PROFITABLE ENVIRONMENTAL PROTECTION (PEP) PROJECT

ANNUAL SUMMARY

Fiscal Year, 1994

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QUARTERLY REPORT

July, August, September, 1994

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PROFITABLE ENVIRONMENTAL PROTECTION (PEP) PROJECT

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PROJECT ADMINISTRATION

The new fiscal year opened with a PEP Advisory Committee meeting held in Tonga. Because of the uncertainties surrounding the future of the Suva USAID mission and the life of the PEP Project, it was agreed that activity outside Vanuatu would be curtailed until the situation was clarified.
All proposed interventions were reviewed and ranked, with eight subsequently approved for continuing activity. Five were considered to have a low probability of success and placed on inactive status with no plan for subsequent action. Two of the approved eight were located outside Vanuatu, and placed on hold. The Committee determined that the approved interventions were of sufficient scope and diversity to test the PEP hypothesis; no new interventions were to be sought.

Decisions regarding the Suva USAID mission and the Project were handed down early in the second quarter. The mission was to be closed at the end of September 1994, and liaison with FSP for PEP was transferred to USAID/Manila. The original PEP Project completion date of September 1995 remained unchanged. Project funding was reduced, with a concurrent reduction in the Project's geographic scope. It was confirmed that future Project activity would be limited to Vanuatu; initiatives in Papua New Guinea and Tonga were discontinued. USAID and FSP agreed to shift program emphasis to greater promotion of community participation, building local skills, institutional strengthening and documentation of lessons learned for sharing with other NGOs.

With PEP staff geographically dispersed in stations in Santo, Ambrym and Port Vila, formal quarterly staff meetings were instituted to facilitate planning and communication. These meetings have also served as a vehicle to quickly acquaint new staff members with the broad purposes of the PEP Project, as well as familiarize them with day-to-day ongoing activity.

PERSONNEL

In January 1995, Marine Conservation Specialist Anita van Breda arrived to assume on-site direction of the Elephant Island intervention. February saw George Bumseng, a resident of N. Ambrym, join the Project as Local Facilitator to assist Liaison Officer, John Salong.

Two other new staff members were recruited during this quarter. Ms. Donna Kalfatak assumed the post of Environmental Coordinator Assistant, based in Santo. Stanley Womack joined the staff on a six months contract to develop environmental education programs appropriate to the various PEP initiatives.

PEP lost a capable and fine scientist when Project Manager, Dr. Nora Devoe, resigned in May. Upon her departure, the Project management was reorganized in response to an USAID/FSP agreement for more participatory management. Some management responsibilities were assumed by FSP Regional Director, Ms. Kathy Fry, and the rest vested in the Project Coordinator, Suliana Siwatibau, who joined the staff on May 30th. Ms. Siwatibau is a botanist with wide ranging development experience in the South Pacific.

In July, another Lolihor resident, Matu Bongranli was recruited to serve as Liaison Officer for Women.

PROGRAM ACTIVITIES

As previously noted, the retrenchment of USAID activities in the Pacific resulted in a contraction of PEP's activities from a regional project to one confined to Vanuatu. Through to the end of the Project, the focus will be on two EMUs at Lolihor, N. Ambrym and Hog Harbour, Santo; and on two other activities, design of a species recovery program and enterprise development for the endemic palm species Carpoxylon macrospermum; and upon producing a report on viable alternative ways of handling waste lubricating oil in Vanuatu.

Lolihor:

A program to (re)introduce acid resistant varieties of wild yams into the dark bush on the upper slopes of Lolihor is progressing with 3000 kgs. of seed tubers sown by approximately 100 participating farmers.

In August, PEP signed an agreement with Vanuatu's Farm Support Association (FSA) to establish several demonstration or "wuhuran" farms to demonstrate techniques for site-stable agriculture. The objective of this program is to introduce practices to increase the productivity of existing gardens. Workshops conducted by PEP's Environmental Education Specialist reinforce this program. Community monitoring of the effect of community activities was

encouraged through the design of two surveys which were conducted by the local school. These gathered information on people's current practices with regard to clearing bush for gardens and their attitudes towards land conservation.

Following a positive report from PEP's tourism consultant and support from the people of Lolihor, a five day trek from Lolihor to Ambrym's volcanos, across the ash plain and back to the airport in N. Ambrym was designed. To prepare the community to understand and meet the expectations of tourists, two workshops were held to train guides. A food preparation workshop was conducted to teach Lolihor cooks to prepare nutritional menus using local foods with greater appeal to tourists. With the cooperation of the Red Cross of Vanuatu, a five day first aid workshop was organized for tour guides. Two trial treks were run under the supervision of the consultant followed by more training to correct deficiencies. Subsequently, several treks were conducted by the members of the tourism project with no PEP staff assistance. Tourists universally report that the experience was enjoyable, but uneven. It is clear that people involved in the tour have the skills but do not always employ them.

In parallel with the advancement of specific interventions, community development activities have been facilitated throughout the year. Lolihor-based PEP staff have worked with the UNDP's Equitable and Sustainable Human Development Programme (ESHDP), a project to train local people to evaluate their resources, determine and prioritize their needs, and develop a program to meet these needs. To facilitate the establishment of a community wide-group to assume responsibility for management of development activities, FSP's Community Development Specialist visited Lolihor where he consulted with leaders of the six villages within the EMU. The result of this effort was the establishment of the Lolihor Development Council (LDC) in January 1994. This body meets regularly and has assumed the lead in providing guidance for development activities within the community.

Early in the year, PEP staff assisted in the formation of the Wuhuran Theatre Group, a community theatre troupe serving as a vehicle to heighten awareness of social and conservation issues, and to provide education relative to these matters.

In January, Wuhuran attended a workshop conducted by Vanuatu's profession troupe, Wan Smol Bag. The group has given numerous performances in Lolihor, and has proven to be effective in promoting community development activities.

Hog Harbour, Santo:

Marine Conservation Specialist Anita Van Breda joined PEP in January, establishing residence and an office in Santo, where she will provide onsite direction of the Hog Harbour intervention. Environmental Education Assistant Donna Kalfatak, also based in Santo, augmented the PEP staff in May. The initial emphasis Hog Harbour has been to assure that activity is community based, and that social and economic factors are considered in formulating a PEP's goals. Ongoing liaison with the Local Government Council, Hog Harbour village leaders and all other stakeholders has been maintained. With the support of Clark University consultants, PEP expanded its knowledge of the community through conduct of a joint Participatory Rural Appraisal training exercise that produced a village action plan to serve as a guide for PEP activities.

Acquisition of base line ecological data has included a marine resource assessment by a University of the S. Pacific marine scientist and a reef fish census by a marine biologist of the Hawaii Cooperative Fisheries Research Unit. PEP staff have conducted shoreline transects to characterize invertebrate populations, and carry out periodic water quality monitoring.

The PEP Santo office continues to respond to numerous requests for environment information and assistance from the general Santo community, much of this associated with expanding tourist development activities on the island.

Carpoxylon macrospermum:

Carpoxylon, a rare and endangered palm endemic to Vanuatu, is the focus of a country-wide PEP intervention. First described in 1835, thought to be extinct in the 1930s, and "rediscovered" in 1987, this plant is of great interest to palm specialists because of its evolutionary uniqueness. The PEP intervention involves the collection of data required to support the preparation of a species recovery plan acceptable to the International Union for the Conservation of Nature, and the design of an enterprise activity involving the sale of Carpoxylon plant materials. A consulting contract was let to study reproductive biology, the effect of the CITES convention on the project, and seed handling and storage. A second contract was awarded for a market study to assess the market for Carpoxylon plant materials. This study indicated a substantial market, and recommends that a business be developed to serve this market. The establishment of an enterprise hinges upon the availability of plant materials in excess to the needs of the species recovery program.

Waste Oil:

In Vanuatu, as in all the small island nations of the South Pacific, there is no mandate requiring that waste lubricating oil be disposed in an environmentally responsible manner. As a result, all waste oil eventually finds its way into the ground. The PEP waste oil initiative will determine the amount of waste oil available for recovery, and to investigate various alternatives for the recycling or disposal of this oil. If feasible, an enterprise is to be planned to undertake the waste oil collection and reuse.

Estimates have been made of the amount of waste oil available for recovery, and of volumes that realistically might be recovered. Various options for recycling or disposal have been investigated, with two scenarios indicated. Destruction of Vanuatu's waste oil in an environmentally sound way could be accomplished through incineration employing off-the-shelf equipment available in the United States. From a business standpoint, an enterprise based upon waste oil incineration would be viable only if waste oil collection was mandated by government, and if users of lubricating oil were charged for waste oil collection.

A second solution to the disposal problem is to use waste oil "as found" as a source of supplemental energy. Either of Port Vila's two largest hotels could use all the oil that could be collected at this time to meet their hot water heating needs. A report is under preparation summarizing this project; this will be reviewed with stakeholders both within and without government prior to developing a plan for subsequent action.

QUARTERLY REPORT

July, August, September, 1994

Written By
Profitable Environmental Protection (PEP) Project Staff

I SUMMARY

As stated in the report for the previous quarter, PEP's activities for this quarter have concentrated on the Vanuatu programme. We have spent the quarter consolidating and expanding local activities and contacts. This will be continued next quarter.

Programme activities:

PEP consolidated its interventions in Lolihor through running a series of training workshops for those directly involved. These included more tour guide training; a management and a bookkeeping training workshop for the Lolihor Development Council; assistance with its office establishment; and a tree planting workshop.

In August PEP signed an agreement with the Farm Support Association to establish several demonstration or "wuhuran" farms to demonstrate techniques for site-stable agriculture. This met with a few problems of which the current protracted drought is the most serious. More wild yam planting material were obtained and distributed for planting.

PEP began the process of encouraging community monitoring of the effect of PEP activities by designing two surveys which were conducted by the local junior secondary school. These surveyed people's current practices with regard to clearing bush for gardens and their attitudes towards land conservation.

The Environment Education Officer visited Lolihor several times and began putting together material to meet the environment education needs identified by the people themselves.

Interaction with other bodies included facilitating a North Ambrym tour of the members of the team developing the Vanuatu Tourism Master Plan, and assisting with the organization of the ESHDP Lolihor development congress.

In Santo PEP expanded its contact with the Hog Harbour community through conduct of a joint PRA training exercise which produced a village action plan that would serve as a guide for further PEP activities there. A workshop on safety for boat owners operating in the area around Elephant Island and several village workshops on environment issues, were held during the quarter.

PEP arranged to rent a house in Hog Harbour village as its base. This should make continuing contact with the village much easier.

The PEP Santo office continued to respond to numerous requests for environment information from the general Santo community - particularly associated with tourist development activities.

Negotiations for the survey of Vanuatu's Carpoxylon population were satisfactorily concluded and the survey set to start in the next quarter.

Investigations on waste oil continued and gained much from the visit to Samoa of PEP's enterprise specialist.

PEP continued its interest in the Malekula reef reserve proposal and was represented at the ceremony declaring the reserve.

Note to readers: Each of the PEP Quarterly Report contains the entire history of each project or intervention. New material for each reporting period is added under the heading of "**Current Situation**", and organized by intervention. If you do not wish to review material previously presented, look for the "**Current Situation**" heading under each active intervention (North Ambrym, Santo, Carpoxylon, and Waste Oil) - all new material is inserted thereafter.

II PROGRAM ACTIVITIES

The following sites have been adopted or considered for PEP intervention:

I. NORTH AMBRYM

Initial Situation: Gardens in the Lolihor EMU are expanding at the expense of forest, largely because inhabitants are expanding cash cropping. Traditional slash and burn practices necessitate site rotation every year.

Conservation Objective: To reduce loss of forest cover occurring as a consequence of expanding gardens.

Enterprise Interventions: Enterprises that provide an alternative source of cash income, give new or added value to natural resources, or that substitute destructive gardening for more sustainable exploitation will be expanded or developed, thus reducing dependence on cash cropping (cocoa, copra, cattle, peanuts) or market gardens (mostly taro and sweet potatoes) for income.

Enterprises selected for advancement were (1) a tourism project, (2) cultivation of wild yams, and (3) site stable agriculture.

Project History

March 1993: PEP Team recommends adoption of this EMU, with further investigation of specific interventions.

September 1993: Profiling completed, active EMU, Initial Environmental Examination submitted and approved for wild yam enterprise, IEE in progress for tourism project, handicrafts under investigation, shark fin enterprise dropped. Monitoring and evaluation and environmental education programs are active.

PEP team recommends continuing advance in tourism, handicraft, and yam initiatives.

December 1993:

Tourism

Consultant Jeremy Challacombe visited the Lolihor EMU during the previous quarter to prepare an IEE for the tourism project. Traditionally, access to the volcanoes has been denied during the yam planting season, November through February. It is believed that persons visiting the volcanoes disturb them, bringing volcanic dust and acid rain that destroys the newly planted crops. Villagers favoring the tourism project wanted this prohibition lifted. In May of 1993, following presentations by representatives from Ranvetlam, the District Council of Chiefs agreed that tourists could visit the volcanoes at any time of the year. Although this issue has been the subject of continuing debate, the decision of the District Council was reaffirmed in August 1993. In a cultural context, this represents a major deviation, and is an indication of the level of interest in increasing tourism.

Site-Stable Agriculture

Boosting production from areas already under cultivation is one forest conservation strategy that PEP proposed for Lolihor but has not yet attempted. Following from several discussions with Charles Rogers of the Farm Support Association (FSA), Devoe drafted terms of reference for Rogers and FSA to begin this work, assessing existing farming systems, and recommending practices to boost production in terms of either food or cash. This consultancy is scheduled for February.

Equitable and Sustainable Human Development Program (ESHDP)

On November 6th, Pestelos travelled to Lolihor. Working with the PEP Liaison Officer, the following four days were devoted to community relations activities that culminated in the formal endorsement of the ESHDP Workshop by the Ambrym Island Councilors. The program and subsequent profiling activities began on November llth, and continued intermittently through November 29th. Following a discussion with all participants at the onset of the training, it was agreed that participants would not be compensated for their work with the project. This issue was again raised by the local trainers on November 29th, when they presented a petition calling for a sitting fee to be paid, retroactive to the first day of the workshop. Pestellos and Salong responded, saying that among other considerations, this demand was in violation of a previous commitment, and that there was no money available to pay such fees. The workshop was declared closed, and Pestelos and Salong returned to Port Vila.

It should be noted that the work of the ESHDP was virtually completed by November 29th. The sudden closing of the program and subsequent discussions within the EMU brought to the surface long standing conflicts relating to ESHDP, the PEP Project, and Salong's work within the community. It is Salong's view that these conflicts are being successfully resolved, and that here is now "incredible support" for the ESHDP.

Popular Theater in Lolihor

Response to the Wuhuran Theater Group continues to be excellent. The newly appointed Local Facilitator is working closely with the company to assure its effectiveness.

George Bumseng Joins PEP as Local Facilitator

Because of John Salong's increased responsibilities as Community Liaison Officer, it became apparent that an assistant should be employed. Further, it was felt that Salong would be more effective if he could distance himself from some of the day-to-day PEP work and devote more time to planning and administration. George Bumseng, a native of Fanrereo village, has been employed to assist Salong in the capacity of Local Facilitator.

PEP team recommends that community participation be enhanced and formalized community participation through the establishment of a Steering Committee for PEP activities in the EMU. The selection of this committee should evolve from the ESHDP. Select consultants to conduct programs in increased food production and a prototype ecotourism project. Initiate development of activities to increase production from lands already under cultivation. Continue to pursue all interventions.

March 1994:

Tourism

In January, Devoe met with the Activities Director for Club Med II to discuss potential shipboard environmental education programs for ships calling at Ambrym and Santo. PEP continues to pursue this possibility with all cruise ship lines.

Tourists visiting Vanuatu are not accustomed to Melanesian cuisine which they perceive as bland and monotonous. To provide more pleasing food and thus enhance the experience, it was decided to conduct a food preparation workshop for residents of Lolihor. It was not the purpose of the workshop to introduce Western-style cooking, but rather to teach local cooks to add spice and variety to the menu using only locally available food. Kelma Sope, a ni-Vanuatu with experience in conducting nutrition and food preparation workshops, was engaged to go to Lolihor to present the workshop. Ms. Sope developed a formal five day curriculum with emphasis on hands-on activities, and also developed a number of recipes utilizing locally available foods. Representing four communities within the EMU, 15 women and one man participated in the workshop. As a final exercise, the group voted to hold a food sale. This was a great success with VT 12,000 raised; it was voted to use the proceeds to provide more training for women's groups.

In October 1993, Jeremy Challacombe reported on his first consultancy, in which he was asked to evaluate the potential for nature-based tourism in Lolihor. Challacombe determined that tourism held reasonable income-generating potential for Lolihor residents. He recommended that a tour be developed, and that local people be trained to undertake this enterprise activity. Challacombe was employed to return to Lolihor in February to design the tour and conduct formal training for guides. Fifteen candidates, including seven women, participated in the guide training program. A planned component of this training was a trial tour, with paying tourists recruited in Port Vila as a test group. Unfortunately, at the time for this tour, two cyclones passed through Vanuatu, straddling Ambrym. Flights to, and local transport in, Ambrym were suspended, and the trial tour was canceled. Upon his return to Port Vila, the consultant met with locally-based tour operators to acquaint them with the PEP tourism project. Their reaction was favorable, and they evidenced interest in marketing the tour once it was fully developed.

Lolihor Development Council

Of ongoing concern are the issues of management and sustainability for the tourism project and other interventions. An expected product of the PEP/ESHDP participatory profiling and planning exercise was the selection of a Lolihor Development Council to provide guidance and management for development activities in Lolihor. As related in above report of the ESHDP activity, this did not eventuate. The tourism project involves a number of stakeholders whose record of cooperation is clouded; it was felt to be essential that a locally chosen body be constituted to assume management responsibility for the enterprise.

In an attempt to bring together the Lolihor community, and to facilitate the selection of a development council, Neil Netaf Stevens, a member of FSP's ni-Vanúatu staff and a Community Development Specialist, was recruited to work within the EMU.
Following background meetings with PEP staff and Jimmy Nipo of the Department of Local Government in Port Vila, Stevens travelled to Lolihor in March for ten days of consultations with community members. At meetings in six villages, the purpose of both PEP and ESHDP projects was discussed, and support and commitment for each project solicited. Next, an area leaders' meeting was convened, which resulted in the election of the Lolihor Development Council, Chairman, and Executive Committee. The Council agreed that they would support all PEP/ESHDP initiatives, and that responsibility for community participation would be lodged with the Executive Committee. If the Committee functions and accepts these responsibilities, it will follow that leadership and management roles now in the hands of on-site PEP staff will be transferred to local leaders. PEP staff will assume their more appropriate roles as advisors and facilitators, and the project will have achieved a significant milestone.

Site-Stable Agriculture

PEP began work with the national NGO Farm Support Association (FSA), negotiations for which were begun last quarter. PEP Local facilitator George Bumseng visited FSA personnel and the farm and alley cropping demonstrations at Montmartre just outside Port Vila at the end of January.

Charles Rogers of the FSA assessed existing farming systems in Lolihor during February 19-March 1. He reported considerable potential for improving agricultural practices by: 1) introducing alley cropping to contribute to site-stabilization of cash cropping; 2) enriching fallows with legumes to speed restoration of soil fertility; and 3) increasing production from coconut plantations by suitable under plantings. Additionally, Rogers recommended a program of farm forestry to further stabilize agriculture, diversify woody biomass, and produce fuel wood and building materials. Contouring and other techniques to reduce erosion were also suggested. During his visit, Rogers established a contour planting trial. Cuttings of Gliricidia sepium sent by Rogers were outplanted in Lolihor in March. Rogers raised the interest of local farmers and predicts excellent participation in activities aimed at enhancing agricultural production.

Equitable and Sustainable Human Development Program (ESHDP)

PEP continued coordination and planning with NPSO, Department of Local Government, and ESHDP personnel in Suva for the rescheduling of the aborted Lolihor Development Congress. Target date is now June. A United Nations Volunteer is expected to be posted to Lolihor in June, too.

Popular Theater in Lolihor

During the last two weeks in January, the Wuhuran Theater Group was in Port Vila for a training workshop with Vanuatu's national troupe, Wan Smol Bag. Wuhuran began work on a new play written by them, "Nabanga", about themes of cooperation in village life. Cooperation is shown to enhance environmental management and quality of life, while greed and self-interest lead to environmental degradation and social problems. "Nabanga" was performed for PEP and other FSP staff during the training.

Cyclones prevented the Wuhuran Theatre group from returning to Ambrym until early February. Wan Smol Bag continued to coach them, and they worked on the play "Tourists and Toilets", which Wan Smol Bag had originally written and produced upon commission from World Wide Fund for Nature (WWF). PEP selected this play for the Wuhuran Theatre's repertoire because it raises many of the environmental and social issues surrounding outer-island tourism and serves as an excellent platform for launching discussion of these issues. Wuhuran Theatre presented "Tourists and Toilets" in Vila for PEP, the larger FSP, and collaborators from Department of Local Government, Environment, Forestry, and National Planning Office. We were joined by Sally Montgomery Brumbaugh, new FSP Vice President, on her first visit to Vanuatu. The theatre group presented "Tourists and Toilets" in Fanrereo and Ranon following the Port Vila workshop.

June 1994:

1 a. Equitable and Sustainable Human Development Program (ESHDP) and Lolihor Development Council (LDC).

ESHDP developments include the following:

- the first draft report on the ESHDP Participatory Planning Process in Lolihor called, "Community Aspirations for Human Security in the Lolihor Watershed Area: their implications to strengthening local capacities for project development and implementation", was produced;
- National Planning Office (NPO) re-affirmed commitment to being the coordinating center for ESHDP,
- new national committee has been set up. (The sacking of striking civil servants had left vacant positions.)
- a work plan produced,
- and the decision made for the United Nations Volunteer (UNV) to reside in Port Vila instead of North Ambrym.

Lolihor development:

The L.D.C. has written letters to:

- all NGOs, introducing itself and requesting training support;
- Telecom Vanuatu Ltd. (TVL) to request the installation of a single line telephone in Lolihor, with facsimile capacity.

Initial preparations with Nasonal Komuniti Divelopmen Trust (NKDT) to run a workshop with the LDC were canceled after scheduling difficulties. Neil Stevens Netaf, FSP Community Development Specialist substituted to facilitate the drafting of LDC's constitution. The week long process generated further excitement and cemented commitment to the PEP project activities in Lolihor. Neil officially opened a temporary office at the Lonbato co-operative store room at Ranon village.

The L.D.C. and the Lolihor community are:

- prepared for the Lolihor Development Congress on August 17th; and
- eager to have assistance from the U.N.V. to develop and implement working policies based on community aspirations for human security.

Having received drafts of the constitution, delegates of the L.D.C executive will be travelling to all villages to discuss the draft constitution, address questions, and allow further input towards the final draft for ratification at the Second Annual L.D.C. Meeting.

Based on the constitution, the LDC will proceed to develop:

- Lolihor Conservation Policy;
- Lolihor Tourism Plan;
- Lolihor Cultural Revitalization Policy;
- Lolihor Non-formal Education Policy;
- Lolihor Sustainable Development Plan;
- and a framework for partnership with other organizations.

After clarification of these policies, delegates of LDC will embark on an awareness mission to Port Vila to inform potential partners of how they can participate in the implementation of LDC policies in Lolihor. The partnership framework will guide negotiations with all organizations including local groups such as Wuhuran Theater Group.

The LDC executive met with the PEP coordinator and:

- agreed to hiring an environment educator for Lolihor;
- endorsed Marina Joses as the part time female Local Facilitator;
- agreed on first aid, tour guide and cooking workshops and a schedule for these;
- submitted a budget for a building for the LDC;
- and endorsed ten names as Wuhuran farmers to work with FSA on site stable agriculture.

1 b. Wild Yams

Three thousand seven hundred and sixty two kilograms of wild yams have been bought from the villages of Wilit and Konkon by PEP and distributed since November 1993. The total number of farmers that have received wild yams is ninety four.

Volcanic activity temporarily affected some of the growing plants but they have since recovered. More and more farmers are interested in participating in wild yam planting. Those who have already planted want to plant more.

Time constraints have resulted in a weakness in wild yam monitoring. But the proposed wild yam farmers workshop will be conducted to:

- reinforce PEP's goals in Lolihor;
- allow farmers to exchange ideas on the best ways to plant and harvest wild yams, monitor growths, monitor production, identify a marketing channel, and agree on a beach selling price.

The L.D.C. is committed to:

- administer the purchase of another 7,000 kg of wild yams from Wilit, Konkon, and S.E. Ambrym;
- transport, store, and distribute wild yams to farmers after briefing them.

1 c. Wuhuran Theatre Group

Developments with Wuhuran Theater Group include the following:

- hiring of two new members, John Nabong and Shelly Sali, - two performances of "Tourists and Toilets" play at Ranon Junior Secondary School and Fanla village;
- production of "Jealous Heart," - a new play about root causes inhibiting advancement of PEP activities in Lolihor, ready to be performed;
- a two day on-site training at Henyal-Orkon by Charleon Falao of Wan Smol Bag Theater; and
- and the decision by the group members to establish Wuhuran Theater Group as a separate entity from PEP to facilitate involvement in non-formal education on all issues including, but not limited to, environmental awareness.

1 d. Tourism

From May 3 - 7, two tourists embarked on parts of Ambrym Adventure Tour. Four days notice was too short to get everything organized, and the two tourists could not afford a cultural dance display at Fanla. A village tour outside of Lolihor was quickly organized. The tourists did not want to go to the hot springs, having just travelled in New Zealand. Their travel on Sunday resulted in some guides not turning up. Consequently, packs were too heavy for just one guide and the PEP local facilitator. Luckily, the tourists were fit and experienced, so they carried some of their own packs. The guides did not know the right path at that time because they had not surveyed the paths as planned due to other commitments. A report submitted by the two tourists has proven valuable to the tour guides and the cooks.

May 17 - May 26 saw consultant Jeremy Challacombe's return to Lolihor. He was joined by four tourists from May 19 - 24. The whole tour program was conducted. Everything went smoothly and everyone was relatively happy, except for some people at Emiotungan in West Ambrym who were expecting the tourists to stop at their village. A meeting called by the chiefs of West Ambrym on July 28th will discuss Ambrym Adventure Tours and listen to their concerns.

Work on brochures for Rossolo Bungalows and Ambrym Adventure Tours has started but is yet to be completed. The in-house brochures will be produced and distributed to the tour operators in Vila.

Meetings have been held with tour operators in Vila to inform them of Ambrym Adventure Tours. Mike Van Hessing of South Pacific Travels and Gilbert Ambroggani of Surata Tamaso may be coming on an awareness tour of the Ambrym Adventure Tours in August. They will try to bring some paying tourists to cover their costs. Jeremy Challacombe is also trying to organize a commercial tour from Australia in the next quarter.

It is recognized that some work needs to be done to inform yachtsmen of the Ambrym Adventure Tours. Educational pamphlets, brochures, posters and videos must be produced to provide a guide for tourists on what to expect and how to behave. Evaluation questions in self-addressed envelopes will be provided to tourists for feed back. This will help the stakeholders in improving the tour.

Douglas Solomon, (bungalow owner and operator) and Isaiah Bongnaim, (tour guide leader to west Ambrym,) should be taken on a study tour to see eco-tourist operations either in New Zealand or Fiji. A tour will enable them to substantially improve their practices on the ground.

Planned training workshops include:

- a first aid course for tour guides scheduled for July;
- the second tour guide training course (to increase the pool of tour guides) in August;
- and another cooking workshop is scheduled for September.

1 e. Site-Stable Agriculture

Arrangements between three individual farmers, the Ranon Junior Secondary School Agriculture Teacher, and Charles Rogers, led to the shipment from Vila of some 450 glyricidia cuttings for alley cropping. Because of packing and transportation complications, only 30 per cent of the planted cuttings have sprouted. Glyricidia plants, however, already exist at Ranon. These can be used to start other alley cropping plots.

George Bumseng, has planted out:

- Dendrolobium umbellatum or "limlalau," 100 per cent of which are growing;
- pigeon peas - already germinated;
- and flamengia, for the purpose of collecting seeds. It remains to be seen how flamengia will resist volcanic activity.

George has also set out markers to monitor soil erosion on:

- a contour planted garden plot;
- and a plot without contour planting.

Nine Wuhuran farmers, besides George, have been identified to serve as key farmers in demonstrating:

- fallow enrichment;
- contour planting and alley cropping;
- and cultivating under coconut trees.

Current Situation

September 1994:

1 a. Wild Yams

Wild yams continue to grow but some will be affected by the current drought in Lolihor. One plot was trampled by cattle looking for water and better pasture.

Another six hundred and ninety (690) kilograms of tubers has been distributed for planting by twenty five farmers. Other farmers are requesting planting material and the LDC is waiting for approval for funds by PEP to purchase another (7) seven tonnes from South East Ambrym.

1 b. Site-Stable Agriculture

Under contract to PEP, the Farm Support Association established 6 demonstration plots with wuhuran farmers. Meetings held with different community members revealed the existence of other acid-rain resistance yam varieties. Some of these were collected for trial in the wuhuran plots. Planting of cuttings and seeds for alley cropping and for fallow enhancing was delayed due to a long period of drought.

PEP agreed to meet the cost of fencing the demonstration plots to keep pigs and cattle out. These destroy gardens close to the village and discourage people from farming land in proximity to settlements. The problem has to be addressed if the remaining forest, which is being encroached by gardens, is to be saved. The LDC agrees that the issue requires attention.

1 c. **Wuhuran Theatre Group**

George Bumseng's absence from Lolihor on an Asia Environment Program (AEP) Scholarship (see Appendix I) illuminated the great need for guitar lessons for all the theatre group members. In his absence, only two performances were made on the occasion of the Lolihor Development Congress.

A funding proposal has been submitted to PEP for the performance of "Jealous Heart" in 8 Lolihor communities. PEP and the Wuhuran Theatre Group have agreed that any future plays would be developed and performed on a contract basis and at the request of PEP. PEP has encouraged the theatre group to seek other opportunities to perform as an independent theatre group, and has provided support for core activities.

1 d. **Tourism**

Under the sponsorship of PEP, a successful first Aid Training Workshop for the Tour Guides of Lolihor was conducted by Mr. Solomon of the Red Cross Society, Port Vila (see Appendix II).

Six tourists including three members of the National Tourism Master Plan Consulting Team embarked on part of the Lolihor Ambrym Adventure Tours (see Appendix III). The feedback provided was valuable in planning the second Tour Guide Training Workshop to be conducted Eileen Ligo.

Tour Guide Training Workshop, Conducted by Eileen Ligo: (see Appendix IV).

- gave theoretical and practical experience to the tour guides of Lolihor,
- finalized agreement on package tour with the LDC, people of Emiotogone and Sanesup,
- orientated potential tour guides of West Ambrym and recommended urgent action to market the tour package before end of October 1994.

The National Tourism Master Plan Consulting team sent another mission to Lolihor to discuss the Lolihor, Ambrym Adventure Tours.

