultations between SPREP and recipient organisations of training, not just the SPREP National Focal Points.

The continued need for training was clearly expressed and with funding constraints affecting the amount and type of training Members can receive, SPREP has a critical role not only as a training provider (directly), but also as an advisor on how to access quality environmental training programmes and funding avenues.

General patterns that emerged included the US and French Territories (e.g. American Samoa, French Polynesia and Guam) being more adequately skilled and knowledgeable across all environmental areas.  There was also more need for further training and support in Tonga and Vanuatu compared to the other independent Members surveyed (i.e. Fiji and PNG).

### 4.1.3   Current Training Opportunities

The assessment found that the present trend of short courses provided by SPREP cannot adequately fulfill the needs expressed.   Training needs to be better coordinated with less reliance on short courses as the main means of training, as they are often not sustainable in the long term.   A key player in the region is USP which is in the process of setting up a ''Pacific Centre for Sustainable Development'' which aims to pull together all environment-related programmes..

Other current providers of training in the Pacific such as the National Tidal Facility (NTF) at Flinders University in Adelaide, Australia which provides climate training under SPSLCMP for government officials across the Pacific have a training strategy that has been reviewed to better meet country needs.  Within its training framework, it has provided basic technical and scientific training and now builds upon the basics in a progressive way that targets not only technical professionals but also policy makers, administrators and decision makers.

Simarly, PICCAP which was responsible for transferring the Vulnerability and Adaptation Assessment Course from Waikato University to USP in Fiji provides the basic technical and scientific training and now progressively looks at components of this in detail.

More coordinated training approaches are already been achieved such as those mentioned above and will help training providers achieve the following;
➢   keep pace with the increasing and changing demands of the various jobs/agencies responsible for the relevant environment issue
➢   provides a process that allows trainees to integrate learnings from not just that training, but others as well i.e. something to hang all the different 'pieces' onto
➢   plan and implement more effective follow-up actions after training since each training initiative is part of larger plan that builds progressively upon each phase

### 4.1.4   Potential Training Opportunities

There are new training sources available to be tapped.   In most of the countries, there is a continuing trend to train more professionals at universities, whilst taking advantage of the short courses, seminars and meetings offered through various sponsors.  The assessment found that there are numerous other untapped sources, which include local industries, other government departments, local experts in specific fields, and other overseas programmes.

Part of the Training Officer's role at SPREP is to explore new sources of training and funding to assist Members in accessing training programmes.   A recent initiative is the coordination of a cross-country attachment from Fiji to Guam EPA for EIA training.  Guam as a US Territory is quite advanced in EIA and was willing to assist Fiji in this area by having a Fiji Environment Official attached to Guam EPA.  Such initiatives are still to be fully explored as well as other potential training sources.

### 4.2   Recommendations

The trend in most countries follows a basic pattern of formal training, followed by very informal on-the-job-training.  The ethic of training as a process that occurs throughout one's career has yet to take firm hold within most sectors in the Members surveyed.   Formal training cannot

possibly cover everything that conservationists, meteorologists or educators etc. need to know throughout their careers.  As their career develops, they will need different skills at different levels and there must be a way for Members to recognise and address these evolving needs. The following recommendations are categorised according to actions to be taken by Members, and those by SPREP bearing in mind the ''results formula''.

### 4.2.1   Measures to be taken by Members

*Working Environment*

x)   Develop training plans – as the first step to establishing training as a long-term process. A key tool is a training plan, which takes into account short/medium-term skills building as well as long-term human resource development objectives.  Training plans should be linked to an ongoing process of identifying training needs, and should include a way to monitor and evaluate all training programmes.

Two organisations who had developed clear training plans and were actually implementing them regularly were the Meteorology Services in French Polynesia and the Department of Environment, Planning and Conservation (EPAC) in Tonga.
E.g. The Meteorological Services in French Polynesia has a Training Co-ordinator, whose responsibility is to develop an annual training plan based on a needs assessment that matches individual needs to sectional and organisation needs.  It also has an annual training budget for the provision of specialised and unspecialised training with continued upgrading of peoples' skills and knowledge in Toulouse, France.

