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1995 Progress Report and Assessment

for the

Coastal Resources Management Element of the Natural Resources and Environmental Policy Project (NAREPP)

Prepared by

The Project Manager and Staff

for the Period

**October 1, 1991 through December 31, 1995
Focus on activities in 1995**

Working Paper No. 9/1995



Coastal Resources Management Project, Sri Lanka

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This report was prepared with the assistance of all the CRMP staff, valuable comments were made by R.A.D.B. Samaranayake of CCD. Assessments are derived from various discussions among government counterparts, USAID and CRMP personnel concerning the CRMP activities.

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Acronyms and Abbreviations

ADB	Asian Development Bank
CCAC	Coast Conservation Advisory Council
CCD	Coast Conservation Department
CEA	Central Environmental Authority
CES	Center for Environmental Studies, Peradenya
CMTA	Coastal Management in Tropical Asia Newsletter
CRC	Coastal Resources Center
CRMP	Coastal Resources Management Project
CTB	Ceylon Tourist Board
CZ	Coastal Zone
CZM	Coastal Zone Management
DOF	Department of Forests
DWLC	Department of Wildlife Conservation
EA1P	Environmental Action 1 Project
EIA	Environmental Impact Assessment
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization
GTZ	German Technical Assistance Agency
GSL	Government of Sri Lanka
HIRDEP	Hambantota Integrated Rural Development Project
HSAMCC	Hikkaduwa Special Area Coordinating Committee
ICRI	International Coral Reef Initiative
IDRC	International Development and Research Organization of Canada
IRG	International Resources Group
LHI	Lanka Hydraulic Institute
NETTLAP	Network for Environmental Tertiary Level Training in Asia and the Pacific
NORAD	Norway Agency for Development
MBRD	Marine Biology Research Division
MEIP	Metropolitan Environmental Improvement Project
MTEWA	Ministry of Transport, Environment and Women's Affairs
MOU	Memorandum of Understanding
NARA	National Aquatic Resources Agency
NAREPP	Natural Resources and Environmental Policy Project
NEAP	National Environmental Action Plan
NGO	Non-governmental Organization
PO	Project Officer
SACEP	South Asia Cooperative Environment Programme
SAM	Special Area Management
SAMCC	Special Area Management Coordinating Committee
SLAAS	Sri Lanka Association for the Advancement of Science
SLFAR	Sri Lanka Fisheries and Aquatic Resources Association
TAF	The Asia Foundation
UDA	Urban Development Authority
URI	University of Rhode Island
USAID	United States Agency for International Development

I. BACKGROUND

INTRODUCTION

This progress report and assessment of the Coastal Resources Management Element of NAREPP/USAID is based on the life of project workplan drafted in June 1991 and revised for activities in each calendar year. Although this report includes outputs of the whole project, detailed accounts are made for those activities conducted in 1995 only. This report, in addition to listing accomplishments, assesses the project and makes recommendations for future improvements.

The Coastal Resources Management Project (CRMP) uses an incremental approach to project design. Yearly workplans are adjusted according to project progress and changing circumstances within a more general life of project workplan. The CRMP in collaboration with participating agencies decides on workplans for the coming year in a manner which strategically advances Sri Lanka's coastal management agenda.

Since 1991, the CRMP has increased assistance for the implementation of government policies which encourage decentralization through Special Area Management projects and training of local government personnel concerned with coastal management. The drive to promote investment in tourism has guided the CRMP to assist with the development of environmental guidelines for coastal tourism development and for the resolution of conflicts with current regulations on setback requirements for coastal tourism establishments. Thus, the CRMP has responded in a strategic and adaptive manner to the needs of coastal management in Sri Lanka.

PROJECT HISTORY

In 1985, USAID/S&T/FENR signed a Cooperative Agreement with The University of Rhode Island's (URI) Coastal Resources Center (CRC) to implement Coastal Resources Management (CRM) Projects in AID-assisted countries which ended in May 1995. The Sri Lanka CRMP was initiated on January 1, 1986 through a MOU between the Government of Sri Lanka (GSL) and USAID which designated the Coast Conservation Department (CCD) as the counterpart agency to CRC. The objective of the Sri Lanka CRMP was to assist the CCD in formulating and implementing a national coastal resources management program with components in policy formulation, planning, regulation, public education and training.

The pilot project has been productive and ushered in a wider perspective of Coastal Resources Management to replace a narrower vision of coast protection. The Sri Lanka Cabinet ratified, in 1990, the Sri Lanka Coastal Zone Management Plan, a collaborative effort of CCD and technical advisors sponsored by the project.

The Plan addresses four major coastal issues in Sri Lanka: shorefront development; erosion management; coastal habitat protection; and historical, archaeological, recreational and scenic site protection in the coastal zone. Implementation of the plan is now underway. Considerable CCD staff strengthening occurred through both long and short-term training and participation in international professional meetings.

The base for coastal management in Sri Lanka was broadened by holding training sessions for district officers and representatives of other GSL agencies. During 1990-91, the CRMP involved a large number of senior Sri Lankans in a thorough review of the issues and opportunities in the nation's coastal region. A final workshop was held in October, 1991 to finalize the strategy document: *Coastal 2000: A Resource Management Strategy for Sri Lanka's Coastal Region*.

The MOU governing this initial pilot project ended in September 30, 1991. All activities under that agreement and budget have been completed.

In 1991, USAID and the GSL initiated the Natural Resources and Environmental Policy Project (NAREPP). The goal of NAREPP is to support sustainable use and management of Sri Lanka's natural resources and environment. Key objectives of NAREPP are to integrate environmental considerations in the planning, management and monitoring of new and existing developments. NAREPP also facilitates greater public participation in environmental policy formulation, sustainable resource management and conservation. The present CRMP is the coastal element within NAREPP.

PROJECT ADMINISTRATIVE DESIGN

The URI/CRC assistance to USAID/Sri Lanka and the GSL to implement the coastal component of NAREPP through June 1996 has differed from the past URI/CCD CRMP in several respects:

- Work carried out under the NAREPP bilateral agreement between USAID/Sri Lanka and the GSL is through an add-on to the S&T/FENR/URI Cooperative Agreement in coastal management. The MOU with the GSL which governed the initial Sri Lanka CRMP ended September 30, 1991.
- The coastal program from 1991 through 1995 has been broader in scope than in the past CRMP. Under NAREPP, issues have been addressed in a broadly-defined coastal region, as opposed to the narrow shorefront strip regulated by the CCD through the Coast Conservation Act. Technical assistance previously restricted to CCD has been provided to several GSL agencies having resource management responsibilities within the coastal region.
- Under NAREPP, the CRMP has worked to involve local government authorities, NGO's and private sector organizations in the CRM planning and implementation process.
- The coastal element has involved key agencies involved in testing new policies and procedures. It has focused agency research and planning efforts at two specific selected Special Area Management sites where resource management is being implemented and refined at the community level.

The coastal component of NAREPP is closely coordinated with other NAREPP project components. Specific mechanisms for coordination and designating support and resources are worked out with the International Resources Group (IRG) and USAID

which includes joint attendance of project planning meetings, occasional seminars and joint acceptance of workplans for participating agencies.

URI through the CRMP provides much of the technical inputs required by activities in the project. URI also has primary implementation, management and monitoring responsibilities. All consultants required for the CRMP are jointly approved by the involved agency of either CCD or NARA with CRMP on a case-by-case basis and USAID.

The CRMP of URI is mandated under an umbrella Cooperative Agreement of USAID extended from May 1995 through May 15, 1998. The present workplan approved by USAID allows the CRMP to operate through June 1996. The preliminary proposal for a Phase III project through May 15, 1998 has been submitted to USAID.

ADMINISTRATIVE FRAMEWORK

The Coastal Resources Management Project (CRMP) has a full-time project manager, responsible to The University of Rhode Island for the overall CRMP coordination with government agencies and for the day-to-day project operation. The CRMP contracts part-time or short-term consultants to assist with project needs. Finally, the CRMP employs 3 office staff to efficiently manage and assist with administration. The collaborative roles of CCD, NARA, DWLC and other agency personnel are indicated in Annex 1 to show the commitment of GSL in CZM.

OVERALL OBJECTIVES OF CRMP

The consensus among CRM policy makers reflected in the *Coastal 2000: A Resource Management Strategy for Sri Lanka's Coastal Region*, was that the thrust of the five-year CRM program starting in 1991 would operate conceptually on two parallel tracks. Track 1 was for strengthening of central government agencies and formation and improvement of national policies for CRM. Track 2 initiated the implementation of Special Area Management (SAM) projects at the community and district levels to provide pilot test sites for learning experiences, to improve existing policies and plans, and provide material for new policies on CRM and coastal and marine biodiversity, as appropriate. The objectives of the CRMP from 1991 through 1995 are:

- a. To strengthen the capability of central government agencies to collaboratively implement effective strategies for the management of coastal environments in the broader context defined in "*Coastal 2000*" (Track 1--national level).
- b. To close the loop between planning, policy formulation and implementation as frequently as possible by undertaking special projects at the community level which effectively manage coastal resources and biological diversity (Track 2--local level).

- c. To work with the private sector to involve them in planning and implementing a development strategy for areas of the coast where Special Area Management is appropriate and environmental and biodiversity resources need management (Track 2--local level).
- d. To establish effective operational plans and procedures for marine reserves and sanctuaries which may be effectively implemented at the local level (Track 2--local level).
- e. To build technical competence and capacity for effective coastal resources and biodiversity management through a variety of training activities by:
 - 1. Building technical competence of key government personnel and private sector institutions in CRM; and,
 - 2. Developing a cadre of personnel in GSL agencies and private sector institutions who can integrate coastal environmental issues, resources management and conservation of biological diversity into development policy, planning and decision-making. (Track 1 --national level).
- f. To develop mechanisms for collaborative action among GSL agencies, universities, NGO's, private sector and local communities in CRM.
- g. To ensure that the CRMP project activities and experience are fully transferred to the collaborating agencies for long-term continuation and that full responsibility of work is assumed by the GSL.

II. PROJECT WORKPLAN SUMMARY

Component I: Promoting a common agenda for coastal resources management through institutional improvement, collaboration and CZM plan implementation

- Task 1:** Promote *Coastal 2000* through publications and forums
- Task 2:** Work with CCD to strengthen regulatory role, to decentralize regulatory functions and revise the CZM plan
- Task 3:** Work with NARA to strengthen ability in research for resources management and to build a CRM core group
- Task 4:** Facilitate collaboration among agencies concerned with CZM in coordination with CCD, NAREPP and the NEAP

Component II: Promoting integrated CRM through Special Area Management (SAM) and community involvement at the local level

- Task 1:** Refine and distribute concept paper on SAM
- Task 2:** Complete environmental profiles with Sinhala translations and all baseline research for SAM sites with the collaboration of CCD, NARA, DWLC and other agencies and the local communities
- Task 3:** Complete and adopt SAM plans with the collaboration of CCD, NARA, DWLC, local communities and other agencies
- Task 4:** Preliminary SAM plan implementation based on draft plans
- Task 5:** Document, monitor and evaluate SAM planning and implementation efforts in collaboration with NAREPP

Component III: Training and education to support CZM plan implementation, agency involvement and SAM projects in collaboration with NAREPP/USAID

- Task 1:** Train CCD, NARA and other agency personnel in CRM and SAM planning and implementation (institutes and master degrees)
- Task 2:** Train provincial and local officials and private sector individuals in CRM, CZM and SAM plan implementation

Component IV: Administration

- Task 1:** Complete workplans and deliver equipment for participating agencies through NAREPP
- Task 2:** Organize, stock and manage CRMP office to provide logistical support for all CRMP activities as required

III. PROJECT RESULTS AND ASSESSMENT

Component I: Promoting a common agenda for Coastal Resources Management through institutional improvement, collaboration and CZM plan implementation

This component supports and strengthens the national base for CZM in Sri Lanka by integrating the policies set forth in *Coastal 2000* with ongoing coastal management activities. It improves the capability of the CCD to implement a permit and monitoring system and to build participation in implementation of the CZM plan and its revision of 1996. It is building a coastal resources management core group in NARA to better address the needs of management issues through research. Finally it is encouraging coordination among the agencies involved in the implementation of the CZM plan.

EXPECTED OUTPUTS BY 1996

- *Coastal 2000* printed and distributed to all participating government, non-government agencies and selected foreign organizations
- Revised and new guidelines developed and adopted for selected coastal development activities
- 90% of new major developments in the coastal region comply with coastal environmental regulations
- 90% of minor permits delegated by CCD to the local level (except in north and east)
- Administrative procedures for monitoring local implementation of minor permits will be fully functional
- At least 10 researchers in NARA and the Director General will be conversant in the principles of CRM and be involved in research which contributes directly to CRM
- A multidisciplinary NARA/CRM core group will be functional with a wide perspective on CRM and expertise to deal with major CRM management issues
- A water quality monitoring and research unit in NARA will be functional which contributes directly to environmental pollution control and water quality management planning and monitoring in coastal areas
- The Coast Conservation Advisory Council will be adequately informed to address major problems of the CZM plan
- The CRMP will publish annual substantive reports on CRM issues, process and solutions in Sri Lanka contributing significantly to overall NAREPP outputs

Task 1: Promote *Coastal 2000* through publications and forums

This task, a carry-over from the original CRMP and transition to Phase II of the project, is nearly completed. The results to date which have been partly supported by Phase I funding include:

1. Completion of 20 background papers contracted for reference, 1991 (Phase I, Funding)
2. *Coastal 2000* printed in 1993 and distributed to about 500 key persons in government and private organizations (Phase I Funding)
3. Background paper on economics of CZ resources edited and distributed as Working Paper, 1993
4. Background paper on fisheries by Leslie Joseph published in 1994
5. Cabinet approval in early 1994 for policies in *Coastal 2000*
6. Document presented at World Coast Conference in Netherlands, October 1993 by Director of CCD
7. Policies incorporated into revised national CZM of 1996
8. Policies presented at national forums (see Annex 2)

This task, partially supported by CRMP Phase I, has taken significant time and effort and has involved many Sri Lankan government policy makers and agency personnel. It has provided an opportunity for educating many about the need and process for CRM. Many government individuals now make reference to *Coastal 2000* when speaking on coastal conservation issues.

Assessment. *Coastal 2000* has reached its potential in terms of providing needed policy reform for coastal management in Sri Lanka. The CCD and CRMP have vigorously promoted the policies of *Coastal 2000* and have woven them into the revised national CZM plan. The policies have also influenced the development of the National Environmental Action Plan (NEAP). But, verbal reference in plans is not implementation and the far-reaching policies of *Coastal 2000* are not easy to implement. Thus, much work remains to be done in terms of truly broadening the scope of coastal management in Sri Lanka.

