

South Pacific Regional Environment Programme

Training Unit K1

USES OF THE TRAINING MATERIALS

USE OF THIS UNIT

This unit describes some of the different ways that these training materials can be used. It should be included in the training programme whenever the participants will themselves be using these materials to organize local training activities. The group should discuss specific ways in which the materials could be drawn upon to help solve local problems.

Each participant should be provided with a complete set of the training materials for his own reference and later use.

TEXT

USES OF THE TRAINING MATERIALS

The goal of this programme is to give local people the knowledge they need to develop and manage their own resources and environment so that they can both meet present requirements and still be able to provide for future generations. This goal involves many needs for local environmental training and understanding which can be met in different ways, and these materials have been design to be used in as many of these ways as possible.

The level of the materials has been set as far as possible to be understandable by adults in rural village areas of the Pacific Islands. They should therefore be useful in rural extension and adult education activities, in training lower and middle level government employees at the local, provincial or national level, and in formal education from secondary school through university undergraduate levels. The materials are self-explanatory, so training leaders or instructors do not need to have prior experience with the environment in order to use them, but they may want to bring in outside resource people to help with some of the units.

The training programme has been divided into 48 units grouped under 11 headings (see annex). The units have been arranged in a logical sequence so that they can be used together from beginning to end as a comprehensive training programme. It is also possible to select just those units that apply to a particular local situation. It is not necessary to follow the present order of units, so they can be mixed or rearranged if that is more appropriate. Where one unit contains background information for another, this is stated at the beginning of the unit. The units have been designed to stand alone as well, so they can be used individually or as a supplement to other curricula.

Each unit is preceded by a brief explanation for the group leader or instructor on the use of the unit, which gives some suggestions as to its presentation. If exercises are needed to reinforce the material, these are also described briefly. Supporting audio-visual materials or supplementary materials are also listed. These are generally available from the South Pacific Regional Environment Programme.

All the units have a text which gives the basic content of the unit. This can be used by the group leader as the basis for his or her own presentation. It can also be read to or by the group, or copied and given to them as a text to be read and then discussed in the group. The questions at the end of most units can help with the discussion.

The following are some of the different types of applications of these training materials to illustrate the ways they can be used. Obviously many other uses are also possible.

Training local environmental specialists or resource managers

The purpose of the training programme taken as a whole is to give participants a broad background in environmental problems, an understanding of their resources, and enough knowledge of scientific methods to be able to look for solutions to specific problems. This is explained in more detail in units A1 and A2. People so trained should be able to become local environmental specialists and resource managers, working with their own communities to develop their resources wisely and to avoid environmental problems.

Normally all the units would be used in such a training programme, although a few units could be skipped if they concern resources that do not exist locally (such as forests on many atolls). The existing order should be followed unless there are special reasons to take some units out of order, such as the presence of a visiting expert or an opportunity for a field trip.

The length of the training programme would depend on the ability of the participants to absorb the material and the amount of time they have available. The programme could be concentrated into a period of several weeks, but it might be better to spread it over several months to a year, with periods of two or three weeks training as a group followed by periods back in the villages applying what has been learned and perhaps doing field exercises.

One possible time schedule for such a training course involving 13 weeks of group training spread over 9 months is as follows:

GROUP SESSION 3 weeks

- Goals of the training course (A1)
- Sensitization to environmental problems (B1-B6)
- Resources of the country or region (C1-C10; lectures and field trips)

INDIVIDUALLY IN THE FIELD (at home) 1 month

- Each trainee prepares a descriptive report on the local resources of his village or area

GROUP SESSION 2 weeks

- Principles of ecology and resource management (D1-D6)
- Traditional environmental management (E1-E3)

INDIVIDUALLY IN THE FIELD 1 month

- Studies of traditional resource use (in each trainee's area)

GROUP SESSION 2 weeks

- Reports and discussion of traditional environmental management
- The human habitat (F1-F4)
- Managing the local environment (G1-G4)

- INDIVIDUALLY IN THE FIELD 1 month
- Inventory of local resources and environmental problems (by each trainee in his own area)
- GROUP SESSION 3 weeks
- Reports and discussion of inventories and local problems
 - Research methods and techniques (H1-H3)
 - Group research projects
 - Choice of a research project by each trainee
- INDIVIDUALLY IN THE FIELD 2 months
- Research projects
- GROUP SESSION 3 weeks
- Review of research project reports
 - Assessment of development projects (I1-I7)
 - Communicating knowledge to others (J)
 - Review and evaluation of training course
 - Group visits to each village with presentation to the community of the trainee's results

Village sensitization on local environmental questions

Sometimes a whole village may have environmental problems which require understanding and action at the local level. A selection of training units could be presented in a series of meetings in the village to sensitize the community to their problem and to the possibilities for local action. This could start with units B1, B2, B4, and B5 to give a general introduction to environmental problems. A few units could be chosen from among sections C, D and F that apply specifically to the local problems. If traditional knowledge is important in the village, then units E1, E2 and E3 could also be covered. Finally unit G4 - Planning could be used to help the village prepare a local plan to solve its problems.