Individual tourists have continued to drift to Lolihor. Travel Agents in Port Vila have not taken advantage of the opportunity offered by PEP to familiarize themselves with the Lolihor Ambrym Adventure Tours. The Lolihor Development Council is interested in exploring linkages with tour operators in Santo, pending the opening of the New International Airport in Luganville.

1 e. **Monitoring Forest Clearing Practices**

Concern that PEP has no clear means of monitoring the effect of its interventions on the rate of forest clearing resulted in the decision to conduct a survey to investigate the current practices of clearing bush and forest in Lolihor. The survey had several objectives;

to establish baseline information on forest clearing practices in Lolihor,

to train local people in the conduct of such a survey,

to begin a process of monitoring forest clearing that the LDC can take over and continue after PEP closes.

A simple questionnaire of 12 questions was designed, and translated to Bislama. Discussions were held with the principal and staff of the local Junior Secondary School for students to be trained and to conduct the survey, under staff supervision during the August holidays. This coincided with the commencement of the traditional period for clearing land for new gardens. Three hundred nineteen questionnaires were completed. It is the intention to do only sample surveys in future so that the school can process the data itself by hand.

The results of the survey are presented in Appendix V. In brief they show that each household averaging 6.2 persons, has at least 2 farmers and often 3. The majority of farmers (over 52%) were females. Of farmers of both sexes, about 25% were farming for the first time this year. Of the rest, total number of years they had been gardening ranged from 1 to 62 years. On average, each farmer has three gardens, using the same piece of land for some two to three years, and leaving it fallow for some three to four years before farming it again. About 42% males and 38% females cleared virgin forest each year for new gardens. By far the most frequent reason for clearing virgin forest (83%) is to make gardens for subsistence crops. Favoured crops for resistance to volcanic damage are manioc and fiji taro, while crops considered good for planting under bush are wild yams and fiji taro. Some 71% of forest clearing is for mixes of subsistence and cash cropping, 52% is for cash crops only, 29.8% is for planting coconuts. The survey did not attempt to measure the average area of forest cleared each year. Only 12 of the 319 farmers had no more virgin forest on their land. The majority of farmers (97%) considered it important to conserve virgin forest while 94% think it good to leave some virgin forest uncleared. These results show that with careful planning and encouragement of well managed utilisation of the virgin forest, the Lolihor community may be able to sustain the integrity of their environment in the long run.

1 f. **Monitoring changes in Knowledge, Attitudes and Practices (KAP)** of the wuhuran farmers and a control group.

A total of 23 farmers, comprising all the wuhuran farmers and a control group, were subjected to a KAP survey. As these were specially selected farmers, they averaged a higher number of gardens (4.8) than the community average (3.1). Almost all of the gardens have some cash crop. The most frequent cash crops are coconuts and kava, while peanuts is also less frequently planted. Bananas, manioc, fiji taro and water taro are usually planted with cash crops. Sixteen of the 23 farmers still have about half or more than half of their land in virgin forest, while 4 of them have none left. Of those with virgin forest, 15 said they plan to keep some of it untouched for various reasons including that -

- they thought it is important to preserve the environment,to keep trees, and to provide fruits for birds,
- the bush provides nutrients, and helps regeneration of abandoned gardens,
- forest is necessary to plant wild yams in, or,
- it is too much work to clear.

The average fallow time for these farmers was just over 3 years. While 20 of the 23 considered the current fallow period long enough, 2 thought they were coming back to the same garden site too soon and not giving enough time for the land to recover. Ideas for improving the situation, included planting with legumes, alley cropping, longer fallow, mulching, and planting with big trees. All except one, garden on sloping land while all except three, claim they lose soil through erosion. The majority are using wood to stop erosion and consider this satisfactory. Suggestions for improvement include planting trees including glyricidia, hibiscus, limlalau, and alley cropping. All burn rubbish after clearing the land for new gardens because burning kills tree roots, weed seeds, pests, drives away rats, helps crops grow better, and is custom practice. Only three farmers state that burning is not good for the garden, because they had obtained new ideas from the FSA agents and because the rubbish burnt could be spread to fertilize the garden. About half the farmers interviewed are now farming the same garden plot longer than they did 5 years ago through mulching with crop rotation, and through decreasing fallow period. Fifteen of the farmers think that farming the same piece of land for many more years than currently practiced is not good, the reason being that such practice depletes soil nutrients too much. The majority favor mixed cropping and a list of crops thought to benefit each other as well as those thought to be detrimental to each other was obtained. The survey data is tabulated in Appendix VI.

This questionnaire was administered a few months after the FSA team had made visits to Lolihor, so that it already detected the influence of the FSA programme on site-stable agriculture.
Another KAP survey is to be conducted towards the end of PEP life to see how much effect the FSA intervention has had. Responses of wuhuran and control farmers for both surveys will be analyzed separately then.

1 g. Vanuatu Equitable and Sustainable Human Development Program (VESHDP) and Lolihor Development Council (LDC).

VESHDP is advocating the participatory development process and facilitating participation in Lolihor with the following activities:

- official launching of VESHDP and the signing of the Suva Declaration by Vanuatu's Prime Minister and UNDP's Resident Representative on July 27, 1994, as part of the 14th Independence Anniversary Celebrations,
- orientation of Directors of Government Departments and Political Secretaries,
- orientation of Vanuatu NGOs,
- and close partnership with the National Planning Office staff and the Department of Local Government.

The facilitation of local participation in Lolihor included:

- support to the Lolihor Development Congress on August 17, 1994, and swearing in of the Lolihor Development Council,
- video documentation of the Lolihor Development Congress,
- introduction of Alan Morales, the UN volunteer to work with the LDC, the Lolihor Development Team (formerly known as Local Trainers) and the people of Lolihor to prepare project documents, find donors, implement, monitor and evaluate the projects.

LDC has;

- taken on responsibility of organizing all workshops conducted in Lolihor and funded by outside groups including PEP,
- held wide consultation with the Lolihor population concerning
  - Wuhuran education program,
  - LDC constitution prior to the Annual General Meeting of the LDC on October 15th 1994,
- submitted a report on wild yams to PEP and requested funding for another (7) seven tonnes of wild yams to be planted,
- a grant of Vt 200,000 from PEP to the LDC to partially cover start-up expenses for the organization. Funds are to be used for construction of office space and purchase of office furniture and supplies (subject to approval by PEP staff),
- mandated the Lolihor Development Team to document project ideas, implement, monitor and evaluate the projects,
- undergone a three day Basic Bookkeeping and Business Management Workshop conducted by Hanson Kalo of Community and Environmental Forestry Project and sponsored by PEP.
- and reviewed and finalized package rates for the Lolihor Ambrym Adventure Tours to begin on April 1st 1995.

1 h. **Educational Activities**

The work of Stanley Womack (PEP Environment Educator) and Matu Bongranli (PEP Women Local Facilitator) in conducting the KAP survey has been discussed previously.

Jacque Yakan of CEF conducted a very successful tree planting workshop with 10 farmers of Lolihor complete with;

- theory,
- tree planting along the coast line,
- video show, and
- and establishment of a nursery.

Peter Kaoh of FSA has been responsible for the site stable agricultural project in Lolihor. His work with the team Wuhuran farmers has been hindered by the dry season and the prevalence of volcanic activity. The activities of Womack, Yakan, and Kaoh are detailed in Appendices (VII & VIII).

2. SANTO

Initial Situation: The Australian Institute for Marine Sciences completed a Vanuatu Marine Resources survey in 1988. The Survey identified Hog Harbour and Elephant Island as one of four exceptional coral reef systems in Vanuatu and recommended Elephant Island as a national conservation priority. The area was noted for its rich marine biodiversity and unique conservation potential. Some suggestion of over fishing exists, turtles are occasionally hunted. Local tourist attractions, including Lonnoc Beach Resort and Champagne Beach, would benefit from protection of reef quality at Elephant Island. Potential exists for enhancing snorkeling and diving enterprises in exchange for cooperation in site protection.

Conservation Objective: To institute a private, protected area to safeguard the exceptional marine biodiversity of Elephant Island, threatened by uncontrolled exploitation and large-scale tourism (Fairstar cruise ship shipboard diving).

Enterprise Intervention: Lonnoc Beach Resort, Elephant Island, and Champagne Beach would all benefit from maintenance of reef quality at Elephant Island. We propose to investigate the enhancement of existing tour/snorkeling/diving enterprises to support a protected area, and to improve tourist services in exchange for cooperation in management of Elephant Island. The appeal for working with an established business (Lonnoc) is very high. Some baseline data is available and conventional business indicators can be employed to demonstrate progress (or lack thereof).

Project History

September 1993: This project is highly recommended for continued investigation. Land disputes are rumoured for Elephant Island. The relationship between Lonnoc Beach and Elephant Island is unclear (Does Lonnoc share Elephant-Island-derived revenues with Elephant Island owners?). We would like to investigate these issues before approaching the principals at Lonnoc and Elephant Island to seek their cooperation in developing pro-conservation enterprises.

December 1993: Stead travelled to Santo October 28 to prepare for the visit of USAID's Larry Armstrong and Toni Ferrara. Prior to their arrival, he met with John Mooney, Santo's Municipal Planner, to develop a strategy for introducing PEP into the Elephant Island community. It was decided to work through the Santo Tourism Industry Development Association (STIDA), as virtually all stake holders are represented in this organization.

Devoe and AEP Fellow Milika Naqasima travelled to Santo December 14-16, so Naqasima could see the site and better detail her work plan for January and February. Devoe and Naqasima met with Local Government Council (LGC) Secretary Havo Moli to discuss plans for work at Elephant Island and in the surrounding communities of Hog Harbor and Port Olry. Moli

pledged LGC support for the PEP effort. He suggested that he accompany PEP staff to the site and villages to present them to the area chiefs upon Naqasima's return. He seemed acquainted with the environmental issues in the North Santo area and genuinely interested in protecting resources and tourist income there.

Naqasima and Devoe also met with Luganville Municipal Planner John Mooney, who as a member of the STIDA, had first approached PEP with regard to environmental management in North Santo. Mooney's concern, like PEP's, is in preventing damage to the marine resources which could result from uncontrolled tourist traffic, and thus undercut tourist revenues. Mooney was briefed on the discussion with Moli and PEP work plans.

Kalmer Vocor, owner of the Lonnoc Beach Resort, met with Devoe and Naqasima to discuss his questions about development in the area. Lonnoc Beach Resort will be the base for much of the PEP field work, so Devoe wanted to discuss longer-term rates for accommodation and boat rental. Vocor is very knowledgeable about local issues and politics, and is an important stakeholder in the project.

Ranked fourth in importance by the PEP Advisory Committee, it was recommended that this intervention is to be the site of heightened activity. Anita van Breda, PEP's Marine Conservation Specialist, will assume her duties on January 31st, and will be stationed in Santo to undertake day-to-day direction of this project.

March 1994: Van Breda arrived in Vanuatu the end of January and prepared a Project History and overview of PEP activity at Elephant Island. This includes statements of goals and objectives, activities and expected outcomes. She travelled to Santo to assist AEP fellow Milika Naqasima with field work and report writing. Debriefing meetings at the close of the fellowship were held with the Local Government Council Secretary Havo Moli, STIDA's Chairman Kalmer Vocor, Fisheries Department Francis Hickey, Devoe and van Breda. Naqasima gave a brief presentation of her findings. Devoe and van Breda reaffirmed commitment to follow up the initial findings with additional research. Fisheries agreed to target Hog Harbour community for traditional marine management education workshops.

Van Breda returned to Vila for PEP staff meetings, and to discuss PEP marine projects individually with PEP staff. Ten working days in Vila were devoted to research and networking for two marine projects as well as FSP computer and video training.

Devoe and van Breda defined terms of employment for a ni-Vanuatu environmental education assistant to work with van Breda in Santo. In March, van Breda established day-to-day management of the Santo project with the establishment of a PEP Santo office. Management is defined as "integrator, coordinator, communications center, tactician, and consensus-maker". Van Breda recruited environmental education assistant Donna Kalfatak, who will be based in the Santo office.

Extension Activities

To introduce PEP's marine projects to the South Pacific environment community, van Breda drafted and mailed a letter of introduction to PEP collaborators, supporters, and colleagues in the region.

The Great Barrier Reef Marine Park Authority requested PEP's review of a report on a global representative system of marine protected areas for IUCN and the World Bank.

The Australian High Commission - Vanuatu, requested PEP's review of a marine reserve project in Malekula.

Development of local contacts for further involvement with this project are underway. Van Breda and Kalfatak met with STIDA's acting manager Eileen
Ligo to communicate PEP research findings thus far, and to review plans for future activities. Ms. Ligo reaffirmed STIDA's interest in this project and agreed to participate in village workshops. Van Breda and Kalfatak also volunteered to formally introduce this project to the members of STIDA at their next general meeting.

Van Breda and Kalfatak participated in the Environment Unit's Big Bay national park community workshops.

Field activities are based from Lonnoc Beach Resort (LBR). LBR continues to update and improve services including construction of a larger bar and restaurant and running water, toilet, and shower facilities. Owner Kalmer Voccor would like to encourage landings of cruise ship visitors to Lonnoc Beach and has requested PEP's assistance in choosing a location and recommending construction design of a jetty.

We will continue to lend technical assistance and support for community-generated marine conservation projects where feasible and appropriate (such as the Maskelyn Island giant clam project). Our association with these projects enhances PEP's visibility and furthers our knowledge of, and experience with, community driven conservation projects which will ultimately enhance our effectiveness with our community education activities.

Research

Van Breda edited Milika Naqasima's Santo report, and composed a two page summary for distribution to PEP collaborators.

Documentation of existing literature and information relative to development of a management plan for this site is an ongoing project.

Ecological data gathering continues with a third round of water quality testing to be completed in April. A fisheries biologist consultant will be contracted to assist with further development and refinement of the coral and reef fish biological monitoring program. Future work plans will identify additional research needs for economic, cultural and social data necessary for management of the area. The environmental education assistant will lead development of environmental education community workshops and will continue with the Woman' Fisheries Network Survey which seeks to evaluate the role of woman in community fisheries.

PEP recommended continued efforts to further develop this project including commissioning a participatory rapid appraisal of Hog Harbour and Port Olry. Long-term partners and funding agents should be sought to ensure continuance of PEP's efforts and goals.

June 1994:

Van Breda travelled to Port Vila April 18 and 19, for a two day staff meeting with USAID officials. A Santo-Project summary was prepared and future work plans discussed. With the project's ecological work under way, planning emphasis was given to social and economic data gathering relative to community dynamics and development. The group agreed to search for a social scientist consultant to perform a Participatory Rural Appraisal for Hog Harbour and Port Olry villages. The consultant will be required to train PEP ni-Vanuatu staff in the principles and methodology of PRA in order to develop in-country skills. Other plans include regional recruitment for institutional partners to assist with continuation of project beyond the close of PEP.

U.S. A.I.D. staff members John Grayzel and Chuck Howell, travelled to Santo with van Breda and Devoe for a one day tour of Hog Harbour, Lonnoc Beach Resort, Champagne Beach, and Port Olry.

The Santo-PEP office was moved to the Local Government Council building. The new office space increases accessibility of the PEP project to local community.

Van Breda and Kalfatak travelled to Vila in April for an introduction to the new PEP project coordinator and project review meetings.

Extension Activities

With the addition of Kalfatak to PEP staff, introductory meetings with the President and Secretary of Local Government Council were arranged. Kalfatak and van Breda requested continued assistance with facilitation of community relations. Additional meetings were arranged with two Hog Harbour village chiefs to remind the villagers that the project was still on-going, to share results of Naqasima's report, and to inform them of the pending visit of a fisheries biologist. It was agreed to arrange a meeting with all village leaders: chiefs, pastors, womens' group, youth group, and key landowners (Mr. Obed; Champagne Beach and Mr. John Wus; Elephant Island) for June to discuss the project's objectives, findings to date, and village involvement and participation.

Kalfatak and van Breda consulted with Neil Stevens, FSP Community Development Specialist, regarding future plans for Hog Harbour community relations and development activities. Meetings were also held with William Naviti, Fisheries Research, and Ernest Bani, Environment Unit, to update status of project and seek support and involvement.

Individual meetings were also held with custom landowners of Elephant Island and Champagne Beach to discuss the project and extend an invitation to the village leaders meeting.

Research

Previous fish census dive sites were relocated and coordinates recorded. Mapping of dive sites was completed to facilitate work of contracted fisheries biologist consultant Dr. Allen Friedlander/ Hawaii Cooperative Fisheries Research Unit.

Dr. Friedlander conducted a census of reef fish of Elephant Island and Hog Harbour, Champagne Beach patch reefs. The work was designed to augment previous preliminary work completed last January and included recommendations for further investigation regarding subsistence and commercial fishing efforts, and their possible impacts for future management of the site. Preliminary analysis indicates a diverse and healthy fish population. However the full analysis and report is not yet available.

We are also in the process of conducting shoreline transects to characterize invertebrate populations, the primary target of women who fish.

Water quality monitoring continues. The Matevulu College blue hole will be included in the monitoring program at the request of the Department of Geology, Mines and Water Resources.

June 14 the Fairstar cruise ship visit to Champagne Beach was documented. The findings were reported to the Fisheries Research and the Environment Unit. A meeting was held with STIDA officials to discuss the Fairstar and cruise ship visits in general. We agreed to work together on the design of improved snorkel and dive regulations for all tour operators and to design an education program for tourists based on environmental considerations.

Kalfatak completed a report of the Women's and Fisheries Survey of 15 women in Hog Harbour, January 1994. An English and Bislama version of the results are available for distribution.

Other

Kalfatak completed an open water diver certification program.

van Breda participated in PEP's eco-tourist trek to Ambrym.

Participatory Rural Appraisal (PRA).
The staff planning meeting in June decided that any resource management plan for the Santo EMU would be formulated by the resource owners themselves, facilitated by PEP through a PRA exercise. On the advice of the USAID Manila office, contact was made with Dr. Richard Ford of Clark University. Negotiations are now well underway for the latter's assistance to PEP with training and with the conduct of the PRA exercise in Santo.

The proposal to facilitate community resource management planning through a PRA exercise has created interest in a few other bodies, including the Government Environment Unit. Discussions were held with the latter, which has a proposal for a PEP-type project in Matantas area contingent to the PEP Santo EMU. It was agreed that training associated with PEP's PRA exercise would also be made available to some of the government officers involved in Matantas. These will, in the main, be those that normally service PEP's EMU communities, and would therefore be required by PEP for the PRA anyway.

The PEP Coordinator held a briefing meeting with the outgoing Regional Development Planner attached to Luganville Municipality. He provided useful insight into current development of small indigenous business enterprises in Santo, particularly those involved in tourism.

Current Situation

Status, September 1994:

PEP/Santo work this quarter focused on social data gathering and increasing community participation in the PEP project. A Participatory Rural Appraisal (PRA) exercise was completed which yielded much information about the resources and social structure of the community as well as information on needs and issues of importance to the community. PRA techniques learned can be applied to specific areas of natural resource management of interest to PEP. Anticipated follow up will include continuing support of the momentum in community mobilization generated by the PRA, as well as addressing natural resource, agricultural and cultural problems identified in the PRA.

Environmental education and extension activities continue to grow. PEP/Santo receives many requests to provide or assist with environmental education from a range of individuals and institutions including local tour operators, government offices, individuals, and communities concerned with protecting resources. Kalfatak has translated posters, comics and booklets into Bislama for use in education workshops.

A PEP house was rented in Hog Harbour to serve as a field-site base of operations. Located within a short distance of the village "nakamal" (meeting house) and cooperative store, the house allows greater access by the community to the PEP project.

Extension Activities

1. van Breda and Kalfatak toured the PEP project site with Mr. Richard Teare, American Ambassador to Vanuatu, and his wife during their visit to Santo in July, 1994.

2. Stead and van Breda met with dive and tour operators in Santo during Stead's enterprise research trip to Santo, July 1994.

3. Kalfatak and van Breda met with approximately 20 women of Hog Harbour to review and discuss the findings of Kalfatak's survey work completed in January. Information about membership in the Fiji based Women and Fisheries Network was provided and the women were encouraged to share information about their fishing activities and problems.

4. An environmental education and safe boating workshop was held for the staff and families of Lonnoc Beach Resort. The PEP project was explained, and general issues of coral reef and coastal conservation discussed. Specific information on anchoring was targeted to LBR boat captains in an attempt to minimise anchor damage to reefs. Boat captains were enlisted to assist with data gathering in terms of SCUBA and snorkelling activities of guests. A diver survey at LBR is now in place.

Posters on Vanuatu government fisheries regulations were distributed. Kalmer Vocor, proprietor of LBR, asked advice on what activities within the resort potentially damage coastal resources. As a result, taboos were placed on throwing rubbish in the sea, walking on reef flats at low tide, and putting wash water in the sea.

5. At the request of Chief Lulu Vatu, South Santo, and Chief Moli, Malo, an informational meeting was held with Mr. Peter Morris, lease holder in South Santo. Together, these gentlemen would like to establish a marine reserve in South Santo. We spent several hours discussing the history of the area and past attempts to protect resources. We agreed to assist with environmental education and surveying of the site which contains marshes, mangroves, mullet breeding grounds, and areas where coconut crabs were formally found in abundance. Land disputes and disagreements on land use are evident. Additional information will be needed for any future PEP involvement with this activity.

6. Kalfatak represented PEP/FSP at the opening ceremony of Ringi Te Suh Marine Reserve/Malekula at the request of Mr. Jack Enrel (see Appendix IX for full report).

7. Kalfatak and van Breda provided assistance to Dr. Ken Zimmerman of Southern Cross University, Australia with research on marine snakes in Vanuatu. Dr. Zimmerman requested information on local beaches with appropriate habitat for marine snakes; collections were made at Elephant Island and Champagne Beach of Laticauda frontalis (thought to be found only in Vanuatu) and L. colubrina.

7. Several meetings and field trips were made with Jeremy Challacombe and Charles Darby, environmental consultants to the Vanuatu National Tourism Master Plan. These meetings allowed PEP staff to learn about tourism development planning in Vanuatu and express issues of concern regarding marine based tourism.

8. van Breda and Kalfatak attended the Save the Children Fund (SCF) "South Santo Bush Community Resource Management Project" first quarterly meeting in Vimele village. The project coordinator presented his report; guests were invited to make introductions to their projects. PEP was asked to present information to SCF "resource tour" for select village members.

9. Received request to make education presentation to Woman's Affairs Department workshop in October 1994.

Research

1. Report received regarding fisheries census and monitoring completed by Allen Friedlander (see Appendix X for abstract; contact PEP/Santo for copy of full report).

2. Visit to sea mount north of Elephant Island discovered by Yang Yako, commercial fisherman in Hog Harbour. Due to its proximity, this area may be included in Hog Harbour resource management plan.

3. With assistance from Dr. Richard Ford and John Bronson/Clark University/USA, a three week Participatory Rural Appraisal exercise was completed in Hog Harbour from September 11 to October 1, 1994 (see Appendices XI, XII & XIII for full reports). The PRA trained 14 village members and 12 individuals from PEP, FSP, and the Environment Unit, Fisheries, and Forestry government departments. A community action plan resulted from the PRA exercise, which PEP will use as a foundation for creating a village resource management plan. Abbreviated versions of PRA techniques will be used by PEP staff to address specific issues (such as fisheries and tourism) not covered in detail in the initial PRA.

Continuing Education

van Breda and Kalfatak travelled to Suva, Fiji to attend the International Workshop on Traditional Marine Tenure and the Sustainable Management of Marine Resources in Asia and the South Pacific (see Appendices XIV & XV for full trip reports). Kalfatak made a brief report on her survey work for the Women and Fisheries Network and van Breda presented information on the PEP/Santo project. The workshop proved useful for exchange of information between research and conservation projects in the region; many requests for additional information on PEP were received.

3. CARPOXYLON MACROSPERMUM PROJECT

Initial Situation: Carpoxylon macrospermum, a palm in what is described as probably the only endemic plant genus in Vanuatu, is botanically important as a very distinctive genus with few close relatives, and clearly endangered. The palm was apparently an important food for coconut crabs, flying foxes, and to a lesser extent, people (edible kernel) before its population declined. Thought to be extinct prior to rediscovery in 1987, Carpoxylon was known from at least one site on Santo (four plants), and suspected from sites on Erromango, Tanna, and Ambae (20 individuals total). Without conservation measures, this species is likely to become extinct.

Conservation Objectives: Multiplication of the remaining palms and protection of the full range of the plant's genetic diversity to ensure the survival of the species, assessment of the existing population and development of a formal species recovery plan, protection of wild palms and habitat.

Enterprise Intervention: A village-based and/or Port Vila- based nursery to produce and sell the palm to Vanuatu collectors and landscapers. Providing there are no legal restrictions, seeds or seedlings could be sold to the lucrative international palm trade, with sales initially directed to palmeta and research institutions. Money is to be returned to village projects and further conservation efforts.

Project History

September 1993: The enterprise has excellent conservation value. The village of Casaveia, where four adult palms grow, has one extended family, very much interested in working with PEP. The enterprise potential of a palm nursery is to be evaluated. Success may hinge on the ability to access the international market; this situation will be clarified.

December 1993: A terms of reference for forester Joanna Walker's assistance with the search for Carpoxylon at sites outside of Casaveia, South Santo, was drawn up following preliminary discussions. The initial plan was to follow leads of informants on palm location. When this method turned up a number of palms, Devoe conjectured that the population might in fact be large enough to merit a more generalizable sample. Accordingly, in November, Devoe and Walker walked a four-day transect in West Santo, where no palms had been reported, to effectively take a random sample of the palm population.

Upon the request of the editor of "Naika", the newsletter of the Vanuatu Natural Science Society, Devoe prepared a report of the findings and sent it to two palm taxonomists, John Dransfield and John Dowe, who are kept abreast of the Carpoxylon project. Both asked to forward the report to scientific journals for possible publication. As the request from Dowe was received first, it was sent by Dowe to "Palms and Cycads".

Also in November, Devoe and Stead met with forest botanist Pat Curry and horticulturist Sandy Lawson. Stead had arranged a meeting with Lawson, a local landscaper, to discuss the potential market for Carpoxylon. Lawson suggested that all rare endemic plants would be of some interest to collectors, but that the landscaping market is confined to plants with specific qualities. Lawson has a personal interest in rare native species, and believes the sale of materials from these plants could be a profitable on a small scale. Curry suggested that determining handling methods for seeds of indigenous plants is a big task, and if started now, would assist the work of a proposed national botanical garden. Devoe and Curry believe that seed collection and sale could both raise conservation awareness and return income to rural communities. Curry urged the others to consider organizing a native plant enterprise that would market a broad range of rare and unusual plants.

Walker sent to Devoe Carpoxylon seed collected during her consultancy. Devoe sowed the seed in small-scale germination tests similar to those reported earlier, except that seed was sown in germination trays rather than directly into plastic pots. The first germination tests sown in July, 1993, yielded 89% germination, confined to a one-month period. It took more than two months from germination for the seedlings to reach the stage where the fronds became biffed. From these first tests and subsequent growth of the seedlings, we learned that in a wet medium, degree of insolation has little effect upon the rate or percentage of germination over the range tested (full sun, direct sun limited to three hours per day), but that where the potting medium is maintained moist, greater insolation produces faster seedling growth. These seedlings were held at Devoe's home for three months following sowing, and then transferred in November to the care of Mele family living in Port Vila.

Upon learning that the first batch of Walker's seed had been refrigerated, Devoe conjectured that it was unlikely to germinate. However, chilling may not have killed the embryos, in which case induced dormancy would likely delay germination. None of this seed has germinated to date, but neither is it obviously deteriorated.

The next lot of seed collected by Walker from two areas on Santo was sown November 18 with 23 out of 30 seeds (77%) germinated to date. Seed subsequently collected by Devoe and Walker sown November 27 has reached only 27% germination. Upon germination, seedlings are removed from germination trays and planted into poly planting bags.

Devoe is seeking a collaborator or contractor to assess the amount and distribution of genetic variation among the subpopulations of Carpoxylon spread over Santo and perhaps Ambae, Erromango, Tanna and other islands in the Vanuatu archipelago. The information is needed for the species recovery plan, which will aim to protect the whole genetic base.

The Enterprise Specialist prepared a report "Strategy for Carpoxylon Enterprise Development" . The report notes that the domestic market for Carpoxylon plant materials is insignificant, but that there is a high probability that a substantial export market exists. Initially, export sales would be to collectors. If the species proves to have value as a landscaping or ornamental plant, this market should be developed as well.

With the existing prohibition against the export of Carpoxylon materials, it is not possible to capitalize on this market. If it is possible to document the income-generating potential of this enterprise and concurrently present a conservation plan that confirms that there is plant material available that is excess to the needs of the conservation plan, export sales may be approved. To this end, a market study to determine potential sales of Carpoxylon plant materials will be commissioned. A TOR has been prepared, and a consultant is sought to undertake this work.

Recommendation, December 1993: PEP's Carpoxylon intervention has attracted the interest of internationally recognized palm experts; without exception, they support the project. Development of a conservation plan and enterprise activity should continue unabated.

Status, March 1994: On the enterprise side, a consultant was employed to conduct a study to quantify the market for Carpoxylon plant materials in the United States. This was limited to the U.S. for two reasons, 1) the U.S. represents by far the greatest single market for these products, and 2) initially offering the products exclusively in the U.S. greatly simplifies administration and distribution problems. The consultant employed had formerly been associated with Cultural Survival Enterprises as a market researcher, and was intimately familiar with research of this nature. The consultant concluded that there was a viable market for Carpoxylon plant materials in the United States, and suggested approaches to access this market.

On the conservation side, a short-term technical assistance contract "Information Support for Horticultural Production of Carpoxylon macrospermum, Veitchia montgomeryana, and V. spiralis" was fulfilled by Dr. Dennis Johnson, Deputy Chairman of the Palm Specialist Group of the IUCN Species Survival Commission. Dr. Johnson was asked to assist with a literature review to determine restrictions under CITES and plant quarantine to shipping seeds and seedlings of these species internationally. He further supplied background information related to palm biology and to the handling of seeds and seedlings as commodities and an Initial Environmental Examination for the proposed PEP palm seed enterprise.

During the quarter, Devoe corresponded with Johnson, Dransfield (Royal Botanic Gardens, Kew, UK), Dowe (Townsville Palmetum) and others regarding the species recovery plan for Carpoxylon. She met with Dowe and Dransfield while in Australia. Expressions of interest in conducting the molecular analysis were received from staff at the Bailey Hortatorium at Cornell University and the US Forest Service National Forest Genetic Electophoresis Lab.

PEP resolved to draft a plan to pursue Carpoxylon recovery. This draft, with a discussion of the enterprise aspects of the project, should be presented to Vanuatu's Environmental Unit. A goal of this activity would be to have the Environmental Unit rescind its prohibition against the export of Carpoxylon plant materials. If the Government of Vanuatu agrees that Carpoxylon seed can be exported in conformance with a sound conservation plan, PEP should assemble all data necessary to the plan, which will be subject to scientific peer review.