Coastal 2000 should continue to be promoted in appropriate ways. These include: newspaper articles and television coverage, presentation at meetings and making reference to its policies for new resource management projects as they are designed. Also, the promotion of the *Coastal 2000* is a continuing opportunity to broaden the sphere of government and nongovernment agencies involved in coastal management. This can be achieved by more use of media and by making reference to the policies at national forums.

Task 2: Work with CCD to strengthen regulatory role, decentralize regulatory functions and revise the CZM plan

This task involves the Coast Conservation Department. Since the beginning of Phase II of the CRMP, work with CCD has focused on strengthening its role in the implementation of the CZM plan through strategic collaboration. The primary results of these efforts are:

1. The assessment of CCD capacity for implementing current and anticipated coastal resource management activities leading to approval for increased CCD cadre of about 12 persons (completed in March 1993)
2. Guidelines for local administration of minor permits as part of decentralization (completed in 1992)
3. Recommendations to improve inter-agency coordination in coastal management leading to more constant interaction between CCD and other agencies important in the CZ (completed in March 1993 and ongoing)
4. Criteria for identification of minor permits as part of the decentralization efforts now used in educating local officials about their role in CZM (completed in March 1993)
5. Revised setback requirements in CZM plan finalized in 1994 and incorporated into revised CZM Plan of 1996
6. Environmental guidelines for coastal tourism development published in 1995
7. National CZM plan revised for adoption in 1996
8. Numerous one-day trainings of 50-100 persons each for Divisional Secretaries and key Provincial officials on implementation of the CZM plan (see training section)

Assessment. The largest constraint to CCD implementing the CZM plan has been insufficient qualified personnel in the central office and the small regional network of support. This is beginning to change as more cadre have been approved (which will need training). CCD is actively devolving itself of responsibility for minor permits and law enforcement on obvious problems in the CZ. This devolution process is sporadic and depends on the capability of local officials.

Work with CCD, as reflected in the 1995 workplan, has focussed on efforts to revise the CZM plan, devolve its responsibilities as appropriate, strengthen its capabilities to facilitate the SAM process, and improve its own internal management capability. CCD has achieved these outputs through a collaborative relationship of assistance.

It is important to note, that given the small size of the CCD in relation to its mandate for implementation of the CZM plan, the agency has worked wonders in a country that is only beginning to address its natural resources management concerns. The monitoring of the CRMP has been essential to its success.

Task 3: Work with NARA to strengthen ability in research for resources management and to build a CRM core group

This task includes all the activities which concern NARA and its efforts to develop a CRM core group among the professional staff. The main results are:

1. Assessment of the research capability of NARA to contribute to CRM (completed in 1992)
2. CRM core group formed with an operation strategy through ongoing meetings and resource management discussions (commenced in August 1992)
3. Meeting and support of CRM core group, ongoing 1993-95
4. Strengthened water quality monitoring and research unit for CRM efforts through involvement in SAM site research and provision of portable water testing equipment
5. Field research studies completed on lagoon fisheries, aquaculture, coral reef status and water quality for contribution to the SAM plans

Assessment. In 1991 NARA lacked the capacity to even discuss new work. NARA's traditional research approach of fixed duration and limited scope have molded the CRMP's collaboration with NARA to one of strategic involvement in SAM planning through research which contributes to the SAM plans. The objective was to encourage NARA to consider the importance of integrated planning efforts through appropriate and efficient research. This process is now functioning through the meeting of a "CRM core group" within the agency which now has direct involvement in the SAM sites. The CRM core group, chaired by the NARA Chairman, actively pursues its role in the SAM planning efforts.

NARA can now expand its role in the SAM planning and implementation process at Hikkaduwa and Rekawa through a monitoring and plan refinement capacity. Opportunities for special area management assistance in resources management planning for new sites can be explored. Opportunities for the CRM core group to collaborate with CCD have not been fully utilized and CCD should also participate in the CRM core group meetings at NARA.

The CRMP has facilitated the participation of NARA in the SAM planning process jointly with other agencies. The value of this participation is that NARA has become more aware of the kinds of research questions which need to be answered which are relevant for coastal management. The research designs of NARA staff have been assisted by CRMP to augment value in planning.

Task 4: Facilitate collaboration among agencies concerned with CZM in collaboration with CCD, NAREPP and the NEAP

This task allows the CRMP to perform its role as facilitator of CZM through involvement in various meetings and workshops and through the production of relevant publications and presentations. The main outputs have been:

1. Contributions to the Coast Conservation Advisory Council meetings on a regular basis through short presentations on policy, suggestions on how to be more effective and how to reduce the burden of coastal setback variances in the meeting agenda
2. A new CCAC which functions more effectively with a broader focus of attention such as reviewing SAM plans, discussion of new policy initiatives and which spends less time on requests for set-back variances which are reviewed internally in CCD
3. Output of various position papers based on policies of *Coastal 2000* for distribution to policy makers such as the conference proceedings of the seminar on: "Are Coastal Zone Management and Economic Development Complementary in Sri Lanka" and others listed in Annex 5.
4. Writing and publishing several articles on CZM in Sri Lanka in the Coastal Management in Tropical Asia Newsletter
5. Assisting with the design of donor assisted coastal environmental projects such as projects within the National Environmental Action Plan and those under the Southern Area Development Task Force

Assessment. This task is essentially a bonus of the CRMP presence in Sri Lanka which would not be possible without a functioning CRMP office and people inclined to write and edit acceptable documents for local and international consumption. The main constraint on this task is the limited time of CCD and CRMP personnel to perform these activities.

Local authors have participated in most of the publications produced. This task can nevertheless be used to engage even more counterpart agency or private persons in the activity of disseminating information on CZM in the country and for foreign audiences. The many lessons being learned in coastal management in Sri Lanka, need to be disseminated locally and abroad through more writing and wider publication of results.

Component II: Promoting integrated CRM through Special Area Management (SAM) and community involvement at the local level

This component is implementing CRM activities in two selected pilot coastal sites (Hikkaduwa town and marine sanctuary and Rekawa Lagoon and vicinity, Tangalle) to test procedures and to involve the local communities. The overall objective is to encourage sustainable use and conservation of coastal resources, and to generate economic benefits for local communities by involving stakeholders in planning and management activities.

EXPECTED OUTPUTS BY 1996

- SAM site profiles using secondary and primary information will be completed for two sites in 1994
- SAM plans will have been developed for two sites through the participation of NARA, CCD, DWLC and local communities
- Two special area management sites will be in the implementation stage with significant local participation
- Marine habitats and biological diversity in the two SAM sites will be stable and showing some measurable improvement
- At least two substantive and published papers documenting the SAM process and outcome will be completed

Task 1: Refine and distribute concept paper explaining the rationale and means of implementing SAM projects

The concept of SAM is new to Sri Lanka and required detailed explanation before it could be accepted by the government agencies involved. The first concept paper (Wickremeratne and White 1992) and accepted in a national workshop included:

- Rationale for SAM projects using examples
- Why and how sites are selected
- Kind of site surveys required
- Means of implementing a SAM project
- Key actors in implementation
- Local, national and private participants
- Long-term management of a site

A second paper (White and Samarakoon 1994) highlighted the SAM process working in the sites and several problems such as:

- a. gaining acceptance among national agency personnel
- b. defining management boundaries at the site
- c. overcoming skepticism at the local and community level about their roles and capacity to participate in the process
- d. focusing community discussions on natural resources management
- e. maintaining an issue driven agenda for activities
- f. providing direct financial support for specific field activities/projects to motivate community participation
- g. providing adequate logistical and technical assistance to project field officers
- h. fulfilling tasks of writing profiles and draft plans in a manner which links closely with all participants

A third paper submitted to Ambio for publication by White, Barker and Tantrigama (in press) highlights the SAM process in the context of Integrated Coastal Management and economic valuation and justification for implementing SAM projects in a site such as Hikkaduwa.

Assessment. The concept and experience papers written, published and presented on the SAM process have been very useful in the dissemination of information on the lessons being learned in the SAM projects in Sri Lanka. Dialogue has been generated and reference is being made in Sri Lanka and outside the country to the SAM process. Such documentation and information dissemination is essential to promote national policy.

Task 2: Complete environmental profiles with Sinhala translations and all baseline research for SAM sites with the collaboration of CCD, NARA, other agencies and local communities

An environmental profile is a prerequisite for developing resource management plans for a specific site. Profiles provide a summary of existing information, field assessments, primary research and an overview of the management problems to be addressed. The results of this task include:

1. All secondary information; rapid area assessments and village level interviews; primary research; major management issues and their analysis; maps and bibliographies on the sites compiled and published in environmental profiles in 1994/5 (500 copies for each site).

2. Primary research on Hikkaduwa site for management includes:
 - a. detailed mapping of all resources and land uses
 - b. condition of the coral reef and water quality (NARA)
 - c. socio-economic study of tourism
 - d. coral reef users survey
 - e. contingent valuation study on coastal resources
 - f. cost-benefit analysis on SAM plan implementation
 - g. solid waste management feasibility study

3. Primary research on Rekawa site for management includes:
 - a. baseline and ecology study on lagoon shrimp fishery
 - b. detailed mapping of all resources and land uses
 - c. coral reef and fish survey
 - d. hydrology, irrigation and land use study of area
 - e. socio-economic study on income and dependence on coral mining
 - f. shrimp aquaculture feasibility study
 - g. survey of lime kilns

4. For each site major management issues, their causes, and institutional arrangements were identified through observation. Also the outputs of a series of workshops for different stakeholders facilitated by project officers and by government agency representatives were analyzed and incorporated into the profiles.

5. The Hikkaduwa profile published in Sinhala for local use

6. A summary of the Rekawa profile translated for local use

Assessment. The compilation of the environmental profiles has taken longer than anticipated because the required secondary information was not always available, the definition of what constitutes secondary and primary information was uncertain and because writing skills were limited to several busy persons. Since the profiles were delayed in production all new research on the sites was included into the profiles. Finding a competent Sinhalese translator with access to Sinhalese word-processing equipment was very difficult.

Many benefits were derived from the process of compiling the profiles. The participation of local government and community groups educated them about the planning process and their local problems and solutions. The accurate and complete output of the profiles is valuable for long-term management planning and reference since institutional and planning memories are often short. The profiles are proving invaluable for education of old and new government officials involved in the planning process.

The various research efforts, although time consuming and costly, have provided more accurate information for planning. The process of doing the research has involved NARA and other organizations which have learned by doing and have become involved in the management planning process for the sites.

Task 3: Complete and adopt SAM plans with the collaboration of CCD, NARA, DWLC, local communities and other agencies

SAM plan development proceeded simultaneously with the final stages of the profile preparation for the two sites. This created a favorable environment for plan implementation by preparing community-based groups and local government for final planning and implementation responsibilities. The planning process within the community was facilitated by the POs who worked jointly with local government, national agency personnel (CCD, DWLC and NARA) and the SAM consultants of the CRMP. The main results include:

1. Permanent project officers (POs), one at each site, active since March 1993
2. One or more planning workshops conducted per month since July 1993 at each site using the profile as background information to explore management strategies. Annex 2 lists those conducted in 1995.
3. Draft management plan based on the profile and workshop results completed for Hikkaduwa in late 1994 and for Rekawa in early 1995
4. Special Area Management Coordination Committees formed and fully operational at each site
5. Monitoring required for indicators of management status and for long-term implementation conducted by NARA includes:
 - a. use practices within the Hikkaduwa sanctuary
 - b. coral reef condition at both sites
 - c. water quality at both sites
 - e. monitoring of larval presence in Rekawa Lagoon and analysis relating to shrimp fishery in the area
 - f. proposals for land use and aquaculture in Rekawa
 - g. use of water for irrigation and impact on hydrology of Rekawa lagoon and vicinity
6. TOR for POs re-evaluated in relation to the evolution of the management plans for the sites with slow replacement of PO duties by government and NGO counterparts
7. Both draft management plans reviewed, refined and endorsed in local and national planning workshops by end 1995

Assessment. This task, implemented by the SAM consultants, project officers, DWLC, CCD and/or NARA personnel in cooperation with community-based individuals and groups, is the center of SAM process. It has proceeded in a step-wise manner ongoing throughout the SAM project as part of the plan refinement process. It is also very site specific.

This planning process draws the participation of all agencies and local groups. It is long-term and operates on a parallel track with actual implementation of local action projects. Success in the planning phase is essential for resources management to occur.

An initial constraint was the lack of focus of planning issues and objectives. Although Hikkaduwa provided a clearer focus because the issues are obvious and agreed upon by most interest groups, the Rekawa site lacked directed focus on particular issues. Experience dictated that the hotel and scuba-dive operation sectors had to be included in the planning process along with other stakeholders in Hikkaduwa. For Rekawa, the quality of the planning meetings being conducted at the site needed improvement by reducing the number of issues addressed in a given forum.

Interaction with development planners and donors has emphasized the need for plan design in both sites to include economic justification for recommended actions. The cost/benefit analysis for Hikkaduwa resources and tourism revenues has proved valuable in focusing planning discussion and priority setting on problems which are economically relevant. An example is the contingent valuation of the coral reef for tourist attraction. Another is the relative worth of sewage treatment in relation to tourism profits.

Task 4: Preliminary SAM plan implementation based on draft plans

This task utilizes the outputs of all previous work at a site and begins full implementation of the management plan actions while allowing adjustments in the field work and plan activities. Results and implementation projects include:

1. Education and awareness raising activities have contributed to a significantly higher level of concern and understanding about the management issues and their solutions
2. Divisional Secretaries and their staff play a key role in SAM planning and coordination process which has stimulated them to be active in promoting CZM actions in their areas
3. In Hikkaduwa, implementation projects include:
 - a. several beach cleaning activities assisted by the CRMP and spontaneously organized by local groups;
 - b. two posters and a brochure printed and disseminated through local participation;
 - c. signboards designed jointly with DWLC and installed at the site by DWLC;
 - d. a patrol boat and motor purchased;
 - e. boundaries of the sanctuary revised, plotted and ready for gazetting;
 - f. land use maps verified through local official participation;
 - g. DWLC guards trained for sanctuary surveillance;
 - h. Glass-bottom Boat Association formed and strengthened for assistance with management of sanctuary;
 - i. SAM Coordinating Committee fully functional;
 - j. Ministry of Fisheries approved rehabilitation of boat harbor for fishing boats anchored in sanctuary;
 - k. Swimmer floats and boundary markers installed by DWLC;
 - l. New sanctuary gazette notice drafted and submitted; and
 - m. Solid waste management linkages made with MEIP which has now included Hikkaduwa as a target site along with Galle Town.