Focus on a specific local problem

It may be that all that is needed is to help a community or area with a specific local problem. The following two examples show how a selection of training units can be used for a training programme to address a particular problem.

Suppose there is a project to install a freezer for storing fish so that it can be sold in the main town. It would be important for the local fishermen to understand what this could mean for the management of their fishery. A training programme for the fishermen could start with units B1 and B2 to give a short introduction to the idea of the environment and the need to manage resources. This could be followed by units C8, C9 and C10 describing coastal resources, and by unit C6 on fisheries management. Part of unit E1 on

traditional fisheries knowledge could also be included. Unit I6 would cover the possible impacts of fisheries development projects like the freezer. The training could end with the part of unit H2 on coral reef and fish monitoring, so that the fishermen could collect information themselves on what is happening to their resource, and then act accordingly.

Another example would be the case of a village on a high island with problems of water shortage and pollution in its water supply. An extension training programme in the village could start with units B1, B2 and B4 on general environmental problems. Unit C2 would explain water and the water cycle, and part of C4 could be added if part of the problem came from forest cutting in their water catchment. Unit D2 would explain the role of the weather, units D5 and D6 would provide the basis for understanding water pollution, and unit F2 would show possible sources of the pollution problem in the village. To help the people find a solution to their problem, units G1 and G4 could show how to inventory the water catchments and plan for their management, and the sections of unit H2 on rainfall and turbidity would show methods for collecting better information on the water supply and water pollution.

Training monitoring personnel

Both general government programmes and specific development projects often require regular environmental studies or monitoring to provide information on the present state of the environment and to record any important changes. However, there are few trained environmental specialists in the South Pacific to do such work. In the absence of more highly qualified personnel, these training materials can be used to train existing or newly recruited staff to carry out routine environmental monitoring.

Such a training programme could begin with units B1, B2, B3, B4 and B6 to give a general background on the environment, followed by the units in sections C and D most pertinent to the monitoring project. Units F1 and F2 would be appropriate for any monitoring in or around villages or towns. Mapping and inventories are covered in unit G1. Units H1 and H2 would be covered in detail, as would unit I2. If other specific monitoring techniques are to be used, they should be explained as well. The appropriate units in I3 to I7 would be added if projects are to be monitored. The communications skills covered in unit J might also be of use to monitoring personnel.

Introducing government personnel to environmental questions

Any government concerned about the sound management of its country's environment will want all government personnel to be aware of the environmental dimensions of their work.

Short training programmes built around a selection of the units could give government officers the necessary background to carry out their responsibilities more effectively without requiring too much time away from their jobs.

It is also possible to organize a rapid 2 or 3 week course which could skim quickly through most of the units, touching on the highlights of the materials and providing copies of the units so that they can be referred back to again for further individual study. Such an approach would both strengthen the participants' general background on the environment and also help them to see where they could themselves use the training materials in their own areas of responsibility.

Use in formal education

Many of the units could be used in schools and universities at various levels. Taken together they could form the basis for a course in environmental management. Individual sections or some units in them could also be used as a supplement to existing curricula in fields such as:

- natural science (units in sections B, C, D, H),
- social science (B, D, E, F, I),
- health (B, D, F),
- geography (B, C, F, G),
- biology (B, C, D, H),
- geology (B, C, D, H, I),
- environmental science (all),
- agriculture (C, D, E, G, H, I),
- forestry (C, D, G, H, I),
- fisheries (C, D, E, G, H, I) and
- development planning (B, F, G, I).

The level of the units would be most suitable to upper secondary school and university undergraduate levels, but even upper primary school teachers could find some of the concepts and ideas useful in their classes. The materials could therefore be covered most appropriately as part of the curriculum in teacher training colleges.

Educating the general public

There is a great need in the Pacific for the general public to become more aware of the environment and the things they can do to manage it wisely. Public understanding of environmental questions can also encourage governments to take action to solve environmental problems.

The text of certain units could be adapted for use as newspaper articles, or provide the basis for radio broadcasts on environmental topics.