June 1994: PEP held a meeting with the head of the Vanuatu Government's Environment Unit to brief him on the status of the project to date. Discussions ensued on the need to conduct a comprehensive population survey of the palm in order to formulate a strategy for conserving the species. PEP's conditionality for developing a profitable enterprise as part of the conservation strategy was explained and accepted. It was agreed that a palm expert be engaged

to conduct the population study which is to include an enthnobotanical component. It was also agreed that the opportunity would be utilised for training some ni-Vanuatu persons in the process of population survey of a threatened or vulnerable plant species. Both the Environment Unit and the Forestry Department agreed to send up to two persons each to participate for part of the time during the six-week field work for this palm.

Contact was renewed with the palm expert, Dr. John Dowe, who has agreed to come in November/December for a period of six weeks. Dr. Dowe will conduct the population survey and include ethnobotanical information in his investigation. He will also supervise any laboratory analysis necessary for establishing genetic variation. The PEP Coordinator will assist Dr. Dowe for part of the survey.

Contact was also renewed with Mr. Dick Phillips, a commercial nurseryman who exports palm seeds from Fiji, and a member of the International Palm Society. He confirmed his interest in assisting with collection, germination, packaging, and export of palm seeds if needed. He also expressed interest in re-establishment of the palm in Aneityum - the location of the type species. Our last quarterly report made an error about a Carpoxylon palm being at the University gardens in Suva. The palm, one of two representatives in Fiji, is growing in Mr. Phillips' garden.

Current Situation

Status, September 1994:

PEP continued negotiations and concluded contracts for the services of John Dowe and Dick Phillips as reported for the last quarter.

4. WASTE-OIL

Situation: There is no program in Port Vila (or Vanuatu) providing for the disposal of used lubricating oil (waste oil) in an environmentally acceptable way. It is believed that a local utility uses 60,000 liters of lubricating oil per year. In addition, unknown amounts of lubricating oil are imported to service motor vehicles, construction equipment, and the like. Disposal of this waste oil is by dumping onto the earth.

Vanuatu's Energy Unit is enthusiastic about this project, and has offered to undertake a preliminary survey of waste-oil 'producers' and potential purchasers.

Conservation Objective: To prevent the waste oil from being dumped improperly.

Enterprise Intervention: Working with the utility and other producers of waste oil, PEP proposes to develop an enterprise that would collect and market the used oil.

Project History

March 1993: The recommendation was to continue to evaluate feasibility of this project.

September 1993: During the RDO/SP-FSP meetings of March and April, 1993, the then RDO/SP Science Advisor declined to approve continued activity in this area. PEP staff feel that this project has considerable enterprise and conservation merit and would contribute to the range of linkages addressed by PEP. In August, the Enterprise Specialist again discussed this proposed project with the RDO/SP Project Officer, and asked for approval to continue to study the recovery and sale of waste oil. This approval was granted. Preliminary discussions have been held with Vanuatu's Energy Unit; they enthusiastically support the concept.

PEP resolved to continue to advance this initiative, further define the project, and seek information regarding waste oil "producers" and potential customers.

December 1993: Efforts during this period were focused upon accurately determining the amount of lubricating oil imported into Vanuatu, and in ascertaining the size of the local market for waste oil.

Meetings were held with the managers of the three firms that import lubricating oil into Vanuatu to explain the project and to query them regarding the amount of product entering the country. The total amount of lubricating oil imported into Vanuatu in the last 12 months was 468,000 liters; this represents an average year. After subtracting the amount of oil sent to outer islands and estimated amounts consumed during use, it is estimated that 200,000 liters are available for recovery in Vila.

It may be possible to market some recovered oil in Vanuatu, although initial discussions with potential users have not been encouraging. Therefore, it is necessary to develop an economically viable export scheme that would provide for local storage, economical transportation, and the identification of an overseas purchaser. The local Shell Oil bulk plant has 800,000 liters of unused bulk storage that might be made available at some unknown cost. An arrangement to use this capacity would have to negotiated with the parent company in New Caledonia.

With the exception of a small, specialized facility in New Zealand, there is no known re-refiner of used lubricating oil in the South Pacific. In Australia, used oil from metropolitan areas is customarily collected and sold as fuel oil. Although this oil may be filtered or cleansed in some way, it is not re-refined. The selling price is not sufficient to cover the cost of collection, processing, storage, and delivery; producers pay oil collectors for their services.

It was thought that oil tankers departing Vanuatu with empty bunkers would accept waste oil at very favorable rates. This is not the case. No bulk oil is shipped to Vanuatu from nations that are potential users (Australia and New Zealand). Oil imported into Vanuatu comes from Fiji and New Caledonia; neither of these nations represents a market for used oil.

It was recommended that efforts be continued to find a market for Vanuatu's waste oil. Market prices for waste oil in New Zealand and Australia should be determined, and cost of transport to those countries should be ascertained.

March 1994: The possibility of disposing of Vanuatu's waste oil to an overseas market was investigated. Because of depressed world oil prices, there is virtually no market for waste oil in the South Pacific. Because of these depressed prices, the operation of Australian re-refineries became uneconomical in 1991, and these facilities were shut down. Commercial businesses collect waste oil for a fee of two to six cents per libre. This product is sold as a source of heat in a very soft market at prices that often fail to cover "production" costs. Much of the waste oil collected is being stored. The situation is much the same in New Zealand; however, there is one re-refinery in operation. The bottom line is that even if waste oil could be delivered free to Australia or New Zealand, it would find no market.

In Suva, Fiji, a foundry uses waste oil as a source of heat. It has not been possible to determine what, if anything, they pay for this oil. It is known that they are able to meet all their needs from local sources, and that there is no possibility that Fiji will accept waste oil from Vanuatu. In 1993, a re-refinery commenced operations in W. Samoa. At present, this facility is able to meet all requirements for raw product from domestic sources. Realistically, transportation costs preclude Western Samoa as a market for Vanuatu's waste oil in any foreseeable scenario.

The cost of shipping oil from Vanuatu to typical destinations such as Australia and New Zealand was investigated. No tank ships regularly operate between Vanuatu and these countries, and in view of the small amount of product to be transported (200,000 liters per year, maximum), no ship would call to pick up this cargo. The alternative is to place the waste oil in 205 libre drums and ship them in containers. The bare cost of this, exclusive of local handling and delivery in Vanuatu and the delivery point, is approximately VT 136.000 per container, which translates to A$.83 per litre.

Lack of a market and prohibitive cost of transportation preclude any possibility of exporting waste oil from Vanuatu. Any scheme for collecting waste oil must be predicated upon the assumption that the oil will be disposed of within the
the country. There are three broad possibilities:

1. Destroy the oil in an environmentally acceptable way.
2. Use it as a source of heat with little or no processing.
3. Process the waste oil so that it can compete in the marketplace with "new" product.
4. Ship the oil out of the country.

PEP resolved to continue to investigate the four alternatives indicated above.

June 1994:

Approximately 30 manufacturers were contacted to determine if their technology and equipment capabilities could meet the need for waste oil incineration, re-refining, or burning without processing as a source of heat. With one possible exception, no practical small-scale incinerating equipment is available. One manufacturer makes off-the-shelf waste-oil reprocessing equipment with capacities appropriate to the needs of small island nations (SINS) and at a reasonable price. A standard commercial hot water heater was located that will burn crankcase oil, transmission fluid and No. 2 oil "as received" from service stations, utilities, and other "producers" of waste oil.

Potential suppliers have been provided with specific parameters for equipment suitable for use in Vanuatu, and proposals solicited. These proposals will be evaluated during the current reporting period.

The Energy Division of the Forum Secretariat in Suva, Fiji, was contacted for information on a UNDP funded waste oil study. This information was provided by Mr. Park Yuen, Project officer at the Forum Secretariat. Information regarding waste oil recycling was requested from the UNDP in Suva, Fiji. Mr. Somsey Norindr, Resident Representative, responded with an overview of the situation in Australia and articles describing a small-scale re-refinery in W. Samoa. We will continue to liaise with these two organizations.

Current Situation

Status, September 1994:

The Enterprise Specialist visited W. Samoa to meet with Mr. Tony Hill, Managing Director of Aegis Oil Samoa Ltd., a small-scale waste oil re-refining facility (see Appendix XVI). The purpose of the meeting was to evaluate the technical and financial viability of this facility, and to determine if such re-refineries represent a practical solution to the disposal of waste oil in Vanuatu and other small nations of the S. Pacific. The following observations derive from a day-long meeting:

1. The facility is efficiently laid out and fabricated to high standards (largely by Mr. Hill). With minimal start-up difficulties and few subsequent maintenance problems, the facility produces re-refined base stock to acceptable standards.

2. From a production standpoint, the art, science and major cost is in the additive selection and blending to produce various end products.

3. Public acceptance of products has been high, and these demand retail prices comparable to brand name products produced from virgin base stock.

4. The major problem is the inability to secure enough waste oil to keep the facility operating efficiently. Hill has initiated a program to import waste oil from American Samoa, although he does not know the cost of such a scheme. (Experience in New Zealand, and an analysis of the situation in Vanuatu indicates that the cost of handling and transport preclude any possibility that importing waste oil is financially viable.)

5. No useful business plan was prepared prior to initiating the project. Accurate cost data was not accumulated during the construction of the facility. There are no drawings or specifications to document construction of the facility.

6. Although the plant has operated intermittently for several months, no useful product cost data has been accumulated.

Hill believes that, at best, to break even a small-scale facility such as this would have to produce 200-300,000 liters per year. This is two to four times the total amount of waste oil available in Vanuatu. Although data is not available, it is evident that construction of a small-scale re-refinery is capital and technology intensive. Elimination of waste oil by re-refining and blending to produce a marketable end product is not considered a viable alternative.

Several manufacturers of oil equipment capable of filtering and purifying waste oil have responded to inquiries by PEP. Equipment of an appropriate scale and reasonable cost is available "off the shelf". The product produced by this equipment will vary in viscosity and chemical composition. It is not known if this product can be burned in conventional atomizing burners; this is under investigation. Manufacturers of chemical incinerators have also be queried. "Off the shelf" equipment is available, although initial cost is high, approximately US$ 260,000 and operating costs are substantial. To achieve necessary high combustion temperatures, incinerators employ powerful blowers. These blowers consume large amounts of electrical energy, and are expensive to operate. In addition, a pre-heater employed by these incinerators requires a source of energy, usually diesel fuel or LPG.

Returning to Suva, the Enterprise Specialist met with Suresh Raj, Sustainable Development Advisor, UNDP, and following with Brian Dawson, Director of the Forum Secretariat's Energy Division and Mike Lawrence and Park W. Yuen of his staff. Funded by the UNDP, the South Pacific Forum is managing the S. Pacific Regional Energy Project. A study of waste oil issues is a component of this project. Both parties were briefed on the PEP's waste oil work and it was agreed to continue to exchange information. As neither representatives of the UNDP nor the Forum had visited Aegis Oil (Samoa) Ltd., the Enterprise Specialist offered his observations on the appropriateness of small-scale re-refineries as a potential solution to the regions waste oil disposal problem.

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5. MALEKULA CLAM PROJECT

Situation: A small marine conservation area was established by community members with no outside prompting or support. A community representative requested PEP's assistance with information and further project development. The Maskelynes area is noted for over-exploitation of near-shore resources due to population pressure and absence of management. Because of rough seas and scarcity of deep-water boats, villagers are heavily dependent on near-shore resources for protein. The conservation area is a privately owned reef-flat that has been restocked with giant clams.

Conservation Objectives: To protect the initial efforts of villagers, encourage continued protection of the area, improve efficacy of the reserve to restock other areas, add additional organisms to those protected and produced in the reserve, assist with reserve management.

Enterprise Intervention: This is a subsistence-economy effort. The villagers would like eventually to have enough marine produce to sell, but that is a long-term endeavor. No PEP enterprise activity is proposed.

Project History

September 1993: PEP should provide technical assistance to support and encourage this meritorious community initiative. A partnership with the Environment Unit has been discussed and seems a promising approach that may ensure continued attention to the area. Because of limited enterprise potential, this area has not been chosen by PEP staff as a full-blown EMU.

December 1993: Devoe twice met with Peace Corps volunteer Charles Allen to develop a program for the AEP Fellow's technical assistance visit to Ringi Te Suh. Local Government and traditional leaders were contacted for approval and to secure their input to the plan. Devoe

reviewed and selected environmental videos for use in environmental education workshops planned for the three villages on Uliveo Island, where Ringi Te Suh is located. Jack Enrel, initiator of the Ringi Te Suh project, was asked to join the AEP Fellow during her visit to the project and assisted the Project Manager in developing the work program.

With Fisheries Department Fisheries Biologist Moses Amos, AEP Fellow Milika Naqasima travelled to Malekula December 2-7th. Naqasima and Amos conducted three environmental workshops and surveyed the reefs surrounding Uliveo. During their visit to Ringi Te Suh, they made several recommendations for enhancing giant clam reproduction and growth. PEP will follow-up on these recommendations subject to the availability of staff and resources.

The recommendation was that this low priority intervention would be advanced as resources allow.

March 1994 During this reporting period, no activity relating to this intervention took place and there was no change in the status.

Therefore no activity is planned for the forthcoming quarter.

June 1994: Jack Enrel, Project Initiator of Ringi Te Suh Marine Conservation, privately owned marine protected area in South Maskelynes, Malekula met with van Breda and Kalfatak to report on the progress of the conservation area. Mr. Enrel requested PEP's financial assistance with the purchase of clam shells to stock the reef flat, and for funds to travel to giant clam mariculture centres in the region for practical learning experience. This assistance was not granted as it had previously determined that PEP input would be limited to technical assistance. Mr. Enrel requested we review a contract written for formal recognition of the protected site by adjacent landowners and local chiefs, as well as the village and national governments. We reviewed the contract and recommended adding a map of the site.

Current Situation

Status, September 1944:

Kalfatak travelled to the Maskelynes Islands off the south coast of Malekula to attend the Declaration and Opening Ceremony of the Ringi Te Suh Marine Conservation Project on behalf of PEP. Kalfatak's observations and recommendations are found in Appendix IX.

III ADMINISTRATION

Participatory decision-making was emphasized as part of PEP's management practice and worked well in general. All staff have needed time to work out a satisfactory process and to clarify individual expectations of what it involves. It has been an interesting exercise, at which we shall continued to work.

PEP regrets the departure at the end of the quarter of the Lolihor Liaison Officer, John Salong. Salong has accepted an opportunity to participate in two months toursims industry study program funded by the UNDP at the University of Hawaii. In Lolihor, George Bumseng has been promoted to fill the vacancy created by Salong's departure. A new staff member, Matu Bongranli was recruited in July, to serve as liaison officer for women in Lolihor.

Liaison with other organisations outside the activities of the project continued with CUSO Vanuatu/Fiji, with FAO regional forestry programme, and with the USAID offices in Suva and Manila.

IV TRAVEL AND TRAINING

Anita van Breda and Donna Kalfatak travelled to Suva, Fiji to attend an Asia-Pacific conference on marine resource management. Jim Stead visited Western Samoa and Fiji to seek more information on possible alternative means of treating waste-oil. George Bumseng won a fellowship of the Asia Foundation for a tour to the US. PEP contributed John Salong's expertise to a village survey mounted by the University of the South Pacific in Fiji.

APPENDIX I

THE ASIAN FOUNDATION ENVIRONMENTAL FELLOWSHIP PROGRAM

Report by G. Bumseng.

This brief report describe the activities of George Bumseng who completed an Asian Foundation Environment Fellowship in the U.S. from July 7th till August 25th. Given his involvement in popular theatre for community environmental education and his interests in site-stable agriculture and eco-tourism. He spent the first three weeks at the Yosemite National Institutes International Seminar on Environmental Education in San Francisco, CA. The last three weeks were spent travelling around the Hawaiian Islands to look at the farming systems, the National Parks, community organizations and Institutions.

The International Seminar on Environmental Education was organized by the Yosemite National Institute in California to bring together people concerned with teaching about the environment. The main purpose was to inspire a working relationship among people of different cultures. There were participants from 10 nations, namely Finland, Latvia, Germany, South Africa, Maldives, Nepal, Japan, Vanuatu, New Zealand, and the Bahamas. Their goals were to foster understanding and develop strategies for global environmental education.

The participants included individuals from formal and non-formal education programs, government and non-government organizations and independent professionals in the field of environmental education. All participants actively had to reach beyond language barriers to develop a deeper understanding of each others' cultures, and their environmental problems and achievements, each sharing his or her own experiences.

Over the course of the seminar one common theme emerged: culture is woven throughout education and individual perceptions of the environment. Cross-cultural understanding is paramount to improving environmental awareness, responsibility, and positive action. Environment means different things to different people according to cultural influences. When a culture is constantly in touch with the natural surroundings, its people anticipate and respond to environmental problems more readily. In contrast, when a culture strays from its traditional values, the more detached its people become from one another and the world around them. Urban societies have lost touch with much of the natural world on which they depend. When people from rural areas migrate to urban centres and are exposed to modern consumer lifestyles, they gradually lose their traditional, sustainable way of life.

This loss of values seems to be fundamental in the escalation of environmental problems. International environmental education is therefore essential in forming bonds between people, cultures and countries.

The kinship that grew among seminar participants provided the inspiration for hard work, laughter and reflection. Through shared knowledge and experiences, group members learned from one another, grew with each other, and celebrated their commonalities and differences.

These educators returned home to share the common understanding of the need to ensure that educational systems elevate the status of children as future "earthkeepers".

In Hawaii the fellow was affiliated to the 'Participatory Development Group' based at the East-West Centre. Here is a summary of his schedule of activities.

WEEK 1 (AUG. 1 - AUG. 6)

DATE		SUMMARY
Mon. 1 Aug.	-	Tour of PDG facility, meetings with staff, viewing of collection.
Tue. 2 Aug.	-	Met Lisa Ferentinos: ADAP, discussion over dinner; Tudi Baker: Video on sustainable Forestry and Resources Management in the South Pacific. Nancy Glover: Alley cropping attended Waimanalo Community Development Corporation Board Meeting; and Community Newspaper meeting.
Wed. 3 Aug.	-	Flight to Hilo (Big Island). Arrange around transport to Jay Rams facility TRAIDES in Hakalau - (Tropical Rural Island/Atoll Development Experimental Station).
Thur. 4 Aug.	-	Visit to Volcanoes National Park and Institute for Sustainable Future in Pahala.
Fri. 5 Aug.	-	Discussion and tour at Institute for Sustainable Future and taro farm at Pahala.
Sat. 6 Aug.	-	Visit to Farmer's market and solar car factory.
Sun. 7 Aug.	-	Visited turtle bog and Buddish Temple. Presentation of slides at the institute in the evening.
Mon. 8 Aug.	-	Flight to Honolulu Research at E-W Centre

Tue. 9 Aug.	-	Research at E-W Centre
Wed. 10 Aug.	-	Met Eric Enos: Director of Drug Abuse Prevention Program. Visit to taro patch.
Thur. 11 Aug.	-	Prepare for "Presentation' at East-West Centre.
Fri. 12 Aug.	-	Video/slides and discussions on Vanuatu and appropriate village development.
Sat. 13 Aug.	-	Rest
Sun. 14 Aug.	-	Rest.
Mon. 15 Aug.	-	Flight to Lihve. Kauai island. Meet with Jeff Chandler, State Historical Presentation Association. Also met with Chipper Wickman: National Botanical Gardens. Evening: Attended community meeting to discuss state plans to develop beach site into a recreational area. Community wanted to preserve the site due to the cultural significance.
Tue. 16 Aug.	-	Meet with Waipo taro farmer's market and visit to taro farm.
Wed. 17 Aug.	-	Visit to National Botanical Gardens, meet staff.
Thur. 18 Aug.	-	Visit to Kokee Museum, sacred sites, lumber factory, Indo-Pacific artifacts store. Met Mark Jeffers: Story Book Theatre, presentations and environment for children. Also met Howard Shapiro, Earth Friendly Schools Program, Dept. of Health, Solid Waste.
Fri. 19 Aug.	-	Visit to salt ponds and Hyatt Hotel facilities. Flight to Honolulu.
Sat. 20 Aug.	-	Presentation of video: Wuhuran Theatre group at Youth Correctional Facility. Depart Honolulu - Fiji.

The program in Hawaii was a busy and rewarding one for the fellow. A lot of experience was gained and valuable contacts made. The lessons learned from tourism in Hawaii will be useful in Lolihor when implementing the eco-tourism project and other developments that are now sprouting.

APPENDIX II

FIRST AID TRAINING WORKSHOP
LOLIHOR, N. AMBRYM, AUGUST 30 - SEPTEMBER 4, 1994

FIELD OFFICER'S REPORT

30.07.94

Leave Vila for Ambrym at 11.24 am and on arrival took a boat to Ranon. Was met by Chief, Councillors and people from village. Organise accommodation and later decide on course venue.

1.8.94

Official opening at 8.30 am by Elder of the village who also welcomed every participants and wish them fruitful learning for the week. Refreshments was served for everyone that attended the opening.

Course subjects commenced at 9.30 am and followed through as per programme for the 3 days. Copy attached.

4.08.94

Practical exams took place Thursday afternoon and Friday morning with a successful result having 14 out of 15 who attended the course passed their Basic Practical First Aid. Certificates yet to be issued.

Official closure was 3.17 pm. Words of appreciation was extended to the Red Cross for having responded to their needs followed by dinner for everyone that attended the closing ceremony.

COMMENTS:

Participants were keen at learning. Travel expenses all covered for Peoples Foundation of the South Pacific (F.S.P.). All arrangements were found as arranged. Receipts of money spent will be given to FSP for their records and reporting.

Sale of First Aid books - Vt400 to Red Cross Office.

Johnson Solomon
Liaison Officer
Vanuatu Red Cross Society.

APPENDIX III

REPORT OF AMBRYM ADVENTURE TOURS

John Salong, PEP Liaison Officer

This report covers a 4 day tour from Lolihor across Ambrym's ash plain to Sanesup conducted August 11-14, 1994. Participants included members of the consulting team preparing the Vanuatu Tourism Master Plan and residents of Port Vila.

Events Preceding the Tour:

1. The indefinite postponement of a meeting with West Ambrym Chiefs scheduled for July 28, 1994, to brief them on Ambrym Adventure Tours, to get permission for entering West Ambrym through Meltoungone, and to negotiate a rate for passing through their lands.
2. Concern was expressed on Friday, August 5, 1994, by Tokon Bofu of Fanrero, guardian of the Marom Volcano of Hawor, that two sail boat tourists should be forbidden from going to the volcano. He had a dream the night before where his dead father was telling him to allow the volcano to burn, or else he would die. He interpreted his father's message as meaning that the season to allow tourists visits to the volcanos should be limited to May, June, and July, when the yams were already harvested. This led to a Lolihor Development Council (LDC) meeting on Sunday, August 9th, in which the following compromise was reached: the site of the extinct volcano at Hawor would become part of the tour to be visited by every tourist who would then be allowed to go and visit the live volcanos. A sacred ceremony of appeasement to the Marom volcano would be performed at Howor by the guardians of the volcano upon payment of some money to the guardians of the Marom at Hawor. Only then could tourists visit the volcanos.
3. Word was received from Enos Falao of Sanesup on August 9th, that the people of Emioutogone wanted VT 1.000 per tourist passing through their land.

Tour Report:

1. Seven, instead of eight tourists arrived at Rossolo bungalows from Craig Cove on two boats in the afternoon of Thursday, August 11th. They included: Jeremy Challacombe, Stewart Hadfield, planners for the National Tourism Master Plan; Richard Carpenter, Registrar of Companies; Graham Watson, Public Works Department; Peter R. Dutton, Robyn Balaban, and Elsie Pama, National Tourism Office.
2. The tourists took the opportunity that afternoon to make a quick visit to the Nopul Airstrip which is being manually cleared. (Such infrastructure can facilitate tourism to the area.)
3. The tourists left Rossolo Bungalows on Friday morning, August 12th, to hike up to the volcano and across to Emioutougone and Sanesup in West Ambrym. The were driven part way up in Douglas' truck. They were accompanied by nine tour guides (an extra guide went because of some confusion).
4. They visited the volcano, camped in the ash plain, and hiked across to Emioutougone in the early afternoon and had to wait for a truck. They were given some food as a token of welcome at Emioutounge. Then they were driven to Milee Bungalows in Sanesup where they deposited their gear before driving back to Sesivi to spend a brief period of time in the hot springs.
5. They spent the night at Milee Bungalows. The next day, Sunday, August 14th, John Salong met them to do a brief evaluation. The decided that they would rather talk than fill out forms and use pre-addressed envelopes.
6. That same day, the tourists diverted a flight from Santo to pick them up at Craig Cove for the return to Vila. The tour guides returned with John Salong to North Ambrym by boat.

Comments Made by Tourists:

R. Carpenter:
An interesting walk up 2 volcanos. The bad weather wasn't Isaiah's fault. Isaiah was an extremely considerate leader. Perhaps the overnight camp would be improved the new mugs or cups, and I would suggest that a new water carrier be purchased. The guides need to be trained firstly as to what they are there for and secondly as to how to do their job better. I enjoyed the trip and these comments are meant to be helpful rather than critical.

S. Hadfield:
Isaiah was a considerate and responsible guide. It would be good if he could sit down and talk to the tourists about the trip - the formation of the volcano, folk lore about it, distances to be traveled each day and to generally reassure the tourist tramper. I suggest that you purchase some foam mats and new mugs. I also suggest you have 30 metre rope for: 1) hold onto as you look over the volcano, 2) holding onto if need be when going across the ridge, and 3) for emergencies.

G. Watson:
A very interesting and well led weekend. It may have been improved by less helpers & Isaiah delegating most of the work (such as fetching water) to his helpers. The camp may have been more comfortable if a small frame hut was constructed - particularly use if the weather is not good.

P.R. Dutton:
Need more information about the island, volcanos, etc. Tourists want more information on Ni-Vanuatu culture and customs, ie., "camp fire stories". There should be maps to show where things are and distances. Suggest 1 or 2 day trip or other options. I would have preferred Ranon to Sanesup in 1 day. There should be literature and information available before to know what to take, supplies, etc. If overnight camping, equipment must be better - and waterproof. Why so many guides? While camping at night, Ni-Vanuatu were too noisy. Suggest guide tent be away from others. Costs seem in line; job well done.

R. Balaban:
Very interesting walk. Not difficult at all. Guides were helpful, especially Isaiah. Walk to volcano and back could possibly be a day trip rather tan an overnight? For overnight stay, camp needs to be better organized, ie., better tents (our's leaked). There could have been more food. It looked like the guides got out "left overs". It would be nice not to have to carry own water. Suggest that everyone be told to bring wet weather gear & water proof packs. All-in-all, great hike. Would do it again!

General Comments by Subject:

Guides:
Isaiah has excellent potential a guide, but he needs to establish that he is the group leader. Other guides need to know what their jobs are, especially at camp. Maybe older and more mature people would be better. Need more training. Maybe 1 guide to 1 tourist is too much.

Information:
Need to sit tourists down to give information about the volcano and trip, establish leadership, codes of conduct, talk about sharks in the water, culture, and rules of safety.

Equipment:
Need to have a rope, first aid kit, impregnated mosquito nets for the bungalows, tent repair kit, survival bag, foam mats, ground sheets, better tents, and a semi-permanent structure at the camp to keep the equipment in. Need to have chairs with backs at Rossolo Bungalows to be able to lean back on and relax.

Costing:
Should have depreciation built in. For trucks, the true price is VT 1.000 per kilometer (?).

Positive Points:
Go back with pleasant memories. A room full of books, deck of cards and checkers board at Rossolo Bungalows would give a psychological security. Need good and plentiful food (less rice and more fruit). Hot springs (at Sanisup) was a highlight, but need at least 2 hours at it.

Issues to Resolve:
Consumption of alcoholic beverages by tourists?
Tourists wandering through Villages?
Tourists dress codes?
Photographs?
Tourist attendance at religious ceremonies?

An extra tour guide went on the trip due to some misunderstanding. Isaiah clarified the situation in a fax to Elsie Pama, and the situation will be corrected. Every other person was paid for their part of the service. Other lessons were learnt that should improve on the Ambrym Adventure travels.

Points of Contention Include:

1. Entry fee to the volcano from Ranvetlam to remain at VT 1.000 (not VT 500) to cover the secret ceremonies of appeasement to the volcano by Tokon Bofu of Hawor so that the visiting season can be kept open all year around.
2. Will the people of Emioutougone continue to accept VT 500 per tourist as entry fee on their land?
3. Should tour be hanged, such that lunch is served at Emioutougone on the way out of the volcanic ridges?
4. Should a program of custom dancing at Emioutougone be arranged on the morning before flying out of Craig Cove?
5. How will all these alter the costs?
6. Will Enos (owner of Milee Bungalows) have his telephone reinstalled?

APPENDIX IV

THE LOLIHOR TOURISM DEVELOPMENT
PROJECT
NORTH AMBRYM

TOUR GUIDE WORKSHOP
SEPTEMBER 1994

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FUNDED BY THE
PROFITABLE ENVIRONMENTAL PROTECTION PROJECT

THROUGH

The Foundation for the Peoples of the South Pacific

FOR

THE LOLIHOR TOURISM DEVELOPMENT
NORTH AMBRYM

TOURISM AWARENESS WORKSHOP:

Period: Wednesday 31st August 1994
thru Monday 5th September 1994

1. Three and half day Workshop on Tourism Awareness modified and or expanded to serve the needs of this project.

2. Tour guide training to include camp site selection, sanitation, trail, selection, walking/tour pace, safety issues, first aid kit. A two day training.

3. Two day trek across volcano to evaluate level of development of tourism project.

4. One day Workshop in sanesup - on Tourism Awareness and Tour Package Construction and Costing.

INTRODUCTION:

Prior to the training of Tour Guides it was necessary to establish the following:

a). The natural friendliness and skills in true Melanesian hospitality - in each participant.

b). Each participants' level of understanding of tourism as an industry, tourists and the requirements of tourists.

c). Each participants' knowledge of the job, "Tour Guide".

d). Each participants' educational background and the understanding and oral command of the English and French languages.

Natural Friendliness and Skills of True Melanesian Hospitality

1) Each participants was invited for a brief "storian" session where the following skills had to be revealed:

a). Listening patiently without interfering till the person talking has stopped.

b). Repeating or retell the speaker what he has just said.

c). Receiving the confirmation of the above.

d). Responding.

2) First shy. But responding. Within five minutes the shyness is gone.

3) Immediate wish to know personal details of the visitor!

4) Immediate wish to know if you like pawpaw or coconut or some other fruit or food so they could bring you some later today or tomorrow.

5) Finally your name and how you say it. Because now they can boast of friendship with you.

The "Storian" sessions went well and it did not take long to establish the fact that all participants were "NATURALS".

Understanding of Tourism - An Industry, Tourists and the requirement of Tourists.

In a group work session, the participants had to answer the following questions:

a). Wanem ia Tourism?
b). Who ia wan Turis?
c). Turis ikam long wea?
d). Turis ikam from wanem?

An overall summary of group answers are as follows:

a). Tourism hemi wan bungalow mo tour blong turis.
b). Turis hemi wan waet man nara kantri.
c). Hemi kam long Australia.
d). Hemi kam blong luk Volcano mo Fanla.