4. In Rekawa, implementation projects include:
 - a. installation of several signs on mangrove conservation;
 - b. coordination with other development projects for long-term support;
 - c. land use mapping completed through verification of residents;
 - d. cashew tree nurseries and poultry farming started;
 - e. Federation of Rekawa Voluntary Organizations formed;
 - f. nine volunteer facilitators (catalysts) after training and guidance by CCD and CRMP
 - g. leadership training program conducted;
 - h. design for Kapuhenwela Causeway complete;
 - i. SAM Coordinating Committee fully functional;
 - j. Lagoon Fishery Cooperative functional;
 - k. Federation of Womens Organization established; and
 - l. Approval for support of the Coastal Lagoon Environment, Education and Research Center (CLEER).

5. Initial establishment of institutional and legal basis for long-term plan implementation and liaison with potential donor and government support is ongoing.

This task, as it proceeds, is making the SAM projects sustainable. Implementation is defined as those activities which truly involve the main actors in the sites such as local government, community groups, and national agency representatives.

Assessment. The number of implementation actions is rapidly increasing along with the level of local and national participation in the planning and implementation process. As stakeholders have begun to witness some on-the-ground progress their desire to participate has increased. For example, residents in Hikkaduwa see changes taking place and have thus been stimulated to a more positive attitude and willingness to contribute to the process by being active in meetings and agreeing to local action. In Rekawa, responsibilities taken by the lagoon fishermen's association has produced rewards which have reinforced their own participation. Equally, the Divisional Secretaries in both sites have become more active and positive.

A question being raised is how the SAM process will be sustained for plan implementation. What mechanism or institution will become responsible? The answer is evolving through the SAM Coordinating Committee mechanism which is taking a life of its own. The members; national and local government, along with local stakeholders; are forming a whole larger than the separate members. Some actions are now being stimulated through the Committee which would not be taken by individual agencies alone.

Task 5: Document, monitor and evaluate SAM planning and implementation efforts at sites in collaboration with other NAREPP projects

This task provides information on the successes and failures of SAM planning and implementation and feedback to the overall project. The outputs are:

1. Trip reports; monthly PO workplans and progress reports; CRMP quarter reports; the environmental profiles; various monitoring and research results and the

USAID/NAREPP mid-term evaluation report; all of which contribute to monitoring of the SAM projects.

2. Indicators of progress have been established (both process and outcome) for the SAM sites and are being monitored and reported on as shown in section IV of this report.
3. Field visits of NAREPP partners, USAID officials and several NGOs have resulted in feedback on the SAM process and influenced its adoption in other sectors.

Assessment. Since 1994 more time has been devoted to monitoring and to refinement of SAM project indicators. This included linking indicators to ongoing research at the sites, establishing criteria or thresholds of success and dissemination of indicator results to local participants. The information produced is providing the evidence for a continued role for SAM planning in Sri Lanka and elsewhere. An impartial evaluation should also be done by an objective organization to identify the successes or the problems of the process.

Component III: Training, education and outreach to support CZM plan implementation, agency involvement and SAM projects in collaboration with NAREPP

The training component is closely tied to the other project elements described above. It is a means to achieving the institutional development objectives and assisting with the implementation of the CZM plan and SAM projects.

EXPECTED OUTPUTS BY 1996

- 80% of CCD planning staff and at least 6 NARA researchers or staff will receive advanced training in environmental impact assessment, economic valuation, and conflict resolution in relation to CRM and biodiversity conservation
- At least 3 CCD and 3 NARA personnel will attend the URI summer institute
- 80% of the local officials responsible for reviewing minor coastal permits will attend at least one coastal management training seminar
- 75% of all coastal resource users will be exposed to at least one of CCD's coastal education media
- Each coastal district will have at least one coastal workshop or other occasion at which resource user views were solicited (except in north and east)
- At least six CCD staff and 4 researchers of NARA will be experienced in the design and implementation of SAM plans and will have either attended a SAM training or SAM study tour

Task 1: Train CCD, NARA, other agency and NGO personnel in CRM and SAM planning and implementation

The completed training outputs of this task follow:

1. 2 CCD participants and one local government official completed the 2-week SAM training program in Thailand, March 1992 and 1 NARA and 1 DWLC participant completed the SAM training in Philippines, October 1993; 1 CCD officers completed the SAM training in Philippines, October 1995
2. 1 CCD planning division staff attended URI summer institute in 1992 and 1 CCD staff attended in 1994
3. One-day seminar on SAM conducted at NARA for 10 staff, 1992
4. 1 CCD planning division staff graduated in 1994 from the URI Department of Marine Affairs with Masters Degree
5. 10 national agency staff went on SAM site study tour in Southeast Asia in March 1994

Assessment. These advanced training efforts have provided substantial returns to the CZM program in Sri Lanka. Virtually all the key personnel in CCD and NARA involved in CZM activities, have been trained under the CRMP, Phase I or II. Most senior level staff of both CCD and NARA can speak intelligently about CZM in Sri Lanka and the participatory approach of the SAM process. They are favorably influencing the direction of the present and future efforts of CCD and NARA for CRM.

Task 2: Train provincial and local officials and private sector individuals in CRM, SAM and CZM plan implementation

This task includes all in-country training activities which build the capacity of national agency staff and provincial level personnel, aside from CCD, in CZM expertise. The results are:

1. Four, one-week CRM/SAM training courses for provincial, national agency and NGO personnel (25 participants each):
 - a. Hikkaduwa: March 1992, June 1993, September 1995
 - b. Rekawa, Tangalla: September 1993 (100 trained)
2. Nine (Galle (2), Matara, Gampaha, Tangalla, Negombo, Hambantota, Panadura, Wattala) trainings for 60 to 100 (each) regional staff of various government agencies on CZM and regulatory permitting conducted in coastal district sites, 1993, 1994, 1995 (437 trained)

3. Three, one-day courses for public school teachers, 1995 (150 trained)
4. One, training of trainers course, for 11 national agency staff, Negombo, September 1994
5. The Center for Environmental Studies (CES) of Peradeniya University has become active in CRM/SAM training by assisting with the week-long course of September 1995 in Hikkaduwa. CES is now a viable partner for CCD in future trainings for national level staff.

Assessment. Initially, the CRMP staff worked with CCD staff to plan and implement local level trainings. Now, after a significant transfer of planning and implementation skills to the CCD staff, all the local trainings are implemented solely by CCD staff planning and action. Other agencies such as DWLC, UDA, CEA, CTB, the district and divisional secretaries and local government and police have benefitted from these trainings. More than 400 individuals have been trained in the various provincial and district level trainings. CES is capable of being a training partner with CCD and NARA.

Component IV: Administration

This component assists CCD and NARA to develop workplans as part of the CRMP workplan and to procure equipment essential to the effective implementation of their respective workplans as supported by NAREPP. The CRMP office is staffed by a Project Manager (9 months/year), office manager/secretary/book keeper with additional assistance as needed. The responsibilities of the CRMP office are to support, guide and record all URI-CRM events and to work closely with GSL agencies concerned with CRM as well as NAREPP in the overall implementation of the project.

Task 1: Complete workplans and deliver equipment for participating agencies through NAREPP

The results of this task are:

1. Annual workplans for CRMP, NARA and CCD completed
2. Itemized equipment needs fulfilled in 1992 with several exceptions for NARA
3. Procurement of equipment with assistance of IRG/NAREPP and USAID was delayed but completed in mid-1995

Assessment. The annual workplans for CCD and NARA in addition to the overall CRMP workplan has helped the agencies focus on the CRMP work which concerns their agency. It has forced each agency to assess what they can practically accomplish and assisted in the overall coordination process among agencies. The constraint for the timely completion of procurement was the process within USAID of determining which equipment would be allowed.

Task 2: Organize, stock and manage CRM Project and office

This task has been efficiently conducted by the CRMP office staff. The main responsibilities of staff and results are:

1. Manage all financial matters and make reports;
2. Purchase supplies as required for all activities;
3. Arrange meetings and workshops with required logistics both in Colombo and at project sites;
4. Arrange travel for all consultants and CRMP staff;
5. Maintain all equipment;
6. Perform secretarial functions as required;
7. Keep all records and files in order;
8. Assist with all publications and written documents;
9. Disseminate publications and keep records thereof;
10. Develop a CRMP library using the Endnote software; and,
11. Learn, collect data for and update the Management Information System devised for NAREPP.

Assessment. The CRMP management unit is very efficient and accomplishes many tasks for a small investment on the part of USAID. The by-products of locating the office within the NAREPP building are substantial and include: access for many reference materials of the Project Manager and the newly formed library; provision of assistance to many visitors and callers regarding CRM in Sri Lanka; presentations for special interest groups on CZM; and assistance with design of coastal projects for government and donor organizations.

IV. Project Target Indicators and Performance

A summary of primary CRMP Target Indicators of Performance by project component is shown in **Table 1**.

Individuals trained or who participated in various training programs are summarised in **Table 2**. Breakdown of number trained per year are given in **Figure 1**. Indicators of CRMP progress with USAID Strategic Objectives are summarised in **Table 3** and **Figures 2, 3 and 4**.

As an example of the level of participation being achieved through the SAM Coordinating Committees an analysis of the Rekawa SAMCC is shown in **Figures 5, 6 and 7**.

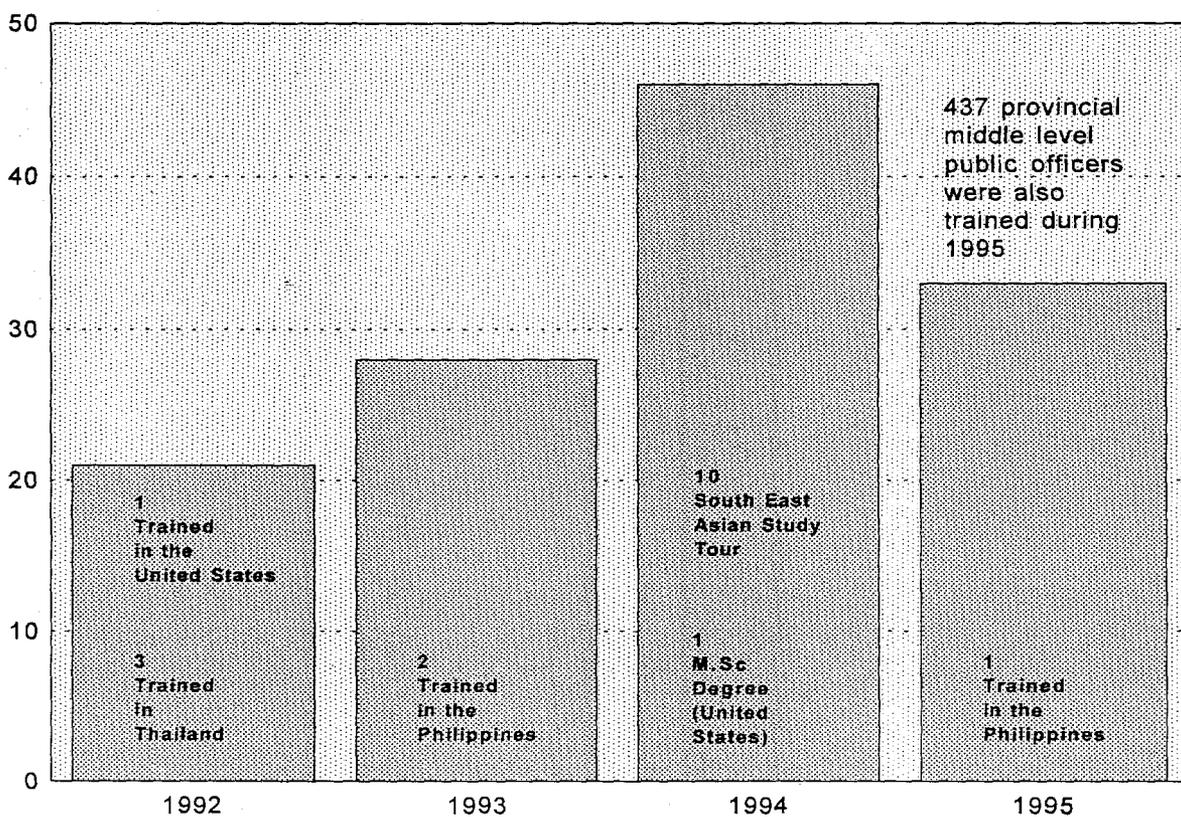
Several letters of appreciation are attached for review.

