

SUMMARY:

THE DEVELOPMENT OF THE
ATOLL RESEARCH UNIT
TARAWA ATOLL
REPUBLIC OF KIRIBATI

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THE ATOLL RESEARCH UNIT: BACKGROUND

The Atoll Research Unit (ARU) was established by the University of the South Pacific in Tarawa, Kiribati, after consultations with the Kiribati Government, to carry out investigations on the problems of living on atolls: environmental, resource, social and economic factors.

ARU began operation in 1980 as a branch of the University of the South Pacific's Institute of Marine Resources. It consists of a spacious laboratory/office block on Tanaea Islet on Tarawa, basic laboratory, aquarium facilities, photographic and darkroom equipment, SCUBA tanks and compressor, 5m and 3.5m motorboats for nearshore studies, a motor vehicle, motor bike and house. It has a staff of four: director/research fellow, 2 research assistants and, technician.

Although ARU is situated in the remote Gilberts Group on the equator, it is well serviced by aircraft: biweekly from Nauru (with connections to Micronesia, Guam, Japan, Australia, Fiji, Solomon Islands), once weekly from Marshall Islands, and once weekly from Fiji and Tuvalu. ARU communicates each second week with the Institute of Marine Resources, Laucala Campus of the University of the South Pacific, via satellite (USP Net Sat. of Peace Sat Network).

RESEARCH PROJECTS AND PUBLICATIONS

The main marine and fisheries projects conducted from 1980-1982 include:

- (1) * Circulation of water in Tarawa Lagoon (Prof. Groves)
- (2) * Shore processes and beach formation (Prof. Groves)
- (3) * Earthquakes and atoll inundation (Prof. Groves)
- (4) * Intertidal ecology of Tarawa Lagoon (Ms. L. Bolton)
- (5) ** The ecology and fishery of the bivalve *Anadara* (te bun) (Ms. L. Bolton)
- (6) ** The scleractinian corals of Kiribati (Ms. L. Bolton; Dr. L. P. Zann)
- (7) ** The distribution of the blue coral *Heliopora* (Dr. L. Zann)
- (8) * Atoll subsistence fisheries (Dr. L. Zann)
- (9) * Beche-de-mer in deeper waters of Tarawa Atoll (Mr. H. Silver)

In addition ARU has a comprehensive marine reference collection of scleractinian corals (ident. Prof. M. Pichon), a small collection of molluscs, and a small herbarium.

A number of agriculture and social projects were conducted at ARU in 1982. These include:

- (1) ** Soil classification (Dr. J. Morrison)
- (2) * Taro beetle research (D.E. Dharmaraju)
- (3) * The hydrochemistry of giant taro (babai) pits (Dr. T. Frevert)
- (4) ** Aroid research and breeding (Dr. Wilson)
- (5) ** Veterinary care (Mr. Moengangongo)
- (6) * Social factors affecting lagoon use and shore colonization (G. Sullivan)
- (7) * A bibliography on atoll research in Kiribati (G. Sullivan)

* denotes Technical Reports available

** denotes Technical Reports in preparation

PRESENT RESEARCH

Projects in 1983 include:

- (1) A study of tuna baitfish in Kiribati (Mr. D. McCarthy and T. Tebano)
- (2) Fish migration through atoll passages (Mr. D. McCarthy and T. Tebano)
- (3) Subsistence fisheries and yields from atolls (Dr. L. Zann)
- (4) Monitoring of reef fish for ciguatera poisoning (T. Tebano)
- (5) Fishes of Tarawa (Dr. A. Emery)

FUTURE PROGRAMS

The University of the South Pacific has proposed that ARU's scope of interest be broadened to include the general problems of the atolls in the University region (Tuvalu, N. Cooks, Nauru). Projects with the atoll countries of Micronesia will be encouraged.

It is therefore hoped that the resident staff of ARU will increase, visitors will be encouraged and that it will become a centre of atoll studies in the future.

ODA PROPOSAL

The position of Director of ARU is pending. It is hoped that the new Director will develop a range of new programs and generate appropriate funding.

However ARU requires some urgent financial support in the immediate future.

- (1) A replacement motor vehicle. The present Whitby Warrior has broken down for 12 months and is probably beyond repair. ARU is currently unable to transport equipment by road, greatly affecting its operations.
- (2) Project funds. The University currently allocates only F\$12,000 p.a. to ARU for maintenance and projects. To develop a credible research program additional funding (e.g. on additional \$20,000 p.a.) is required.
- (3) Personnel. Research projects to be designated by the new Director and ARU Advisory Committee will require specialized scientific personnel. ODA might consider making available fellowships of 1-2 year duration for UK scientists for relevant research programs (e.g. as it is funding Mr. Steven Why for the Eucheuma project).
- (4) Education and extension. ODA might consider funding a small fisheries/marine sciences library for ARU. This could be incorporated into the existing USP Centre Library.

The development of a video education centre (e.g. using cheap VHS equipment camera, monitor, VTR \$2500) with a small library for supply of video tapes for extension programs.

The funding of workshops on relevant topics (e.g. on the Law of the Sea and atoll nations), drawing participants from surrounding atoll nations and states.

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