The *training plans* should be linked to job descriptions, and where they do not exist, they should be developed.  There should also be, if possible, a Training Officer to implement the plan and maintain the training record.  With these plans in place, it is possible to transform on-the-job training to in-serve training programmes using experienced personnel.

xi)   Ensure there is a local resource person working alongside any external trainer to ensure continuity and transfer to others

xii)   Ensure mandatory reporting by the learner to his or her organisation and community, including verbal reporting

xiii)   Develop a reward system in the community or organisation following transfer of knowledge/skills

### 4.2.2   Measures to be taken by SPREP

These measures are to be taken for any SPREP Programme

*Learning Experience*

i)   Address the priority areas for training within the various work programme areas at SPREP.

ii)   Ensure that gender issues, traditional practices and group values are incorporated into training.

iii)   Ensure that a process or framework of action planning and implementation (including monitoring and evaluation) is developed for the training component of any SPREP project, that then looks progressively at components of this in detail (the methods, issues, appropriateness etc).   For example, the first phase of a major training project may take 3-4 weeks just on conservation planning, covering a wide range of cross-cutting topics like - participation, information collection and management, facilitation,

partnerships, etc . The next training may then focus on the implementation stage again revisiting the previous collection of topics.   This has proven to be effective (WWF training) if done in a progressive way that is not too prescriptive but emphasizes adaptive planning and management.   The value of the approach is that the framework provided a process that allowed the participants to integrate learnings from not just that training but others i.e. something to hang all the different 'pieces' onto.  This also allows for a better outcome as the larger picture is more clear with process emphasized.  This should be clear to the course designers which should then be communicated to trainees or participants at the outset and be revisited throughout the training.

iii)     Compile a <u>directory of case studies</u> across all environmental areas, to be used in training. Member countries have repeatedly called for case studies with more local content.   Although there is a considerable amount available under Biodiversity and Conservation, Waste Management etc., there needs to be a central source that can be easily accessed and available.  The role of clearinghouse for environmental informaiton under our Information Resource services is important in this regard.

*Work Environment within Member organisations/governments*

iv)     <u>Identifying the client as well as the learner for any training</u>

Revisiting the ''results formula,'' for training to yield results on-the-job, it must be linked to a business need.  SPREP has much control over the ''learning experience'' side of the equation, whereas the client (usually two levels above the learner) controls the work environment side of the equation.

> Learning Experience x Work Experience = Business Results

If training is to have an impact on-the-job, those who have control over the learning experience and whose who can change the work environment must work together as partners i.e. SPREP and its clients in Member organisations.

v)     Together with Members identifying the short-term and long-term <u>follow-up</u>, as well as who will fund it, should be done prior to the training.

vi)     Help strengthen the Human Resource (HR) function of key organisations in Members particularly with regards to developing Training Plans that are tied to business needs, and training records to keep track of training activities in-country

*Within SPREP Secretariat*

vii)     Ensuring the <u>participant selected</u> has the necessary skills to enable them to pass on their knowledge and skills

viii)    Developing a <u>monitoring and evaluation mechanism</u> that would help gauge the impact of training in SPREP Members.  E.g. when announcing a training programme or workshop, the Circular could stipulate that:

➢ applicants must advise SPREP of how they aim to implement the training and the type of support they may require to facilitate implementation

➢ one of the criteria for selection of a participant is for them to be prepared to return after their training and implement an activity or project within a given timeframe

➢ applicants will be expected to write a report within one month upon return to their workplace showing that they have made a presentation to others on what they have learned on the course

> applicants will be sent a Post-Training Evaluation Form within three months after returning to work. The Form is to be filled out by the trainees and their supervisors on how useful the training has been and whether there has been any change in the trainee's performance
> applicants will not be considered for any future training if they do not fulfill any of the above requirements
> for the selection process, applications are to be forwarded to SPREP for screening and selection, with the endorsement of National Focal Points

*Effect*
The effect of this measure would be to:
- discourage those who attend training when it doesn't necessarily fit in with their work
- spread the training net wider because applicants who can't commit to the requirements will pass the offer on to others who may
- make the first little step towards developing a ''learning organisation'' by ensuring that country participants transfer or impart some of what they have learned to others and not keep it all to themselves
- provide SPREP with some formal measure of whether the knowledge and skills acquired is shared or implemented in-country

ix) Developing and standardizing training forms and processes. Training is all about setting standards that enable us to measure the effectiveness of any programme. Such actions would include:

> documenting the training process from start to finish and having it easily accessible to SPREP Programme Staff for their reference
> developing a standard SPREP Pre-Training Questionnaire, Training Evaluation Form and Post-Training Evaluation Form that can be customised to meet the needs of any event, including meetings. This has been done already but feedback from Programme Staff has been slow. Perhaps this message can be reinforced through open discussion and with management support
> Developing standard Training Announcement Circulars, Nomination Forms and Course Programme Formats that can also be customized

*Effect*
- SPREP Programme Staff would be better informed about the requirements of a good programme. A lot of resources (funds, time, effort and people) go into running training programmes and workshops and should be seen as an investment, and like any investment, careful planning is mandatory
- Developing standard forms gives a comprehensive, unified and professional portrayal of SPREP training. Training documentation (forms and even reports) become recognisable as SPREP ''products'' and contributes to the ''branding'' of SPREP in its role as training provider.