Table 1. Specific CRM Project Target Indicators of Performance

Indicator	Baseline 1991	Target 12/96	Total 12/95
Component I: CZM plan implementation through collaboration			
1. Major policy documents with environmental guidelines accepted by GSL + 1990 CZM Plan accepted and implemented + Coastal 2000 policies accepted + Revised CZM plan accepted and implemented	yes (1)		yes (2)
2. New major developments comply with CZM plan and EIA regulations	10%	90%	80%
3. *Portion of CCD's authority for minor permits delegated to local level	0	70%	55%
4. Core group at NARA involved in SAM planning and related research (no.)	0	10	7
5. *CRMP advises GSL and CCAC by issuing X substantive reports	0	12	10
Component II: Special Area Management planning and implementation			
6. SAM concept paper accepted and disseminated to X people	0	500	350
7. *Portion of environmental profiles completed with maps and all data:			
Hikkaduwa	0	100%	100%
Rekawa	0	100%	100%
8. *Portion of SAM plan completion:			
Hikkaduwa	0	100%	80%
Rekawa	0	100%	80%
9. Number of stakeholders active in SAM planning and implementation:			
Hikkaduwa	0	600**	500
Rekawa	0	500***	350
10. Coral reef habitat stable and improving in measurable terms (ha)	0	200	120
11. Number of lime kilns operating (Hikkaduwa)	80	0	?
12. Number of lime kilns operating (Rekawa)	51	few	5
Component III: Training			
12. Senior staff of CCD, NARA DWLC and other national agency staff trained in CZM and SAM Planning	2	150	124
13. *Number attending 1 day seminar on CZM and SAM planning	0	500	437
14. Community awareness/education programs in SAM sites	0	2000	3020
* Indicators recommended by USAID Evaluation, 1993			
*** Lagoon Fishermen	300	** Glass-bottom boat operators/Guides	100
Sea Fishermen	100	Hotel/guest house operators	250
Farmers	100	Fishermen in/near sanctuary	100
		Tourist guides	150

Table 2 Training/workshops/awareness programs conducted by CRMP during the period 1991-1995										
					No. of Trainings Conducted		Numbers Benefitted		Overall Participatio	
									Male	Female
Five day workshop for senior and middle level officials on CZM and SAM					4		89		71	18
Specialized training for NARA/CCD/DWLC officials					3		21		19	2
Local government officials training in CRM by CCD with CRMP support					4		437		391	46
Community awareness/education programs and workshops conducted in SAM Sites					82		3020		1782	1238
Overseas training in coastal management					6		18		16	2

Figure 1 Specialized training for senior coastal managers and researchers (in Sri Lanka and Overseas)



**Table 3. Indicators of Coastal Resources Management
Project Progress within USAID Strategic Objectives**

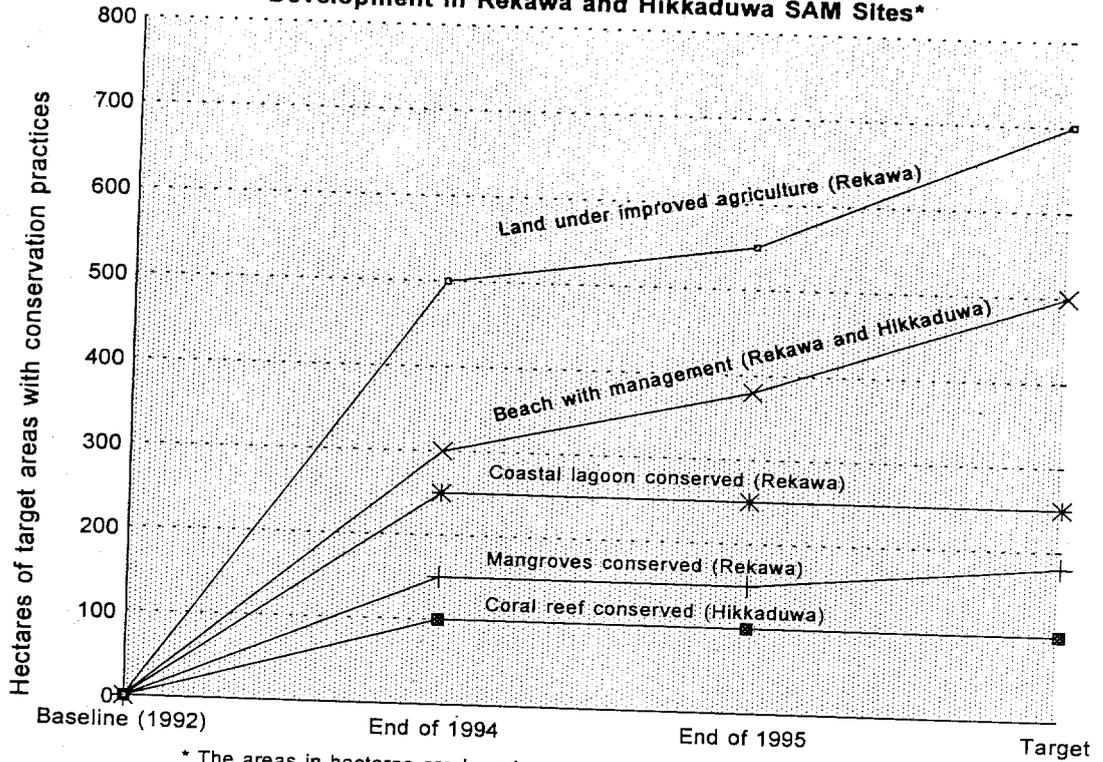
Indicator and units	Baseline* 1991	1994	Present** 12/1995	Target*** 12/1996
USAID Strategic Objectives				
1. <u>Increased private sector employment and income</u>				
a. Increase in employment in targeted enterprises				
+ glass-bottom boat generated employment/revenue as percent of operating capacity of 50 boats	20%	45%	50%	75%
b. Jobs saved by assistance to maintain environmental quality in Hikkaduwa				
+ jobs saved in Hikkaduwa	0	2700	3000	4000
2. <u>Improved environmental practices to support sustainable development</u>				
a. Hectares of targeted areas with conservation practices				
+ land under improved agriculture (Rekawa)	0	500	550	700
+ mangroves conserved (Rekawa)	0	150	160	180
+ coastal lagoon conserved (Rekawa)	0	250	250	250
+ coral reef conserved (Hikkaduwa)	0	100	100	100
+ beach with management (Rekawa and Hikkaduwa)	0	300	380	500
b. Number of people benefitted from adoption of environmentally sound practices				
+ people in Rekawa site	0	3000	3500	4500
+ people in Hikkaduwa site	0	3000	3600	5000
+ people in coastal strip from Colombo to Hambantota	0	8000	9000	12000
c. Number of households with secure natural resource use rights				
+ fishermen (Rekawa)	0	300	320	350
+ glass-bottom boat operators (Hikkaduwa)	0	50	50	50
d. Number of user groups with joint responsibility for management of resources				
+ groups functioning in Rekawa	0	7	10	12
+ groups functioning in Hikkaduwa	0	3	4	5
e. percent of industries implementing pollution prevention/control measures				
+ new tourist resorts in Coastal Zone	40%	60%	65%	90%
f. percent of municipal solid waste disposed through environmentally sound systems in Hikkaduwa	0	40	45	80
3. <u>Greater empowerment of people to participate in democracy</u>				
a. Number of community groups achieving a defined rating				
+ groups in Rekawa and Hikkaduwa	0	10	14	17

* Since all indicators are measuring improvements resulting from project activities, the baseline is 0 for most indicators

** Present status is estimated by areas mapped in profiles, numbers of people involved in meetings, number of active organizations etc.

*** Targets are arbitrarily selected based on what is practical to achieve

Figure 2 Improved Environmental Practices to Support Sustainable Development in Rekawa and Hikkaduwa SAM Sites*



* The areas in hectares are based on resource coverage in field as mapped for environmental profiles and where SAM management action is beginning

Figure 3 Number of People Benefitted from Adoption of Environmentally Sound Practices

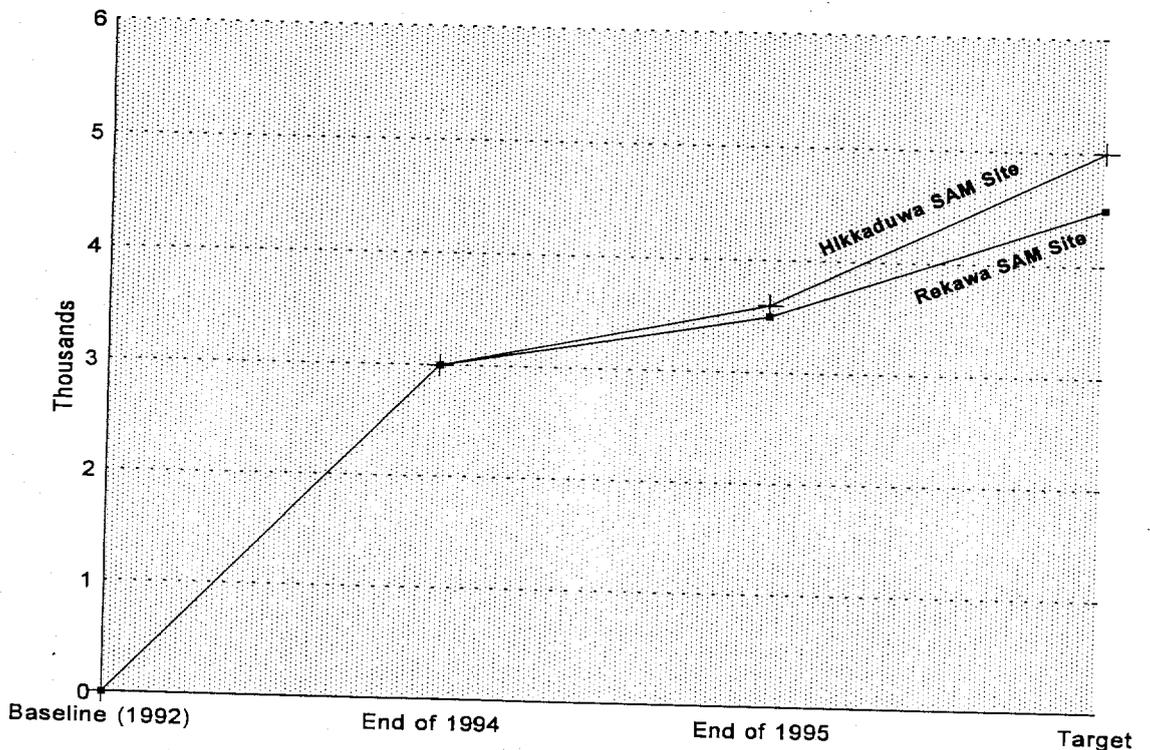
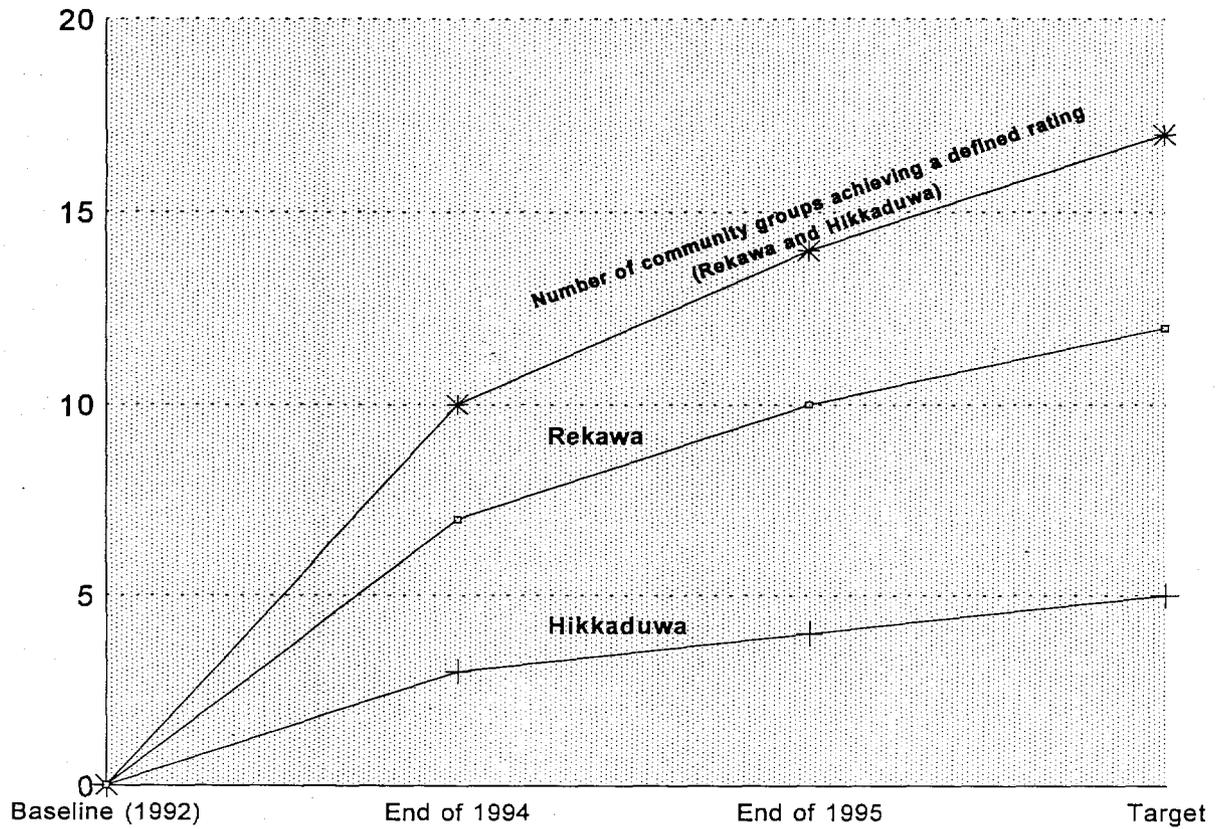


Figure 4 Number of User Groups with Joint Responsibility for Management of Resources*