There are many non-governmental organizations and citizens' groups interested in questions of environment and development that could use some of the units for group activities, or even organize their own training programmes for their members using all or part of the training materials. These groups might include women's associations, youth groups, church groups, adult education programmes, nature protection societies, environmental groups, and other kinds of associations. Such groups could pick and choose among the units those in which they are particularly interested.

ANNEX

TRAINING FOR RURAL ENVIRONMENTAL MANAGEMENT

OUTLINE OF THE TRAINING PROGRAMME

- A. Explanation and justification of the training programme for village leaders and potential trainees.**
- A1. Introduction to the training programme (for trainees)
 - A2. Introduction to the training programme (for village leaders)
- B. Sensitization to environmental problems**
- B1. Problems in the Pacific Islands environment
 - B2. Problems in the local environment
 - B3. Problems in the world environment
 - B4. Relevance of environment to immediate practical concerns
 - B5. Overview of traditional environmental management
 - B6. The South Pacific Regional Environment Programme
- C. Basic resources**
- C1. Geological origins of islands
 - C2. Water and the water cycle
 - C3. Soils
 - C4. Forests and their ecological importance
 - C5. Environmental management in agriculture
 - C6. Fisheries management
 - C7. Conservation of nature
 - C8. Coral reefs
 - C9. Lagoons
 - C10. Mangroves
- D. Principles of ecology and resource management**
- D1. Time
 - D2. The weather
 - D3. Nutrient cycles
 - D4. Populations
 - D5. Microbes
 - D6. Water pollution
- E. Traditional environmental management**
- E1. Traditional resource use and management
 - E2. Sorcery and science
 - E3. Salvaging and evaluating traditional knowledge
- F. The human habitat**
- F1. The human habitat: basic needs
 - F2. Hygiene and sanitation
 - F3. Human habitat planning
 - F4. Disaster planning

- G. Managing the local environment**
- G1. Resource inventories and mapping
 - G2. The environment in the past
 - G3. Predicting the future
 - G4. Planning
- H. Techniques for research and monitoring**
- H1. Research: the scientific method
 - H2. Research and monitoring instruments and techniques
 - Rainfall
 - Temperature
 - Turbidity
 - Coral reef and fish monitoring
 - Forest monitoring
 - Soil analyses
 - Censusing and sampling
 - H3. Recording and analyzing data
- I. Assessment of development projects**
- I1. Dealing with developers
 - I2. Principles of project assessment and monitoring
 - I3. Mining impacts
 - I4. Forestry impacts
 - I5. Agricultural impacts
 - I6. Fisheries industry impacts
 - I7. Tourism impacts
- J. Communicating knowledge to others**
- Giving a simple talk
 - Teaching by example
 - Writing reports
- K. Use and evaluation of the training materials**
- K1. Uses of the training materials
 - K2. Evaluation of results

South Pacific Regional Environment Programme

Training Unit K2

EVALUATION OF RESULTS OF TRAINING ACTIVITIES

USE OF THIS UNIT

Training courses and other training activities can only be improved over time if the results are evaluated. The reactions of participants can be very useful in identifying strong points and weaknesses in the training approach, and in making certain that the training meets real needs.

This unit provides a format for evaluating training activities using the materials in this programme. The format is based on that used by the South Pacific Commission for many years to evaluate all its training activities, with some modifications to adapt it to this training programme.

The questionnaire should be duplicated and given to each participant at the end of the training activity. Time should be allowed at the end of the course for the questionnaires to be completed. They should then be returned to the course organizer for evaluation.

The South Pacific Regional Environment Programme would appreciate receiving summaries of such course evaluations, as well as any other comments that could help to improve these materials. Write to:

Environmental Education Officer
South Pacific Regional Environment Programme
South Pacific Commission
Post Box D5
NOUMEA CEDEX
New Caledonia

**EVALUATION QUESTIONNAIRE ON
RURAL ENVIRONMENTAL MANAGEMENT TRAINING COURSE**

Course participants are to fill in this form. Each participant should not give his or her name but tick (or check) the appropriate boxes and make as many comments as possible.

NAME OF COURSE:

VENUE:

DATES: From: to
Day/Month/Year Day/Month/Year

I. Overall impressions of the course

1. Do you think you personally needed the course?
Urgently Moderately Not really

2. What do you consider were the main objectives of the course?

.....
.....
.....

3. Do you think that those objectives were achieved?
Completely Partly Not really
If not really, or partly, why?

.....
.....
.....

4. Did you find the course interesting?
Very Moderately Not really

5. Has the course made you want to find out more about the environment?
Very much so Partly Not really

6. Do you think that the course material was relevant to your present job?
Completely Moderately Not really

7. Do you think that, as a result of attending this course, you will be better able to manage your resources and environment when you return?