It was obvious that the level of understanding of Tourism as an industry was poor. Let alone that of tourists and their requirements.

Knowledge of Tour Guiding

Each participant was required to talk about Tour Guiding as a job - fifteen minutes preparation time and three minutes presentation time. The talk could be written out and read.

Summarising the general overall view:

"Tour Guiding was a job that required the guide to explain to tourists about trees and plants and custom and to answer their questions. It required helping tourists to enjoy their holiday."

The present and new Lolihor Tour Guides had very little understanding of the great responsibilities associated with the job and the risks and tasks that it involves. They had no idea that their whole attitude towards the importance of the job was the key to the successful continuation of the tourism project in their region, once it has started. They did not know that they had to make this thing work.

PARTICIPANTS' EDUCATIONAL BACKGROUNDS

I attach a list of educational background of each participant. In the group we have:

Year 11 - 1 person
Year 12 - 2 person
Year 13 - 30 person

A vast majority of the guides have had very limited education. The little communicating English they have is not used enough to lighten the tongue to speak easy or respond easy. Only two guides speak some French - enough to communicate and sufficient to guide a tour with limited commentary.

From the above findings it was decided that t
be organised along these lines - in Bislama

1. Tourism Awareness - TURIS TOK SAVE

a) What is Tourism?
b) What are Tourists and who are they?
c) The different kinds of Tourists.
d) Where do they get their money?
e) Making travelling arrangements.
f) Getting here.
g) Why do they come here?

2. <u>Bildimap wan Tour</u> - <u>Building on Tour</u>

a) Yu nidim wanem - Tour Components
b) Tour i nidim wanem we yu no save salem - What is one of the components that you cannot sell?

c) Rot mo lo atraksen - Means of transport and attractions.
d) Yu winim wanem - What do you gain.
e) Yu sevem wanem - What do you save.
f) Yu kru olsem wanem - Development funds.

3. Composing and costing the Lolihor Ambrym Adventure Tour.

4. Wanem ia "Tour" — What is a " Tour"
Wanem ia Tour Guide? — What is a Tour Guide?

5. Hospitality - Showing (soem mo salem)
- Giving (kivim fir nomo)

6. Information gathering - commentary composition.

7. Tour to Ranon village and Fanla.

8. Group making of commentary on Ranon and Fanla Tours - in English.

9. Group work, practice tours - skit form, in English.

10. Tour guide partnership (letter in English).

11. Summary.

12. Evaluation of Ranvetlam workshop.

13. Marum Liklar.

14. Sanesup Workshop.

TOUR GUIDE TRAINING
LOLIHOR TOURISM DEVELOPMENT

PROGRAMME

WEDNESDAY

9.00 - 9.30 AM	:	OFFICIAL OPENING
9.30 - 11.00 AM	:	TURIS TOK SAVE
11.00 - 11.15 AM	:	BREAK
11.15 - 12.00 NOON	:	OLI KAM LONG AMBRYM FROM WANEM
12.00 - 1.00 PM	:	LUNCH BREAK
1.00 - 2.00 PM	:	BILDIMAP WAN TOUR YU NIDIM WANEM
2.00 - 2.30 PM	:	BILDIMAP LOLIHOR AMBRYM ADVENTURE TOUR
2.30 - 2.40 PM	:	BREAK
2.40 - 3.30 PM	:	KOSTEM WAN TOUR KOSTEM LOLIHOR AMBRYM ADVENTURE TOUR
3.30 - 3.45 PM	:	CLOSING OF DAY ONE

NOTE: PEP representatives, FSP representatives and Councillors attend today's Workshop only. Thursday & Friday Tour Guides only.

PROGRAMME

THURSDAY

9.00 - 9.05 AM	:	OPENING PRAYER
9.05 - 9.30 AM	:	WANEM IA TOUR
9.30 - 10.00 AM	:	WANEM IA TOUR GUIDE
10.00 - 10.15 AM	:	BREAK
10.15 - 11.15 AM	:	HOSPITALITY SOEM (SALEM) KIVIM (KIVIM FRI NOMO)
11.15 - 11.30 AM	:	SKIT PREPARATION - GROUPS THEME "MEET & GREET" - SHOWING "SOEM" & "KIVIM IN ACTION
11.30 - 12.00 NOON	:	PRESENTATION OF SKITS.
12.00 - 1.00 PM	:	LUNCH
1.00 - 1.45 PM	:	WALK TO RANON VILLAGE

1.45 - 2.00 PM	:	REGROUP POW WOW
2.00 - 3.00 PM	:	WALK TO FANLA VILLAGE
3.00 - 3.30 PM	:	VILLAGE TOUR PAYING RESPECT - NASARA AND CHIEF TOFOR
3.30 - 4.00 PM	:	REGROUP - POW WOW OUTSIDE FANLA VILLAGE CLOSING PRAYER DISPERSE

PROGRAMME

FRIDAY: Friday's session was conducted and run in English.

9.00 - 9.05 AM	:	OPENING PRAYER
9.05 - 9.30 AM	:	TOK BAK - RANON VILLAGE AND - FANLA VILLAGE
9.30 - 10.00 AM	:	GROUP WORK. SUMMARISE RANON AND FANLA INFORMATION COMPILING: HISTORICAL DEVELOPING & NATURAL ATTRACTION.
10.00 - 10.15 AM	:	BREAK
10.15 AM - 11.00 AM	:	PRESENTATION OF WORK AND INFORMATION BY GROUP LEADERS.
11.00 AM - 11.15 AM	:	PREPARATION OF GROUP WORK. "TOUR OF FANLA" OR "TOUR OF RANON" UTILISING NEWLY GATHERED INFORMATION.
11.15 AM - 12.00	:	LUNCH
1.00 PM - 1:30 PM	:	TOUR GUIDE PARTNERSHIP. PARTNERSHIP TO BUILD UP KNOWLEDGE OF VANUATU AND TO IMPROVE, ENGLISH THROUGH LETTER WRITING. COPY SAMPLE LETTER.
1.30 P M - 1.45 PM	:	SUMMARISING WORK OF LAST 3 DAYS.
1.45 PM - 2.30 PM	:	GROUP WORK. EVALUATING IN GROUPS.
2.30 PM - 3:00 PM	:	REGROUP GATHER IN BY LEADER PRESENTATION OF GROUP EVALUATION.
3.00 PM - 4.00 PM	:	CLOSING OF WORK SHOP
4.00 PM - 4.30 PM	:	FEAST BY LOLIHOR.

TOUR GUIDE TRAINING

PROGRAMME

Saturday: Tour of Marum Liklar
Practical work for guides
Local knowledge and hosting skills
Setting the pace
Camp course - Location
- Setting up
- Latrine
- Equipment
- Food
- Campfire

Volcano tour by night

Sunday: Tour of volcano continued
Trek across to West Ambrym
Overnight Milee Bungalow.

Monday: Sanesup workshop
(Refer attached)

THE SANESUP WORKSHOP PROGRAMME

Programme

8.30 am - 9:00 am	:	Official Opening Introduction to the one day workshop by John Salong.
9.00 am - 9.30 am	:	Tourism Toksave Who are you? Are you good enough?
10.00 am - 10.30 am	:	Selling and giving hospitality
10.30 am - 11.00 am	:	Skit preparation and presentation - "A tour situation of your choice".
11.30 am - 12.00 pm	:	Why do tourists want to come to Ambrym? Attractions and culture.
12.00 - 1.30 pm	:	Lunch at Milee Bungalow. Plays "Tour Guide and Tourist" counters presented in 3 groups by the Lolihor guides.
1.30 pm - 4.00 pm	:	Building and costing a tour. Packaging the Lolihor Tour and costing a Tour (emphasis on the West Ambrym components).
4.00 pm - 4.30 pm	:	Evaluation and official closing
5.00 pm	:	Official Dinner.

TOURISM AWARENESS

It is always easier to talk when you know who you are talking to and what you are talking about. So before you are able to host a tour it is important that you know something basic and common about your visitor and that you know a lot about what you are going to show them.

So the first half day of the workshop was spent learning about the tourist. Who he is, where he comes from, where he got his money from, what he wanted to see here comes from, what he wanted to see here and how we are to look after him.

There is always a moment or two in tour guiding when there is no handy tree to talk about and you find yourself raking your brains to think of something to say. Knowing about him can give, you something to talk about! His flights or country and so on.

Some time was spent on the structure of tourism as an industry. This assisted the participants to see where THEY fit into the "holiday" from planning and saving to arriving at Ranon.

BUILDING A TOUR

Building a Tour is not too hard to do. Once you know what the tourist is all about. Working as a group; all participants contributed to the structuring of the Lolihor Ambrym Adventure Tour. From Craig Cove to Craig Cove, all components (attractions and services) were discussed acknowledged and costed. Finally the package was fixed and the council's development fee was added to this. Attached copy of package Breakdown and prices.

WHAT IS A TOUR?

Its all very well talking tour guiding to a Westerner who knows what touring is, but a ni-Vanuatu who has left his home island twice to the another similar island has no idea what a tourist "tour" is. The average ni-Vanuatu associates the word "tour" with the last government official visit to his island or village. It was very important that the guides of Lolihor understand a "tour" in terms of the following:

1. Tourist's expectations.
2. The 'package' he bought in Vila or Australia - what does the tour he bought comprise.
3. The importance of covering all aspects of the tour - comprehensive commentary throughout.
4. Value for money.
5. No additional services that might cost the council more than the costed nett of the tour the tourist bought.
6. Authorisation from the council for changes to the tour plan caused by bad weather or other situations beyond control of the guides.

WHAT IS A TOUR GUIDE?

The role of a Tour Guide on a tour was discussed in great detail. The most important task of the Tour Guide being to carry out a planned itinerary of activities spread out over a period of time, hostessing visitors who had purchased involvement in this programme of events.

RESPONSIBILITIES:

1. Ensure you yourself are familiar with the tour programme and know the details of meal stops, overnight arrangements and comfort and swim stops etc.

2. Ensure you know the location of the programme and all other parties involved in the host of the programme in great detail.

3. The welfare of the visitors rests in your hands. Because you know your turf like the back of your hand, you will lead them on a safe path.

4. Make sure that they see everything that they paid to see and that you know in advance what they paid for.

5. Make sure that you are equipped with answers to possible questions to do with the people, culture etc of the tour location.

6. Ensure your visitors safety and full enjoyment of their visit.

7. Delegate tasks to your assistants or operators. Don't do everything yourself. You are a Tour Guide.

Your Guide - Yu Hu? Who are you?
- Yu kat naf blong mekem wok ia? Are you good enough to do the job?

Many times a Black person will think of themselves as inferior to the White person. Often this feeling is caused by the following:

a) Suddenly the speed boat arrives with a tourist and you have not yet washed your face or combed your hair. Your nails are long and dirty and your mouth is unpleasant from not cleaning your teeth.

The tourist is neat and clean though a little tired from travelling.

b) You are in the same clothes that you were in yesterday. It is crumpled because you slept in it last night. The middle button of your shirt fell off last week and you did not sew it back on.

The tourist's clothes is reasonable clean and only crumpled where he sat on it and all his buttons are there.

c) He is wearing a good pair of walking shoes and you are wearing a pair of "savat" with a hole in one heel.

d) He took out a fat wallet and paid the boat driver and of course you saw fat wads of 1000 vatu notes still in here. And if you remember rightly, you have 120 vatu left of your last tour guide money.

So you think or conclude that he is better than you, that you are black and poor while he is white and rich. Now we must take another look at this situation, by checking you both inside out on the facts that surround you both:-

You Tour Guide	Tourist
You have flesh, bone and blood	He has flesh bone and blood
You have a heart	He has a heart
You have feelings	He has a feelings
You have emotion	He has emotion
You have family	He has family
You have religion	Maybe he has, maybe not
You have a life culture	He has dead culture, his culture died a long time ago.
You have a tribe	He has a unit family
You have lovely "Environment"	He is from a concrete city

You have live chickens running around you	He sees packed chucks in Supermarket deep freezers
You have pigs and land and custom	He has money
You have an active volcano	He has a cooker/stove.
You speak his language	He speaks only his.

CONCLUSION

You are both fellow human beings. He came to visit you because you have what he has not. His paying for the privilege of seeing you and the beautiful rich island of Ambrym.

HOSPITALITY

Showing and Giving of Tourism Hospitality were covered and in group work and skits a presentation by four people had to show or rather deliver the correct difference between the aspects of "hospitality" that are sold: for example; bungalow meals served with a smile, and that which are given freely, for example a pawpaw given with a smile. Two lists on the wall displayed the two different and important Hospitality Exercises"

Showing (Soem)		Giving (Kivim)
Sell to Tourist		Give Free to Tourist
1. Meet at the airport	- with -	a smile
2. Welcome to Ambrym	- with -	a handshake
3. Wait for him to take photos of trees	- with -	patience
4. Assist him into the speed boat	- with -	a helping hand
5. Talk to him all the way	- with -	friendliness.

INFORMATION GATHERING AND COMMENTARY COMPOSING

The group did a great group work of information gathering and commentary composing on the two tours of Ranon and Fanla. I attach results on both villages on the system used. When things are made too easy and you find all the information you need to do a tour on one piece of paper, you loose the most important thing - the spirit of the place and time that makes the difference to the commentary and your presentation. It is important that each guide should search for their own information from their own people and be a "mountain of information" because it is a part of them. Then, tour guiding in Lolihor will bear the spirit of the place and be genuine always.

TOUR TO RANON VILLAGE AND FANLA

These two tours were made for various reasons to achieve the following:

1. Time distances so guides can advice visitor s prior to walking how long it takes to go from one place to another.

2. To work out walking pace/speed for different age groups. How fast do you as a guide walk? Setting the pace.

3. Information gathering.

4. Tour commentary composing - that is what do you talk about between this rock and the old copra shack three hundred metres down the road.

5. Courtesy/respect calls at villages. Introduce your visitors to the chief or some authority as you to through just letting them know:

    1. If you're just passing through
    2. If you're going to be around for a while
    3. If you're going to need water or toilets.

All courtesy but important stops to make.

GROUP WORK - COMMENTARY MAKING

Groups working together were required to compose commentary on a small section of the tour of Ranon or the tour of Fanla. It was important that the information given is relevant only to that section and dealing with the past, present, and future.

Some excellent work were presented here and the guides presented their work with great pride. It is good to do something you like doing because you know all about it. Gives great confidence in yourself and your ability. Presentations were made in English.

TOURISTS AND TOUR GUIDE SKITS

In four sets of skits, seven groups of 4 participants enacted scenes of different locations and situations involving tourist and guide.

1. Meet and greet and welcome
2. Historical and development
3. Cultural
4. Questions and answer

This is an excellent way of determining ability and confidence and general knowledge. Very successful acts were performed.

TOUR GUIDE PARTNERSHIP

In an effort to commence some continuing exercise to assist in improving the "English", the participants agreed anonymously to begin letter writing with the Tour guides of Santo. They are to write in English and exchange general knowledge on Vanuatu and their own villages and island. A draft letter was put up and copied by all participants. I was to take the letters back to Santo and the tour guides. Hopefully this will be the beginning of "learning from one another" to improve English and educate in information building.

GROUP SUMMARY WORKSHOP

Participants worked in groups to summarise what the workshop had covered without referring to notes. Leaders presented these in English. Following these there was question time to straighten up doubts and further queries.

Overall every group was able to fully recap on the workshop coverage and all the important and key functions discussed were recalled and summarised and presented.

EVALUATIONS

The workshop broke up into groups to evaluate the workshop. To get the ball rolling, 4 guideline questions were asked:

1. Was the workshop useful to you?
2. Did you learn something new?
3. What would you have liked to see included.
4. Would you like another course?

Group Responses:- Summarising

1. Was the workshop useful to you?

   a) Yes, because many of us did not know ourselves and our background.
   b) Yes, it showed us many things about tour guide and tourists.
   c) Yes, it help us to understand ourself and our island and the tourist.

2. Did you learn something new?

   a) Yes, we learn that a tour guide is very important.
   b) We learnt that tour guide is a very important job.
   c) We learnt how to make a tour, to package it, and to cost it.

3. What would you have like to see included?

   a) Teaching about how the volcano is made.
   b) Teaching us to speak English
   c) We want general information on Vanuatu.

4. Would you like another course?

   a) Yes, we would like another course.

CONCLUSIONS

"A lot of people had passed through Ranon, Ranvetlam and Henyal Orkon. A lot of people visited Ranon and Fanla. Many were visitors and many were friends. Many came to help the people of Lolihor. There were others that came to participate in ceremonies. All of them left behind for us so much. We learnt many new things from them. Things that will help us to be proud of ourselves and to be able to share these with others in a pleasant way.

As each one left, we went home. The next day I woke early. On my way to the garden, I asked myself "what do we do now? Where do we go from here?"

This morning it was different. I woke up and I knew exactly where I fitted in. I knew where I was in the Lolihor package. I knew what I was all about. I feel good today."

by: Wan workshop participant.

In the workshop we had spent a short 10/15 mins. on "who am I?" "Am I good enough" and since the tourist is made up of blood and bones and flesh, then were the same except in colour. He doesn't speak my language and I speak "His" language so I must be better than be is. I must be the best tour guide in Lolihor. This and all that was covered by the workshop has done a lot for the tour guides. Immediately they have confidence, concern for correctness and a new sense of pride in the responsibilities they will carry in the tour guiding job. I believe we have achieved the following:-

1. We know tourism - and the industry.
2. We know who tourists are.
3. We know what a tour is.
4. We know who we ourselves are.
5. We know that we are they key people in tourism in North Ambrym.
6. We know that Lolihor's Tourism project's future depends a lot on our performance in tour guiding.
7. We know how to build tours and to make their commentary.
8. We know how to give service with friendliness and hospitality.
9. We know exactly what the Lolihor Ambrym Adventure Tour is.

10. We have more information now on Ranon and Fanla than we ever did before.
11. We are proud of our roots. We know our grand parents and great grandparents.
12. We know why tourists are attracted to our island. We are happy to show them the beauty of our people and home.

I feel that all that could have been achieved in the time we had was achieved. I am only sorry that I was not fully aware of the state of "tour guide awareness" before assuming that the time quoted was sufficient. At the point of starting this workshop the Lolihor tour guides needed more than 3 days of training. As it was, the first day was spent in packaging and costing so that in reality the Lolihor guide training only had 2 days of workshop. The packaging and costing was a vital issue as "itinerary management" in tour guiding is very very important so the time was not wasted here. It was also vital to council members and property and land owners - to work it all out together as a team. Established a good understanding for everyone.

In a session such as this we are unable to teach recorded history, geography or general information to build an information pool. The letter writing and partnership, should help in a minor way to improve english and build general knowledge. There is a need for some sort of a situation to assist in the improving of the English (speaking) and the improving of tour guide skills. I conclude that the workshop was an of Tour Guiding as a vital component of the Lolihor Tourism Project.

RECOMMENDATIONS

1. The only way to improve on or develop further a skill is by putting it into practice and using it on a regular basis. Practice makes perfect. Being attached to an operation where everyday you do a tour soon turns a novice into a confident guide. I recommend that guides be attached to other Tour Operators in other islands to give them daily practice tour guiding and give them experience that they need.

2. There is a T.C.S.P course in Santo in October that is for Northern islands. (T.C.S.P. - Tourism Council for the South Pacific). I recommend that at least one Tour Guide attends both the basic and intermediate courses. Contact Annie National Tourist Office Vila.

3. Because of the low level of education the guides don't have the basic geography knowledge of formation of islands and so on. They don't understand volcanos or earthquakes other than the traditional stories and legends. Need a volcano study. I recommend a situation where they are instructed this basic knowledge.

4. The conversational English is very limited. I recommend a course specially structured around the tours of Lolihor where phrases and statements are built on simple English and memorised by guides. These are then used as starting points or headings to conversations or commentaries on various subjects. Maybe this could be worked in with the geography lesson, and volcano study. The guides are definitely eager to learn and there is a new pride in them now that equipped with the right armour they could become great tour guides.

MARUM LIKLAR VOLCANO TOUR

Saturday 3rd Sept./Sunday 4th Sept. 2.30 pm

The Tour:

The tour from beginning of finish is a beautiful experience, one that I am thankful I did not miss. The walk to the start of the ash plains was startlingly diverse all the way. The varying steep climbs and descends cut out any monotony and kept me guessing what was around the next bend.

A very very snaky ridge obviously with beautiful, ferns, orchils, banyans and funny village type plants and shrubs.

Then I had to pay my respects to the spirit of Marum Liklar by throwing a reed into the water way (flood way) before descending into it! The walk up the flood beds conjured up images of red hot lava rushing down at the small group! For a moment my heart stopped - what if this monster decided to erupt now?! God forbid. The guides were happy so I became carefree again!

The volcano by night was absolutely amazing. A challenge that was dramatically rewarding! One I will not hesitate to recommend.

The camp was also great. The location could be better. The campfire and the story telling - but there was no flute! The best part of it all was the morning walk across the watershed boundary of Lolihor into the northern territory. The huge lava flow ways and the different earth hills shaped by the wind and the rain. Eerie, massive, daring. I felt so small and insignificant. Then eventually perched on top of the highest point of massive volcano with the ridge about six inches wide and 20 knots of wind gushing and trying every hard to topple you over the ridge! The descend was beautiful with shoes full of sand and laughter ringing into desert expanse of earth ridges. The Emeltugon hospitality was warm. The refreshing coconut drinks appreciated. Enos Falao of Milee bungalow is a great host. Lots of food, warm, clean beds lovely people.

The Tour Guides:

The guides were very accommodating. One guide after another was allocated to me by the head guide for 2 hours or less. They were acknowledgeable in all aspects of the bush. They have island history of man and the Marum Liklar. I have one thing only to say here: They wanted to tell me so much but since it was made law that all commentary I talk be in English; they were stuck. It helped when I asked questions but without the questions they were stuck. Even then the questions were answered in one sentence. You could feel their desire to explain further hanging there. You could touch it. It was painful. It was in their eyes as they looked at me desperately searching for words! Yes they were helpful, respectful, laughing, happy, and somehow free in a nice simply way.

The Equipment:

Sufficient. Some time was spent on building permanent places for tents. A lot of digging and levelling base was done before the demonstrating of pitching tents. A session on choosing camp sites, camp latrine, camp hygiene and basic camp rules - was held before setting up camp.

Food:

The food committee do not have much of a choice where camp food preparations is concerned. They have never had to cut and cook cabbage when Marum Liklar is casting down its ash on an open air kitchen! So they give us cabbage to cut up ourselves and wash (in what water) against volcano ash! Many porters came with us to carry food and water - in plastic bottles. Very very hard to carry. Sugar in bottles, milk in milk powder tin, a coffee jar of coffee glass plates and earth cups! Oh Lord, the weight. The poor porters.

Water:

Only three people carried everybody's cook and drink supply. Heck - spread it out is what I say. Spread it out.

Latrine:

Excellent, Location. Pathway. Windwise.

The Ridge Trek:

John Salong made it easier midway when he laughingly compared the soft earth to the ice and rocks of other countries. I felt silly at being frightened of the whole thing. I was scared to death I might fall. But I had strong sure supportive arms and hands all the way - I should do this more often! Then, Isaiah took charge and everything went smooth. It all worked complicated. I don't know how he finds his way around. All waterways and ridges looked the same.

Conclusion:

A very good tour - good length - good walk - good trek. Some security needed when viewing the volcano. The earth shakes as we approach the lip indicating activity immediately below us. If you stop on the last slope and let your body sink into the sand you will feel the rumble. If the rumbling is intense enough that you can feel it through your whole body then the ground is not solid enough. The lip above you may cave in anytime. This was the view stand that Isaiah used. I suggest roping viewers to give that security. Before leaving camp a description of the trek should be given, like John's comparing an earth drop to an ice or rock one. Then people are prepared. Just before the ascent, there should not be any slow walk or pause as there is great danger of earth slide in the event of an earthquake. I have no complaints, just a few recommendations. The tour is good and ready.

Recommendations

1. A camp catering session for the catering committee. To include things like: food preparation against volcano ash rain. Why a heavy coffee jar and a heavy sugar bottle when there are such things as coffee, milk, sugar and tea sachets or bags - aeroplane or aviation type things. Why glass plates and earth mugs when there are picnic plates, cups and so on. Food like cabin biscuit and chinese soup rather than rice and cabbage. If you must have the cabbage, could we please have it all cut up and washed and seasoned ready to throw in a pot and close the lid?!

2. Ropes: Introduce use of ropes for safety and security on volcano and on ridge crossing. Flashlight per visitor.

3. Tour Guides: Commentary making talking practical as I recommended earlier.

4. Tour Guides: Don't throw your knife or axe at every tree on the way! A toksave on environment to be included someone.

MARUM LIKLAR AMBRYM ADVENTURE TOUR READINESS FOR MARKETING

When it's all said and done; the package is one that had been around for a while. The only different between in the past and now is that, this time it is a "tour" - planned, timed, programmed and hosted from arrival at Craig Cove to departure at Craig Cove. In the past, visitors purchased as they went along and then ran out of time or missed out parts of it for various reasons. The land and property owners are ready. The tour guides are ready. Of course nothing is perfect yet but time and practice will soon polish up a lot of the rough corners. You cannot polish now until the ball is rolling and you can see more clearly where the bumps are.

I have every confidence that the tour will sell. I have confidence in the tour guides, the property owners and can see them do a great job and become better hosts very soon.

Again I am confident in the tour's readiness for market.

SANESUP WORKSHOP: Conclusion and Recommendation on the Sanesup Workshop

A very very wise, last minute decision. As participants of the tail end of the Lolihor Tourism Package it is important that these operators receive the same training and exercises as North Ambrym to ensure a flow of service hospitality. At the closing of the workshop; it was declared that in all of West Ambrym's involvement over the years in tourism, this was the first Tourism TOKSAVE the region has had! I attach a list of participants.

Recommendations:

1. Another proper 3-4 day workshop by the National Tourism Office. Contact Anne 22685 ph.

2. TCSP Course Santo October 1994.
   Representation - 1 x Tour Guide, 1 x catering & accommodation personnel.

EDUCATION
PARTICIPANT's HIGHEST LEVEL OF EDUCATION

	Name	School/s	Level Reached
1.	Rixonne Kintor	Maranata/Port Vato	Class 6
2.	Worwor Tofor	Port Vato/Lamap	Class 6
3.	Rah Edwind	Ranon Primary	Class 6
4.	Ivan Bong	Ranon Primary	Class 6
5.	John Willie	Matevulu	Year 9
6.	Sandie Sidas	Ranon Primary	Class 6
7.	Allen Wesley	Ranon Primary	Class 2
8.	Atel (Hadithy) Tofor	Makam	Class 6
9.	Serah Peter	Makam	Class 6
10.	John Tasso	Ranon Primary	Class 6
11.	Kintor George	Ranon Primary	Class 6
12.	Reuben Bong	Ranon Primary	Class 6
13.	Lesbeth Bong	Ranon Primary	Class 6
14.	Rolyn Bong	Ranon Primary	Class 6
15.	Elieneth Lindsey	Ranon Primary	Class 6
16.	Lann John	Ranon/Port Vato	Class 6
17.	Alima Obed	Malapoa	Year 9
18.	Moses Bila	Ranon/Santo	Class 6
19.	Elsie Rosse	Ranon/Santo	Class 6
20.	Emma Youkon	Ranon/Santo	Class 6
21.	Kevin Sangul	Matevulu	Year 11
22.	Dorah	Ranon	Class 6
23.	Kemkem Tongtang	Ranon	Clsss 6
24.	Elsie Solomon	Ranon	Class 6
25.	Lilon Ruth	Makam	Class 6
26.	John Alfred	Ranon Primary	Class 6
27.	Jacquie Bong	Ranon Primary	Class 6

ATTENDANCE

DAY ONE

F.S.P. - John Salong
Chairman Lolihor Council: Chief Tokon
Representatives: James Hanghang
John Rawo
Obed Alima
Job Tabol
Nelly Billy
Isaiah Bong
Edward Jimmy
PEP Facilitators: Matu Bongranli
George Bumseng

Workshop Participants:

Rixone Kintor
Worwor Tofor
Rah Edwind
Ivan Bong
John Willie
Sandie Sidas
Allen Wesley
Atel (Hadithy) Tofor
Serah Peter
John Tasso
Kintor George
Reuben Bong
Lesbeth Bong
Rolyn Bong
Elieneth Lindsey
Lann John
Alima Obed
Moses Bila
Elsie Rosse
Emma Youkon
Kevin Sangul
Dorah
Kemkem Totang
Elsie Solomon
Lilon Ruth
John Alfred
Jacquie Bong

Attendance - Thursday 1 September, 1994
Workshop Participants
DAY 2

Henyal Orkon
Serah Peter
Fred Solo
Atel Hadithy Tofor
Emma Youkon
Alima Obed
Lilon Ruth
Allen Wesley
Kintor Fanrerence
John Taso
Sandie Sidas
Dah Edwind
Doreen Reuben
John Willie
Rixonne Kintor
Rolyn Bong
Rolyn Bong
Elsie Solomon
Moses Bila
Kevin Sangul
Elsie Ross
Ivan Bong
John Alfred
Kemkem
Isaiah Bong
Dorah Bong Meluen
Lesbeth Bong
Jacquie Bong
Lann John
Worwor Tofor
Elieneth
FSP Rep.

Attendance - Friday 2nd September, 1994
Workshop Participants
DAY 3

Rah Edwind
Tasso John
Toreen Reuben
John
Obed Alima
Lesbeth
Emma Youkon
Serah Willie
Roslyn Bong
Moses Bila
Lann John
Sandie Bongto
Fred Totang
Isaiah Bong
John Willie
Kemkem
Kevin Sangul
Kintor Farerence
Ivan Bong
Bongmeluen
Lilon Ruth
Elsie Solomon
Elieneth
Allen Wesley
Ronnie
Atel H. Tofor
John Alfred
Worwor Tofor
Jacquie Bong
Rixonne Kintor

Sanesup Workshop Participants
Monday 5th September, 1994

Sanesup:

Losalyn John
Wendy John
Lilix Naros
Lixcy Joe
Clorex Phelip
Roslyn Brownsen
Roslyn Joe
Joebubu
Leipakoa Willie
Kenrick Toto
Enos Falao

Meltugon:

Philip Talibu
T. Bongnaim
B. Sandy
D. Bae Luke
B. Masengvi
Beonkon
B. Benson
Magekon

Lalinda:

Philip Tao
Dalong
Henby T.
Lilip
Alain
Roger
Rey
Jackson
Massing
Jeme
Josise
David
Wilson
Apia

Baiap:

Bambu R.
Stephen Jacob
J. Kelven
Amos O. Epi

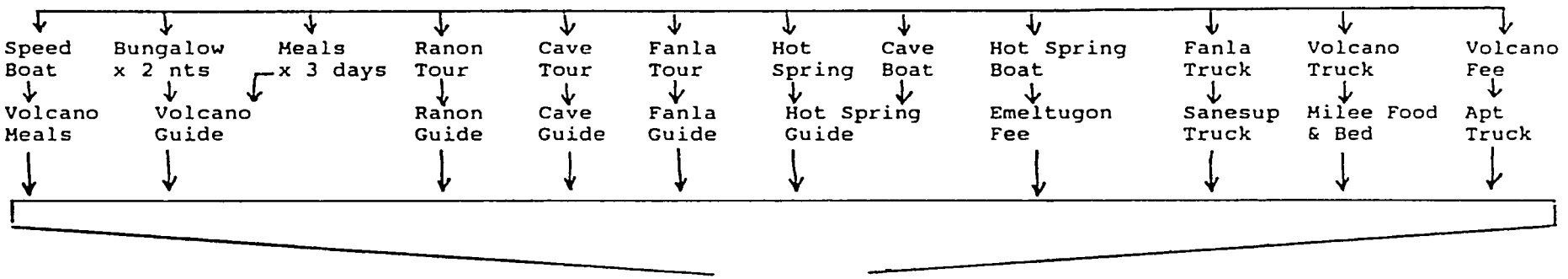
Lolihor:

John Salong
Sandie Sidas
Alima Obed
Emma Youkon
Rah Edwind
Kemkem
Jackie Bong
John Taso

Isaiah Bongnaim
Kevin Sangul
Lilon Ruth
Elsie Rose
Moses Bila
Kintor
Lesbeth Bong

BILIDIMAP WAN PACKAGE

LOLIHOR AMBRYM ADVENTURE TOUR
5 DAYS/4 NIGHTS



Add all costs. This is now your operators NETT.