* Number of organized user groups with some formal recognition

Figure 5 Pattern of Attendance at SAM Coordinating Committee Meetings for Rekawa

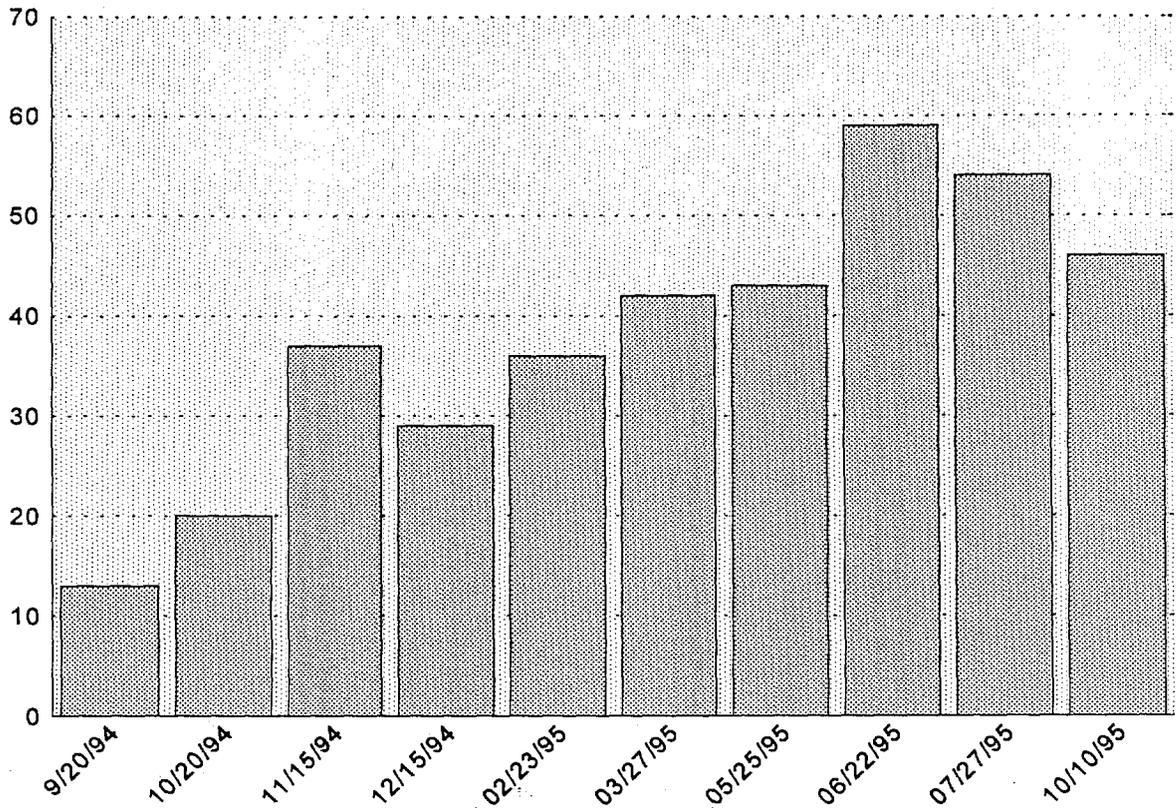
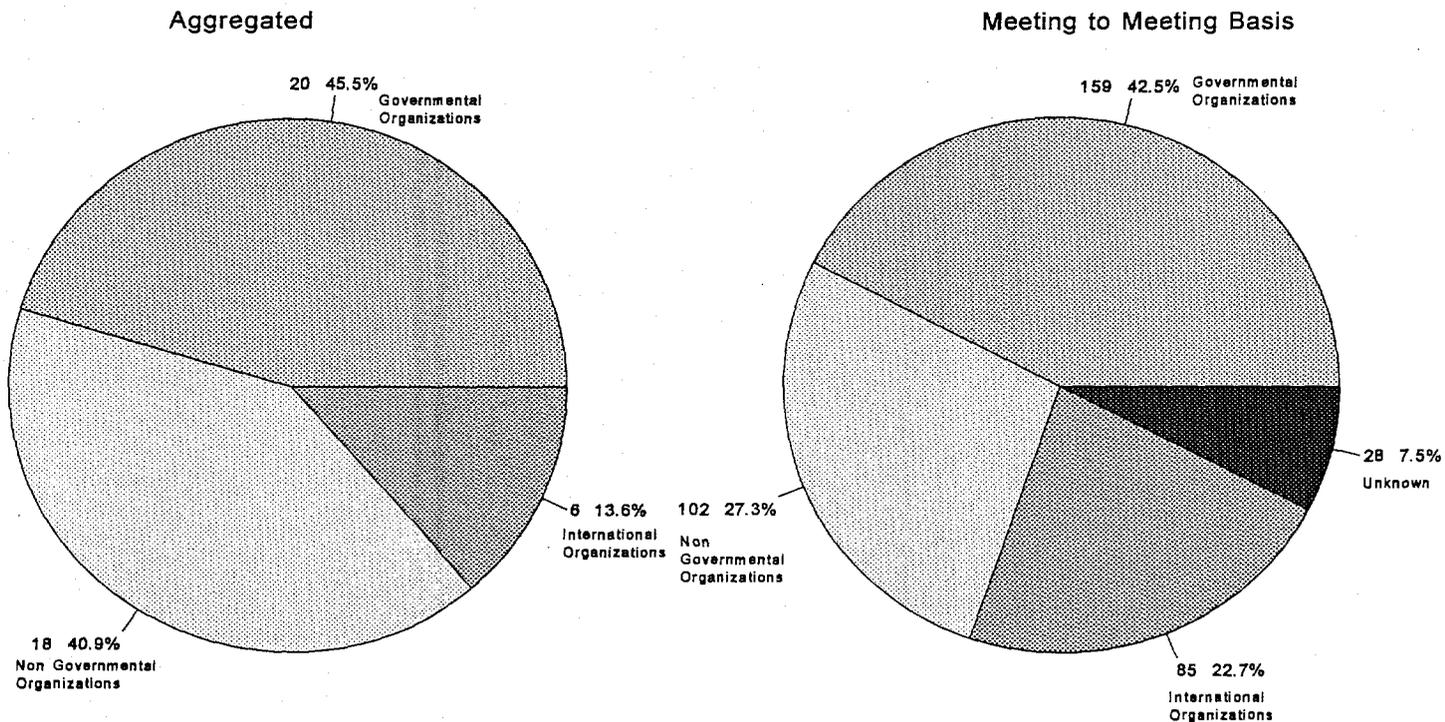
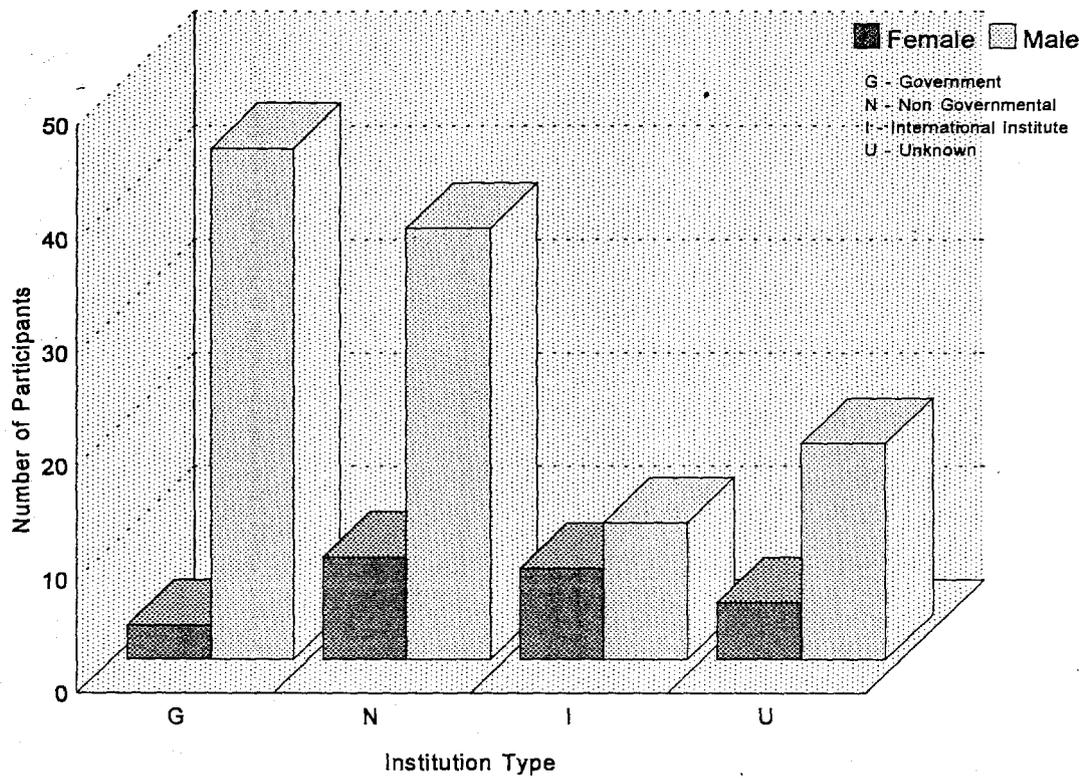


Figure 6 Percentage of Organizations Types Represented at SAM Coordinating Committee Meetings for Rekawa



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Figure 7 Attendance at SAM Coordinating Committee Meetings for Rekawa



ASSOCIATION OF TOURIST BOARD APPROVED HOTELIERS OF HIKKADUWA

CORAL SANDS HOTEL LTD.
326, GALLE ROAD, HIKKADUWA,
SRI LANKA.

Tel: 09-57436
01-687012
Fax: 01-687638

Mr. Steven Nakashima,
Consultant,
CRMP Office,
Gower Street,
Colombo - 05.

27th October 95.

Dear Steve,

I wish to thank you for your participation at the recently held Public Meeting organised by us with the Ceylon Tourist Board in Hikkaduwa.

I also take this opportunity to thank you for having made available the valuable posters, to be distributed among the participants.

I am glad that I was able to give an opportunity to Mr. Karunaratne Banda, your Project Officer to make a presentation at this meeting and to explain the SAM Plan to the public. This exercise, I am confident would educate the local community about the usefulness of the CRMP. We sincerely hope they would cooperate with us and support the implementation of the project proposals.

In this connection I wish to draw your attention to the seminar on "Tourism and Coastal Resources Management" organised by me in September 1994 to introduce the CRMP activities to the members of our Association.

As a Member of the Co-ordinating Committee you will accept the fact that I am making every endeavour to make the SAM Plan in Hikkaduwa a reality.

I have always insisted that the first priority should be to shift the fishing boats from the Marine Sanctuary area, if any progress is to be made. I am therefore grateful to the CRMP for inviting the Hon. Ministry of Fisheries to Hikkaduwa in this connection. We should be happy that the Ministry has now given top priority for the development of the Hikkaduwa Fisheries Harbour.

My intimation to you about the follow up discussion held in Hikkaduwa recently enabled your Field Officer Karu to explain to the Officials present at this meeting, the necessity to develop the harbour for the successful implementation of the SAM Plan.

In fact, on this occasion, I was able to inform those present that it was at the invitation of our Committee that the Hon. Minister visited Hikkaduwa and decided on the necessity to develop the harbour.

Contd. P/2.

With this initiative, we should now insist the responsible Ministries and other Authorities concerned to implement the rest of the proposals in our Programme. The second priority being the establishment of the Visitors Centre for the Marine Sanctuary.

I am concerned to understand that the SAM Planning process is scheduled to be completed by the end of this year. However it is encouraging also to note that the period could be extended may be by another year.

As pointed out at the last Committee Meeting, I therefore wish to suggest that the year 1996 be considered " The Year of Implementation" of the proposals. We have had so many meetings and discussions during the last few years. However, the actual implementation of proposals had been slowed down due to various unavoidable circumstances.

We meet monthly and discuss major issues but its frustrating to attend such meetings when nothing is done due lack of follow up action. As we are aware of the priorities, and since we now have a dynamic Divisional Secretary, I once again propose that a full time Coordinating Officer of a higher caliber capable of laising with the Departments and Authorities concerned should be immediately appointed on a contract basis with a firm commitment to see to the implementation of the proposals within the year 1996.

You will agree with me that all the surveys done, meetings and seminars held, publications and print outs put out and the contribution made by your Organisation as well as by all those involved in the programme, would be a waste of funds and time if the Project has to be abandoned with the winding up of your responsibilities in the near future.

As a person very much interested to see that the SAM Plan becomes a reality, which I personally feel is the only way by which we could sustain the Tourist Industry in Hikkaduwa, I would assure you my fullest cooperation and assistance in achieving this goal.

I sincerely hope that all concerned, from now onwards will cooperate with us and act accordingly with the same intention.

Thanking you,
Yours sincerely,



SIRI GOONEWARDENA.

cc - Dr. Allan White.

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Registered No. S 979

ASSOCIATION OF TOURIST BOARD APPROVED HOTELIERS OF HIKKADUWA

CORAL SANDS HOTEL LTD.
326, GALLE ROAD, HIKKADUWA,
SRI LANKA.

Tel: 09-57436
01-687012
Fax: 01-687638

20th December 1995.

Dr. Allan White.
CRMP Office.
Colombo.

Dear Allan,

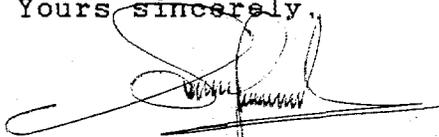
I am enclosing herein for your information copies of the following:

- (1) My presentation at the NAREP Seminar.
- (2) Proposals submitted to the Southern Province Development Programme.
- (3) Letter addressed to MEIP regard sewage disposal in Hikkaduwa.

As you will notice I have high lighted the importance the SAM Plan in all the above communications. I have infact attached a copy of the SAM Plan to my proposals submitted with item (2).

I sincerely hope that the Authorities concerned will take serious note of the facts mentioned and help us to implement the SAM Plan proposals to establish a better environment in Hikkaduwa to sustain a viable tourist industry.

Thanking you,
Yours sincerely,



SIRI GOONEWARDENA.

CC - Mr. Steven Nakashima.

V. RESPONSES TO USAID/NAREPP EVALUATION

The USAID Sri Lanka mid-term evaluation of NAREPP completed in November 1993 made several recommendations for the CRMP to address in 1994, 1995 and 1996. These recommendations as expressed in the evaluation report under findings, conclusions and recommendations are addressed below.

A. Transferability. "The results of the URI/CRMP program will be useful in many countries that are, or soon will be, facing the same problems as Sri Lanka. Successful CZM activities have potential for transfer to other countries. URI's centrally-funded base project has a global responsibility for technology transfer which should be enhanced by NAREPP."

Recommendation. "Give more emphasis in technical reports to the worldwide information transfer potential of the CRMP activities."

Response. The dissemination to an international audience of the lessons being learned in the Sri Lanka CZM program is being accomplished by the following activities:

1. International distribution of CRMP publications upon request is ongoing through the Coastal Management in Tropical Asia (CMTA) Network, a centrally funded project started in 1993 for which the Secretariat is based in the NAREPP office and which has produced five issues through September 1995.
2. One major article on the CZM program of Sri Lanka has been and will be included in each issue (two/year) of the CMTA Newsletter. The articles are listed in the Appendix with publications.
3. Publication through international journals on the results of the Sri Lankan program include a major article in Ocean Yearbook in 1989, about six papers in the combined proceedings of Coastal Zone 1989, 1991, 1993 and 1995; a paper on the status and management of coral reefs in Sri Lanka in Coastal Management, March 1995 and the cost-benefit analysis of the Hikkaduwa SAM plan submitted to Ambio.
4. An evaluation report of the ongoing SAM process will be published showing lessons learned in Sri Lanka.

B. Biodiversity. "One of USAID's pre-eminent environmental policy objectives is biodiversity protection and conservation. The URI/CRMP program is clearly involved with biodiversity and habitat protection, but its workplan does not use the term biodiversity."

Recommendation. "Report on what NAREPP does in biodiversity protection and develop specific biodiversity objectives and working strategies within the existing program for all components consistent with AID strategy."

Response. The SAM projects of the CRMP are clearly working for the protection and management of biodiversity. Several project objectives and indicators specifically

address biodiversity through coral reef, mangrove, estuary and beach habitat protection and management. Indicators which measure hectares of habitat protected for coastal ecosystem have been developed.

C. Community organizing. "Community organizing for coastal resource management projects is best done by trained specialists. The SAM program was not designed as a community-based management system, it is specifically a resources conservation program. Community organizing skills are needed in SAM program."

Recommendation. "Bring community organizing specialists into SAM sites. Plan and test approaches before implementing community-based management on a wide scale. Coordinate with TAF to include NGOs and thereby increase program effectiveness."

Response. The CRMP has since the outset of the project made explicit attempts to improve the skills of the Project Officers in community organizing. The POs were initially hired because of their experience in working with community groups. Also, two Special Area Management consultants have assisted to train the field staff to be more effective at communicating with community groups. The real need, in the case of Hikkaduwa in particular, is a person with skills in dealing with various levels of community, the private sector hotels and including local and national government. Such skills are difficult to find in Sri Lanka. Slowly the staff have adapted to the needs.