These are some of the key recommendations arising out of the report, with a few of them e.g. developing standard training evaluation forms at SPREP, already developed and ready for implementation following further discussions and expressions of commitment.

**Closing remarks**

The assessment provides some baseline data about environmental training in the region that can be the basis of more in-depth studies across the different environmental fields. The role of the Training Officer will include working closely with the different work programme areas in SPREP to implement some of the recommendations outlined above.

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

## ANNEX A

**Purpose of the Questionnaire and Completion Guidelines**          O.U.O. -
|_|_|_|_|_|

(1-5)

The purpose of this environmental Training Needs Assessment (TNA) is to review past environmental training sponsored/conducted by SPREP for your country, and to determine future training requirements  to better meet your country's needs and priorities.

We would appreciate it very much if you could take time to fill in the questionnaire and return it to Audrey Dropsy while she is in-country.  She will be available to provide advice and assistance during the week to facilitate the information gathering process.

If there is more than one person in your department/organisation who will fill out Part B of this questionnaire please provide his or her name and designation.

Thank you for taking time to respond.

## PART A.     TRAINING IN GENERAL

**Name** _____

**Title** _____

**Department/Organisation**  _____

**Address (include email if available )**  _____

**Total Number of staff by gender    Men: _____(6/7) Women: _____(7/8) Total_____ (9-11)**

**Number of years  working in the Department/Organisation _____ (12/13)**

Briefly, how would you describe the main **Goals of your Department/Organisation?**

_____ (14)

_____ (15)

_____ (16)

_____ (17)

_____ (18)

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

1.

The areas identified below are SPREP's Work Programme Areas under the SPREP Action Plan. Please indicate with a tick(s), the environment-related area(s) for which your department/organisation is responsible:

**Bio-diversity and Natural Resource Conservation**

(19)
- ❑1   Conservation Area Management
- ❑2   Development and implementation of regional strategies, national plans and NGO and local community initiatives for endangered, threatened or vulnerable native species
- ❑3   Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species
- ❑4   Implementation of conventions, agreements and strategies relevant to the conservation and sustainable use of biological diversity
- ❑5   Increased political support and national/local capacity for Coral Reef and Wetland Ecosystem Conservation

**Climate Change and Integrated Coastal Management**

- ❑6   South Pacific Sea Level & Climate Monitoring Project
- ❑7   Pacific Island Climate Change Assistance Programme (PICCAP)
- ❑8   Development of Greenhouse Gas Inventories, Mitigation, Vulnerability and Adaptation Strategies in response to Climate Change, Climate Variability & Sea Level Rise by National Expertise
- ❑9   Evaluation of Methodologies, Models & their Results
- ❑0   Development of Curriculums for schools with the support of the SPSLCMP & Atmospheric Radiation Measurement (ARM) Project
- ❑X   Cooperation amongst regional Meteorological organisations and commitment to international standards and procedures
- ❑V   Coastal Management

**Waste Management, Pollution Prevention and Emergencies**

(20)
- ❑1   Waste and Chemical Management
- ❑2   Marine Pollution

**Environmental Management, Planning and Institutional Strengthening**

- ❑3   Planning, Managing and Regulating Development in an environmentally sustainable manner
- ❑4   Integrating NEMS into national and sectoral plans and programmes
- ❑5   Environmental Impact Assessment (EIA)
- ❑6   Environmental Reporting (State of Environment project)
- ❑7   Development and implementation of environmental legislation
- ❑8   Effective participation in regional and international environmental negotiations and agreements
- ❑9   General Environmental Management capacity building

**Environmental Education, Information and Capacity Building**

(21)
- ❑1   Formal environmental education/curriculum development
- ❑2   Public awareness raising
- ❑3   Coordination of environmental training
- ❑4   Development of clearinghouse mechanisms for environmental information (e.g. Web site, Database, and Library )
- ❑5   Media Liaison and Publications
- ❑6   Information technology infrastructure

**Other areas (please specify)**

- ❑7   _____

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

**Institutional issues**

2.  What are three main difficulties your department/organisation experiences in carrying out its responsibilities? Please indicate their importance using the following rating code;
    1 =very important,  2 = quite important, 3 = not very important

| Difficulty | Importance |
|---|---|
| (22) | (25) |
| (23) | (26) |
| (24) | (27) |

3(a)  Does your department/organisation have an annual Training or Staff Development Plan?

