

REPORT ON THE INR WORKSHOP ON
COASTAL WATER QUALITY MONITORING,
VILA, VANUATU 16-23 APRIL, 1987

INR TECHNICAL REPORT NO.87/2

INSTITUTE OF NATURAL RESOURCES
UNIVERSITY OF THE SOUTH PACIFIC

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S. Naidu

April, 1987

INTRODUCTION

This workshop was organised in response to a request from the Government of Vanuatu to the South Pacific Regional Environment Programme (SPREP) for provision of basic training for local staff from various Government Departments in coastal water quality monitoring.

AIMS OF THE COURSE

The aims of the course were:

- 1) To introduce the participants to the importance of coastal water quality monitoring
- 2) To introduce participants to the techniques of water sample collection and preservation
- 3) To give participants experience in field survey work including the criteria used in selection of sampling sites and the use of field instruments onsite for measurement of parameters such as salinity, temperature, clarity of water, dissolved oxygen, and in bacteriological analysis
- 4) To introduce participants to some laboratory analytical techniques used in water quality monitoring
- 5) To involve participants in the calculation and interpretation of water analysis results

COURSE ORGANISATION AND COURSE CONTENT

The course was run at the Agricultural Department, Tagabe, Port Vila and was attended by seven technical assistants (see Appendix I for names and present posting). The course presentation consisted of a combination of lecture and discussion sessions with a substantial section on field work and laboratory work (see Appendix II for the detailed programme). A major part of the fieldwork consisted of the selection of sampling sites for a water quality assessment of Vila Bay, Erakor and Emten Lagoons (see Figure I). All the participants had an opportunity to use field equipment such as deep-water sampling bottles, salinity meter, dissolved oxygen meter, temperature probes. They also made clarity measurements and performed simple chemical analyses

such as determination of dissolved phosphate in water. The final part of the course consisted of a discussion of results obtained and interpretation of the data. All course participants were given a draft handbook on techniques involved in water quality assessment.

GENERAL COMMENTS

One of the principal difficulties with a course of this kind is that most of the equipment and chemicals have to be brought from the main USP campus, and this presented some problems. In the case of equipment which are fragile, extra precautions are required and almost always more than the required amount of chemical has to be taken.

ACKNOWLEDGEMENTS

The workshop staff would like to thank the following people who were of considerable assistance in the organization and running of the course:

- 1) Dr M. Chambers, Environmental Adviser, Ministry of Lands,
Energy and Rural Water Supply
- ii) Mr P. Bazeley, Principal Veterinary Officer, Ministry of
Agriculture

The workshop was organised and presented by:

Mr Jon Brodie, Director, INR, USP

Mrs Shamila Naidu, Research Fellow, INR, USP

and funded by the South Pacific Regional Environment Programme and the Institute of Natural Resources.

APPENDIX I

Course Participants

- 1) Mr Ernest Bani, Environmental Officer, Ministry of Lands, Energy and Rural Water Supply
- 2) Mr Rawo Bong, Technical Assistant, Agriculture Department
- 3) Mr Albert Carlot, Fisheries Officer, Fisheries Department
- 4) Mr Willie Harrison, Technical Assistant, Ministry of Geology, Mines and Rural Water Supply
- 5) Mr Tony Masiu, Technical Assistant, Port Vila Municipality Health Department
- 6) Mr Harry Tete, Technical Assistant, Physical Planning Unit
- 7) Mr Richard Malili, Technical Officer, Vila Hospital Laboratory

APPENDIX II

Course Programme

Monday 13 Aril 1987

Meeting with workshop participants and their section heads.
Discuss arrangements and contents of the Workshop.

Thursday 16 April 1987

Introduction to coastal water quality monitoring.
Methods of monitoring.
Water sampling and preservation techniques.
Field and laboratory analysis.

Tuesday 21 April 1987

Field trip on Fisheries Department vessel.
Use of field equipment in Vila Harbour.

Wednesday 22 April 1987

Analysis of water samples collected on 21/4/87 using facilities at Government Agriculture Laboratory, Tagabe.
Counting of fecal coliforms on samples from Vila Harbour.
Explanation of uses of various pieces of equipment and instruments available in agricultural laboratory.
Visit to hospital laboratory for discussion on various microbiological techniques used in bacteriological examination of water.
Visit to some sites in Erakor and Emten lagoon to explain the consequences of nutrient enrichment of water.