The NGOs working with TAF have shown little interest in working at the field level in coastal areas and have little expertise to do so. The alternative has been to help strengthen the existing NGOs at the field sites. This appears to be effective.

D. Public interest. "The benefits of the DWLC's Hikkaduwa Marine Sanctuary, while environmental, on subordinating public to private interests, specifically hotel owners. The sanctuary is the center of the SAM program and it will be unfortunate if the program failed to consider social and economic equity issues. Rekawa Sanctuary appears to have a more balanced agenda." *sic*

Recommendation. "NAREPP and DWLC should conduct a social and economic impact analysis of the Hikkaduwa SAM site, and design measures to ameliorate potentially negative impacts on local residents."

Response. The majority of local interests and residents of Hikkaduwa are employed by or involved in the tourism industry. And, unique to Hikkaduwa, the majority of hotel interests are locally controlled and owned. Only a small minority of the large hotels are owned by companies from outside of the area.

The CRMP conducted a major social-economic study for the area which was analyzed in socio-economic and cost-benefit framework. The study put into perspective the relative value of the tourism industry to the local economy as compared to more traditional economies of fishing and agriculture. It clarified the perspectives of local residents on the problems they see in management of coastal resources for tourism, fishing and the protection of biodiversity. It also highlighted the perspectives of tourists which come to Hikkaduwa and costed the implementation of the SAM plan in relation to the benefits derived from tourism and improved environmental management.

E. Alternative livelihoods. "The CCD program supported by URI/CRMP necessarily encumbers the livelihood of some people such as the illegal coral miners, creating hardship and increasing difficulty of enforcing regulations. Solutions lie with the expansion of alternative employment opportunities and the retaining of coral miners and others."

Recommendation. "Create a specific activity in collaboration with TAF and appropriate NGOs to identify employment opportunities and conduct retraining programs to relocate coral miners and others displaced by CCD's program."

Response. The SAM projects, in Hikkaduwa and Rekawa, have through the planning process, determined what livelihood opportunities exist and how they can be developed to employ coral miners or others involved in destruction of coastal resources. The history of both the CCD and CRMP attempts to stop coral mining include alternative livelihood programs through land grants for agriculture which unfortunately was not successful because it was not attractive to the coral miners.

Research on the problem of coral mining indicates that national economic policies which affect importation of cement, as a replacement of coral lime in construction is required to change the market demand for lime. In addition, inland coral lime deposits must be made more accessible through investment in infrastructure. Strategies short of these interventions will be doomed to fail.

In Rekawa, the CRMP through a variety of activities including improved law enforcement and a new poultry raising project, have decreased substantially the incidence of coral mining. Short of integrated and intensive efforts for site specific areas, coral mining is difficult to stop.

F. Integration. "The permanent success of CRMP depends on broad public and political support. A large number of GSL agencies, NGOs and community groups will need to participate. The coordination with other NAREPP components, especially the public education and training elements, must be increased to enhance effectiveness."

Recommendation. "Increase the GSL agencies in the CCD and URI/CRMP collaborative network to include industrial, urban and rural development, health, education and other interests to policy formulation and program development. Integrate the planning functions of CRMP with other NAREPP components."

Response. The NAREPP evaluators have highlighted an area which has been the concern of CRMP since 1990 when the *Coastal 2000* was first drafted. The whole thrust of the *Coastal 2000* is more integration and collaboration of the agencies which have jurisdiction over coastal areas. The preparation of the *Coastal 2000* included more than 30 government agencies and NGOs in the process and the key ones are now active in collaboration with the CCD. The EIA process for coastal projects, for example, normally involves the CEA, UDA, DOF, NARA and others as appropriate. The SAM planning projects have included local representatives of all these agencies plus DWLC and the local government, divisional secretaries and community groups on a regular basis. Their participation has increased steadily from 1993 to the present. The integration achieved toward environmental management through the development of the *Coastal 2000* and the SAM projects is unique in Sri Lanka.

G. Economics. "There is insufficient economic analysis in the CZM and SAM. Including economic analysis could be planned by close collaboration with IRG and university economists."

Recommendation. "Expand the work program of CZM and SAM to include economic analysis, such an activity would be well-served by close collaboration with IRG and university economists."

Response. The need to include more economic analysis in resource management plans was recognized in 1993. In the case of Hikkaduwa, a resource valuation and cost-benefit study of the tourism industry in relation to coastal resources management was completed in 1995. This study highlighted opportunities for investment in infrastructure and means for environmental protection through support from the tourism industry and government. For Rekawa, a socioeconomic survey and analysis addressed opportunities for alternative livelihoods in relation to the value of natural resources in the area. Also, a resource valuation study on mangrove resources in Rekawa has been completed by a resource economist of Peradeniya University.

It is noteworthy that the resource persons contracted for the economic study and analysis in Hikkaduwa were identified after discussion with IRG. Also the only published work summarizing the results of the resource valuation and cost-benefit analysis for Bolgoda Lake initiated by IRG was in the Coastal Management in Tropical Asia Newsletter after some assistance by CRMP staff.

H. Responsibility. "It is not clear how the decentralized CZM and SAM programs will be managed, who the managers will be and what resources will be available when authority is devolved."

Recommendation. "Develop a plan for SAM and other CRMP program management under a decentralized system."

Response. The SAM plans, as they evolved in 1994 and 1995, have refined a decentralized institutional mechanism for long-term management and administration of the pilot sites. The outcome of this management system and the identified roles for local and national government are already of use for future SAM planning and implementation efforts. But it is too early to know if this management system will be sufficient for future planning and implementation efforts.

I. Technical support. "CRMP does not have sufficient capability in beach dynamics and sedimentation alleviation technologies which are critical to the success of the SAM program."

Recommendation. "Engage a qualified beach geologist to investigate and recommend solutions for both SAM sites."

Response. Erosion issues have not been identified as crucial during the issue definition stage of the SAM planning process. Another reason why the CRMP does not have an expert in beach geology and dynamics is because this is the specialty of CCD engineers. The field where CCD is most capable of making detailed studies and recommendations is that of coastal geomorphology and dynamics, sand movement, waves and currents. And, if CCD cannot answer these questions, the Lanka Hydraulic Institute has several capable engineers who have worked with the project in the past. To the extent that the SAM plans have required this kind of expertise, CCD and LHI have voluntarily filled the need.

J. Media and public relations. "Proper use of mass media and planned approach to public relations are essential to achieving community-based management systems and to building public confidence in new programs. Public information and public relations are not now successful in CRMP."

Recommendation. "Secure TAF and NGO support for a public information and public relations program for coastal zone activities."

Response. This recommendation was very appropriate because it was a topic of concern during 1993 for the CRMP. Attempts to interest the Environmental Journalist Forum (a member of the TAF core group of NGOs) were not fruitful at the time. Although the NGO expressed interest, it did not undertake to write articles. Later it did so at its own pace! In 1994 and 1995, several television programs have covered the conservation program and SAM project in Hikkaduwa. Aside from

mass media coverage of the activities in the SAM sites, the CRMP has provided much public information through support of a poster contest organized by CCD in March 1993, publication of two posters on coral reef conservation and the numerous other publications listed in this report and distributed upon request. In addition, the International Coral Reef Initiative (ICRI), highlighted the SAM sites in a video produced for the ICRI meetings and now distributed in Sri Lanka.

K. Performance indicators. "The performance indicators used by URI/CRMP are not adequate to cover the anticipated outputs. Many tasks do not have indicators or they are insufficient."

Recommendation. Adopt additional indicators as specified in the Evaluation Report.

Response. The suggested indicators have been incorporated into the project indicators described and measured in this report and have been monitored since 1993 as appropriate.

VI. RESPONSES TO COMMON QUERIES ABOUT CRMP AND THE SPECIAL AREA MANAGEMENT APPROACH

Query. Why has the "SAM Process" not produced more concrete results in the field for the benefit of local communities and their economy.

Response. The SAM process is one of participatory planning whereby local communities, private sector groups and government work side-by-side to make decisions about their development and management of their natural resources. SAM promotes a governance system which ensures an improved level of democratic participation in decisions which affect peoples use of their natural resources. Once the decision making process is in place, concrete results will emanate from the locality and economy of concern. The people at Rekawa and Hikkaduwa have benefitted from the SAM process in terms which are not so obvious to outsiders. Now, improved environmental quality and local economies are resulting from the planning and early implementation efforts. Examples include:

Hikkaduwa:

- a. more stable coral reef environment since 1987 surveys;
- b. improved operation of GBBs in the sanctuary so that corals are not disturbed and more order is maintained;
- c. more people using GBBs and paying a fixed fee for the boat ride;
- d. cleaner beach and shoreline for tourism;
- e. harbor improvements to accommodate fishing boats; and,
- f. plans for waste management and infrastructure are moving forward.

Rekawa:

- a. potentially improved fish yields from the lagoon fishery;
- b. more active conservation and management of fisheries on the part of the lagoon fishermen and their association;
- c. stable lagoon mangrove ecosystem;
- d. decreasing incidence of coral mining and processing;
- e. new livelihood revenues from poultry farming and improved agriculture.

Hikkaduwa and Rekawa:

A functioning Coordinating Committee, comprised of most stakeholders, government and non-government organizations, meets monthly, is actively pursuing solutions to site problems and is willing to take responsibility for some actions required.

Query. How will the SAM plans be implemented and what agency will take responsibility?

Response. The easy answer to this common question would be to suggest changes in the legal and institutional structure of the Sri Lankan government. Although new laws can help such as a revision of the Coast Conservation Act of 1981 mandating authorization for SAM plans and giving more power to Divisional Secretaries or the CCD, the experience of the SAM projects is evolving a solution. This solution has certain ingredients now evident from the lessons of the project:

- a. The SAM process helps to clarify responsibilities among all actors (stakeholders) in implementation through a progression of events which lead to development of a plan by and for the participants.
- b. The SAM Coordinating Committees (SAMCC) functioning in the SAM sites are made up of the principle stakeholders. This committee both develops the plan and takes responsibility for its implementation. Although actions are taken by individual members of the committee, the larger group encourages completion of actions and forms the institutional memory.
- c. The Chairman and instigators of the SAMCC must be committed to the process and its outcome. The agency in the lead is less important than the dedication of the chairperson and the core members. The Divisional Secretaries in Rekawa and Hikkaduwa have proven to be dynamic and committed leaders of the SAM planning activities with the assistance of the CRMP and the key agencies with jurisdiction in the coastal zone.
- d. To the extent that the SAMCC catalyzes the actions of planning and project implementation, the result is greater than the sum of the individual members acting alone. Individual agencies will tend to avoid responsibility without the catalyzing pressure of the SAMCC.

- e. A key aspect of the SAM plan and process is that it builds on the universal issues of concern to all which stand out as needing immediate action. This focus on the immediate problem helps to bring forth the required attention and action. In the case of Hikkaduwa, this helped ensure attention on the boat harbor improvements. For Rekawa, this helped improve the lagoon shrimp fishery management.
- f. In the end, no one agency or group will take full responsibility. Responsibilities will be clearly delegated to the most appropriate agency (local and national) and to non-government community groups with a formal status.
- g. The SAM implementation process is a team process in which all key players act together but within their sphere of concern. The joint planning and coordination efforts ensure a synergistic effect of action and that actions are complimentary rather than exclusive, competitive or overlapping. Until the SAMCC members perceive themselves as a team which can make a difference in solving the problems of the area, nothing new will be created or solved.

Query: What new institutional assistance is required to make the SAM process work in the long-term?

Response: One suggestion has been to create a position within the Divisional Secretariat to carry out the coordination duties in lieu of the Project Officer assigned to the site. Although the Divisional Secretaries perform this role to some extent, they need a specially trained person to carry on with the SAM coordination and community organizing functions of the PO. In addition, key national agencies, such as the CCD, will need more personnel to serve as catalysts in the SAM planning and implementation process.

VII. JUSTIFICATION FOR A PHASE III CRMP

A major reason for continuing the CRMP from July 1996 through May 15, 1998 is that the CRMP has been designed in coordination with NAREPP. The activities of the CRMP are proceeding well and continued support will ensure the longer-term sustainability of the policy and field projects. The proposed phase III focuses on those activities which can be successfully completed by early 1998 and are essential to the long-term coastal management capability of Sri Lanka; particular emphasis is on those agencies responsible for coastal zone management. It will assist to make the necessary linkages between past work and several development projects of the government with foreign support in the South and Western Provinces. The main reasons why it is important to support a Phase III CRMP are:

1. The CRMP is an integral part of NAREPP and was intended to be synonymous with NAREPP implementation;
2. Although the major objectives of CRMP are well on their way to being achieved, pending a formal evaluation, full implementation will not be possible until early 1998;
3. The CRMP component on Special Area Management (SAM) is experimental and is developing models for coastal management which are new to Sri Lanka and Asia. These models are beginning to be accepted but need the assurance of field level success to have the intended impact on national and international policy;
4. The SAM approach is being viewed by the GSL as a means to deal with special development problems in coastal areas and will comprise a chapter in the revised national CZM plan of 1996;
5. The CRMP has a proven track record in Sri Lanka with full cooperation of the counterpart agencies of the CCD, NARA, DWLC and others in association with CRMP;
6. The counterpart agencies have, during 1995, significantly increased their contribution to the policy and field level work but still need some assistance to ensure that new staff and field activities are being efficiently utilized;
7. Sri Lanka is encouraging development in the coastal zone thus increasing the pressure on environmental resources and straining the capacity of agencies to manage coastal resources (i.e. tourism is expected to double by the year 2000 with about 80% of this in coastal areas). Continued support is required to manage this crucial area;
8. The revision of the national CZM plan must be completed by the end of 1996 for implementation in the period of 1996-2000 to keep up with increasing development in coastal areas and to maintain the credibility of the CCD within the GSL;

9. Continued support for development of training capacity outside of the government counterpart agencies through the Center for Environmental Studies will make training more sustainable after CRMP; and,
10. The 1994 USAID evaluation of the URI/CRMP strongly recommended continuing the project through the end of NAREPP so that improvement in the national CZM program could be maintained and the SAM projects made sustainable.