Add to this your profit → _____

Add to this company or development money → _____

This is your package cost. NETT TO LOLIHOR. All agents must add to this their commission. ← TOTAL: Vt.

← This is what you give to:- Travel Agents, Tour Operators, etc. Add a handing fee of about 2,000 to this total. This is now your selling price - off street.

Vt. ←

APPENDIX V

RESULTS OF THE SURVEY OF BUSH CLEARING AND GARDENING PRACTICES IN LOLIHOR

August 1994

Survey blong faenem aot olsem wanem blong kliarem bus long Lolihor Vilij long Not Ambrym

NOTE: All percentages are only of those answering the particular questions.

Personal statistics of surveyed subjects
Total population of farmers surveyed:

Female	161	52.3%
Male	147	47.7%
No response	11	
TOTAL	**319**	

Age distribution

Males	147	%	Females	161	%
>50yrs	40	27.2	>50yrs	30	18.6
41-50	20	13.6	41-50	20	12.4
31-40	27	18.4	31-40	30	18.6
20-30	31	21.1	20-30	50	31.1
<20	28	19.0	<20	31	19.3

Family size

average	6.2
households	136
minimum	1
maximum	14
std. dev.	2.7
variance	7.0

Question 1.
Is this your first garden? y/n

	yes	no		yes	no
Male	36	111	Female	39	120
>50	6	34	>50	6	23
41-50	3	17	41-50	2	17
31-40	1	26	31-40	3	27
20-30	9	22	20-30	18	32
<20	17	11	<20	10	21

If ,"no" how many years have you been gardening? yrs

Male	avr.	count	min.	max.	std.dev.	var.
>50	32.2	29	5	53	15.3	233.4
41-50	20.5	13	7	40	9.9	97.6
31-40	17.8	24	4	32	7.7	59.3
20-30	5.9	21	1	17	4.8	23.0
<20	2.9	7	1	5	1.4	1.8
Female						
>50	35.4	21	7	62	13.5	181.7
41-50	23.0	14	3	36	8.9	80.4
31-40	19.0	22	4	31	8.5	72.8
20-30	8.1	29	1	22	6.7	44.5
<20	3.1	20	1	11	2.5	6.1

Question 2.
How many gardens have you got?

Male	avr.	count	min.	max.	std.dev.	var.
	3.2	146	1	9	1.8	3.3
>50	3.8	39	1	9	2.0	3.9
41-50	4.5	20	1	9	1.9	3.7
31-40	3.3	27	1	5	1.0	1.0
20-30	2.6	31	1	7	1.5	2.3
<20	1.7	23	1	7	1.4	1.8
Female						
	3.1	160	1	9	1.6	2.6
>50	3.4	29	1	8	1.4	1.9
41-50	4.3	20	1	9	1.6	2.5
31-40	4.0	30	1	7	1.6	2.5
20-30	2.7	50	1	8	1.4	1.9
<20	1.8	31	1	5	1.0	1.0

Question 3.
What kind of bush would you clear for a garden?

	Male	Female
secondary	38	40
fallow	39	58
forest	81	79
other	24	27
coconut	12	6

Question 4.
How many years do you use the same piece of land?

Male	avr.	count	min.	max.	std.dev.	var.
>50	3.2	39	0	7	2.0	3.8
41-50	3.2	20	0	8	1.8	3.4
31-40	2.5	27	0	7	1.5	2.3
20-30	3.4	31	0	10	2.1	4.6
<20	2.4	22	1	7	1.3	1.8
Female						
>50	3.1	30	0	7	1.7	2.9
41-50	2.7	20	1	7	1.7	3.0
31-40	2.7	30	0	5	1.4	1.8
20-30	3.1	49	0	10	1.9	3.8
<20	2.5	30	0	5	1.2	1.3

How many years do you leave the land before using it again?

Male	avr.	count	min.	max.	std.dev.	var.
>50	3.6	39	0	7	1.3	1.8
41-50	3.6	20	3	5	0.7	0.5
31-40	4.0	27	2	10	1.6	2.6
20-30	4.0	31	1	10	1.6	2.7
<20	3.2	22	1	5	0.9	0.8
Female						
>50	3.7	29	0	6	1.4	1.9
41-50	3.8	20	1	7	1.3	1.7
31-40	4.1	30	3	7	1.2	1.6
20-30	4.0	49	1	10	1.7	2.8
<20	3.1	30	0	6	1.3	1.6

Do you make a new garden every year?

Male		Female	
yes	no	yes	no
128	12	149	10

If, "no" how many years before you cut bush for another garden?

Male	"no"	avr.all	count	min.	max.	std.dev.	var.
>50	2	2.3	8	1	6	1.6	2.7
41-50	1						
31-40	1						
20-30	2						
<20	6						

Female	"no"	avr.all	count	min.	max.	std.dev.	var.
>50	0	1.9	8	1	3	0.6	0.4
41-50	0						
31-40	1						
20-30	3						
<20	6						

Question 5.

What's the best crop to grow in your village?

	banana	manioc	cabbage	yam	wild yam	fijitaro	watertaro
Male	20	42	3	48	2	66	43
Female	28	35	6	44	1	69	55

	kumala	peanuts	kava
Male	25	1	1
Female	45	-	-

Why?

manioc - not spoiled by volcano or cyclone
yam - important for custom (majority male as opposed to female reason 7:1), good food
taro - not spoiled by volcano or cyclone, grows well
kumala - grows fast

What's the worst crop to grow in your village?

	banana	manioc	cabbage	yam	wild yam		
Male	23	25	-	51	6	1	11
Female	19	35	2	45	5	3	27

	fijitaro	watertaro	kumala	peanuts	pumpkin
Male	3	2	5	-	1
Female	4	10	1	1	2

	is. cabbage	corn	sweet yam	ash banana	pineapple
Male	3	-	6	2	1	3
Female	1	2	5	-	-	4

	soft yam	malele	soft yam	NONE
Male	1	2	2	12
Female	-	-	1	9

Why?

water taro - spoiled by the sun
yam - spoiled by volcano
manioc - taste bad, spoiled by rats and pigs
kumala - spoiled by volcano and rats

What kind of crop needs dak bus (forest)?

	banana	manioc	cabbage	yam	wild yam	fijitaro	watertaro
Male	8	4	1	8	94	55	25
Female	7	5	4	9	87	70	26

	kumala	is. cabbage	corn	rem konkon	soft yam	kava	chi.cabbage
Male	2	1	-	1	-	1	1
Female	8	1	1	-	2	-	1

	sugarcane
Male	1
Female	-

Why?

wild yam - grows well with dak bus (vines), needs shady place'

taro - grows well with dak bus, needs cool place (shady), rich soil

Question 6.

What year did you last cut dak bus?

Male (# of respondents)

>50	1974(1)	80(1)	82(1)	87(1)	88(1)	89(2)	90(1)	91(1)
	92(1)	93(6)	94(11)					
41-50	1982(1)	84(1)	85(1)	87(1)	89(1)	91(1)	92(1)	93(5)
	94(3)							
31-40	1981(1)	84(1)	86(1)	89(1)	93(9)	94(10)		
20-30	1985(1)	86(1)	89(2)	91(1)	92(2)	93(7)	94(9)	
<20	1957(1)	84(1)	88(1)	90(1)	93(6)	94(8)		

Female (# of respondents)

>50	1978(1)	86(1)	88(1)	89(2)	90(2)	92(5)	93(3)	94(4)
41-50	1976(1)	80(1)	86(1)	90(1)	91(3)	92(2)	93(3)	94(6)
31-40	1981(1)	84(2)	89(1)	90(1)	92(3)	93(9)	94(8)	
20-30	1954(1)	87(1)	89(1)	90(1)	91(3)	92(7)	93(17)	94(10)
<20	1987(1)	91(1)	92(4)	93(10)	94(9)			

Note:

Main reason was to plant more food or make a new garden 71.5%

Other reasons: 5.6%

too old now (4) went to school (1) needed crops growing in dak bus (1)

clears fallow land (8) cleared for school (3) too many people (1)

no answer (73) or 22.9%

Clearing years of the 12 people who have no more dak bus (see Question 9.)

1978(1) 85(1) 90(2) 94(4) 4 people didn't answer the question

Question 7.

In the last 10 years, how many times have you cut down dak bus for the reasons below?

Subsistence crops? 83.1% of the population cut dak bus for this reason.

min. 0 max. 300

# times cut	# farmers	%
10	75	28.3
1	50	18.9
2	47	17.7
3	25	9.4
always	16	6.1
4	15	5.7
5	14	5.3
6	9	3.4

Subsistance and cash crops? 71.2% of the pop. cut dak bus for this reason.
min. 0 max. 70 female 51.1% male 48.9%

# times cut	# farmers	%
1	49	21.6
10	38	16.7
2	36	15.8
3	26	11.5
5	20	8.8
always	19	8.4
4	13	5.8

Coconuts? 29.8% of the pop. cut dak bus for this reason.
min. 0 max. 100 female 46.6% male 53.4%

# times cut	# farmers	%
1	40	42.1
3	13	13.7
2	11	15.6
always	3	3.2

Timber? 2.8%
only 9 people cut timber (3 female, 6 male) 2.8% of the pop. cut dak bus for this reason.

# times cut	# farmers	%
1	2	22.2
2	2	22.2
3	1	11.1
6	1	11.1
11	1	11.1

To plant another crop for cash only? female 49.1% male 50.9%
52 % of the pop. plant another crop for cash only

crop	kava	taro	yam	water taro	kumala	peanuts	taro island	others
farmers	76	23	23	19	14	13	10	23
%	48.4	14.6	14.6	12.1	8.4	8.2	6.4	14.6

Question 8.
How often do you work on your own land?

	Total		Male	Female
	#	%	#	#
all the time	231	75.2	107	118
sometimes	65	21.2	30	31
now only	11	3.6	6	5

How often do you work on other peoples land?

	Total		Male	Female
	#	%	#	#
all the time	33	12.6	13	20
sometimes	190	72.5	96	91
now only	39	14.9	17	19

Question 9.
Do you think it is important to conserve dak bus? y/n

	#	%	
yes	310	97.2	
no	8	2.5	(6 female, 2 male)

Have you got dak bus on your land now?

	#	%	
yes	306	95.9	
no	12	3.8	(10 female, 2 male)

Question 10.
If, "yes", do you think you will leave some untouched? y/n

	#	%	
yes	266	83.4	
no	38	11.9	(23 female, 13 male)

Question 11.
Would you help another man protect his dak bus too? y/n

	#	%	
yes	289	90.6	
no	26	8.2	(15 female, 9 male)

Question 12.
Do, you think it is good to leave some dak bus without clearing? y/n

	#	%	
yes	300	94.0	
no	19	6.0	(13 female, 5 male)

APPENDIX VI

RESULTS OF THE KAP SURVEY
OF WUHURAN FARMERS AND CONTROL GROUP IN LOLIHOR

Males	16
Females	6
No response	1
TOTAL	23

Travel time to farm: avr. 0.8hrs (48 minutes) count 15
min. 0.0hrs max. 2 hrs

1. How many gardens do you have?
   avr. 4.8 count 15 min. 2 max. 10

2. How many of them have cash crops?
   avr. 4.2 count 9 min. 1 max. 10

   - cash crops with food crops?
   avr. 3.1 count 9 min. 2 max. 5

   - cash crops without food crops?
   avr. 3.5 count 6 min. 1 max. 8

3. What cash crops do you plant?
   kava 14
   peanuts 4

4. Do you harvest coconuts for cash?
   yes 20
   no 2

5. Do you have long term cash crops?
   yes 17
   no 4

   What are these?
   kava 14 coconuts 18 peanuts 2

6. What crops do you grow with your long term cash crop?
   banana 15 manioc 9 water taro 8
   fiji taro 7 yam 3

7. How much of your ground is still covered in dak bus?
   half 8 < half 3 > half 8 none 4

8. Do you plan to keep some of it in dak bus always?
yes 15
no 5 (3 male, 2 female)

9. Why? "no"
- If we keep working we will run out of ground and need to clear dak bus. [1]
- trees are too big [1]
- blocks the wind, prevents wind from spoiling crops [1]

Why? "yes"
- bush provides nutrients and helps regeneration of abandoned land. [2]
- important to preserve environment [6] (no females)
- don't spoil the trees [2]
- plant wild yam amongst it [2]
- too much work to clear [1]
- provides fruit for birds to eat [1]
- village has a small population [1]

10. Do you think it good to keep some land in dak bus always?
yes 18
no 4 (male 2, female 2)

11. How many years do you leave land fallow?
avr. 3.3 count 18 min. 0.3 max. 7.5

12. Is this long enough?
yes 20
no 2

13. if not, why not?
no 2
0.3 yrs - don't have bush to provide nutrients
4.0 yrs - need time to enrich the soil again

14. How can the situation be improved?
- plant crops with lekum tree, use mulching, compost and fallow. [1]
- increase the period of fallow. [1]

15. What ideas do you have about leaving land to improve under fallow?
- good, big trees will feed nutrients back to the soil. [6]
- good, let bush grow and nourish soil [3]
- use only alley cropping, not enough ground for fallow method [2]
- If I had enough ground I would leave fallow for long time. [1]

16. Do you garden on sloping land?
yes 22
no 0

17. Do you lose soil through erosion?
yes 20
no 3

18. What ideas do you use to save soil?
- use wood to stop erosion [15] (sitan [1])
- plant laefwood (burao) [1]
- make fences [1]
- plant legum tree and glyricidia [1]

19. Are these satisfactory?
yes 18
no 1

20. How can you improve this idea?
- plant trees that don't dry up to hold soil. [2]
- plant glyrecidia and hibiscus around garden [2]
- plant limlalau [1]
- leave some trees to hold ground [3]
- wooden fence [2]
- plant a lot of big bush to hold ground [1]
- use alley cropping [1]

21. Do you think soil erosion is unavoidable or do you think farmers should try to prevent it?
- It is not unavoidable, everyone should try and block erosion [22]

22. Do you burn rubbish in your garden?
yes 22
no 0

23. What time in the gardening cycle do you burn rubbish?
- clear the bush, let it dry, burn it [22]

24. Do you think burning is good for the garden?
yes 19
no 3

25. Why, "no"?
- spoil rubbish that could be used to feed the ground [2]
- got some new ideas from Charles and Peter

Why, "yes"?
- gets rid of all the bugs [5]
- kills all roots, stops trees from growing again [2]
- cleans garden, no place for rats to hide [2]
- custom practice, crops grow well after breathing ashes [5]
- stops grass from growing fast [1]

26. Is there any other solution besides burning your rubbish?
- don't burn it when planting fiji taro [3]
- spread rubbish to decompose [2]
- yes, you can get the same result without burning [7]
- alley cropping [1]

27. Do you use this other method?
yes 14
no 6

28. If,"not", why?
- crops grow better when rubbish is burnt [1]
- grass will grow fast, crops won't grow well [1]
- bugs will spoil the crops [1]

29. Do you try to extend the use of the same garden plot for a longer period than you did 5 yrs ago?
yes 10
no 12

30. How?
- crop rotation and mulching [1]
- leave ground to rest for 3-4 years [2]
- increase fallow period [1]
- leave ground for 2 or more years [2]

31. Do you think it is good to be able to farm the same piece of land for many more years than now practiced?
yes 7
no 15

32. Why,"yes"?
- don't waste time, lot's of work to do on it [1]
- yes, use alley cropping [1]
- enriches the soil [2]
- soil is retained [1]

Why,"no"?
- crops won't grow well, soil not rich in nutrients anymore [11]
- not enough ground [1]

33. Do you think planting just one crop on the same piece of land is good.
yes 5
no 18

34. Why,"yes" to Q.33.
- makes ground preparation easier [1]
- plant taro in same place, but always change places for yam [1]
- in future we won't use too much dak bus [1]
- because it's got soil [1]

Why,"no" to Q.33.
- doesn't grow well due to loss of soil nutrients [14]

35. Do you find some crops help each other along in the garden?
yes 16
no 6

36. What type of crops?

banana	8	corn	2	taro fiji	2	manoic	2
island taro	1			bean	3	kumala	1
peanut	4						

- island taro gives water to island cabbage [1]
- kumala, covers the ground and stops weeds from growing [1]
- manioc, banana, corn all provide shade for taro [1]
- banana has water that feeds other crops [1]
- banana gives shade for fiji taro [2]

37. Do you find that some crops do not help other crops?
yes 17
no 4

38. What type of crops?

manioc	10	cabbage	4	banana	4	pumpkin	3
island taro	3	corn	2	melon	1	kumala	1
kava	1	island cabbage	1				

- island cabbage blocks water taro from growing [1]
- banana roots, kill island taro and taro fiji [1]

39. Any other comments?
- I'm adapting to the new method of farming [1]
- very interested in working with Peter about alley cropping
- beans and peanuts help all crops
- secret custom method to make crops grow well

APPENDIX VII

TOUR REPORT

Place: Lolihor, Area North Ambrym.

Date : 9th to 13th of August 1994.

Prepared by Stanley Womack

Purpose of tour:

1. Familiarisation tour in the Lolihor EMU area.
2. To gather information from the communities as a bases of environment education.
3. To hold meetings with targeted groups and to draw up tentative program for the environment education in the Lolihor EMU area.

Team:

	S. Womack.	[PEP]
	J. Yakan.	[CEF]
	P. Kaoh.	[FSA]

Introduction.

This tour report presents the activities carried out during a week long tour in Lolihor. It gives an accounts on the meetings, visits, and KAP survey. Some recommendations, suggestions, and problems encountered are also outlined below. Generally the tour was a good one and very informative. There are three appendixes attached to this document. The program of the tour,the brief summary of Mr. Dahlilis' story about the first man and the volcano,and the tentative programs of the environment education in Lolihor.

Achievements.

1.0 Meetings

1.1 Meet with John Salong.

Peter Kaoh arrived one week before, while me and Yakan arrived on the 9th of August. We arrived Ranvetlam at about 1530 hours from Graig Cove. Held a discussion with John Salong and Peter Kaoh about the activities needed to be carried out with the communities, because we all have different programs with the same communities. Also there was an old man who died at Ranon in the same day we arrived, therefore, it will have an effect on our programs. We then sort things out ready for the next day.

1.2 Joint meeting with LDC.

A joint meeting was held on the night of wednesday 10th of August, with the LDC executives and committees to discuss the planning of LDC congress which will take place on the 17th to 19th of August, and for us to explain the different projects we represent and the purpose of our visits. Particularly with the PEP the environment educational program that needed the LDC's inputs.
After the LDC have finalised their program planning, Kaoh and Yakan briefly outlined the purpose of their visit and what they will be doing during the week. I explained the purpose of my tour and the activities I intended to carry out. I introduced the proposal of drawing up the tentative program of the environment education for the Lolihor communities. The LDC agreed to draw up the environment education program [EEP] that night. After some general discussion on the issue the LDC concluded that they do not mind about the time but they have some concerned on the method of dissemination of the information. Their suggestions are as fallows:-

a) Video filming on their own areas and the activities they are carrying out and reviewing it to them.

b) Similar as above with the use of slides show.

c) Use of posters and leaflets as handout after workshop or demonstrations.

d) To hold a meetings in all the villages.

e) Stimulating questionnaire about their knowledge on the environment issues.

f) Special training to PWMU, Holiness CWPA and the DOKAS leaders so that they could help in educating women in their own communities.

g) Special training to Matu as she is dealing directly with the women.

h) To assist Wuhuran theatre group to compose some play on environment education for their communities.

With these concerns it will assist in drawing up the EEP for the Lolihor area.

The KAP survey questionnaire was introduced immediately after this, where it was absolutely agreed to go ahead.

Question time. The main question raised was that, "is there any other crops that could be beneficial to them apart from copra and kava,in terms of cash inflows"?

Answers: - Wild yam, nakai, navel, natavua, wood in terms of timber and firewood etc. depending on how much and how they developed, processed and the availability of the markets.

1.3 Ranon Secondary school.

Hold a meeting with the students and staff of Ranon Junior Secondary School. Kaoh and Yakan give a brief outline of what they will be doing in the Lolihor area. The main emphasis in the meeting was the environment protection and newly introduce farming system (Alley Cropping) that draws the attention of the students and their staff. I briefly outlined what PEP will be doing in Lolihor, in facilitating educational part of the environment and urged the staff that some materials that PEP will produce would be useful for them to use in the school. The principal urged that it is good that NGOs and government establish a curriculum where by all schools will use to address the global awareness of the environment protection. Generally the meeting was good and the students have expressed their interests on such talks. Such speeches is useful to students because it can enable them to decide after leaving school, whether to go back home and make use of the information they heard or drift to urban areas looking for job

1.4 Meet with Tougon of Faramsu.

I hold a short discussion with Tougon of Faramsu about the story of the volcano and the ownership of the volcano. I didn't have the tape recorder to record the story, but I promised him to record the story in my next visit. The story will help a lot in their eco-tourism industry.

1.5 Meeting with Dahlili of Fanrereo.

I held a short discussion with B. Sali Atel Dahlili of Fanrereo who gave me a short brief note about the story of the first man in Lolihor area.

It has been very difficult to meet other targeted groups due to the death and preparation of LDC congress. Wuhuran Theatre have not been reached but I will have a discussion with George Bumseng when he returned from the United States.

2.0 Visits

2.1 Road Construction.

Visited Road Construction at Olal village, take photos of the road construction and reefs that are covered with mud. At Olal the road was constructed two months ago, and one could see the effects of the mud that still covered the whole reefs. As far as environment is concerned the reefs are there without sunlight for two months already, and therefore, it had caused some effect on the marine life and the reefs. The road doesn't look promising at all, because the soils tends to erode away during heavy rain. Wide ditches start breaking in towards the main road. There is an urgent need of cover crop on the sides of the road to protect the soil from falling back into the road. Fontek village have planted taro plots and burao on the road side.

2.2 New airport.

Visited newly man power airport construction at Nebul. It is about one hundred and fifty metres from the main road: useful trees like fruit trees, coconut palms, sago palms etc are cut down as an incentive of their desire. I have learnt during that visit, that there is another proposed airport site at Olal and the evaluation of the properties are taking place in the same week, by the two officers from Agriculture and Lands Departments. It is therefore, leaves the question to where the airport will be built. Nebul would be the ideal area as it lies in the centre of the north Ambrym.

2.3 Gardens.

Several gardens that are visited are on the slope. The crop conditions are very healthy . Soil erosion appeared very lightly but may be some villages have experienced major causes in their gardens, eg Fanla, Fanrereo, etc. The coastal areas towards Graig Cove experienced heavy land slides. The Lolihor coastal area is still in a good shape, but will change when the development of the road is carried out. There is no reef in the Lolihor area.

3.0 KAP Survey

KAP Survey of Sustainable Agriculture Practices was carried out with ten identified farmers to work with peter Kaoh and another twenty as a control to the survey. Because the community are busy with the final day of the death, it is a bit difficult to do the KAP Survey. However, I completed some and leave the rest to be completed by Matu. It will be an interesting result if the questionnaire are completed properly.

4.0 Problems and Constraints

4.1. The death of an active old man in Ranon village, therefore part of the community mourned for the whole week.

4.2. The preparation of the Lolihor Development Council Congress was a priority during the week therefore, our activities coincide with their activities.

4.3. I do not have time to talk to the other targeted groups because they are all busy.

4.4. We leave at Ranvetlam so we have to travel to Ranon and back everyday.

4.5. No tape recorder.

5.0 Recommendation and suggestions

5.1. PEP to buy one high quality tape recorder for recording interviews and custom stories on the PEPs interest.

5.2. Draw up tentative Educational Program and send to LDC for reviewing.

5.3. Peter Kaoh and Jack Yakan to supply appropriate information on their projects. So as to formulate leaflet for the Lolihor Community about the usefulness of their project in environmental protection.

5.4. To label the trees along the tour trekking comprising of English, bislama, Local Scientific and family names of the tree and their uses. This is to aid the tour guides.

6.0 Next Visit

Next visit will depend on the tentative program to be drawn up and the availability of inputs necessarily to Lolihor by PEP, probably in September.

7.0 Conclusion

I have had a wide experienced of the area and have known some individuals that could assist perfectly in the education programs of Lolihor. The people are very kind and always have incentives. Have knowledge of their priorities and the community worked very well through out the week. Lastly, I appreciated the hospitality that Uncle John and Willie provided in Ranvetlam and LDC Chairman, Treasurer, Matu and Douglas for their valuable help in Ranon.

APPENDIX VIII

CONSERVATION AND TREE PLANTING WORKSHOP

8th August to 20th August at Ranon in North Ambrym 1994

Jacque Yakan
Agroforestry Trainer
CEF Project

Aim:

The main aim is to provide awareness on the environment issues and facilitate local target group to contribute efficiently and participate in the trees planting activities and also promoted their conservations.

Objectives:

1. Familiarise myself with the Lolihor community for the tree planting exercise.
2. Talk to Junior Secondary School.
3. Prioritizing the local native trees.
4. Visit various area of different land use and local farming.

Actual programme:

Date	Place	Time
9/8/94	Ranvetlam	3.30pm
10/8/94	Ranon village Ranon second/School	9.00am - 2.00pm 3.45pm - 5.30pm
11/8/94	Ranon	9.00am - 4.30pm
12/8/94	Ranon	9.00am - 4.30pm
13/8/94	Ranvetlam	Spel
14/8/94	Ranvetlam	Spel
15/8/94	Ranon	Workshop 8.30am - 4.30pm
16/8/94	Ranon	Lolihor congress
17/8/94	Ranon	Lolihor congress
18/8/94	Ranon	Workshop 8.30am - 4.30pm
19/8/94	Ranon	Workshop 8.30am - 4.30pm

21/8/94 Jack leaves from Vila.

Purpose:

Workshop on the conservation and tree planting in North Ambrym based at Ranon village which is a partly from the Lolihor area. The joining trip carried by Jack Yakan, Agroforestry Trainer, and Stanley Womack, PEP Environment Education Officer. Jack currently with CEF member was hired by PEP project to facilitate particularly on the various area on the Agroforestry.

This initial plan was to spend 5 days on Ambrym. While on Ambrym, the programme was changed to spend another 3 days with target group. Workshop took 3 days on Monday, Thursday, and Friday. Tuesday and Wednesday were held at the Lolihor congress.

Ranvetlam - 9 August

Tasks (Afternoon)
We formerly discussed with John Salong on the programmes, and elected the names who should be represented as the target group during the workshop.

Participants: (Local target groups)

Names	Place
Touren Bong & Haren	Ranvetlam
John Alfret	Faramsu
Albert	Rambe
Alick	Lonbe
Luan Tomsen	Fanrereu
Tongon	Lolililiu
Busumwel	Fanla
David Yalfun	Lonbokor
Mata	Ranon
Jeffrey	Ranon

Total of the 11 local target group

Ranon Village and Ranon Junior Secondary School - 10 August

Ranon Village

Chairman of the Lolihor Development Council (LDC) Mr. Tokon Sam introduced myself to the members of the target group. He thanked the organisation in providing the assistance to facilitate the Lolihor community. He stressed the importance of LDC, towards the future and mentioned that LDC people should co-operate to take care when using their environment.

After all the introductions, we walked up to the hill to visit their resources, cash crops, food crops, and mainly focus on the previous, and the present traditional garden on the particular area, that was made by the Lolihor people and which were really good farming system.

Availability of resources

1. Fire wood
2. House post
3. Custom leaf medicine.
4. Access for the local seedling collection.
5. Fruit trees
6. Timber species
7. Rainforest
8. Trees for artefacts etc...

Ranon Secondary School (3.45pm - 5.30)

Talk to Ranon Junior Secondary School students. The group was formally welcomed by the principal. Stanley thanked the principal for their welcome and took the responsibility in introducing himself, the member of CEF and Farm Support Association (FSA). After all the introductions, we went on to the main part of the presentation

Peter gave first presentation on the Alley Cropping System. Followed by questions. A lot of questions were asked both by staff and students. Jack gave last presentation on other environmental issues include:

1. Rapid population growth and local population pressure.
2. Population of water and land.
3. Depletion of shell's, coconut crabs and destruction of mangrove.
4. Soil erosion.
5. High dependence on energy.
6. Sustainability of reef and sea resources.

7. **Loss of forests.**
8. **Loss of wildlife.**
9. **Sea - level rise and climate change - I didn't (not enough time)**
10. **Reforestation.**

Stanley offered to help in additional comment on both of the topics and other questions were raised.

Ranon - 11 August

Talk with 11 local target group on the relevant issues related in the Island specifically on the:

1. **Natural disaster**
2. **Importance of wind break**
3. **Deforestation**
4. **Bush burning**
5. **Mature clearance**
6. **Advantage of the reforestation**

After the presentation and discussions we did the exercises "Bifo, Tudei, Mo Fuja". Objective for the exercises is to select the different issues related from the past, today, and future and how we can solve it and what solutions they have to made.

the member was divided into 3 group of 11 participant. Jack explained the exercises and the groups were given 15 minutes to complete the exercise each group chose a leader to present the groups results to everyone.

After we've been through the exercises, I showed them a example for the weekly programme format which is good to help for the planning activities in future.

Example for a weekly programme:

Monday 1/2/94 Environ. meeting at Faramsu	**Tuesday** 2/2/94 Meeting for tree planting at fanrereu	**Wednesday** 3/2/94 Practical for tree planting at Ranvetlam	**Thursday** 4/2/94 Your personal	**Friday** 5/2/94 Draw up the week Programme for the next following visit.