Thursday 23 April 1987

Review of fieldwork.
General discussion on the course/response to participants

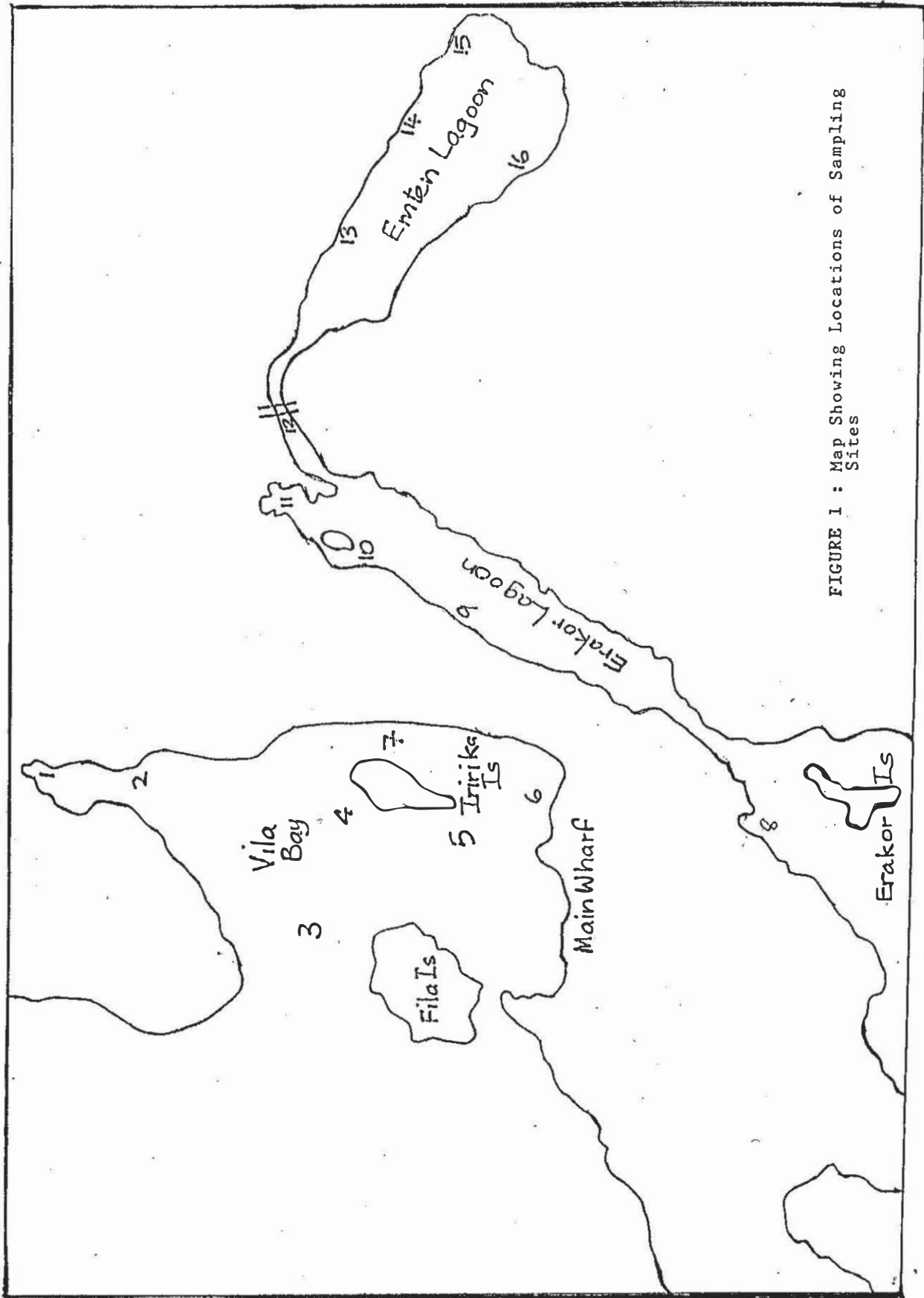


FIGURE 1 : Map Showing Locations of Sampling Sites