Yes ☐ 1   - go to Q5          ☐    No          2          (29)

4.  If your department/organisation <u>does not</u>  have a Training or Staff Development Plan, please tick beside the reasons why it  may not have one.  Tick as many as you wish.

(30)  _____  Training is not in the mandate of your organisation

(31)  _____  No need to develop a Training or Staff Development Plan

(32)  _____  No time to develop a Training or Staff Development Plan

(33)  _____  Don't know how to develop a Training or Staff Development Plan

(34)  _____  The idea of a Training or Staff Development Plan has never arisen

(35)  _____  Other (please specify)


5 (a)  Does your department/organisation have an annual training budget?

Yes ☐ 1          No ☐ 2 - go to Q5(c)          (37)

(b)  If it does, please indicate the amount in your currency (approximate): _____ (38-43)

(c)  If it does not, which agency is most likely to meet the cost of training?

_____(44)

_____(45)

_____(46)

6 (a)  Is information on training programmes disseminated throughout the whole department/ organisation?

Yes ☐ 1          No ☐ 2 - go to Q7          (48)

(b)      If it is, by what means is it disseminated throughout the department/organisation? Tick as          many as you wish.

Circulars or memo          ☐1          (49)

Staff meetings          ☐2

Notice board          ☐3

Other (please specify)          ☐4

_____

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

7.   Can you please provide a brief explanation of how nominees from your department/organisation. are
     selected for local or overseas training programmes.

     _____ (50)

     _____ (51)

     _____ (52)

     _____ (53)

8  (a)   Does your department/organisation conduct  training?

          Yes   ☐ 1 - go to Q9          ☐ No          2          (54)

   (b)   If it does not, please indicate why by ticking off one or more of the options.  Please put
         more than one tick beside what you consider the most relevant reasons.

(55/56)  ☐1 ☐1   We do not have enough knowledge of the subject to give training in it.

         ☐2 ☐2   We do not have enough knowledge of how to deliver training

         ☐3 ☐3   There is a shortage of resources (staff, money, equipment and time) to deliver

                  training

         ☐4 ☐4   There is no demand for training from the staff

         ☐5 ☐5   There is no demand for training from other organisations/community,  etc.

         ☐6 ☐6   There is no need for training in the organisation/department

(57/58)  ☐1 ☐1   There is no need for training in the other organisations/community, etc.

         ☐2 ☐2   We have tried training the staff  before but without success

         ☐3 ☐3   We have tried training other organisations/community, etc., before without success

         ☐4 ☐4   Training is not in the mandate of our organisation

         ☐5 ☐5   Other (Please explain)

         _____

9.   If your department/organisation conducts training, does it collaborate with other local, regional
     or international agencies/organizations, such as NGOs, churches, to deliver training or information to your
     staff, other departments/communities, etc?

          Yes   ☐ 1          No   ☐ 2 - go to Q10          (60)

     If it does, please name those collaborating organizations.

     _____ (61)

     _____ (62)

10.      What is the single biggest training need in your department/organisation?

     _____ (63)

     _____ (64)

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

11 (a)    Is there a training programme you have experience of, which would be useful as a model for future training.    Yes    1 ☐    No    2 ☐ - go to Q12    (66)

(b)    If so, please say what the training programme was and why it would be a useful model.

Programme: _____

Why useful as a model:

_____ (67/68)

_____ (69/70)

_____

_____ (71/72)

_____ (73/74)

## ENVIRONMENTAL TRAINING

### Environmental education and awareness raising

12.    What kind of tools do you think would be most appropriate for environmental awareness raising in your country? Please indicate X) the most appropriate tool in the column using the following scale, and indicate with a tick if there's a need to translate material into the vernacular (indigenous language).

1 = very appropriate, 2=quite appropriate, 3=not very appropriate

| Awareness tools | 1 | 2 | 3 | Need to translate into vernacular? |
|---|---|---|---|---|
| Brochures in libraries, appropriate govt. depts., NGOs, communities | | | | |
| Curriculum aids in schools | | | | |
| Videos for use by departmental staff and community groups | | | | |
| Posters | | | | |
| Radio programmes | | | | |
| TV advertisements | | | | |
| Theatre | | | | |
| Web site on the internet | | | | |
| Interactive CD (Compact Disc) | | | | |
| Other (Please provide other ideas) | | | | |

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

**Access to information**

13.    Please indicate the availability/accessibility of information in-country that can be incorporated into environmental training.  Tick in the appropriate column.