Very much so Partly Not really

If not really, or partly, why?

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.....

.....

II. Contents of the course

8. How did the group leader/instructors perform in general?

Well Adequately Poorly

If poorly, why?

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.....

.....

9. Do you think that the course was well balanced (i.e. between lectures, discussions, films, field trips, etc.)?

Yes No

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.....

10. How useful were the following? Very useful Useful Mostly useless

a.	lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	slides and films	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	field trips and visits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	general discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	small group discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

K2 Evaluation of results

- 4 -

11. What is your opinion of the following topics as they were presented?		Very useful	Average	Unsatisfactory
A.	introduction, justification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.	environmental problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C.	basic resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D.	ecology and resource management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E.	traditional environmental management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F.	human habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G.	managing the local environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H.	techniques for research & monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I.	assessment of development projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J.	communicating knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any comments?

12. List any topics or subjects that you think should have been dealt with
- a. in more detail
 - b. in less detail

13. Did you find the course practical or theoretical?
 Practical Mixed Theoretical

14. The course sessions were:
 Too long About right Too short

15. The pace was:
 Too fast About right Too slow

16. The level was:
 Too high About right Too low

17. Did you have serious difficulty in understanding any of the sessions?
 Yes No

If yes, why?

III. Administrative and other arrangements for the course

18. Were you able to have enough contact with
- | | | | | | |
|----|--------------------|-----|-----|----|-----|
| a. | lecturers/experts | Yes | [] | No | [] |
| b. | other participants | Yes | [] | No | [] |
19. Did you have enough free time
- | | | | | | |
|--|--|-----|-----|----|-----|
| | | Yes | [] | No | [] |
|--|--|-----|-----|----|-----|
20. Were you happy with the following areas of organization?
- | | | | | | |
|----|--------------------------------|-----|-----|----|-----|
| a. | allowance | Yes | [] | No | [] |
| b. | social and cultural activities | Yes | [] | No | [] |
| c. | travel arrangements | Yes | [] | No | [] |
| d. | accommodation | Yes | [] | No | [] |

IV. Need for follow-up course in the future

21. Do you think this course should be repeated or followed up for other people? If yes, how often?

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.....

V. General

22. Please give any general comments you have that can help us to plan future courses.

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.....

EVALUATION QUESTIONNAIRE ON
RURAL ENVIRONMENTAL MANAGEMENT TRAINING COURSE

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Very Moderately Not really
5. Has the course made you want to find out more about the environment?
Very much so Partly Not really
6. Do you think that the course material was relevant to your present job?
Completely Moderately Not really
7. Do you think that, as a result of attending this course, you will be better able to manage your resources and environment when you return?
Very much so Partly Not really
If not really, or partly, why?
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II. Contents of the course

8. How did the group leader/instructors perform in general?
Well Adequately Poorly
If poorly, why?
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9. Do you think that the course was well balanced (i.e. between lectures, discussions, films, field trips, etc.)?
Yes No
.....
.....
.....

10. How useful were the following? Very useful Useful Mostly useless
- a. lectures
- b. slides and films
- c. field trips and visits
- d. general discussions
- e. small group discussions
- f. assignments

11. What is your opinion of the following topics as they were presented? Very useful Average Unsatisfactory
- A. introduction, justification
- B. environmental problems
- C. basic resources
- D. ecology and resource management
- E. traditional environmental management
- F. human habitat
- G. managing the local environment
- H. techniques for research & monitoring
- I. assessment of development projects
- J. communicating knowledge

Any comments?

.....

.....

12. List any topics or subjects that you think should have been dealt with
- a. in more detail
- b. in less detail

13. Did you find the course practical or theoretical?
- Practical Mixed Theoretical

14. The course sessions were:
- Too long About right Too short

15. The pace was:
- Too fast About right Too slow

16. The level was:
- Too high About right Too low

17. Did you have serious difficulty in understanding any of the sessions?
- Yes No

If yes, why?

.....

III. Administrative and other arrangements for the course

18. Were you able to have enough contact with
- a. lecturers/experts Yes No
- b. other participants Yes No

19. Did you have enough free time Yes No

20. Were you happy with the following areas of organization?
- a. allowance Yes No
- b. social and cultural activities Yes No
- c. travel arrangements Yes No
- d. accommodation Yes No

IV. Other

21. Do you think this course should be repeated or followed up for other people? If yes, how often?
-

22. Please give any general comments you have that can help us to plan future courses
-
-
-