Phase III Project Focus

The main thrust of the project through May 1998 will be to make sustainable what has been started in the first 9 years of operation. All key activities will become the full responsibility of the counterpart agencies. The "projects" of essential concern to complete include:

- Gazetting, distribution and implementation of the national CZM plan by CCD;
- Developing water quality standards for coastal use zones for incorporation into the national CZM plan;
- Promotion of newly developed environmental guidelines for coastal tourism development to facilitate implementation of the CZM Plan and to encourage developers to be more sensitive to environmental issues in coastal areas;
- Implementation of the SAM plans in Hikkaduwa and Rekawa and securing funding for infrastructure within the two Special Area Management sites of Hikkaduwa and Rekawa;
- Support several specific projects within the SAM plans for Hikkaduwa and Rekawa such as:
 - * Institutional design for the Coastal Lagoon Environment, Education and Research Center in Rekawa
 - * Ecotourism development around the beach and sea turtle resources in Rekawa
 - * Strengthening of community-based resources management groups formed as part of the SAM planning process
 - * Management of the marine sanctuary in Hikkaduwa
 - * Institutional design for the Coral Reef Interpretation center and aquarium in Hikkaduwa
 - * Integrated management and recycling system for solid waste and sewage disposal system for the Hikkaduwa town

- Develop one new SAM site which builds on lessons learned from the first two sites;
- Refinement of CRM core group operating at NARA to support Special Area Management research and planning needs for 1 or 2 new sites;
- Publications of particular relevance for national policy on coastal management;
- Conduct strategic training activities to augment the government, NGO and selected university capacity in coastal management; and,
- Institutionalise the CRMP and its information and assistance in an appropriate manner.

Ensuring Sustainability of CRMP Activities by GSL Agencies

It is crucial that all activities undertaken in the extended workplan become the full responsibility of the GSL collaborating agencies. This transfer of responsibility will be accomplished by instituting the following procedures:

- a. Project decisions will be made jointly by a steering committee comprised of CCD, NARA, DWLC and CRMP;
- b. All project activities pertaining to CZM plan revision, monitoring of compliance in the CZ and SAM planning and implementation will be carried out under the direction of a CCD staff member in collaboration with CRMP;
- c. CCD and other participating agencies shall initiate all important meetings to decide on Project activities, SAM plans, CZM plan revision or other matters supported by the CRMP and be fully responsible for SAM plan endorsement in the two sites;
- d. CRMP policy analysis, library and administrative functions shall be institutionalized either within GSL (Ministry of Fisheries or Environment) or become an autonomous legal entity incorporated in Sri Lanka as an NGO to assist with the technical assistance of CZM in the country.

VIII. Schedule for URI-CRMP Tasks and Activities: 1992, 1993, 1994 and 1995

WORKPLAN COMPONENT/TASK/ACTIVITY	SCHEDULE				
	1992 1993 1994	1995			
		1	2	3	4
Component 1 Promoting a common agenda for coastal resources management through institutional improvement, collaboration and CZM plan implementation					
Task 1 Promote "Coastal 2000" through publications and forums					
1 Completion of all editing of background papers	C	-	-	-	-
2 Print papers of high quality	C	-	-	-	-
3 Complete publication of coastal 2000	C	-	-	-	-
4 Obtain official Cabinet recognition for Coastal 2000	C	-	-	-	-
5 Promote public and government recognition	O	O	O	O	O
Task 2 Work with CCD to strengthen regulatory role and decentralize regulatory functions and revise CZM plan					
A - Strengthen CCD's Regulatory Role and Revise CZM Plan					
1 CCD capacity assessment	C	-	-	-	-
2 Improve inter-agency coordination in coastal management	C	O	O	O	O
3 Complete environmental guidelines for coastal tourism development activities and publish illustrative document in 1995	O	O	C	-	-
4 Revise the National CZM plan, final draft	O	O	O	O	O
5 Develop a computerized database system for recording and tracking CCD permits and related information.	O	O	O	O	O
B - Decentralize CCD's Regulatory Function					
1 Develop criteria for identification of minor permits	C	-	-	-	-
2 Develop guidelines for local administration of minor permits	C	-	-	-	-
3 Monitor implementation by local administration of minor permits	O	O	O	O	O
Task 3 Work with NARA to strengthen ability in research for resource management, water quality monitoring for CRM & build CRM core group					
1 Assess the research capacity of NARA to contribute to CRM	C	-	-	-	-
2 Form CRM core group and develop operation strategy	C	-	-	-	-
3 Meeting and support of CRM core group	O	O	O	O	O
Task 4 Facilitate collaboration among agencies concerned with CZM in collaboration with CCD, NAREPP and the NEAP					
1 Attend & contribute to Coast Conservation Advisory Council meeting as required by CCD	O	O	O	O	O
2 Write and publish articles on CZM in Sri Lanka in <u>Coastal Management in Tropical Asia Newsletter</u>	O	O	O	O	O

P : Projected
- : Completed

O : On-going
* : Workshop/Training

C : Completion

WORKPLAN COMPONENT/TASK/ACTIVITY	SCHEDULE				
	1992 1993 1994	1995			
		1	2	3	4
Component II Promoting integrated CRM through Special Areas Management (SAM) and community involvement at the local level.					
Task 1 Refine and distribute the SAM concept paper explaining the rationale and means of implementing SAM projects					
1 Draft concept paper with necessary information	C	-	-	-	-
2 Discuss & refine through interaction with agency, CRMP, IRG and others	C	-	-	-	-
3 Conduct small one-day workshop to obtain a consensus on the concept paper	C	-	-	-	-
4 Finalize paper for circulation and education on SAM concept	C	-	-	-	-
5 Continue to refine SAM Paper in relation to field experience	O	C	-	-	-
Task 2 Complete environmental profiles with Sinhala translations and all baseline research for SAM sites with CCD, NARA and others agencies and local communities					
1 Compile all secondary information on site into a draft profile	C	-	-	-	-
2 Plan and conduct rapid area assessments as appropriate for each site and incorporate information into profile	C	-	-	-	-
3 Identify major management issues and their causes at each site & incorporate into profile	C	-	-	-	-
4 Support research studies on hydrology and landuse, socio-economics, aquaculture potential, lagoon fisheries and sea turtles (Rekawa); and water quality, coral reef condition and trends, tourism economy, waste water treatment and tourist perceptions (Hikkaduwa)	C	-	-	-	-
5 Incorporate all major research findings into profiles and management plans as appropriate to support management	O	C	-	-	-
6 Finalize and print environmental profile for use in planning	C	-	-	-	-
7 Translate profile summaries into Sinhala and distribute	O	O	C	-	-
Task 3 Develop draft SAM plans with CCD, NARA other agencies & local communities					
1 Conduct Training/planning workshops at site(s) using profile as background information to explore management strategies	P	O	O	O	O
2 Support presence of permanent Project Officers at site	O	O	O	O	O
3 Draft management plan based on profile and workshop results	O	O	O	O	C
4 Public review, modification and finalization of plans through national agency, community and advisory comments	O	O	O	O	C
5 Refine workplan of field project officers from the draft management plan and experience to date	O	O	O	O	O
Task 4 Preliminary SAM Plan implementation based on draft plans					
1 Evaluate field work of project personnel and develop detailed workplan for field personnel for community organization and achieving objectives of the plan	O	O	O	O	C
2 Conduct local training and education seminars as needed	O	O	O	O	C
3 Liaison with all district officials, government and private organizations as required for longterm support through monthly SAM Coordination Committee meetings at each site	P	O	O	O	C
4 Establish institutional and legal basis for longterm plan implementation					
5 Liaison with NEAP projects for SAM plan implementation beyond 1995	O	O	O	O	O
6 Support catalyst program in Rekawa					
7 Support sanctuary management and GBB association in Hikkaduwa	O	O	O	O	O
Task 5 Document, monitor & evaluate SAM planning & implementation efforts at all sites in collaboration with other NAREPP Projects					
1 Monitor the process and outputs of SAM projects through site visits & comparison of baseline data with updated data and appropriate research at site	O	O	O	O	O
2 Submit periodic reports reflecting results	O	O	O	O	C
3 Publish selected useful reports for dissemination & education	O	C	C	C	-
4 Share results periodically with NAREPP partners	O	O	O	O	O
5 Sponsor exchange field trips for community members from sites	P	O	O	O	C

P : Projected O : On-going C : Completion
- : Completed * : Workshop/Training

WORKPLAN COMPONENT/TASK/ACTIVITY	SCHEDULE				
	1992 1993 1994	1995			
		1	2	3	4
Component III - Training, Education & outreach to support CZM plan implementation, agency involvement and SAM projects in collaboration with NAREPP/USAID					
Task 1 Train CCD, NARA & other agency personnel in CRM and SAM Planning and Implementation					
1 3 NARA and 4 CCD participants to SAM training program in Thailand, March 1992 and in Philippines in October 1995	C	-		*	-
2 1 NARA and 2 CCD persons attend URI Summer Institute in each of the years 1992 and 1994	C	-	*	-	-
3 8 participants on SAM study tour in Southeast Asia	C	-	-	-	-
5 1 training/workshop on special topics of CRM/SAM conducted at NARA for 8 researchers/staff 1992, 1994	C	-	-	-	-
6 1 CCD staff will enroll in master's degree course, 1993-1994	C	-	-	-	-
Task 2 - Train provincial and local officials and private sector representatives in CRM, SAM & CZM plan implementation					
1 Train 25 (each course) provincial and national agency and NGO personal in CRM and CZM implementation, 1992 & 1993 at Hikkaduwa; 1994 at Dickwella 1994 and 1995 at Hikkaduwa	C	-	*	-	-
2 Plan for periodic short-term training & prepare CCD staff to implement such training (5 courses for regional officials and 5 courses for teachers)	P	P	P	*	-
3 Conduct a training of trainers course for 15 participants	*	*	*	*	*
	C	-	-	-	-

P : Projected
- : Completed

O : On-going
* : Workshop/Training

C : Completion

Annexes

- 1. Participating agencies and active personnel**
- 2. Important presentations, events and meetings**
- 3. Travel and field trips**
- 4. All publications supported by CRMP**
- 5. Major equipment with NAREPP funding**
- 6. Annual expenditure 1991-1995**

Participating Agencies and Active Personnel

CRC-URI

CRC Director, Stephen Olsen; provides policy support for the CRMP activities and liaison with other CRC projects

CRC Associate Director, Ms. Lynne Hale; provides logistical and policy support, comes once a year to Sri Lanka

CRC Training Coordinator, Mr. Brian Crawford; provides guidance in all training activities

CRMP-Sri Lanka

Project Manager, Dr. Alan White; responsible for all CRMP projects and outputs; assists with administration and most representations of the project (9 months/year)

Special Area Management consultants:

Mr. Piyasena Ganewatte; Rekawa SAM project (12 months/year)

Mr. Steven Nakashima; Hikkaduwa SAM project, assists Project Manager with overall project management (6 months/year)

Special Area Management field staff:

Mr. W.M. Karunaratne Banda, project officer, Hikkaduwa

Mr. T.M. Ariyaratne, project officer, Rekawa

Mr. Mahasen Fernando, assistant project officer (up to May 1, 1995)

Ms. Kelly Hamby, Peace Corps Volunteer at Hikkaduwa (up to December 1, 1995)

Ms. Ann Rugh, Peace Corps Volunteer at Rekawa

Project administration and accounting:

Mr. Mervyn Wijeratne, Project Administrator (retired with effect from May 15, 1995)

Ms. Indira Fernando, office manager and administrator

National and foreign Planning consultants:

Professor Kem Lowry; planning assistance, (4 weeks/year)

Dr. C.K.M. Deheragoda, Sri Jayawardenapura University

Mr. G. Tantrigama, Sri Jayawardenapura University

Dr. S.B.S. Abayakoon, University of Peradeniya

Dr. H.N. Seneviratne, University of Peradeniya

Volunteer Student/Research Interns

Ms. Kate Sullivan and Shawn Kelly (University of Rhode Island). Kate co-authored the CRMP publication on "Environmental Guidelines for Coastal Tourism Development".

Shawn made the first draft of the Hikkaduwa Marine Sanctuary Brochure (February 1 - May 8, 1994).

Mr. Keene Haywood (Volunteer from the University of Miami) worked on the environmental profile for the Rekawa Lagoon (July 29 - December 19, 1994).

Ms. Virginia Barker (Duke University). Her report on Economics of Sustainable Ecotourism Development in Hikkaduwa: Analysis of a Special Area Management Plan. Virginia Barker is a CRMP Working Paper. (May 31 - August 30, 1995).

Mr. David Houser (Volunteer from the University of North Carolina). Analysed the participation at SAM Coordinating Committee meetings at Rekawa (October 9 - December 8, 1995)

Short Term Volunteer Researchers

Jesper Pederson from Holland; (March/April, 1995)

Jeanette Vaartjes and Meindert Witvliet from the Agricultural University, Wageningen, Holland completed the report "Contingent Valuation Method study on the coral reef and beach in Hikkaduwa" (June to August, 1995)

Primary Collaborating GSL Agencies and Coordinating Personnel:

Coast Conservation Department (CCD)

Nissanka Perera (Director); overall liaison with CRMP

R.A.D.B. Samaranayake (Manager/Coastal Resources Development); directs the SAM projects jointly with CRMP and works with CRMP on all other mutual interests

I. Ranasinghe (Deputy Director/Planning); responsible for CZM plan revision, works jointly with Dr. C. Deheragoda

A. Premeratne (Deputy Director/Planning); represents CCD in the Hikkaduwa SAM planning and implementation process

K.W.P. Tilakaratne (Planning Assistant); responsible for developing and maintaining new monitoring system of CCD jointly with CRMP

B.H.J. Premathilake (Field officer); assigned fulltime to Rekawa

National Aquatic Resources Agency (NARA)

Mr. M.H. Gunawardene (Chairman); Chairs the Coastal Resources Management Core Group and assists with CRMP Planning

Upali Jayasekara (Director-General); overall liaison with CRMP

Dr. Padmini De Alwis (Head, Environmental Unit); active in CRM Core group; water quality research in Hikkaduwa for SAM plan

Arjan Rajasuriya (Research Officer/Coral Reef Research Project); active in CRM core group, responsible for coral reef research in SAM sites

Dr. D.S. Jayakody (Research Officer/Microbiology Research Division); active in CRM core group, responsible for fisheries studies of Rekawa SAM plan

Dr. Pauline Dayaratne (Director/Marine Biology Resources Center); active in the CRM core group and policy activities for CZM

Department of Wildlife Conservation (DWLC)

Mr. C.P. Attanayake (Director); overall liaison with CRMP

Mr. Chandra Jayawardena (Wildlife Officer); responsible for Marine Sanctuary Management in Hikkaduwa

4 DWLC Field Officers, assigned fulltime to Hikkaduwa for marine sanctuary management, work jointly with CRMP Project officer

Ministry of Transport, Environment and Women's Affairs

Mr. Cecil Amarasinghe, Secretary

Mr. J.G. Keerthiratne, Additional Secretary

Mrs. S. Malalasekera, Director, NAREPP Project

Mr. H.M.B.C. Herath, Deputy Director, Natural Resources (Coordinator for CRMP)

Mr. M.J.J. Peiris, NAREPP Accountant

Central Environmental Authority

Mr. G.K. Amaratunga, Chairman

Mrs. Shirani Yasaratne, Director/Natural Resources Management Division, Liaison for EIA work in coastal zone and for environmental guidelines for tourism development.