| Type of information/ resource | Readily available/ Accessible (within 48 hours) | Available/ accessible, but not easily | Unavailable/ inaccessible |
|---|---|---|---|
| Environmental Strategies/Plans | | | |
| Other related Reports | | | |
| Case studies | | | |
| Sites which could be visited | | | |
| Speakers | | | |
| Videos | | | |
| Internet | | | |
| Geographic Information Systems (GIS) | | | |
| Databases | | | |
| Results of university or other studies | | | |
| Traditional knowledge | | | |
| Other (please specify) | | | |

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

## PART B.  QUESTIONNAIRE - SPECIFIC AREAS

**THE QUESTIONS IN PART B, RELATE TO THE FOLLOWING SPECIFIC ENVIRONMENTAL AREAS AS OUTLINED UNDER SPREP'S ACTION PLAN;**

**B1  Bio-diversity and Natural Resource Conservation**
_____  Conservation Area Management
_____  Development and implementation of regional strategies, national plans and NGO and local community initiatives for endangered, threatened or vulnerable native species
_____  Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species
_____  Implementation of conventions, agreements and strategies relevant to the conservation and sustainable use of biological diversity
_____  Increased political support and national/local capacity for Coral Reef and Wetland Ecosystem Conservation

**B2  Climate Change and Integrated Coastal Management**
_____  South Pacific Sea Level & Climate Monitoring Project
_____  Pacific Island Climate Change Assistance Programme (PICCAP)
_____  Development of Greenhouse Gas Inventories, Mitigation, Vulnerability and Adaptation Strategies in response to Climate Change, Climate Variability & Sea Level Rise by National Expertise
_____  Evaluation of Methodologies, Models & their Results
_____  Development of Curriculums for schools with the support of the SPSLCMP & Atmospheric Radiation Measurement (ARM) Project
_____  Cooperation amongst regional Meteorological organisations and commitment to international standards and procedures
_____  Coastal Management

**B3  Waste Management, Pollution Prevention and Emergencies**
_____  Waste and Chemical Management
_____  Marine Pollution

**B4  Environmental Management, Planning and Institutional Strengthening**
_____  Planning, Managing and Regulating Development in an environmentally sustainable manner
_____  Integrating NEMS into national and sectoral plans and programmes
_____  Environmental Impact Assessment (EIA)
_____  Environmental Reporting (State of Environment project)
_____  Developing and implementing environmental legislation
_____  Effective participation in regional and international environmental negotiations and agreements
_____  General Environmental Management capacity building

**B5  Environmental Education, Information and Capacity Building**
_____  Formal environmental education/curriculum development
_____  Public awareness raising
_____  Coordinating Environmental training
_____  Development of clearinghouse mechanisms for environmental information (e.g. Web site, Database, and Library)
_____  Media Liaison and Publications
_____  Information technology infrastructure

**(If you DID NOT answer PART A of the Questionnaire please provide your name/title, responsibilities and department/organisation)**

Name_____Title_____

Responsibilities _____

Department/Organisation _____

## B1 - BIODIVERSITY & NATURAL RESOURCE CONSERVATION

**BIODIVERSITY & NATURAL RESOURCE CONSERVATION  is SPREP's Action Plan Area One (1).  It covers the following programmes:**

- Conservation Area Management
- Development and implementation of regional strategies, national plans and NGO and local community initiatives for endangered, threatened or vulnerable native species
- Prevention, eradication or control of non-indigenous species which threaten ecosystems, habitats and species
- Implementation of conventions, agreements and strategies relevant to the conservation and sustainable use of biological diversity
- Increased political support and national/local capacity for Coral Reef and Wetland Ecosystem Conservation

**Biodiversity & Natural Resource Conservation projects**

14.        Apart from the following projects, please identify any other  Biodiversity & Natural Resource Conservation projects currently operating in your country, or in association with your department/organisation or Conservation Area (CA). This is not  limited to SPREP projects.

| Project | Executing agency |
|---|---|
| South Pacific Biodiversity Conservation Programme (SPBCP) | SPREP |
| Regional Marine Turtle Conservation Programme (RMTCP) | SPREP |
| Regional Avifauna Conservation Management Programme (RACMP) | SPREP |
| Regional Marine Mammal Conservation Programme (RMMCP) | SPREP |
| Regional Invasive Species Project (RISP) | SPREP/IUCN |
|  |  |
|  |  |

**Biodiversity & Natural Resource Conservation problems**

15. What is a current Biodiversity & Natural Resource Conservation problem/pressure in your country? If there is more than one, please identify them IN ORDER OF IMPORTANCE, with (1) indicating very important, etc.

| Current Biodiversity & Natural Resource Conservation problem/problem | Importance |
|---|---|
| | 1 |
| | 2 |
| | 3 |
| | 4 |

**Past Training on Biodiversity & Natural Resource Conservation**

16. How many in your department/organisation or Conservation Area (CA) have undergone training in Biodiversity & Natural Resource Conservation over the past 3 years? Please fill in the table attached at the back as <u>Annex A</u> indicating the following;

- name and designation of the trainee
- name of the workshop attended
- where the training took place
- duration of training attended (date/month/year)
- sponsor of the training
- whether or not the person conducts any training himself or herself.