Ranon - 12 August

Local native seedlings

Lolihor has potential of the nuts trees and other native trees, It will be provided a good supply for young seedling to the local community. With these access, the local target were to improve the local communities on the Agroforestry system and other practices as required, also involved the local individual, or community to establish their own nursery. Particularly at Ranon village people should take initiative to play their role on the tree planting activities along the coastal site. And it's really important to protect now before it will be too late:

1. **The wind break**
2. **Shade**
3. **Protect the iron sheets from the salt spray**
4. **to remain the sea, and title wave do not move a long to the shore**

Field trip

Jack took the groups to visit a particular area. Showed them the appropriate location to collect the young seedlings, these area will be used as well in future for the sustainable supply of seedlings.

Ranon - 15 August

Demonstration for tree planting

Demonstrated in front to the target groups and students the method for the tree planting.

Numbers of species were been planted:

Species	Numbers
Nabangura	15
Navele	10
Namalaus	5
Natapoa	10
Alphytonia	5

Planted total of 45 species in Ranon J.S.S

Ranon - 16 & 17 August

Held the Lolihor congress and I also participated which is a important day for Lolihor community.

Ranon - 18 August

Planted the appropriate trees along Ranon village about the middle from the main road and the seaside and that will be the right position to protect any danger in the future.

Number of trees planted:

Species	Number
Nabangura	19
Natapoa	5
Navele	10
Namalaus	5
Alfitonia	5
Mango	3
Nandau	1
Navele	5

Planted total of 53 species.

Ranon - 19 August

Introduced the local target group the seeds collection calender for the native species, specifically the period on when the seeds will be ready to harvest, the treatment methods, germination, and sowing technics. Lastly we all elected a chairman and secretary to be responsible to delegate their responsibility.

Recommendation:

My recommendation is to put more emphasis on this particular area next year at the beginning of March 1995 and it will be more efficient to organise these on the rainy session to

- Provided more training to the target group to:
- Improved their skills on the practical as well.
- Establish a trial plot for the public awareness.
- Replaced the sea oak and other trees that was been damaged by the cyclone along to the sea site and it's good be to replace them.
- Setting with the school student a local nursery for their practices, and also to be used in future to maintain the school boundary from the cyclone, and provided the shade for the school student.
- Lolihor Development Council should provide a good facility for the training environment.

Workshop closed

Local Native Species	Tree Exercise								
	Kaikai	House	Firewood	Post	Shade	Kastom	Kenu	Mereser	Namba
Natora		X		X					2
Natapoa	X		X		X	X	X		5
Nabanga	Pijin				X			X	2
Nangai	X		X				X		3
Namamau	Pijin	X		X				X	3
Navele						X			1
Nabakura					X		X		2
Namalaus		X		X					2
Nakoka									
Kokonas	X		X				X		3
Bamboo						X			1

Priorities Species (by number of uses)

Natapoa 5

2 Nangai 3
Namamau 3
Kokonas 2

3. Natora 2
- Nambanga 2
- Nabakura 2
- Namalaus 2

4. Navele 1
- Bamboo 1

Recommendation Species (by number of uses)

1. Natapoa 5

2. Nangai 3
Namamau 3

Species	Seed Ripe	Treatment	Germination	Sowing Technique
Bean Tree Castanospermum australe	May –	None	32 – 36 days	1 seed long wan plastic long wan big plastic, perem seed long graon long 5–7 cm dip.
Bisa adenanthera macrophylla	Oct.	None		Sakem seed long graon insite long wan tray, kaveremap long thin layor blong graon. Transplanem time igat 2 lif.
Kauri Agathis macrophylla	Feb. Mar. Jun.	None Semtaem after yu collectem	8–10 days	Sakem seed long tray or graon nating time hemi germinate then yu sakem thin graon anatap, transplanem time i gat 2 lif i gro.
Miltree Antiaris toxicaria	Jun. Jul. Aug.	Putum long wota for 1 day mo 1 night		Wan seed long wan plastic long smol plastic nomo, pusum long graon 3–4 cm, transplanem taem igat 2 lif.
Nakatambol	Apr. Aug.	Putum seed long wota 1 night nomo.	33 days	Putum long bed or tray mo layem seeds long flat saed long graon mo pusum long graon 1/2 cam transplanem taem igat 2 lif.
Namalaws	Jan. Feb. Mar.	None		Putum seed long tray, transplanem taem igt 2 lif.
Namamau Securinega flexuosa	end Apr. May Jul.	None	5 weeks	Sakem berries or seeds long tray we igat graon long hem, hemi open bed, sakem thin graon antap long layer blong kaveremap berries, transplanem time igat 2 lif.
Namariu Acacia spirobli	Aug. Nov.	None		Sakem berries or seeds long tray we igat graon long hem, bae hemi open bed, sakem thin graon antap long layer blong kavremap berries. Transplanem taem igat 2 lif.
Narara Blue wata Pterocarpus indicus	Jan. Mar.	None		Sakem seeds long open bed or tray. Layem fruit flat saed or stanemap seed mo pusum insite long graon abaot 1–2 cm kavremap wetem thin graon, transplanem taem igat 2 lif.

Species	Seed Ripe	Treatment	Germination	Sowing Technique
Nandau	Apr. Jul.	None		Perem seed long graon 7 cm dip transplanem taem igat 2 lif.
Nagai Canarium Indicum	Jul. Aug. Sep.	Brekem seed wetem hammer.		1 seed long wan plastic pot, pusum seed insite long graon long 3 1/2 – 4 cm dip. Transplanem taem igat 2 lif.
Natapoa Wild Terminalia Sepicana	Jul.	None		Planem seed long smol pot, putum seed long plastic long flat site long seed pusum insite long graon 1 or 2 cm dip.
Natapoa edible Terminalis Catappa	May Jun. Jul.	None	5 weeks	Planem seed insite long plastic, wan seed nomo long wan plastic, putum seed flat site long graon mo pusum 1 – 2 cm insite long graon.
Natora Intsia Bijuga	May Jun.			Sakem seed long smol plastic, putum seed stret antap long flat end mo pusum down long 2 – 6 cm insite long graon.
Navasvas Alphitonia	Aug. Sep.	Putum long water blong at least 12 hours blong impruvum germ.	16 days	Sakem seed long tray, kapremap wetem thin graon, transplanem taem igat 2 lif ikam antap.
Sandalwood Sandalum Anstrocaledonicum	Nov. Dec. Jan. May 1 – 1	Fulap impotant work blong mekem. Recommendation blong takem young seedling nomo andanit long wan sandalwood tri, or yu save takem long Santo, Vila mo long Dillions Bay mo Ipota.		
Sea Oak Ca	Jan. Mar 1 – 3	None		
Whitewood Endospermum Medullosum	Mar. Apr. May Jun. Jul.	None	4 – 6 weeks	Separatem seed long graon insite tray or open bed. Sakem long thin layer blong graon ova long seeds. Transplanem taem igat 2 lif.

Informesen:

- Sipos we seeds hemi berries – hemi nid blong treatem insite long way tray, olsem yu mekem sowing technique.
- Sipos we seeds hemi gat strong sel, olsem Nangai seeds, yu sut brekem sel wetem hammer blong i open smol bifo igo insite long plastic.

APPENDIX IX

TRIP REPORT

August 30th - September 1st, 1994

MASKELYNES, VANUATU

RINGI TE SUH MARINE CONSERVATION OPENING CEREMONY

Donna Kalfatak

Purpose

I travelled to Maskelynes island, south of Malekula to attend the Declaration and Opening ceremony of Ringi Te Suh Marine Conservation(RTSMC) on behalf of PEP. This report contains a brief chronology of the trip, as well as observations and some recommendations.

Chronology

Tuesday, 30th of August 1994

Travel from Santo to Lamap airport, Malekula arriving 1405. Met by Jack Enrel and some of his relatives at the airport. We travelled to Lamap boat landing by a public vehicle transport (about 10 minutes drive) arriving at 1415. With Jack, his relatives and a nurse we travelled by boat to Sakao Island (20 minutes) before going to Maskelynes. Arriving at Sakao, I was introduced to more of Jack's relatives and was given laplap manioc with boiled fish for lunch. I spent about half an hour at Sakao talking with Jack about a proposed tourism development site on this island while his relatives were getting ready the "bullock and kaekae" ready for the ceremony the following day. I went by boat with Jack and his relatives to the Maskelynes arriving at Pelonk village 1615 (it took us about 45 minutes to get there). Upon arrival I met the rest of Jack's family and later had late afternoon tea with Mr Enrel Simon (Jack's father) and the two fisheries officers, Mr Francis Hickey and Mr William Naviti who were also attending the ceremony. The Founder of the reserve, Mr Enrel Simon briefed me on how and why the thought of starting a reserve started. I stayed at the Pelonk Women's house.

Wednesday,31st of August 1994

The opening ceremony started at 9.00am not 8.00am as stated on the official invitation programme due to disputes over the official declaration of RTSMC early in the morning. The official programme was followed except for few additional items. The official programme ended at 12.45pm. Rest from 12.45pm to 14.00. After 14.00 I spent some time talking with some village women. Later in the afternoon at 15.00 I visited the sanctuary with the two Fisheries officers, Jack Enrel, his father, and three of his brothers. I snorkelled the pool areas of the reserve with Jack Enrel looking at the larger clams that are found there. The largest clam in this reserve is about 45 - 50 centimeters. We took some pictures of the reserve foundation stone and went back to the village at 1730.

Thursday, 1st of September 1994.

After breakfast at 7.00am I visited the old reserve sanctuary which is some few metres in front of Jack's house. The old sanctuary was located by some mangrove trees close to the shore. At 8.15am I took a boat back to Lamap boat landing arriving at 10.10am. I walked to Lamap airport accompanied by three of Jack's relatives and departed for Santo at 11.00am.

Observations

The coastal area in front of the village is bare. All the mangroves have been cut down for the purpose of firewood and building materials. Replanting of mangroves have failed.

There is evidence of siltation due to the depletion of mangroves. Mangrove roots help in holding muddy substrates together. Now that all the mangroves are gone, siltation is a serious problem to the giant clam reserve.

Some villagers have a few small giant clams close to the shore. This clams will be purchased by RTSMC when it has the money.

RTSMC is one square kilometer in area, has been undergoing regeneration coral growth, in comparison with the immediate areas outside the reserve. There were a lot of fish in the reserve.

Seagrass is in good condition. The seagrass is taller in the sanctuary than the areas outside. Most clams in the reserve are Hipopus hipopus. The bigger clams are kept in the reserve pools while the younger ones, mainly hipopus hipopus are kept in the shallow areas where they get exposed during low tides.

Recommendations

1. The areas surrounding the reserve pools are very shallow whereby the younger clams are regularly exposed during low tides. Therefore, it was suggested the smaller clams be relocated in a deeper area.

2. The spacing between each clam now is less than 1 meter. It was recommended to place the clams 1 meter apart to allow better chance of fertilization during releasing of sperms and eggs.

3. At the moment most clams are placed on sandy areas. It was recommended the clams be placed on areas with dead coral to reduce accumulation of sand in clam mantle tissue.

4. Reserve workers were seen walking on top of coral. It was recommended the workers not to walk on coral.

5. Because mangroves replanting failed to take place, PEP should help negotiate with a forester to give advice for replanting.

6. PEP should help with environmental awareness and find funding resources for RTSMC.

Conclusion

The opening ceremony programme was followed through to the end except for few interruptions by the fifth nazara of Pelonk, who at last minute decided to disagree with the ceremony.

Everybody was patient with the ceremony right to the end. From my point of view, the majority of Pelonk villagers understand the reasons for establishing such a reserve.

Concerning the location of the giant clam reserve, the water clarity was poor. This is due to siltation caused by the depletion of mangroves. People should stop cutting mangroves. The villagers need more environmental awareness.

Other

A Brief History of How Ringi Te Suh Marine Conservation Started

Mr Enrel Simon, the Founder of the sanctuary was born in 1910. He is now 84 years old. From the time he was born up until now he has gone through a very interesting transition in his life. It was 1991 that he had a thought of starting such a project. This is part of the story:

" About 70 years ago in this island of Maskelynes there used to be a lot of fish not only fish but other marine animals. We used to have enough to go with our starch cooked for each meal. Going out fishing in those days used to take us only some minutes to catch a basket-full of either fish or shellfish, but these days it takes us more than an hour to catch a fish or look for other edible marine animals.

Anyway, it was 1991 a month I cannot recall back that I cooked a pot of manioc. I decided to look for either fish or shellfish to include with the manioc I just cooked. I spent more than two hours trying to find/catch shellfish/fish. I came back home with nothing and had my manioc with no protein, and looked back to the dramatic changes that have taken throughout my life. I thought, if nothing is to be done, our future generations will surely suffer. Therefore, it was that particular moment I had the idea of starting a marine reserve park. I talked over the idea with my son, Jack Enrel, over a christmas holidays when he came home for school vacation. Jack was eager with the idea and supported me to start looking seriously into it.

In 1992, I bought natalai from Pelonk villagers and initiated a small reserve area which was close to shore. And today it has increased to an area of 1 square kilometer.

I foresee that Ringi Te Suh Marine Conservation will not serve me and my family only, but the village of Pelonk and the Island of Maskelyne as a whole in the future".

APPENDIX X

ASSESSMENT AND RECOMMENDATIONS FOR LONG-TERM MONITORING OF REEF FISH POPULATIONS ALONG THE NORTHEAST COAST OF ESPIRITU SANTO, VANUATU.

A Technical Report Prepared for the United States Agency for International Development (USAID) and The Foundation for the Peoples of the South Pacific (FSP), Profitable Environmental Protection Project, Espiritu Santo, Vanuatu

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5 October 1994

ASSESSMENT AND RECOMMENDATIONS FOR LONG-TERM MONITORING OF REEF FISH POPULATIONS ALONG THE NORTHEAST COAST OF ESPIRITU SANTO, VANUATU.

ABSTRACT

Assessment of the shallow coral reef fish communities was conducted along the northeast coast of Espiritu Santo including the offshore cay, Elephant Island. Underwater visual census techniques were used to make a preliminary analysis of the reef fish community structure and to establish baseline data for monitoring long-term changes in these communities. An abbreviated species list (104 species) was constructed from nine families of fishes that were considered to be of economic and ecological importance. Parrotfishes and surgeonfishes were the dominate families by biomass and number of individuals. Results of detrended correspondence analysis demonstrated good concordance in fish assemblages among the censuses conducted around Elephant Island. Mirror Reef and Hog Harbour appeared to have fish assemblage structure different from those around Elephant Island. Recommendations are made for establishing sampling strategies to detect possible changes in the composition of the fish communities over time. A protocol is also recommended for monitoring the extent of fisheries harvest within the area.

APPENDIX XI

REPORT ON PRA TRAINING WORKSHOP

Hog Harbour - Sept. 13 - 30, 1994

John Bronson - Clark University
October 7, 1994

Summary Statement

The PRA Training Workshop held in Hog Harbour from Sept. 13 - 30, 1994 was very successful with the following accomplishments:

- Trained 15 residents of Hog Harbour in PRA and more importantly to begin to take a pro-active approach to the primary issues affecting the village.
- Trained 13 participants from PEP, other NGOs, and government extension personnel in PRA. The workshop also developed their confidence and provided them with an approach to work with communities.
- Completed a PRA with Hog Harbour village. They identified their main problems, and developed locally supportable solutions as well as establishing initial action areas.
- Re-mobilized village groups in Hog Harbour. Provided a focus on issues of concern and outlined opportunities for the groups to pursue. This was exemplified by members of the youth groups which attended the workshop performed in a skit on environmental awareness at the closing feast.
- Extended PEP's knowledge of Hog Harbour and its relationship with its natural resources environment. Identified key areas of village interest and plans for local action.
- Identified further intervention points for working with the community of Hog Harbour: special areas of concern which PEP may focus upon; opportunities for awareness building, action areas, and considerations of future changes.

However, several constraints impacted the workshop:

- Hog Harbour is a comfortable village, and discussions about addressing problems and finding local solutions is new to them. They don't yet recognize the need for change, and this attitude perhaps lessened their involvement in the PRA. Although the results are good, the village is only now awakening to action.
- The need for greater preparation, orientation and awareness building in the community about PRA and how it can help them in advance of the workshop.
- Language (the workshop was conducted in English) difficulties, as all the concepts were

new, even to the translators.

- The village was quite busy during the workshop with two marriages and yam planting season. This may have limited peoples energy to participate in the workshop.

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Lessons Learned Participants Evaluation Instructors Comments Improvements	Page 7
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Introduction and Organization of the Report

This report contains the main discussion and evaluation of the workshop. The results of the data gathering sessions with the village are included in the accompanying Data Report as Annex IX, with both an English and Bislama version. These reports also contain descriptions of how each workshop session was conducted, its objectives, process, and how it was done in Hog Harbour. Atached as part of this report is the remaining annexes containing materials used in the workshop Tie complete list of annexes is as follows:

Annex I:	Workshop Schedule (English & Bislama)
Annex II:	List of Participants
Annex III:	Household Interview Questionnaire
Annex IV:	Summary of Questionnaires
Annex V:	Closing Ceremony Program
Annex VI:	Copy of Certificates Awarded
Annex VII:	Summary of Participants Workshop Evaluations
Annex VIII:	List of computer files & descriptions resulting from the workshop
Annex IX:	Workshop Data Report (English & Bislama)

Review of Sessions

The focus of the training side of the workshop was upon developing participants understanding, confidence, and experience in using PRA to work with a community. The training format emphasized participants experiencing directly the various PRA steps by engaging in simulations and practice of each exercise. This format strengthens understanding and also allows the participants to discover what aspects work better. It also enables them to make adjustments which will facilitate the exercise in this specific cultural context. Participants also conducted all sessions in front of the community. This developed their leadership skills, helped to develop confidence, and localized the workshop. All necessary preparations took place before meeting the village residents.

The typical day began with an overview of the previous nights session with the community. With all participants sharing their observations about conclusions from the data as well as things which worked or not. In this way, each benefitted from the other perspectives. Following the recap, a new PRA exercise was introduced. An explanation of why the exercise was used, its objectives, and how to conduct it, were provided. Then the participants broke into smaller work groups to actually go through the exercise. They were charged with completing the exercise, and preparing for facilitation of it that evening with the Hog Harbour community. When the groups had completed their simulation and preparations, they shared both their conclusions and results and how they intended to run the evening session. As the village requested only evening sessions, we had to combine and run two similar exercises each evening. Thus the need for the small groups to work on different activities.

This format of spending the day working on that evenings session was new for me. In my previous PRA workshops, a preliminary week is set aside for preparations and training before actually engaging the community. I felt the format used in Hog Harbour was excellent. Although perhaps both the community and particularly the participants were extended by the long duration of the workshop, the format of adjusting preparations from the previous session, and building upon actual results, greatly strengthened the workshop. The quality and experience of understanding PRA and the ability to use it are much greater from this approach, and I intend to use it hereafter.

Sept. 13 This was the primary theory day. We evaluated the workshop schedule and made adjustments to work around the marriage day (which would impact 3 days), and moved some sessions around to accommodate the village. The final schedule which the workshop followed is included as Annex I. The main focus of the day was to review the theory behind PRA and begin to understand it. This involved a small simulation of different exercises. The main objective of this day was to provide a general understanding, and on subsequent days we would focus upon specific aspects of PRA. In addition, we prepared for the next mornings activity, sketch map. Although it was explained that the village could complete the exercise almost without the help of facilitators, there was great uncertainty about how to conduct the session. This stemmed from inexperience and was expected.

Sept. 14 This day began with the opening ceremony and followed with the sketch map exercise. The facilitators discovered that it was easy because the community knew the information

so well. Many of the PRA steps are like that, with the emphasis on knowledge the community has, and it can be quite easy to assist in bringing it out. The exercise was quite successful. The remaining portion of the day was to redraw the village sketch map and prepare for the next mornings activity, household mapping.

Sept. 15 The morning session was identifying the location and type of houses in the village. A small group of village members joined the village participants in drawing on a outline of the village each residence. They used three shapes to indicate the style of house. In addition, they listed the home owner. There was some discussion about this last aspect. Apparently, the villagers were not too comfortable in linking names with houses, because they said it could be used by others for negative purposes. We left the decision to the community members, and they accepted it, with the stipulation that the house locations be left scattered and not organized. The second session of the day was the time line exercise. This was widely publicized and attendance was great. Many elders gathered, however, they were often disrupted from their stories by chattering in the audience. There seemed to be a high level of hesitancy in public speaking, even for village history, and we ran into it frequently in later days. Because the commotion did not allow a respectful environment, the construction of the time line was not smooth. In fact, the session was stopped after two hours because most elders were tired, even though the time line had only reached 1989. In my experience, the construction of this time line was more difficult than others, and I don't know why. The session was capably handled, but the hesitancy in publicly presenting the information was unusual for me. Certainly the environment had some impact, but finding ways to facilitate public comments became one of our concerns.

Sept. 16 We had recognized from the last few days that the village would not be able to attend morning sessions, so we cancelled them, and instead would only hold the exercises during the evening. This required good organization on our part, as we had to prepare for and conduct two activities each evening. But it worked out well. Trend lines were the focus today. The participants practiced during the day, working on their own trends, and then preparing materials in advance for the evening. The session was excellent. The community was divided into a mens and a women's group to allow greater discussion, and this proved successful. Both groups focused upon similar concerns, and raised issues which came up in later exercises.

Sept. 19 The weekend was given off to the participants after a short lecture on Saturday morning about the first few steps in the PRA process. The first business this day was to begin planning for the exercises to take place later in the week. As the marriage preparations would begin Wednesday, we had to identify transect routes, and households to interview in advance. The other main business was to prepare for that evening sessions. Two small groups were established, one to work on the seasonal calendar, and the other on the daily gender calendar. Each group tried the exercise and made adjustments to make it easier for the community that evening. The seasonal calendar group identified topics to focus upon, while the daily calendar wanted to have both men and women complete their own calendar as well as the other. The evening ran quite smoothly during the group presentations, with the daily calendar generating great discussion as to the causes of differing workloads. Many workshop participants also benefited from this discussion. The day went quite well.

Sept. 20 Institutional analysis was the focus of today. The participants from Hog Harbour performed one component of the exercise themselves: profiling the more effective village institutions. Which then were used by the group that evening to have other community members evaluate their effectiveness and then their relationships. The ranking part was difficult as there was hesitancy in offering an opinion first about an institution. But by focusing upon the less significant or controversial groups, such as political groups or the school council, the process gained momentum. In ranking exercises it is often difficult to begin, but by fishing for the easy choices, it can be started and then easy to continue. The facilitators did a fine job in making this adjustment.

Sept. 21 This was the first day of marriage preparations so we did not have any session with the community. Instead we divided into three groups to complete a transect through the different ecological areas of Hog Harbour. The village participants in the workshop served as escorts. This exercise was very helpful in learning about the area, because it is quite social. As you walk and talk to the residents you can learn much. Besides, it can also be quite enjoyable, and the participants were quite enthusiastic about the exercise.

Sept. 22 This day was reserved for the household interviews because it would involve the least number of villagers as they were busy with the marriage preparations. Even though families had been identified two days previously, there were changes right up to the last minute. In fact, out of the 12 scheduled interviews, only 8 took place. This was entirely due to the weddings. In order to minimize bias and encourage responses, the workshop participants recommended only Ni-Vanuatu conduct the questioning. The questionnaire was multi-topical, and a small group reviewed it and adapted the terminology to the local environment (farms to gardens, etc.), and added specific references to marine resources. A copy is included as Annex III, with a summary of the responses as Annex IV. It provides a detailed view of a few persons main concerns, and supplements data obtained in other ways.

Sept. 26 Because of the marriage ceremonies, no activities took place the last three days. Livelihoods were the main focus today. The groups conducted extensive preparations to discover better ways of presenting the exercises. And they found good solutions by providing broad themes to help identify the various resources. The quality of the preparations directly influenced how smoothly the evening sessions ran. By now the group was able to run two activities at the same time and get good results in about two hours of work. The livelihood sessions were managed well without much difficulty.

Sept. 27 The day was scheduled to be only for data analysis, but because we anticipated that the ranking of opportunities would take more time, we moved the ranking of problems up to this evening. Then the main focus of today became generating a list of problems for the community to evaluate and rank. I anticipated today would be difficult because of the comfort of Hog Harbour. Problems would be difficult to identify because it wasn't a needy community. And it was somewhat problematic yet productive. As we already had 14 members of the community with us, they would be able to ensure the list of problems applied to Hog Harbour. The participants were broken into two groups, of Hog Harbour residents, and the others titled "Expatriates". Each evaluated all the data collected so far and brainstormed to develop a list of problems affecting the community and their causes. The results were quite different. The village group prepared a

simple list of problems from their perspective. Although it reflected some misunderstanding about certain problems, it was understandable. The expatriates on the other hand became so analytical that their flow chart was barely readable. However, both efforts yielded key information as to the root causes of the main issues. These two lists were then compiled by a small party from each group to prepare in a presentable format for the community that evening. The others prepared for ranking the various problems using the pair-wise ranking technique. They decided from previous indications of differing perceptions by men and women, that each would need to rank the problems separately. This was done and yielded a good consensus of the village concerns. The top scores for each gender were surpassed by second tier concerns from both. The land disputes issue came up as two very vocal men debated it, but others did not join in. The resulting ordering was satisfactory to all present.

Sept. 28 This day was similar to the previous, except the target became developing local solutions to the problems which the village could do and would do. The format was the same, with two groups developing a list, and then combining the result. In most PRA's the primary problems tend to be more concrete and less abstract as the social problems identified by Hog Harbour. It is much easier to deal with shortage of water than Kastom, at least in discussing what to do. The opportunities are more tangible. So when the list of opportunities was prepared, it had already been evaluated by the village members present, and didn't need the complex evaluation technique usually used. Therefore, instead of evaluating the opportunities, the evening session would be an open discussion of what to do about the problems. But, this approach didn't work very well. Community members were very quiet about the issues. Usually, there is a great deal of discussion about the problems and possible solutions. But in Hog Harbor, the residents behaved as if it didn't concern them. In our recap of this session, we felt the format of large, open, public discussion contributed to the problem. Certainly, the nature of the first few problems made it difficult to address, yet there was also little feedback about the gardens, a more tangible problem. I felt that the community had never had to address its problems in this fashion, and that it was uncomfortable with it. Perhaps greater community preparation would have made an impact, or maybe a more entertaining format. But when presented with a list of agreed upon problems and possible solutions, they didn't show initiative. However, the fact that many people in the community were there and heard discussions about the problems and the need for action, along with locally available solutions, perhaps had some impact. In fact, the village participants in the workshop enthusiastically grabbed the list of opportunities as things they could do. So the beginnings of local action towards community problems was established.

Sept. 29 This final day of workshop activities built upon the previous evenings difficulties. Yesterday was identifying what to do, and today would identify who would do it through the construction of a community action plan (CAP). However, it was agreed that we needed to present the plan for a CAP in a different fashion. Therefore, the participants worked out that two small groups (male & female) would be formed to encourage discussions. During their preparations, the participants and the village members present developed a CAP on one of the opportunities addressing one of the main problems. This was then to be used as an example for the groups that evening. They would go through it in detail in small groups, then come back to the plenary to work on the others. It was further decided to work on only the top opportunity for the top four problems, and allow the community at a later day to address the additional opportunities

and the lower problems if they wanted. This approach certainly improved upon the previous night. Each group worked on a different opportunity quite fine, but when they were back together, additional contributions were slim. Although in total a good action plan was established, with serious commitments by members of the community, the seeming reluctance to either speak out or perhaps to just commit to action was still present. This may be related to their culture, or perhaps to their perceptions towards these issues. But these last few steps were difficult. However, in discussions with the village representatives involved in the workshop, they said that it was new to them, and that the community had never thought in these fashions before. They also indicated that they would build upon these results. Although it may not have appeared to mobilize the community, actions are taking place in their own fashion.

Sept. 30 The final day of the workshop and the closing ceremony. The program for the closing is included as Annex V, and an example of the certificates awarded as Annex VI.

Lessons Learned

This section has two components; a short discussion of the participants evaluations of the workshop (included as Annex VII), along with a few comments of my own not already mentioned.

In general, the participants enjoyed the workshop and spoke highly of it. Some identified the problems of community preparation. But, almost all mentioned that they had benefitted greatly from the workshop and that it gave them confidence and an approach to work with communities. The village participants also stressed that they now know how to look at their problems and find ways to overcome them. These are some of the main objectives of the workshop.

I too, thought the workshop went well. The quality of the participants was high. They were very enthusiastic, and showed good initiative in preparing for the sessions. They also handled themselves well in front of the community, and facilitated the exercises very competently (most everyone had the chance to do so, it was something we stressed). During the workshop many participants gained confidence and offered excellent contributions by the end. In summary, they made this a successful workshop.

The format also worked well. Having village members involved at every stage reinforces the nature of this approach. They were able to provide good feedback as to how to make it work in Hog Harbour, and all benefitted from their inclusion. It also ensured there were no secrets and that the workshop was transparent. Having a day to prepare and practice for a session was also good. This allowed detailed discussions and experimentation with each step. I believe most participants enjoyed having the time to try these new activities. They seemed to understand the concepts, objectives and process very thoroughly. Although they probably need more confidence, they are prepared to conduct a PRA, because they just have.

As for the village, I believe they have now begun to look at their situation a bit differently. While they are relatively comfortable now, pressures are building, and change is coming. They recognize their relationship with the environment is being impacted. And perhaps now they can begin to

address these issues. While the last two days of the workshop were difficult, the community of Hog Harbour has a list of problems and solutions which they can pursue. They also have an action plan which will work on these issues. More importantly, through the 15 village members (now called PRA participants), they have a base or foundation of people to work from. They have been introduced to the process of self-examination, identification of resources, and planing for action. The CAP perhaps can be a guide, and as the problems increase, Hog Harbour will perhaps know how to address them.

Improvements:

With respect to the problems outlined in the summary, addressing those issues would improve future workshops. Community preparation is a key factor in PRA. Although including village members was excellent, more preparation and orientation would strengthen the experience. The issue of language has probably been resolved with the interpreters now understanding PRA better. But the main area of change is perhaps encouraging greater use of small group discussions, more entertaining formats, and perhaps the use of drama and role plays involving the community. It would be difficult to surmise whether other villages in Vanuatu would have responded like Hog Harbour, but nevertheless, PRA could probably benefit from a better transition from problem ranking to planning for action. In my experiences in Africa, this has never been a problem, not to suggest that it can't still be improved. But recognizing the interest in skits and entertainment here, perhaps there can be more use of them.

Next Steps

1) There is a need for PEP to continue to support the village of Hog Harbour. PEP was identified as a resource capable of assisting in the organization of workshops addressing environmental concerns. Additionally, the PRA participants from the village have expressed interest in mobilizing for community action. They may need support and assistance in getting established. The data report emerging from the workshop is about Hog Harbour and in a sense they are the owners. It can be quite useful for the village and should be accessible to them. Members of the community have requested that they receive a copy, and community groups should also have a record. As it can also be a helpful resource, perhaps a copy could be left with the school or some other public location. Finally, the community may want to make additions to it. There was an initial discussion with the PRA participants and particularly the Assistant Chief Kalamesi, about how the data can be used for monitoring of these problems. Specifically, certain trends could be charted addressing their primary concerns and included. At a future point, the exercise could be repeated and the new trend would serve as a self-monitoring tool. This offer of assistance in reforming the data report into a log book should be continued.