**What are the training needs for Biodiversity & Natural Resource Conservation**

17. <u>Technical</u> knowledge and skill requirements.

   Please indicate with an **(X)** your level of confidence for each of the knowledge, skill and ability areas described in <u>Annex B</u>.

18. <u>Generic</u> knowledge and skills requirements.

   Please indicate with an **(X)** your level of confidence for each of the knowledge, skill and ability areas described in <u>Annex C.</u>  *(If you are filling out any other environmental areas under Part B, please fill this section out only once.)*

19.     If training and education in Biodiversity & Natural Resource Conservation is needed, who do you think should receive this training? Please identify the most important group by ticking in the appropriate column.

| Group | Essential | Very important | Quite important | Not very important |
|---|---|---|---|---|
| National government staff (please indicate appropriate department) | | | | |
| Local government | | | | |
| Non government organisations e.g. churches, community groups | | | | |
| Community members (e.g. women, children and youths) | | | | |
| People employed in Conservation Areas (CAs) | | | | |
| Private enterprises | | | | |
| Teachers | | | | |
| School children | | | | |
| Universities/Colleges | | | | |
| Others (please specify) | | | | |

20.     Do you have any other comment or ideas of ways in which **Biodiversity & Natural Resource Conservation training** could be improved in your country?  If the space provided is not enough, please feel free to use the back of this page for your comments.

**THANK YOU VERY MUCH FOR TAKING TIME TO FILL THIS IN.  PLEASE RETURN IT TO ME BEFORE I LEAVE, AS I  AM VISITING IN-COUNTRY SPECIFICALLY TO ASSIST YOU IN COMPLETING THE QUESTIONNAIRES.**

**I MAY BE FOLLOWING UP WITH A PHONE CALL  SO THAT YOU CAN EXPLAIN YOUR IDEAS AND PRIORITIES MORE FULLY.   THANK YOU.**

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

B1

Question 17 :  Please identify those who have undergone Biodiversity & Natural Resource Conservation training, filling in the table as accurately as possible from 1992 to the present.

| Name of trainee and designation | Name of Course or W/shop attended.  Please indicate if its (N) national; (R) regional; or (I)international | Where training took place | Date/Year | Sponsor(s) | Does the person conduct/ organise any training?  Yes/No.  If so in what areas. |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

## *INSTRUCTIONS FOR ANNEXES B AND C*

*Listed under the column with the heading of each environmental area e.g. Coastal Management, there are items that you need to rate your skills and knowledge on that your job requires.  If something that you feel is important is not listed - please write it in the blanks provided.*

**The Rating Scale -**  The scale and defining 'indicators' below will help you to rate your **ABILITY LEVEL** for each item listed.  Enter your number rating in the spaces provided against the knowledge/skill item being assessed.

**ABILITY LEVEL:** Rate your level in each skill/knowledge area using scale and "indicators" below.

High Priority                                                                                     Low Priority

◄─────────────────────────────────────────────────────────────►

| **LOW ABILITY** <br><br> **(Currently unable to do it; lack basic knowledge of it)** | **MODERATE ABILITY** | | **HIGH ABILITY** <br><br> **(Able to help others; highly satisfied with self skill/knowledge)** |
|---|---|---|---|
| | **(Able to do it with some help; have some knowledge of it)** | **(Able to do it without further help or support; have sufficient knowledge of it)** | |
| ▪ Seen by others as a learner/trainee <br> ▪ Require constant support and supervision; always asking others for help <br> ▪ Feel anxious, highly dissatisfied, frustrated with self skill/knowledge <br> ▪ Work returned frequently for correction/improvement | ▪ Seen by others as adequately skilled <br> ▪ Require some supervision and support but becoming increasingly independent <br> ▪ Feel ok but not terrific about self skill/knowledge <br> ▪ Revisions required are generally minor | ▪ Seen by others as competent <br> ▪ Requires no supervision but still seeks some support <br> ▪ Feel confident about self skill/knowledge but needs assurance of others' advice and support <br> ▪ Revisions are rare and far between | ▪ Seen by others as an expert and could train others <br> ▪ Require no supervision <br> ▪ Highly satisfied with self skill/knowledge <br> ▪ Work usually accepted with no revision required |

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

B1    BIODIVERSITY & NATURAL RESOURCE CONSERVATION (Technical knowledge and skills requirements)