2) As PEP clarifies its own objectives, especially relating to Hog Harbour, certain areas of opportunity emerge. Although Hog Harbour is not exerting destructive pressure upon the marine ecosystem, continued agricultural practices and increased competition for resources may represent future changes. The PRA exercise has assisted the village in identifying increasing problems with natural resources, both terrestrial and marine. This presents an opportunity for continued dialogue and awareness building among the community. Linking better resource management and use with

the village priority for reviving traditional customs and culture could be an excellent intervention point for PEP activities.

3) Continued study in more detail of the behaviors related to resource use within the watershed could best be served with additional PRA or PRA-like activities. Approaching these issues indirectly was successful through the workshop and should be continued. Working with select people representing a sector (fishermen, or farmers) and applying some of the techniques can have good responses about behaviorial pressures.

4) As PEP searches for examples of profitable uses of the environment, the tourism potential of the Hog Harbour area can not be overlooked. Of greatest concern should be the impact these changes will have on the community. Again, the PRA exercise has helped the community to look at issues affecting them. As the tourist pressure increases, exploration of how the village can participate and manage the impacts will be needed. This builds directly upon the issues emerging from the workshop: how can the village manage the changes impacting it. The PRA exercise has helped them to begin considering this issue, and PEP could assist them.

5) Finally, if conservation of the marine ecosystem becomes a main concern, then understanding the potential threats to the area becomes critical. As mentioned above further exploration of behaviors is needed, but additionally, the focus will need to be broadened to all those communities whose future behaviors may impact the ecosystem. As societal and resource pressures increase elsewhere, people in neighboring communities may turn to the Hog Harbour area for resources. Comments about the nature of the people living in Port Orley, suggest that they could well turn to Hog Harbour for resources. PRA could be an initial step in understanding the concerns and resources of that area, and would help to recognize potential future threats.

Required Outputs (referring to contract dated 8/27/94)

i & ii The accompanying data report (Annex IX) will replace the village log book. Although a log book modification may be requested by Hog Harbour. This data report contains the Community Action Plan and is completed in English and Bislama.

iii A case study/hand book building from the Hog Harbour PRA to be used as a guide for future PRA exercises in the region will be produced as stipulated. Much of the information is already contained in this report and the data report.

iv. This report is an assessment of the PRA workshop.

Submitted by:

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Annex I

Schedule for PRA Training Course
Hog Harbour - September 1994

11 Sept - Sun Day of Rest	12 Sept - Mon Bronson, Staff and Participants arrive Hog Harbour	13 Sept - Tues Classroom work for participants in morning and afternoon	14 Sept - Wed Launching Ceremony; Village Sketch Map	15 Sept - Thur Household Map Time Line	16 Sept - Fri Trend Lines	17 Sept - Sat Review PRA Process
18 Sept - Sun Day of Rest	19 Sept - Mon Seasonal Calendar and Gender Calendar	20 Sept - Tues Institutional Profiles and Analysis	21 Sept - Wed Transect	22 Sept - Thur Farm Interview's and Sketches	23 Sept - Fri Wedding No Classes	24 Sept - Sat No Classes
25 Sept - Sun Day of Rest	26 Sept - Mon Livelihood Mapping of Sources & Resources	27 Sept - Tues Data Analysis Ranking of Problems	28 Sept - Wed Evaluation of Opportunities	29 Sept - Thur Develop Community Action Plan	30 Sept - Fri Closing Ceremony; Award Certificates	1 Oct - Sat Travel

Annex I

Program blong PRA Training Course
Hog Haba- Septemba 1994

11 Sept - Sun	12 Sept - Mon Travel i go long Hog Haba	13 Sept - Tues Wok long classrum Introdusem PRA mo mekem praktis	14 Sept - Wed Ofisal opening mo droem map blong vilej	15 Sept - Thur Map blong haoshol Lukluk bok long histri	16 Sept - Fri Lukuik ol samting we ibin jenis	17 Sept - Sat Rivium PRA Proses
18 Sept - Sun Dei blong Rest	19 Sept - Mon Sisonal kalenda mo kalenda blong pikinini, woman mo man long wan wan dei	20 Sept - Tues Wanem ol organaesesen we oli stap mo ol wok blong olgeta	21 Sept - Wed Transek	22 Sept - Thur Intevium ol famers	23 Sept - Fri Mared Dei	24 Sept - Sat Inogat class
25 Sept - Sun Dei blong Rest	26 Sept - Mon Mapem ol samtin we ol man oli live long em mo ol narafala risose;	27 Sept - Tues Tingsave ol infomesen wetem ol representitive blong komuniti mo Rankem ol Problems	28 Sept - Wed Rankem ol Opotunitis	29 Sept - Thur Developem Aksen Plan blong Komuniti	30 Sept - Fri Presentem Aksen Plan blong Komuniti mo klosing serimoni	1 Oct - Sat Ol patisipans i go wanwan

Annex II

LIST OF PARTICIPANTS

PRA Training Workshop - Sept. 1994
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Annex III

Clark University
PRA TRAINING WORKSHOP
Hog Harbour, Vanuatu

HOUSEHOLD INTERVIEWS

1.0 *PERSONAL DATA*

1.1 Name (Optional)_____

Position in Household _____

1.2 Male __ Female ____ Age ____ Marital Status_____

1.3 Highest level of education attained?

1.4 Place of origin of grandparents?_____

1.5 Place of origin of parents?_____

1.6 How many children do you have? _____

1.7 How many people are living in your house?_____

1.8 Does anyone in your family have employment (outside the house)?_____

1.9 If yes where does/do they work? _____

2.0 *SOCIO-ECONOMIC STATUS*

2.1 Type of Housing:
Cement walls: _____
Bamboo walls:_____
Wood walls: _____
Thatch: _____
Iron sheets: _____
Cement floor: _____
Coral floors: _____
Wood doors: _____
Glass windows: _____
Mixed materials: _____
Others:_____

2.2 Do you own any of these implements:

Plough _____
Wheelbarrow _____
Spades_____
Hoes_____
Vehicle _____
Bicycle_____

Canoe_____
Fishing boat_____
Fishing lines _____
Fishing nets_____
Gas stove _____
Others _____

Annex III

2.3 What energy source do you use for cooking?_____
(firewood, gas, kerosene, other)

2.4 Do you have any small business (store, bakery, handicraft, etc.)? What?_____

If yes, how did you start it?_____

3.0 *AGRICULTURE:*

3.01 How many gardens do you have?_____

Do you own them all, or lease (or use) some?_____

3.02 Has your garden always been in one place? Why has it changed?_____

If not, is it closer or farther away from the village?_____

3.1 What is the size of your garden(s) in acres?_____

3.2 What cash crops do you grow on your garden?_____

3.3 What acreage do cash crops occupy? _____

3.4 What food crops do you grow? _____

3.5 What acreage do food crops occupy? _____

3.6 Do you do the following on your farm?

(i) Use organic manure _____
(ii) Apply pesticides _____
(iii) Apply fertilizers _____
(iv) Cut-off drains _____
(v) Bench terraces _____
(vi) Grass strips or hedges _____
(vii) Mulching _____
(viii) Rehabilitation of gullies _____
(ix) Others (specify) _____

3.7 In good years, do you produce surplus food for sale? Which?

3.75 Are pests or wild animals a problem? Which ones?

3.8 What are your main sources of advice on land use and land management practices?

3.9 What are your agriculture-related problems?

What solutions do you propose?

Annex III

4.0 *LIVESTOCK OWNED*

Collect the following information on cattle, goats, horses, poultry, and pigs:

Type _____ Number _____ Breed (local, improved, pure)

4.1 How do you protect your livestock from diseases?_____

4.2 What are your main sources of advice on livestock matters?

Is assistance adequate?_____

4.3 What are the major problems in regard to livestock?

What are the possible solutions? _____

4.4 Have you planted trees in the last two years?_____

What species? _____

For what use? _____

4.5 Where do you obtain your seedlings? _____

4.6 What is the source of advice on afforestation?_____

Is it adequate? _____

4.7 From where do you obtain your firewood supply?

4.8 What problems do you have with obtaining firewood?_____

4.9 How can these problems be solved _____

5.0 *FISHERIES*

5.1 Do you fish? If yes, where? (shoreline, blue-water, elephant isl.)

& do you need to pay for access?

5.2 What method do you use to catch fish?

5.3 What times of year do you fish?

5.4 How much time do you spend fishing (once a day, week, month, etc.)?

5.5 How many times a week does your family eat fish?

5.6 What are your main sources of advice for fishing?

5.7 What problems do you have with fishing?

5.8 Do you collect shellfish? What?

Annex III

6.0 *WATER*

6.1 *Household water supply:* Distance in km_____ Quality: _____

Community water well/spring/dam _____

Personal well _____

Roof catchment (capacity in Lt.) _____

River (specify) _____

6.2 Are the sources permanent or seasonal? _____

6.3 What problems have you encountered in water access?____

6.4 What changes in water access would be most helpful to you?

6.45 Do you use seawater for any purposes?

6.5 Which human diseases are common in this area?

6.6 Is malnutrition a problem in this area?_____

6.7 Which is the nearest health facility?(Name the place)

6.8 Do you have family planning services available? _____

7.0 *EDUCATION*

7.1 Do you think the schools in your area are adequate?_____

Primary school: Secondary school:

7.15 You pay school fees for how many children?

7.2 How far do your children have to travel to school (km)?_____

Primary school: Secondary school:

7.3 Are there adult education classes in your area?_____

7.4 Is there a village polytechnic in your area?_____

7.5 What are the most important problems in education? _____

What are the best ways to solve them? _____

Annex III

8.O *TRANSPORT*

8.1 What is your principal mode of transport?_____

8.2 How do you get to your garden?

8.3 How do you get your produce to market?_____

8.4 Who maintains your rural access roads?

8.5 What are your major problems in terms of transport?____

What are the best ways to solve these problems?_____

8.6 Do you sell any goods to tourists? What kind? _____

9.0 *DEVELOPMENT PERSPECTIVE*

9.1 List down the five most severe problems in your zone (order is not important).

1) 4)

2) 5)

3)

9.2 For the top three most severe problems, what do you think can be done to solve them.

(i) _____

(ii) _____

(iii) _____

Thank you for giving me/us your time. You may now ask me/us any questions concerning what we have just been discussing.

Annex IV

Clark University
PRA TRAINING WORKSHOP
Hog Harbour, Vanuatu

Summary of Household Interviews

Sample size:	8 households
Number of households with outside employment:	75%
Number of households dependent upon firewood for cooking:	50%

Agriculture:

Owns the gardens they use:	86%
Leases the gardens	14%
Stated that the gardens are getting farther away from the village:	86%

Main cash crops: Root crops - 100%, Vegetables - 71%, Coconut - 71%, Banana - 57%, Corn - 14%

Main food crops: Root crops - 100%, Vegetables - 57%, Banana - 57%, Kumala - 43%, Corn - 29%, Sugar cane - 29%

Main agriculture related problems:	Possible solutions:
Pigs spoil the crops	Fencing materials
Pests	Advice
Rainfall	
Shortage of seeds	
Lack of advice	Village extension
Copra transport costs	Better access roads
Weeds	Advice

Problems with obtaining firewood (distance away) 71%

Solutions: Use coconut husks, plant trees

Livestock problems:	Solutions:
Poor grazing	Improve grass
Sickness	Advice
Broken fences	new fence

Number of households fishing as a resource: 87%

Fisheries problems:

- Reduced resources
- More competition
- Equipment problems
- Weather

Annex IV

Education problems:	Solutions:
PTA not contributing enough	asked & must do
Parents do not support kindy	asked & must do
Poor quality of teachers	take teachers from outside
Not enough teachers (strike)	
School politics	headmaster & committee work
Parents not caring about education	parents help
No sponsors for further education	Government

Number of households selling goods to tourists: 75%

Development Problems:	Solutions:
No respect for village leaders	Church preach on more respect Chief to emphasize customs & respect Use local fines, police, & courts
No money	Open new opportunities
Customs, culture, language	Revive and learn customs Parents to teach children
Needs carpenters	Vocational schools
Piko/snails	need to stop
Logging	Stop logging
Land Disputes	Come together & solve
No cooperation	Leaders to sit together and find ways to bring people together
Education	Government improve service
Health	Goverment & committee improve service
Agriculture	Goverment & committee improve service
Bulloks	Advice from livestock
Decrease of marine resources	Better manage the resources by the community

Annex V

Prokram Blong Klosing Blong PRA Wokshop
Long Hog Harbour Vilej

Det:	Friday, 30th September, 1994
Stating Taem:	2:00pm
Masta blong Ceremoni:	Elder Esrom Nockrac
Opening Prayer:	Pastor Ova
Fas Toktok:	Chief Mark Alick
Toktok blong Introduksen:	PEP/FSP Representative
Seminar Leader:	John Bronson
Main Toktok:	Asst. Chief Kalmasei Warsal
Toktok blong Participants:	Charles Vatu
	Tevi Ismael
	Janet Rueben

OPEN FOR QUESTIONS & DISCUSSION

Drama Presentation:	Jack Yakan
Presentasen blong Certificates:	John Bronson & Chief Mark Alick
Gifts & Vote of Thanks:	Donna Kalfatak
Closing Prayer & Prayer for Food:	Pastor Ova

LUKLUK OL DISPLAY MO TOKTOK WETEN OL PARTICIPENS

★ KAEKAE SMOL ★

Ol man oli go wanwan

Annex VI

CERTIFICATE OF PARTICIPATION

PRA Training Workshop

13 - 30 September, 1994
Hog Harbour Village
East Santo
Vanuatu

Profitable Environmental Protection Project of the Foundation for Peoples of the South Pacific

Program for International Development
Clark University
(Mass., USA)

Suliana Siwatibau

HAS SUCCESSFULLY COMPLETED A THREE WEEK FIELD WORKSHOP ON THE METHODOLOGIES OF PARTICIPATORY RURAL APPRAISAL FOR USE IN RURAL DEVELOPMENT PLANNING, IMPLEMENTATION, MONITORING, AND EVALUATION IN HOG HARBOUR, VANUATU - FUNDED BY PEP.

FSP/PEP	Chief Mark Alick of Hog Harbour	Clark University

Annex VII

PRA Training Workshop
Hog Harbour, Vanuatu

Summary of Workshop Evaluation Forms

This short form asks participants in the Workshop to comment on the effectiveness of different parts of the program. Your assistance in completing the form will help in making future workshops more effective. Indicate how well each of these goals was achieved by placing an "x" in the proper column:

1. Overall goals

Specific Goal	High	Medium	Poor
a. acquire an overview of the PRA approach & objectives	90%	10%	0%
b. become knowledgeable about the PRA steps & exercises	67%	33%	0%
c. gain experience in using the different PRA techniques	57%	43%	0%
d. learn from examples of PRA use in other places	52%	42%	6%

e. Any specific comments? The comments provided were very positive about the nature of the workshop, and that they had learned a great deal about working with communities.

2. Program and Instruction

Specific Goal	High	Medium	Poor
a. was the program well organized	68%	32%	0%
b. how effective was the instructor	76%	24%	0%
c. how productive were the small group simulations	84%	16%	0%
d. how helpful were the group discussions	80%	20%	0%
e. how helpful was the training format of participants leading sessions with the community	75%	25%	0%

f. Any specific comments? A few participants mentioned that language was a slight problem (the workshop was in English), but all were quite positive about the workshop. Some others mentioned that they would like more training in PRA because they wanted to use it. A few other comments suggested that there be more preparation time of the community.

Annex VII

3. Organization and facilities

Specific Goal	High	Medium	Poor
a. was the training facility adequate?	62%	38%	0%
b. what about meals and tea?	90%	10%	0%
c. what about sleeping accomodation?	47%	53%	0%
d. workshop administrative details	57%	43%	0%

e. Any specific comments? No comments

4. Additional Comments

Three additional comments would be helpful:

a. Do you see ways that PRA can be helpful in your own work? If yes, what are some examples?

Participants mentioned that PRA would very helpful to them. They cited as examples: working with communities, improving dialogue and understanding, addressing issues and solving problems, helping to develop projects, prepare project proposals, and entering new communities.

b. Did the workshop help you? If so, how?

The responses were very affirmative, with many suggesting that more should also be trained in PRA. They mentioned it was helpful in understanding communities, gaining confidence in dealing with communities and how to work with them, provided a solution for sustainability, and in identifying problems, solutions and actions.

c. What additional information, training, or field work on PRA would be most helpful to meet your needs?

Some mentioned that they would like more materials on the PRA process from other exercises, as well as some results (not everybody saw the case studies). Other comments suggested that many wanted to do more of PRA. Many participants also suggested that the Hog Harbour community needed more preparation before the workshop.

APPENDIX XII

REPORT ON PRA WORKSHOP
HOG HARBOUR VILLAGE, SANTO, VANUATU
12 - 30 SEPTEMBER, 1994

Produced by Wycliff Bakeo
Port Vila, Vanuatu
18 October, 1994

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ACKNOWLEDGEMENT

I wish to take this opportunity to thank the staff of PEP for assisting me in one way or another in carrying out my tasks in the whole PRA process. My appreciation especially to Suliana Siwatibau, PEP Coordinator, for making this chance available to me to undertaking this consultancy. I have appreciated the support given by Donna Kalfatak and Anita van Breda in the field, as well as Henry Boe and Mary Loughman in producing this report. I am mostly grateful to Kathy Fry, who obviously has the last say in my participation in this project.

I also wish to acknowlege the experiences gained through working with Professor Richard Ford and John Bronson from Clark University. Finally my appreciation is extended to my collegue participants and the people of Hog Harbour for sharing our experiences through out the exercise.

SUMMARY

PEP desires to put in place an environmental management plan for Hog Harbour village, and considers that PRA is the most suitable tool available at present to facilitate the establishment of the plan. PEP subsequently organised a PRA workshop in Hog Harbour, to provide an opportunity and make data available to the community to identify its pressing concerns, and together find potential opportunities to address them in an organised and committed fashion. Apart from the production of the community action plan (CAP), being the product of the PRA workshop, 14 members of the community were trained through their involvement in various exercises. The people of Hog Harbour, in the process, discovered for themselves community strengths and potentials which were not recognised before. They have now appreciated that PRA process encourages their participation in rural development planning compared to the more conventional top-down centralised planning.

The CAP for Hog Harbour indirectly highlighted institutional building as a pre-requisite and therefore critical ingredient to any resource development and conservation. The community ranked; lack of cooperation in community development activities, and cultures and traditions eroding, as two main concerns for the village. Both of these concerns are considered linked with respect for leaders and institutional framework. Concerns for natural resources uses was ranked 6th and was not evaluated in the action plan due to time constraint.

PRA has been able to lead the community into own discovery of their problems and opportunities, and an action plan they are committed to implement. It may not have addressed the natural resources as PEP would have expected. However it brought those concerned closer to a framework of a resources management plan. It is now necessary to draw down from this generalised data and results to focussing on more specific issues which are of mutual concern, in anticipation of developing a plan. In the meantime it is consider necessary for PEP to continue be involved in follow up, and assistance most appropriate for the community to effectively implement its CAP.

INTRODUCTION

Participatory Rural Appraisal (PRA) is a methodology or approach that brings a village focus to rural development and enables communities to participate in planning and implementing village-based projects which usually leads to sustainable natural resources management. It offers a significant alternative central planning and externally managed development. It strengthens local leaderships and institutions to become prime movers in taking actions and not waiting for outside agents to take the initiative. PRA also integrates sectors at community level related to natural resources, and helps to build collaboration among different development agents external to the community.

PRA addresses community development along three main assumptions. Firstly, the community have knowledge and information but needs to be organised in a way that it could be useful and be controlled. Secondly, the community has resources but need to be mobilised, and thirdly, resources external to the community are available but need to be defined in a form of village-identified priorities. PRA works with communities to collect and analyse data, and rank what the communities perceived as problems and opportunities through a series of exercises. The solutions are organised into a community action plan (CAP) with specific groups identified to carry out particular tasks.

Though PRA was known, it has never been tried in Vanuatu nor in the South Pacific region. The exercise in Hog Harbour is believed to be the first, and being made possible by PEP/FSP. The workshop was prepared and conducted by Clark University of Massachusetts, USA.

BACKGROUND

PEP selected Hog Harbour to address the importance of conserving valuable resources which could be threatened by development activities. Hog Harbour is situated on the eastern coastline of santo some 50km north-east of luganville. (For further background information of Hog Harbour, an unpublished PEP paper titled "Espiritu Santo Project information paper" by Van Breda and Kalfatak of August 1994 is highly recommended.) PEP is particularly interested in conserving the rich and diverse marine ecosystem that existed in and around Hog Harbour and Elephant Island, as has been recommended by the Australian Institute for Marine Science following its survey on marine resources done in Vanuatu in 1988.

PEP commissioned work in Hog Harbour in December 1993 and by January 1994, its staff as well as contracted consultants and collaborators began collecting baseline data on the area. A Fisheries Biologist from the University of the South Pacific did a survey on reefs and fisheries in the area. PEP's Environmental Education Assistant also completed survey of women in fisheries.

Technical inputs are sourced from government departments and NGOs with similar concerns for resources management. In additional to data acquisition, awareness-raising and training programme were introduced as ongoing exercises by PEP.

In June 1994, it was decided to employ PRA approach to facilitate the establishment of the resources management plan for Hog Harbour. It was recognised that any such plan need be formulated by the resources owners and primary beneficiaries themselves, facilitated by PEP through PRA. Professor Richard Ford spent a week in Hog Harbour and Port Vila in August, undertook a reconnaissance survey, and developing the training schedule. Mr John Bronson, arrived on 10th September to conduct the workshop. These two consultants (Clark University) were assisted by a locally contracted Melanesian Social Planner.

DESCRIPTION OF WORKSHOP

A three week workshop took place in Hog Harbour community hall from 12th to 30th september, 1994. There were 26 participants, consisting of 14 Hog Harbour community representatives and 12 from PEP/FSP and the Government of Vanuatu. The village participants representing various groups in the community including the youth groups, women groups, village council, churches, and the co-operative society.

The trainer made some changes to the schedule to accommodate latest confirmation on the marriage dates. He also introduced daily meetings with the community for mornings and evenings. This latter change did not seem to work out so the sessions with the community were only held in the evenings. The daily timetable was agreed to begin 0730h and end at 1700h, with 30 minutes tea breaks mid-morning and mid-afternoon, and 2 hours lunch breaks. Evening sessions were scheduled for 1900h to 2100h. It became obvious that the daily timetable was not observed for various reasons. In most cases the daily activities ended around 2200h. It was however worth noting that coordination with the groups organising the meals was fantastic, and meals were served whenever required.

A daily schedule started with a recap on the previous evening session, followed by the introduction of next exercise. The participants were then required to go through a simulation exercise and simultaneously prepare for the evening session with the community. They usually broke into two groups for this preparation. The groups presented their products in plenary for comments. Following this, the groups furnished things and organised themselves for the evening session. The groups would highlight the objectives of the exercise, guidelines, and allocated responsibilities of facilitators, reporters, spokespersons etc.. In as much as possible the groups encouraged members of the community to take up some of the facilitating roles, especially in small groups.

Evening sessions were treated highly because it was during these sessions the general population including leaders got involved in the PRA process leading to the CAP for Hog Harbour. The participation of women was encouraged by having separate groups for men and women to allow the women to speak out. While the sessions with the participants were conducted by Mr Bronson, the evening sessions were facilitated by the participants themselves. The workshop was conducted in English with Bislama translation whenever required. The evening sessions however was conducted wholly in Bislama, and in some instance, in the local dialect.

The various exercises undertaken included, sketch map, household map, time line, trend lines, institutional profile & diagram, livelihood sources & resources, village transect, household interviews, seasonal calendar, daily calendar, data analysis, problems ranking, opportunities ranking, and community action plan. Most of the exercises provided different methodologies for acquiring data necessary for extracting problems and solutions, and transforming them into an action plan.

SCOPE OF WORK

I was contracted as the local Melanesian Social Planner(MSP) to assist in both the reconnaissance survey and the workshop. One of the goals of the survey was to define specific tasks to be executed by the MSP for the workshop. For the second phase of my contract, I was generally required to work along side the PRA trainer acting as his local counterpart and cultural advisor.

I was to orient him to the conditions for work in a vanuatu village, particularly with respect to culture and social organisations of Hog Harbour. Also I was required to facilitate his work by liaising with the village leaders and serve as interpreter for the trainer. I was expected to assist the trainer for every activity of the PRA as would be defined from the first phase survey.

For some reason, Prof. Ford did not include a more clear defined tasks for me. In my report of the survey however, I had recommended some tasks, which has provided the scope of my input during the workshop, in addition to those general goals included in my contract. The MSP was therefore required to understudy the PRA trainer in all aspects of the exercise. He will be responsible for coordinating and facilitating the running of the workshop through the following;

1. To act as the local counter-part to the PRA trainer;

2. To coordinate all matters pertaining to the day to day planning and organisation of the workshop;

3. To liaise with community leaders on logistic arrangements including problems and requirements etc..;

4. To facilitate the conducting of the workshop through interpretation and translation;

5. To assist the trainer in conducting the workshop; and

6. To produce a report outlining his activities for the PRA exercise and containing his assessment of PRA process as a means of facilitating community resource planning in Vanuatu.

MELANESIAN SOCIAL PLANNER INVOLVEMENT

i. Planning PRA

My involvement began during the planning stages of PRA exercise for Hog Harbour. I assisted Prof Ford in the reconnaissance survey. A full description of the survey including the terms of reference for the MSP was contained in my first report to PEP.

ii. Orientation of Trainer

I met the PRA trainer, Mr Bronson, on his arrival at baurefield airport in port vila and we got acquaintance immediately. An informal meeting the following day took care of orientation and aspects of culture, and use of common Bislama phrases. It was a chance to have him updated on arrangements resulting from the survey. I was able to brief him on Hog Harbour and organisations serving it, as well as major concerns including the lack of extension services due to the public servants strike. The meeting was followed by a brief tour of Port Vila and surrounding areas.

The orientation and adaptation process however was ongoing through out the entire workshop. The process, especially as it relates to our evaluation of why things were (not) done in a particular way, was perhaps the strength to the workshop final outcome. We were able to make adjustments where necessary to the PRA process to suit local conditions.

1. Act as Counter-part to trainer

I understudied the trainer in all aspects of his functions. These included; preparation of materials, presentation of instructions, facilitating sessions, data input,(incl; synthesising and evaluation), and compilation of procedures and results.

2. Coordinate day to day Planning and Organisation

Though planning relating to workshop was mainly done by the trainer, I was the vocal link-up to the participants and the community at large. I published programmes and facilitated feed backs, allowing as much participation as possible from all concerned, to planning activities. Furthermore I took over logistics-related planning to ensure the trainer's functions were not unduly disrupted.

3. Liaise with Community Leaders

I was constantly liaising with the leaders through out the workshop. This was done informally with the chief, certain leaders and the pastor. These chats were used to publicise the programmes as well as updating on progress. I also consider this as an effective way for raising awareness to leaders on certain issues that were identified from particular activities.

I also discussed logistics, though mostly to commend them for the generally good arrangements. PEP seemed to be handling the meals quite well as no complaints were received. The accommodation were up to standard and so were household amenities. As it has not been possible to extend the operation of the Co-op's generator beyond 2000h, it was arranged for coleman lamps to be used. The visiting participants got along well with the community, involved as much as possible in local activities whenever time permitted. The contribution and support from the village to the closing ceremony of the workshop is worth mentioning.

4. Interpretation and Translation

My involvement in facilitating instructions and communication was perhaps the most time consuming task. Beside the two items translated to Bislama during the reconnaissance survey, I continued to translate materials from English to Bislama and vice-versa, for exercises as well as for the report of the workshop. Bislama being a difficult language, spoken and understood in a number of different ways, made it difficult to have consistency in its translation. Though I was required to proof read all text, time and my other tasks, and not forgetting that I was a participant myself, did not allow me to go thoroughly through the whole report. Translations were done during meal breaks and week-ends. The translation of the PRA hand book was completed in Hog Harbour, while the report of Hog Harbour workshop, started in Hog Harbour, was completed in Port Vila. The latter translation was from Bislama to English as all inputed data were in Bislama.

As for interpretation, it was decided that simultaneous or repeating word for word was not appropriate, though it happened in few instances with instructions and introduction of important concepts. Normally I was required to summarise instructions at the end of the trainer's address. Mr Bronson was cautioned few times to speak slowly in as much simple English as practical.

For evening sessions no interpretation was needed because they were conducted in Bislama, with little interventions from the trainer.

5. Assist Trainer in Conducting Workshop

Though I was a trainee, I was required to assist the trainer in the preparation of materials. This involved sorting wall papers, pens, scotches,pads, etc.. Furthermore, in relation to my interpretation role, I assisted in presenting instructions to participants. I also facilitated sessions with participants during the day, helped lead them to finding solutions to concerns during both preparatory and actual sessions. I was responsible for chairing and facilitating almost all sessions with the community. I was responsible for publicising daily activities and encouraging people from the village to participate.

I assisted in note taking, especially my own observations and evaluation of the procedure and outcome of an exercise. These were used for discussion during the recap sessions, helping participants adapt to better process next time.

A fair amount of my time was spent inputting data using a laptop computer. This took place in between sessions and during lunch and dinner breaks. The date resulted in the PRA hand book in Bislama version, the Hog Harbour PRA report in both Bislama and English, and selected handouts to the participants and the community. I was responsible for programming and coordinating the official opening and closing ceremonies, with the latter accommodating a seminar led by Mr Bronson.

I was wholly responsible for logistic, with assistance from PEP, removing the burden from the trainer to concentrate his time and energy on the workshop.

6. Producing a Report (this Report)

OUTCOME AND ASSESSMENT OF WORKSHOP

Considering that the workshop was the first PRA exercise in Vanuatu as well as in the south pacific region, it can be considered a lime mark for community development in the region. 14 people from Hog Harbour have been trained in the PRA approached which hopefully they will continue to make use of in their respective organisations in the village. The community has a fair understanding of the process which could be build upon in the context of addressing community concerns in the future. The process has had an impact on institutional re-generation and hopefully lead to having effective groups, playing their part in community development activities.

The visiting participants from PEP and government extension services have benefitted in understanding PRA approach, a significant alternative to the conventional centralised planned and externally managed rural development. This will facilitate their work in relation to community development. However due to the public servants strike, not all the government extension services involved in Hog Harbour, participated. This could slow down the process of integrating all sectors at the rural level into planning village-based projects.

The outcome of the workshop may seem not to highlight PEP's primary goals, though it is considered doing the initial identification and self-discovering by the people on concerns affecting their livelihood. It provided a guide through the action plan for further work to be done, perhaps some focussing on specific concerns, like marine resources conservation. I however found the priority concerns not at all surprising because a resources management plan that cannot be implemented by the resources owners is quite useless. This means without an effective institutional framework in the community, there wont be any respect for enforcement of a plan, even if PEP and other agents were to spend fortunes on educating, and raise environmental awareness in the village.