**Question 17:**    Please indicate with an (**X**) your level of confidence for each of the following knowledge, skill and ability areas.
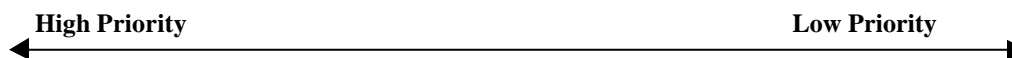
High Priority ← → Low Priority

| Biodiversity & Natural Resource Conservation | Not applicable | Currently unable to do it; lack basic knowledge of it | Able to do it with help; have some knowledge of it | Able to do it without further help or support; have sufficient knowledge of it | Able to help others; highly satisfied with self skill/ knowledge |
|---|---|---|---|---|---|
| Plan for Conservation Areas (CAs) through consultation with relevant parties | | | | | |
| Incorporate gender related concerns/issues in biodiversity & natural resource conservation plans | | | | | |
| Develop effective tools for community-based resource management and conservation | | | | | |
| Develop and identify appropriate links between species conservation and CA management | | | | | |
| Apply wildlife management techniques, which include, monitoring, survey, planning, EIA and contingency planning (mitigating early disasters in the early stages ) . | | | | | |
| Promote and market Conservation Areas (CA) | | | | | |
| Assess, identify, establish and manage income generating activities on a sustainable basis | | | | | |
| Evaluate and monitor CAs on a regular basis | | | | | |
| Raise public awareness using appropriate tools | | | | | |
| Access other resources in support of CA management | | | | | |
| Build capacity to network with others in and outside the CA site | | | | | |
| Coordinate and conduct training programmes for different groups in the community | | | | | |
| Understand National Biodiversity Action Plans & apply lessons learned from the CA in the implementation of such plans | | | | | |
| Operate computers and MS Office tools e.g. MS Word, Excel | | | | | |
| Other (please specify) | | | | | |

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

GENERIC KNOWLEDGE AND SKILL REQUIREMENTS FOR ALL ENVIRONMENTAL AREAS

QUESTION 18:        Please indicate with an (X) your level of confidence for each of the following knowledge, skill and ability areas.

**High Priority**                                    **Low Priority**

| Generic knowledge and skill requirements | Not applicable | Currently unable to do it; lack basic knowledge of it | Able to do it with help; have some knowledge of it | Able to do it without further help or support; have sufficient knowledge of it | Able to help others; highly satisfied with self skill/ knowledge |
|---|---|---|---|---|---|
| Development of management plans | | | | | |
| Finance and business management | | | | | |
| Meeting management including Facilitation | | | | | |
| Conflict Management | | | | | |
| Negotiations | | | | | |
| Communication - Making Presentations | | | | | |
| Communication - Interviewing | | | | | |
| Human resource management | | | | | |
| Supervision and personnel management | | | | | |
| Developing and supporting teamwork | | | | | |
| Leadership skills | | | | | |
| Time management | | | | | |
| Information Management | | | | | |
| Other (please specify) | | | | | |

## NUMBER OF RESPONDENTS FOR EACH ENVIRONMENTAL AREA PER COUNTRY

### Annex C

**Vanuatu Questionnaire Response**

| Dept/Org | Part A General | Biodiversity & Conservation of Natural Resources (B1) | Climate Change, Seal Level & Climate Monitoring and Meteorology (B2a) | Coastal Management (B2b) | Waste & Chemical Management (B3a) | Marine Pollution (B3b) | Environmental Planning & Institutional Strengthening (B4) | Environmental Education, Information and Capacity Building (B5) | Total |
|---|---|---|---|---|---|---|---|---|---|
| Environment Unit | yes | yes | yes | yes | yes | yes | yes | yes | 8 |
| Fisheries Dept. | yes | yes | | yes | | | | yes | 4 |
| Lands & Surveys Dept. | yes | | yes | yes | | | | | 3 |
| Meteorology. | yes | | yes | | | | | | 2 |
| PSC | yes | | | | | | | yes | 2 |
| Quarantine & Livestock Dept. | yes | yes | | | yes | | | | 3 |
| Vanuatu Rural Development and Training Centres Association | yes | | | | | | | yes | 2 |
| Wan Smol Bag Theatre | yes | yes | | | | | | yes | 3 |
| Department of Women's Affairs | yes | yes | yes | yes | yes | yes | yes | yes | 8 |
| Dept/Org: = 9   Total | 9 | 5 | 4 | 4 | 3 | 2 | 2 | 6 | 35 |