It is my view that the community was not prepared enough before the exercises took place. Since it is a new concept, the villagers took time to understanding what PRA is and how it can impact on the community. Though three weeks was considered long, it was observed that the participants were spending longer hours than they would normally do in other workshops or work. Again this may be due to the unfamiliarity of the process.

For a workshop first time in vanuatu I would recommend Prof. Ford schedule to the one used, though there is certain logic in the schedule. I think we expect too much of the community to attend an average of 2 hours in the morning and evening each day. This had an adverse effect on their attendance for successive evening sessions. The workshop was disrupted by a marriage and affected by the yam planting in the village. I consider that the timing was not the most suitable one, and may have more bearing for the trainer than the community.

The respond through community participation and aspects of the workshop may caused wrong interpretation or conclusions. I wish to caution here that, situations in African countries that involved PRA process, are somewhat different from vanuatu. Many of their concerns are marginal and serious, therefore PRA adaption reflect the concerns' magnitude. Though Hog Harbour seems not to be in a situation that needed drastic changes to address resources problems, the workshop was successful in alerting and initiating a process to start looking more seriously at their concerns.

Through an evaluation exercise, all participants indicated that they were generally happy with the course and that the process will help them in their respective work. However the existing form does not foster input for improvement by participants. This is important if this experiences be used as a prototype for developing the most appropriate process for Vanuatu.

ASSESSMENT OF PRA PROCESS AS MEANS OF FACILITATING COMMUNITY RESOURCE PLANNING IN VANUATU

Having gone through and completed a PRA exercise, facilitating the community of Hog Harbour to identify primary concerns and opportunities to address them, I would not hesitate to recommend that efforts are made to introduce PRA into rural community resource planning in Vanuatu.

PRA provides a significant alternative approach to the more conventional centralised planning and externally managed rural development in existence in vanuatu. Though there is a desire to involve rural communities in development planning and resources management by the national government, this was materialised only as far as decentralising services to regional centres. The rural communities are mostly not involved in determining village-based development projects. It has always been a top-down approach where the resources owners and beneficiaries are normally left

out of critical decision making. This has led to the influx of ventures that are ripping off natural resources for minimum benefits to the resources owners, with little concern for sustaining the resources for future generations' use.

There are two major concerns that need to be considered if PRA was to be used in vanuatu. Firstly it must be a Vanuatu PRA, thus the adaptation to local conditions, socially, economically, and ecologically is essential. Secondly the process be accepted and used by the rural community themselves. Unfortunately, without any history of PRA in Vanuatu or in the south pacific region, one cannot really fully address both these concerns at this point of time.

There is however a need to use the exercise in Hog Harbour as a prototype for a couple more exercises in other areas in vanuatu. These further exercises will allow for the refining process of PRA for better adaptation, as well as train more people including community members, NGOs and government officers who are concerned with rural development. At some point, subject to adoption of PRA as a means of facilitating resource planning in vanuatu, an attachment training of at least one ni-vanuatu to an institution in a country where PRA is particularly effective, is considered useful.

The community acceptance of PRA can best be reflected by them implementation the community action plan developed during the workshop. Though given that the Hog Harbour exercise was the first, and usually people take time to adjust, actioning may be delayed. Also there is the question; how serious does the community see these concerns, and the urgency to address them. It is therefore recommended that PEP/FSP maintains communication and dialogue with the community leaders and PRA participants,

giving assistance where necessary and ensuring conditions are conducive for implementing the plan. The experiences of the type of approaches where projects are heavily subsidised, "cargo", and free handouts must be somehow arrested and a message of self-help be replanted in peoples mind.

Since PEP/FSP introduced PRA in Vanuatu, it should consider pursuing the development of the prototype in anticipation of having it adopted as a tool for community resource planning in Vanuatu. It is however considered necessary, at this point, to make the appropriate government departments and other NGOs more aware of intentions, and at the same time sourcing their inputs. It is unfortunate that the government extension services has been disrupted by the 9 month old public servant strike, causing a gap in Hog Harbour. Further set back resulted from changes taking place in the regional governments system. Without a permanent luganville-based NGO, it only leaves PEP/FSP to coordinate follow-ups and monitoring in Hog Harbour. One of the targeted roles for PEP as I see it,is to consolidate and mobilise the different groups existed in the village to be active movers of village-base development activities.

APPENDIX XIII

Participatory Rural Appraisal Workshop Report

Hog Harbour Village
Santo, Vanuatu

September 13-30, 1994

Anita van Breda

Introduction

The Profitable Environmental Protection (PEP) project organised and sponsored a Participatory Rural Appraisal (PRA) course in Hog Harbour village from September 13-30, 1994. The three week course trained a group of 26 individuals in the techniques, theory, and application of PRA. Members of the group consisted of 14 village members, government Forestry and Fisheries, and Environment Unit extension officers and staff from two environmental projects, PEP, and Community Environmental Forestry (CEF), both within the Foundation for the Peoples of the South Pacific, a regional nongovernmental organization.

The workshop was led by Mr. John Bronson from Clark University, USA. Mr. Wycliff Bakeo, former Director of Fisheries, and Melanesian social planner, acted as counterpart and interpreter for Mr. Bronson. The course logistics and course plan were arranged by Dr. Richard Ford/Clark University and PEP staff.

Background

PEP seeks to (1) identify valuable or threatened biological systems, (2) explore linkages between private enterprise and conservation of resources, and (3) develop resource management programs that are beneficial to the local communities as well as the resources. PEP choose the marine ecosystems of Hog Harbour and an offshore cay, Elephant Island, as a work site because of its identification as an area of high biodiversity and pristine nature. Activities that potentially threaten the integrity of the area include increasing tourism, SCUBA diving and overfishing, and upstream effects of deterioration of terrestrial resources through development activities.

Rationale

PEP hopes to establish a framework for an environmental management plan based on the ecologic, social, and economic characteristics of the village.
A community development approach to PEP differs from the original PEP project documented that centred almost exclusively on conservation of high biodiverse and threatened ecosystems coupled with development of private enterprise. PEP was initially defined as an "integrated conservation and development project" where conservation meant maintenance of, or at least mitigated threats to, biological systems, and development meant private enterprise, be it individual or a community business. Although the scientific work of PEP followed standard protocol, the social component of conservation lacked structured attention. Thus, the work of PEP was redefined in May 1994 so that greater emphasis was placed on community development by paying greater attention to community mobilisation, awareness and participation in PEP. The PRA in Hog Harbour represents an attempt to structure community involvement and encourage active participation in the PEP project and produce a community action plan that identifies primary problems and solutions within the community.

Results

The PRA generated a great deal of information useful to PEP. Because the data was created and organised by villagers, their primary social, economic, and ecological concerns took shape in an organised fashion. PEP staff can incorporate this information into project planning. Probably the most useful aspect of the PRA however, was not the information gathered, but the process itself. For three weeks villagers, government officers, and NGO personnel worked together. The village PRA participants learned how to elucidate and structure knowledge about their community. The process created a core group of people who obtained self confidence and a commitment to facilitating cooperation in the community. As a result, the community should be better prepared to interact with outside agents of change.

The outside participants learned how the village perceives itself, and also gained experience in how to work with other rural communities to improve effectiveness of the relationship between external entities and village people.

Benefits of PRA specific to PEP:

1. Defined specific village problems
2. Emphasised community expertise and problem solving
3. Improved mechanism for dialogue between community and outside projects and agencies (potentially encouraging an effective working relationship)
4. Increased awareness of community problems.

Discussion

The PRA data analysis and Community Action Plan (CAP) identified the following community problems: 1) traditional cooperation is declining; 2) customs, culture and language are eroding; 3) gardens are far away and there is a shortage of land; 4) women have too much work; 5) land disputes are a problem; 6) natural resources have declined; 7) quality of primary school not adequate; 8) village sanitation is inadequate; 9) difficult to market local crops.

PEP, primarily concerned with management of natural resources, should consider all land use practices in the watershed (including tourism). The conservation of marine ecosystems will depend in a large part on land use practices. Conservation also requires modifying human behaviour so an understanding of the values, beliefs, and customs of the coastal community is critical.

In addition, customary natural resource management practices are of interest to PEP as they often are the appropriate means of controlling detrimental practices or minimising overexploitation. The concerns raised in the CAP can to a certain extent be addressed by PEP. The PRA however, should not be the sole driving force behind the remaining PEP time in Hog Harbour. Instead, the lessons learned and information gained from the PRA should be incorporated into future work planning. A good working relationship with the community will be one where ownership of the goals and objectives of the PEP project relate to the reality of life in the village; the PRA helped us move closer to this ideal.

General Recommendations

1. PEP staff implied that PEP would be responsible for making links with outside help and that the PRA would dictate what kind of development that happens in Hog Harbour. PRA however, does not completely solve all problems caused by forces of change outside the community. PEP should determine its role, responsibility, and mechanisms for making linkages with other organizations or agencies and discuss these ideas with the community.

2. Since PEP/FSP initiated and sponsored this PRA, FSP may want to surve the PRA participants in a year to determine if and how the participants use the experience in their work (and for Hog Harbour participants, in th village). In addition, an evaluation could be made (with Clark University i the form of a case study) on the effectiveness and future potential for PR in Melanesia.

3. Where possible, further development of the skills of the initia participants should be encouraged; the individuals represent a resource fo rural development and should be called on if other PRAs are held in Vanuatu

4. To foster sustainability, FSP may want to consider a means to maintai a relationship with the Hog Harbour participants (after the close of PEP) t offer support and keep enthusiasm for community activism alive.

Lessons Learned/Observations

1. The mapping exercise indicates that Hog Harbour includes gardens in Sar village (approximately 15-20 km away).

2. The relationship between Lonnoc Beach Resort (LBR) and Hog Harbour i not clear. Some of the initial maps drawn by villagers did not includ Lonnoc, later, other maps contained a great deal of detail on LBR and th Vocor family. At a village meeting however, Mr. Maneseh Vocor stated tha Lonnoc is not a part of the village. PEP will need to further explore thi relationship as LBR represents an enterprise in the PEP equation.

2. Coral reefs, Champagne Beach, and Elephant Island were not prominent o village maps. It is unclear if this was due to lack of understanding amon the villagers of the objective of map making, or if it reflects a distinc lack of concern for marine resources. Because at any one time the exercise were carried out with a small number of villagers, the exercises do no reflect a cross section of the community. I do not believe we can draw clea conclusions on the perception of marine resources at the village level. follow up sectorial PRA on marine resources should contribute additiona information.

3. The timeline exercise provided a public opportunity to discuss lan disputes as a group. As a result, the village was forced to discuss the fac that land disputes can not be avoided, and that the issue is important fo future development. Discussions of land disputes were at times heated an contentious, but there was some agreement that attempting to address lan disputes within the village had merit. Land disputes are considere differently by old and young men as well as women. At times, the younger me and women seemed exasperated with discussion dominated by older men.

4. The issue of custom and cooperation going down raises questions relati to the enterprise component of PEP. Some discussions implied that cooperatio decreases as private business increases; private enterprise foster individuality; development therefore, leads to increasing individuality whic degrades a sense of community.

5. Of the 11 institutions identified, only two, the Water Committee and th Area Council of Women, were formed after Independence.

Recommendations for Future PRAs

1. Provide more training for facilitators before working in the village

2. Make discussion of origination, theory, and philosophy of PRA available to those interested.

3. Recognize limitations of community participation due to other commitments. Our PRA conflicted with yam planting season which may have limited the small community turn out.

4. Address language differences. Effort put into translation from English to Bislama decreased with time. Some discussion took place in language. Local language could perhaps have been used more to obtain details of facts and feelings.

5. Consider issue of scale. PRA works at the village level, however some analysis of the regional, national, and international impacts on village life should be included in discussion of PRA to provide context.

6. Establish mechanism for immediate follow-up to PRA to address any village concerns or questions.

Constraints to follow-up for any Vanuatu PRA include: limited government extension services; change from Local Government Councils to Provincial Governments (how to interact with new political system); limited capabilities and mandate of National Environment Unit.

PEP Follow Up to PRA:

1. Discuss PRA with village participants. Get feedback on their plans and village follow-up to date.

2. Plan sectorial PRA on fisheries and tourism.

Fisheries

The goal of this exercise will be organise information regarding past, present, and projected future fishing activities in the village among men and women. Using exercises from the general PRA, we will try to elicit the type and amount of fishing, trends, and perceived problems and needs among fishers. With assistance from Fisheries extension officers, and a few HH PRA participants, we will attempt to generate a fishing CAP that will identify local solutions to local problems as well as illustrate where and how outside assistance is required. The fisheries PRA will be undertaken with the goal of gathering data on the communities' knowledge and practice of traditional marine tenure (TMT) as well as modern fishing practices. Coconut crab distribution and harvest will be included in this exercise.

The fish PRA will generate and organise information within the village, and prioritize needs within the fishing community. The fish PRA will be done separately with male and female fishers.

This information will contribute to PEP efforts towards development of a natural resource management plan.

PRA Exercises adapted to Fish PRA (taken from Handbook)

1. Sketch map of areas fished: fishers draw areas where they go fishing in dirt map on the ground. Leads to understanding of boundaries, shows where resources, activities, problems and opportunities are located. Identifies areas with specific problems or potential for improved production.

1a. Transect with women (reef gleaning areas).

2. Time Line: a list of key events in the history of the community that helps identify past trends, events, problems, and achievements. Helps to understand how community has dealt with issues in the past. Provides an opportunity to ask elders about previous trends and traditional responses to solve problems.

3. Trend Line (sectors to be identified): will help to learn from the community how it views changes over time; integrates changes into community profile which simplifies problem identification; focuses attention on the positive and negative changes over time in terms of resource use and traditional resource management practices.

4. Organise problems and opportunities. PRA team with a few leaders and informed residents, organises desegregated information into manageable structure for the community to assess and rank.

5. Rank problem and opportunities.

6. Create plan (if needed).

Tourism

As with fisheries, tourism did not figure prominently in the initial PRA. In order to gather information specific to this issue for the community, a sectorial tourism PRA will be held.

The structure for the tourism PRA will be similar to the fisheries PRA. Input will be sought from Irlene Ligo, and other Santo tour operators, including dive operators. As the type and amount of tourism to Santo is likely to change in the next few years, this exercise too, should better prepare the village to manage change that is likely to occur. This exercise will be completed with a select group of villagers and Hog Harbour PRA participants.

Additional Follow Up:

Coastal Issues

1. The PRA showed that sand is removed from beach along various points along the coastline. PEP staff will make a closer examination of this practice and make recommendations as needed.

2. Rubbish is dumped in and around the coastline. PEP will educate on the three Rs of recycling (reduce, reuse, recycle), and discuss a village rubbish disposal plan. Rubbish is dumped in a large earth quake scar, which could be a point of interest for tourists; separating biodegradable from non, could be related to agricultural practices (i.e. compost).

3. The village uses embayments as wash areas. PEP will discuss improved management of this practice with the village.

Custom/Culture/Cooperation

1. PEP would like to support village efforts to restore/revitalise custom knowledge and practice. PEP will seek structured assistance from the Cultural Center and USP (as appropriate) for advise and/or assistance.
Revitilization of custom story telling could assist PEP with gathering knowledge of traditional natural resource management practices (i.e custom marine tenure) which could be incorporated into modern management planning.

2. The village is interested in establishing a theatre group. As discussed previously, PEP would like to involve Wuhuran Theatre and/or Wan Smol Bag for environmental education and tourism education (environmental play with marine emphasis, and Tourists and Toilets). At the same time, PEP may want to use the theatre group to assist with forming a HH theatre group. It is not envisioned that this again would create another Vanuatu professional company, but that this group would work primarily in the village as a tool for village problem solving. With the Environment Unit working in Santo however, there may be room for collaboration.

3. Villagers expressed a desire for a workshop on married life to address issues of work distribution and relationship between men and women's work. PEP will share information with Womens Center/Vila for advise and assistance.

Land Management/Agriculture

1. The village expressed interest in learning improved agricultural management practices; within the village there is an increasing focus on cash crops. PEP was selected in the CAP to assist with workshops on improving garden productivity and land management. With assistance from Stanley Womack and other FSP staff, and possibly FSA and government extension workers, PEP will assist villagers with structuring environmental education to address agriculture, forestry (forest management and logging), and agroforestry.

Post PRA Report:

Four weeks after the close of the PRA, PEP met with a few PRA participants to discuss follow-up to the CAP. Six PRA participants attended the meeting, and village member Themhu.

The assistant chief had arranged a meeting with village leaders to address problem of cooperation, however the meeting was cancelled due to the visit of the Minister of Economic Affairs to the village. Themhu had arranged a meeting of the womens groups to address problem of womens work, but only one group (CWPA) showed up, so the meeting will be rescheduled. Other dates outlined in the CAP were not met due to conflicts with other work needed in the village. At this meeting we discovered that only one copy of the CAP had been left in the village with Chief Mark Alick. No PRA participants therefore had a copy of the CAP. We had to review how the CAP was designed, and responsibilities entailed with follow-up. There seemed to be some confusion as to who was to follow-up and there was a general impression that PEP was to be involved with every action in the CAP.

Following the meeting, we sent photocopies of the two page CAP back to the village, and informed the Assistant Chief we would bring full copies of the Bislama Data Report as soon as it is available.

For PEP staff, this initial post-PRA meeting clearly illustrates the need for: 1) diligent attention to detail and 2) constant collaboration with village members.

Conclusions:

In order to create the framework for a community based resource management plan that will fit into the design of PEP, we need to understand the social structure of the Hog Harbour community. In addition, to encourage long term sustainability of any such plan, we need to enhance the capacity of the village to continue with sound resource management into the future. PRA represents a means to systematise community participation in natural resource management. PRA elucidates and organises information held within the community in a way that builds cooperation and collaboration between the village and external entities.

PEP solicited Clark University for assistance with conducting a PRA in Hog Harbour with two primary objectives in mind: (1) to learn more about the social structure of the Hog Harbour community and what the community considers to be its needs and problems and (2) to develop a means of effectively working with the village so that ownership of the PEP project remains in the village. Initial reaction by PEP staff to the exercise was a positive one, only with time however, will we know if the desired objectives will endure.

APPENDIX XIV

International Workshop on Traditional Marine Tenure and the Sustainable Management of Marine Resources in Asia and the Pacific

Trip Report

The University of the South Pacific
Suva, Fiji

July 4-8, 1994

Anita van Breda

Workshop Format

Four all day lecture sessions. One all day field trip to Kauva, coastal village.

Topics Covered

1. Traditional Marine Tenure in the 90s
2. Traditional Marine Tenure and Management: Challenges, Experiences and Prospects
3. Traditional Marine Tenure and Sustainable Resource Use
4. Transfer of Traditional Marine Tenure and Management Technology
5. Workshop Overview and Approval of Workshop Report

Workshop Benefits to PEP Project

1. Exchange of information with others working in the Pacific, increasing PEP regional profile.

2. Opportunity to meet in small groups with others, increase contacts for follow up to PEP.

3. Opportunity to experience international conference. Kalfatak represented one of few local woman (other then Fijians) working in the field. Opportunity to prepare for and experience public speaking.

4 Made contact with others specifically interested in Vanuatu.

5. Opportunity to visit Fijian coastal village, learn first hand, problems and solutions taking place in the village.

Points of Discussion and Recommendations

1. Review of historical framework for TMT; discuss and debate definition and use of terms such as traditional marine tenure and custom marine tenure. Systems are not static but capable of making adaptations.
2. TMT is not a panacea; need validation of assertions regarding the value of TMT. PEP documentation of village practices will be valuable information for monitoring future changes, and to share with larger environmental community.
3. The word "community" has not been defined for management purposes.
4. Debate role of government in coordinating or managing TMT, does government defeat the purpose of TMT or change the outcome?
5. TMT is not always defined by boundaries. Discussion of ownership and extraction of physical resources versus access to space in relation to marine tourism and migratory species.
6. Problem of marrying the old with the new and trying to re-introduce TMT by imposing an old system on a modern system.
7. Discussion of rights of owners versus upstream effects; resolving conflicts and changing chiefly systems.
8. Social and political environment of a community is a situation not a problem (Hviding).
9. Tenure is defined as the process of interactive activities involving a number of rights and claims exercised and negotiated.
10. TMT and modern management practices do not always conflict or contradict each other.
11. Projects in villages can take a long time to set up, should be proactive against problems with rumour mills; repetition of message necessary.
12. Ban spearfishing to minimize damage to reefs.
13. Appoint village chiefs as fisheries officers.
14. Need to define terms: i.e. overfishing in economic or ecological terms.
15. Not enough discussion on women and fishing.
16. Need more discussion on upstream effects.
17. Growing interest in decentralized fishery management leading to village based management.
18. Need to support village based management with biological information. Moses Amos in Vanuatu one of the best examples.

19. Research is geared to quantification, but dataless management is not necessarily informationless management (Johannes).
20. Decentralization will put more pressure on villages, assistance will be needed.
21. Change in process is more likely to be led by NGOs.
22. If TMT is a revitilization, and not an active transfer of knowledge in villages, curriculum development assistance will be needed.
23. Have to look at total resource base, i.e. marine resources affected by price of copra.
24. Codification of custom by legislation changes custom.
25. Custom systems today are different from 200 years ago. Systems are different because historically people had to be self defending, now centralized government takes monopoly of power.
26. There are no true owners, "owners" are those who have acquired power over time.

Areas in Need of Attention

1. Upstream effects and how this deals with boundaries.
2. Marine based tourism such as diving and surfing which creates possible conflicts of access to an area versus conflicts over resource extraction.
3. Women and TMT.
4. How TMT addresses conservation of diverse biological systems versus conservation of resource species.

Conclusions

1. Workshop and discussions confirmed that it is possible, and in fact desirable, to couple the old with the new. Coupling modern western science or models with traditional or custom practices are not mutually exclusive or antagonistic, but can support each other in the field.
2. Flow of information can and should go both ways; has implications for educational programs.
3. Problems left unsolved include how a community is defined; and how should final decisions regarding management be left to a community? Typically, individuals will come forward as having a driving force behind change (i.e. Simon/Jack Enrel).
4. Need more integration of TMT with traditional land resource management practices.

APPENDIX XV

TRIP REPORT

June 30th - July 10th, 1994

UNIVERSITY OF THE SOUTH PACIFIC, SUVA - FIJI

TRADITIONAL MARINE TENURE WORKSHOP

Donna Kalfatak

I travelled to Fiji to attend a Traditional Marine Tenure workshop held at the University of the South Pacific. This report is about my opinion on the workshop.

It was worth going to the workshop because it helps the PEP project see how Traditional Marine Tenure(TMT) is applied in different countries of the Pacific and Asia, and how it is useful in marine resource management. The workshop was organised into four sessions:

1) Traditional marine tenure in the 90's

2) Traditional marine tenure and management: challenges, experiences and prospects

3) Traditional marine tenure and sustainable resource use and;

4) Transfer of traditional marine tenure and management technology.

Traditional marine tenure varies from one country to another in the Pacific. Some are very effective whereas others are not. For example, in Western Samoa TMT emerged when a decrease in the fisheries was observed. Tonga has high fishing pressure due to no form of traditional sea tenure. Tonga's Land Act 1927 has no exclusive rights, therefore people have open access to the sea. In Vanuatu, the 1980 constitution says that ni-Vanuatu have the right to land and reefs. Vanuatu's Reef Tenure and Property Rights recorded that customary law prevails, although it varies from island to island. In Malaysia there is no evidence of TMT existence.

Boundary disputes are common in most Pacific islands as indicated by some speakers and commentators. Different ways to try to solve this problem was suggested by the workshop participants.

A talk given on TMT in the 90's suggested that modernization has led to replacement of traditional authority. Education, urbanisation, economic development, commoditization and commercialization, technology changes and development projects, have led to a loss of traditional knowledge.

In some countries, for example Fiji, traditional owners are given the right to manage their marine resources but give in to forces of commercialization. Therefore, TMT is not very effective here.

There is a need for the people at grass roots level to mobilize themselves to lobby for better recognition of their TMT. Village people need to mobilize very rapidly when they are confronted with some problem, otherwise they do not often see the need to mobilize themselves. There is a need for local fisher groups to organize themselves and to create a forum for them to lobby and gather knowledge. But it is important to work from the grass roots upwards.

An observation was made that several centres for traditional management are coming up around the world, but there is nothing as such in this region. Resources are scattered around Oceania so it should be worth thinking of setting up some kind of traditional management research centre. This proposal could be considered further if the Pacific people present at the workshop lobby their governments.

A number of initiatives have to come from the countries themselves, particularly on how they view marine tenure issues and the fact that there are many differences in approaches.

This workshop was one step in this direction, in that it enabled countries to share their own experiences with TMT, some of which have been very effective but may not be formally recorded. Because of this, some countries have implemented projects to record information on TMT and some of the recording has been done in traditional languages. Some of the challenges faced by island nations and their TMT, are the introduction of non-traditional species which have affected, and in some cases, destroyed traditional management systems for certain other species.

In the Marshall Islands, there were severe penalties for encroachment into reserves and taboo areas.

In conclusion, the value of TMT should be lobbied to people at the grass roots level. It is seen from the workshop that TMT is slowly dying out in most parts of this region. There is a need for a traditional marine research centres to be established in order to start reviving some of the traditions that have been lost. Fisheries departments should start including TMT in marine resource management, especially in countries where it is excluded. it.

APPENDIX XVI

VISIT TO AEGIS OIL SAMOA LTD.

AUGUST 17, 1994

James L. Stead
Enterprise Specialist

SUMMARY

Aegis Oil Samoa Ltd. is a small-scale waste oil re-refinery located in Apia, Western Samoa. Funded and constructed by Tony Hill, a W. Samoan entrepreneur, the business collects waste oil, re-refines and blends the product into various lubricating oils. Hill has no useful data regarding cost of the facility or manufacturing costs. Plant operation has been intermittent as insufficient supplies of waste oil are not available. Market acceptance of the product is good. It is evident that construction of the re-refinery is capital and technology intensive, and that the scale of the facility is unsuitable. The facility is judged to be financial non-viable and inappropriate to the needs of small islands nations of the S. Pacific.

DISCUSSION WITH TONY HILL, MD, AEGIS OIL SAMOA LTD.

Start-up:
Hill is, in addition to being owner of Aegis Oil, the owner and managing director of R.T. Hill Motors Ltd. (panel beating) and Vaitele Spring Waters (mineral water bottling and sales). He is dynamic, charismatic, well spoken, and an effective salesperson. Also attending the meeting was Mr. Ray Hunt, recently employed by Hill as a business consultant/ accountant. Hunt's experience includes a stint as an accountant with Shell of Australia at the time they opened a large waste oil re-refinery (now closed), and employment as chief financial officer of the S. Pacific Commission. He resigned, establishing a computer sales, application engineering and computer training business in W. Samoa.

Hill first became interested in waste oil processing when he heard of Aegis Oil Ltd. of New Zealand. With assistance of this organization, a plan was developed to export Aegis technology to W. Samoa, and to establish Aegis Oil Samoa Ltd. The original agreement called for Aegis Oil/New Zealand to supply drawings, specifications, technical information, ongoing technical assistance, and for royalty payments. In fact, minimal information, some used equipment, and advice on processing and blending oil were made available to Hill. An obviously intuitive engineer and highly competent mechanic and welder, Hill made it all work. At some point, Hill wrote a check to Aegis Oil New Zealand effectively ending their relationship.

Manufacturing/Technology:
The basic re-refining process is quite simple. Waste oil is heated to drive off water, sulphur, and lighter components (gasoline, kerosene), and filtered to remove particulate matter. This produces a clean base stock of varying viscosity. Various additives are blended to produce the desired end product: lubricating, transmission, hydraulic oils and so forth.

Hill states that whether starting with virgin crude or waste oil, the process is essentially the same, as is the product, the base stock. The art, science and cost are in the additives and blending. Hill has recently turned to a new source of additives, TLC Marketing of New Zealand. The New Zealand High Commission (W. Samoa) has agreed to pay for bringing a TCL consultant to W. Samoa to work with Hill.

Business Plan:
A New Zealand-based accounting firm prepared a "business plan" (copy on file in the PEP office). This shallow document has no information regarding required investment, the market, availability of waste oil, pro forma operating statement, cash flows or financing plan. There is, in fact, no dollar figure to be found in the document. As a tool to assist in evaluating the business, it is of no value.

Finance:
Hill's method of operation defies any attempt to quantify his businesses in terms of dollars and cents. He co-mingles funds from all businesses, and runs the various enterprises from a check book. At the mention of any sort of financial reporting, Hunt shrugs his shoulders. The waste oil start-up was financed from internal funds plus a line of credit available to any of Hill's businesses. When the re-refinery is to operate, employees are drawn from the spring water and panel beating businesses; there is no accounting of this. Hill has no idea of the amount of capital invested. For the retail market, Hill uses used spring water bottles which he considers to be "free".

Waste Oil Collection:
Empty 200 liter drums are dropped off around Apia wherever waste oil is generated. From time to time, the drums are picked up; no payment is made for waste oil.

Marketing:
No market study was undertaken prior to start-up. Franchised service stations (Mobil, BP) would not sell Aegis Oil under the Aegis label. However, they did buy bulk oil which was sold in unlabeled, reusable containers. Public acceptance has been high, and Hill claims the products demand retail prices comparable to brand mane products produced from virgin base stock. A survey of local petrol retailers supports this contention.

Problems:
The barrier problem at this point is the inability to collect enough to keep the refinery up and running. An effort to collect waste oil in American Samoa has been initiated, although costs associated with this program have not been assessed. (Experience in New Zealand, and an analysis of the situation in Vanuatu indicates the cost of handling and transport precludes any possibility that importing waste oil is financially viable.)

Both Hill and Hunt say that because they can not operate the plant an anything near capacity, the operation is losing money. While they have no good data, both feel that to achieve profitability, production would have to reach 200-300,000 liters per year (perhaps 5 times current production). Apparently, the present facility can produce 600,000+ liters per year. Hill says that he built too much capacity.

COMMENT

When asked if he could provide drawings and quote a price to replicate the re-refinery, Hill said this would not be possible. Hunt agreed, saying nothing had been costed. Hill added that he was not interested in assisting with the start-up of another re-refinery, and that he would not have time for such a project. When pressed, he said that perhaps in two years he could provide plans and costs estimates.

There is insufficient data to determine whether or not this (or any) small-scale re-refinery has potential as a solution for the disposal of waste oil in the small island nations of the S. Pacific. Having said this, there are good reasons to believe that the approach is unsatisfactory:

1. Construction and operation of a small-scale re-refinery is both capital and technology intensive.

2. If Hill is correct in saying that break even would occur at a production level of 200-300,000 liters per year, none of the small island nations (with the possible exception of Fiji) produce waste oil in that volume. (It is estimated that at best, Vanuatu could recover 85-100,000 liters per year.)

3. Transport of waste oil between islands is not economically feasible. Further, within 2 years, the S. Pacific Forum, under provisions of the Basil Convention, is likely to restrict or prohibit the movement of waste oil between S. Pacific islands.

CONCLUSION

Disposal of waste oil in Vanuatu or the small island nations of the S. Pacific by means of re-refining is not considered a viable alternative at this time, nor is it likely to be so in the near term future.