**Tonga Questionnaire Response**

| Dept/Org | Part A General | Biodiversity & Conservation of Natural Resources (B1) | Climate Change, Seal Level & Climate Monitoring and Meteorology (B2a) | Coastal Management (B2b) | Waste & Chemical Management (B3a) | Marine Pollution (B3b) | Environmental Planning & Institutional Strengthening (B4) | Environmental Education, Information and Capacity Building (B5) | Total |
|---|---|---|---|---|---|---|---|---|---|
| TEMPP[1] | Yes | Yes | Yes | | Yes | | Yes | Yes | 6 |
| Ministry of Marine & Ports | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 8 |
| Meteorology | | Yes | Yes | | | | | | 2 |
| EPAC[2] | Yes | Yes | Yes | Yes | Yes | Yes | | | 6 |
| Dept. of Health | Yes | | | | Yes | | | Yes | 3 |
| Central Planning | Yes | | | | Yes | | Yes | | 3 |
| Public Works Dept. | Yes | | | | | | | | 1 |
| Dept. of Education | Yes | | | | | | | | 1 |
| Ministry of Labour, Commerce & Industries | Yes | | | | Yes | | | | 2 |
| Ministry of Lands, Surveys & Natural Resources | Yes | | | Yes | | | | | 2 |
| Dept/Org= 10        Total | 9 | 4 | 4 | 3 | 6 | 2 | 3 | 3 | 34 |

1=Tonga Environmental Planning & Management Strengthening Project (AUSAID).
2=Environment Planning and Conservation/Ministry of Lands, Survey & Natural Resources

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

## FIJI QUESTIONNAIRE RESPONSE

| Dept/Org | General (PartA) | Biodiversity & Conservation of Natural Resources (B1) | Climate Change, Seal Level & Climate Monitoring and Meteorology (B2a) | Coastal Management (B2b) | Waste & Chemical Management (B3a) | Marine Pollution (B3b) | Environmental Planning & Institutional Strengthening (B4) | Environmental Education, Information and Capacity Building (B5) | Total |
|---|---|---|---|---|---|---|---|---|---|
| Pacific Concerns Resource Centre (PCRC) | | | yes | yes | yes | yes | | yes | 5 |
| Native Land Trust Board | yes | yes | yes | yes | yes | yes | yes | yes | 8 |
| Fiji Institute of Technology | | Yesx2 | Yesx2 | Yesx2 | Yesx2 | Yesx2 | Yesx2 | Yesx2 | 14 |
| Fiji Institute of Technology General Studies | | Yesx2 | Yesx2 | Yesx2 | Yesx2 | Yesx2 | Yesx2 | Yesx2 | 14 |
| National Trust for Fiji – Dept.of Women & Culture | | | | | | | | Yes | 1 |
| South Pacific Action for Human Ecology and Environment (SPACHEE) | yes | | Yes | | | | | | 2 |
| Dept/Org=5    Total | 2 | 5 | 7 | 6 | 6 | 6 | 5 | 7 | 44 |

## Papua New Guinea Questionnaire Response

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Office of Environment & Conservation | Yes(x2) | Yesx2 | yes | yes | yes | | | yes | 8 |
| Conservation Melanesia (NGO) | yes | yes | | | | | | yes | 3 |
| National Fisheries Authority | yes | yes | | yes | | yes | | | 4 |
| National Weather Service | yes | | | | | | | | 1 |
| Transport Maritime Division | yes | | | | | yes | | | 2 |
| National Forest Services | | Yesx2 | | | | | | | 2 |
| **Dept/Org=6 Total** | 6 | 6 | 1 | 2 | 1 | 2 | | 2 | 20 |

# SPREP ENVIRONMENTAL TRAINING NEEDS ASSESSMENT (TNA)

| Guam Questionnaire Response | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dept/Org | General (PartA) | Biodiversity & Conservation of Natural Resources (B1) | Climate Change, Seal Level & Climate Monitoring and Meteorology (B2a) | Coastal Management (B2b) | Waste & Chemical Management (B3a) | Marine Pollution (B3b) | Environmental Planning & Institutional Strengthening (B4) | Environmental Education, Information and Capacity Building (B5) | Total |
| WERIUG[1] | yes | | yes | | | | | | 2 |
| GEPA[2] Environmental Planning & Review Division | Yesx2 | Yesx2 | yes | Yesx2 | yes | yes | Yesx2 | yes | 12 |
| Dept/Org = 2  Total | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 14 |
| Total Questionnaire Response = 14 + 20 + 44 + 34 + 35 = 147 NB: 147 is the number of all the questionnaires answered. It does not necessarily mean that 147 different entities responded. Some organisations had one person fill in the 8 part questionnaire. | | | | | | | | | |