Ceylon Tourist Board

Mr. H.M.S. Samaranayake, Chairman

Mr. S. Kalaiselvam, Director Planning and Development

Mr. C.C. Wijegunawardene, Ceylon Tourist Board, Bentota

Local Government Units at field sites

Rekawa

Mr. D.A.L. Nimal, Divisional Secretary, Tangalle; Chairs the SAM Coordinating Committee
Mr. P.P.G. Siripala, Assistant Director/Planning, Divisional Secretariat, Tangalle
Mr. P. Siyasinghe, Assistant Director/Planning, Divisional Secretariat, Tangalle
Mr. Hector Hemachandra, Project Director/IRDP Hambantota
Mr. K. Jayamuni, IRDP, Hambantota
Mr. N.W.G. Lakshamana, Provincial Director (Southern Province); Road Development Authority
Mr. L. Jayasinghe, Project Director, Enterprise Development Program, Hambantota
Mr. S.W. Pathirana, Divisional Fisheries Extension Officer, Tangalla
Mr. H.B. Amarasena, Forest Department, Hambantota
Mr. M.P. Gamage, District Environment Officer, Hambantota
Mr. Nissanga, Fisheries Extension Officer, IRDP, Hambantota
Mr. Pathirana, Cashew Field Officer/Cashew Corporation
Mr. A.K.S. Sisiranatha, Engineer, Irrigation Department, Weeraketiya
Mr. S. Wattuhewa, Assistant Director of Agriculture, Agrarian Inservice Training Institute, Angunukolepelessa
Grama Niladharis

Hikkaduwa

Mrs. Simila P. Vithana, Divisional Secretary; Chairs the SAM Coordinating Committee
Mr. L.K. Ariyaratne, Assistant Divisional Secretary
Ms. Mangalika Kaludeva, Director/Planning, Divisional Secretariat
Mr. T.D.S. Saman Perera, Assistant Director/Planning; Divisional Secretariat
Mr. Sarath Wijeratne, Chairman, Pradeshiya Sabha
Mr. A. Kodikara, Secretary/Pradeshiya Sabha
Mr. Alexander Korala, District Fisheries Extension Officer, Fisheries Department, Galle
Dr. D. Wijegunaratne, Medical Officer Health, Hikkaduwa
Mr. B.M.U.K. Fernando, Public Health Inspector
Mr. Siri Goonawardene, President, Association of Tourist Board Approved Hoteliers in Hikkaduwa
Mr. Harishandra de Silva, President, Hikkaduwa Small Hoteliers and Restaurateurs Association
Mr. Alexander Korala, District Fisheries Extension Officer, Fisheries Department, Galle
Mr. Sarath Bandara, Supervising Engineer, Ceylon Fisheries Harbor Corporation

Other collaborating organizations and individuals with CRMP and CCD:

Center for Environmental Studies, Perideniya University; Prof. C.M. Madduma Bandara and Dr. N. Wickremanayake

Care for the Wild (seaturtle conservation group from England); active in SAM planning and education activities in Rekawa

U.S. Peace Corps; two volunteers assigned to SAM projects, one each at Hikkaduwa and Rekawa sites

University of Colombo (Dr. Suki Ekaratne); assists with guidelines for tourism development and on research projects with NARA in Hikkaduwa

Important Presentations, Events and Meetings in 1995 of the CRMP Staff

January 05	Participatory Rural Survey at Wellodaya and Kahaduwa in the Rekawa SAM Area (TA)
January 06	Participatory Rural Survey at Kapuhenwela/Rekawa (TA) Meeting with Director General of Road Development Authority regarding redesigning of Kapuhenwala Causeway in Rekawa (AW and SG)
January 07	Awareness program for Police Officers of Rekawa/Tangalle Area (TA)
January 09	Training program for Catalysts (AW, SG, CCD Director)
January 10	NAREPP Coordinating Committee Meeting (AW, MW)
January 12	Workshop to discuss the Pollution Chapter of the revised CZM Plan (AW, MW)
January 14	Dr. Kem Lowry departs after 2 week consultancy to assist in CZM Plan Revision
January 22	Hikkaduwa Clean up Campaign organized by HSAMCC (AW, SN)
January 24	Rekawa Project Coordinating Committee Meeting (SG, TA)
January 24	Two Peace Corps volunteers join CRMP to assist in the two SAM Project sites
January 25	Meeting at CCD to discuss CZM Plan Revision (AW, MW)
January 26	Completed the draft SAM plan for Hikkaduwa (SN)
January 30	Coast Conservation Advisory Council Meeting (MW) EA1P Appraisal meeting
January 31	SAM Officers' meeting, Colombo
February 1	500 copies of the brochure on Hikkaduwa Marine Sanctuary printed CCD Field Officer (JP) at Rekawa SAM Site commenced work
February 1	Award of certificates for 10 participants (NARA-2; CRMP-1 and DWLC-7) who underwent Snorkel diver training conducted by Sub Aqua Club and sponsored by CRMP
February 2	Restarted HSAMCC meetings and presented draft SAM Plan (SN, KB)
February 2	Initiated GBB economic and operations survey (SN, KB)
February 5-8	AW attended a workshop on Ecotourism in Thailand
February 9	Commenced Hikkaduwa solid waste survey
February 15	NARA Core Group Meeting (AW, MW, SN)
February 17	AW spoke on "Special Area Management for Coastal Resources Management in Sri Lanka: A sustainable approach" at SLAAS Auditorium
February 21	CCD/CRMP Officials meet to discuss CZM Plan Revision
February 21	NAREPP Review Meeting (AW, MW, SN)
February 22	Rekawa SAM Coordinating Committee Meeting (SG)
February 23	Dr. D.S. Jayakody of NARA conducted a workshop on the marine life in the Rekawa Lagoon at Rekawa (SG, TA)
February 28	Navin Goonaratne of Design Consortium visits CRMP to discuss the Rekawa SAM Plan (AW, SG)

March 1	Developed reef user survey
March 2	HSAMCC meeting (SN, KB)
March 2	Review the SAM Chapter of the revised CZM Plan
March 6-22	AW conducts the Earth Watch Expedition in the Philippines
March 8	AW presents SAM Concept to ADB Environmen Division, Manila
March 20	Jesper Pederson, CRC researcher begins work in SL
March 23	Workshop for Youth Society Leaders of Rekawa SAM area (SG)
March 27	Rekawa Project Coordinating Committee meeting (SG, TA,JP)
March 30	Review of Erosion Chapter of the revised CZM Plan SAM Officers/Review Meeting, Colombo
Aprri 4	AW, SN prepared proposal to support SAM projects under NEAP
April 4	NAREPP Coordinating Committee meeting (AW)
April 7	AW delivered a lecture on Coastal Zone Management to postgraduate students of the University of Moratuwa
April 11	AW met Garry Alex and other USAID officials
April 17-20	AW attended Biodiversity Support Program Workshop in Washington D.C.
April 18	Earth Day Press conference at USIS for NAREPP and CRMP (SN)
April 20	Youth Federation meeting at Rekawa (TA)
April 21/22	Participatory Rural Survey at Rekawa West (TA)
April 24	Prepared gazette notice for new sanctuary boundaries (SN)
April 27	Women's Federation meeting at Rekawa (SG, TA)
April 28	Commencement of the research study on conservation of mangrove ecosystem in Rekawa
May 3	Meeting to discuss the CZM Plan Revision (CCD, AW)
May 08	Hon Minister of Fisheries and Aquatic Resources Development visits Hikkaduwa Marine Sanctuary Awareness program for Government Officers in the Galle district, conducted by CCD and sponsored by CRMP
May 11	Director/USAID visited the Hikkaduwa SAM site
May 15	Research proposal signed with Dr. S.U.K. Ekeratne, University of Colombo, to study the Effects of Human Activities on the Coral Reef at Hikkaduwa and Training for Sanctuary Personnel and Recommendations for Management
May 18	Youth Federation meeting in Rekawa (TA) NAREPP Review Meeting at Hotel Taj Samudra (AW)
May 19	Meeting to discuss the CZM Plan Revision (CCD, AW)
May 20	Workshop for Office Bearers of 5 NGOs in Rekawa
May 22-26	AW attended the NETTLAP meeting in the Philippines
May 25	Revised draft SAM plan for Hikkaduwa Workshop on Aquaculture conducted by Dr. D.S. Jayakody/NARA for the members of the Rekawa Coordinating Committee (SG) Rekawa Coordinating Committee Meeting (SG)
May 26	Awareness Program for School children of Rekawa area on corals, mangroves and coastal ecosystems (TA)
May 29	Training on the use of the marine engine and its maintenance for CRMP and DWLC staff (KB, SN)

May 31 SAM Officer's meeting at CRMP

June 01 Research Intern-Virginia Barker arrived to work on Economics of Sustainable Ecotourism Development in Hikkaduwa: Analysis of a Special Area Management Plan

June 01 Hikkaduwa Special Area Management Coordinating Committee Meeting (AW, SN)

June 06 Meeting to discuss the CZM Plan Revision

June 08 NAREPP Coordinating Committee Meeting (AW)

June 09 Meeting to discuss the CZM Plan Revision

June 12 Workshop to discuss the draft CZM Plan (Kem Lowry, AW)

June 14 Rekawa Coordinating Committee Meeting (SG)

June 14 Training Program for Poultry Farmers of Rekawa area (JP)

June 15-30 Dr. Kem Lowry in Sri Lanka to assist with revision of CZM Plan

June 15 Youth Federation meeting at Rekawa (TA)

June 16 Women's Federation Meeting at Rekawa (TA)

June 20 AW and SG met with officials of the Road Development Authority/Matara regarding redesigning of Kapuhenwala Causeway (SG)

June 19-21 Leadership Training Program at Rekawa (TA)

June 28 NARA Core Group Meeting (AW, SG)

June 29 AW presented an overview of Coastal Zone Management in Sri Lanka at the Annual Sessions of the Sri Lanka Fisheries and Aquatic Resources Association at SLAAS auditorium

June 29 Youth Federation Meeting at Rekawa (TA)

June 27-29 Training Program for Poultry Farmers at Kakanadura Government Farm (JP)

June 30 Two awareness programs for Environmental Field Officers and Fishery Leaders at Hikkaduwa

July 1 Awareness Programme for government Officers at Panadura organized by CCD and sponsored by CRMP

July 3 Meeting to discuss the CZM Plan Revision

July 7 Meeting with Manager/Coastal Resources Development; CCD (AW)

July 10 Meeting to discuss the CZM Plan Revision

July 11 Awareness Program for Women's Federation members of Rekawa (TA, JP)

July 12 Animation Program for Lagoon Fishermen's Association, Rekawa (TA, JP)

July 13 Awareness Program for Rekawa Youth Federation (TA)

July 16-21 SN Participated in CZM 95 Conference in Florida

July 18 Community Coordinating Committee Meeting at Rekawa (AW, JP, TA)

July 20 Awareness program for Rekawa Youth Federation

July 21 Awareness Programme for government Officers at Wattala organized by CCD and sponsored by CRMP

July 21 Meeting to discuss the reconstruction of the Kapuhenwala Causeway (SG)

July 24-26 SN met with CRC staff in Rhode Island

July 31	Minister of Fisheries and Aquatic Resources visited the Rekawa SAM Area (SG, TA, JP) Seminar at Tangalle organized by CCD to mark the 25th anniversary of the Ministry of Fisheries and Aquatic Resources Development with assistance from CRMP (AW, TA, JP)
August 02	Discussions on CZM Plan Revision
August 04	SAM Officer's Meeting in Colombo
August 10	Seminar at Negombo organized by CCD to mark the 25th anniversary of the Ministry of Fisheries and Aquatic Resources Development
August 10	Prepared English summary of Hikkaduwa SAM Plan for Sinhalese translation (SN)
August 11	Youth Federation meeting at Rekawa (TA)
August 14	Coast Conservation Advisory Council meeting (AW)
August 16	Meeting Urban Development Authority official regarding Hikkaduwa SAM Plan
August 18	Community Coordinating Committee Meeting at Rekawa
August 22	Virginia Barker presented Economics of Sustainable Ecotourism Development in Hikkaduwa: Analysis of a Special Area Management Plan at NAREPP
August 28	Inauguration of the five day training on Coastal Zone Management and Special Area Management at Hikkaduwa
September 1	Training Workshop on SAM at Hikkaduwa (SN)
September 01	Completion of the five day workshop on Coastal Zone Management and Special Area Management at Hikkaduwa (AW, SN, SG)
September 10	Meeting with Hikkaduwa Hoteliers Association to discuss waste disposal
September 11	Meeting with Lalanath de Silva to discuss Hikkaduwa Sanctuary legal status (AW and SN)
September 12	CCD, NARA and CRMP Officials met at NARA Office
September 13	Meeting to discuss CZM Plan Revision Coast Conservation Advisory Council Meeting (AW)
September 29	HSAMCC meeting (SN, KB)
September 30	Hoteliers Public Awareness Campaign in Hikkaduwa (SN, KB)
October 4	Meeting with Southern Area Development Task Force (SG, TA, JP)
October 10	Intern David Houser joins CRMP for 2 months Rekawa SAM Coordinating Committee Meeting (SG)
October 11	Discussion with NORAD regarding funding for the Rekawa Environmental Center (SG, SN)
October 13	SAM Officer's Meeting in Colombo
October 17	Meeting with Lalanath de Silva to discuss reforms to the Hikkaduwa Sanctuary declaration
October 17	NAREPP Coordinating Committee Meeting (AW)
October 19	Mr. Gary Bayer, Chief of Agriculture and Natural Resources Division of USAID visited CRMP office

October 19	Progress review meeting on the study on Effects of Human Activities on the Coral Reef at Hikkaduwa.
October 26	Proposals to utilize government counterpart funds submitted to M/TEWA (AW, SN, SG)
October 21-Nov. 3	AW attends the Coastal Resources Management Training Program organized by the University of Rhode Island in the Philippines. CRMP sponsored the attendance of Mr. R.P. Jayasinghe an engineer attached to the CCD at this workshop
October 30	Meeting in Hikkaduwa with GBBOA and local government officials regarding sanctuary regulations (SN, KB)
November 3	HSAMCC meeting; USAID officials visits Hikkaduwa (SN, KB)
November 8	Meeting to discuss the Hikkaduwa Harbour Proposal (AW, SN)
November 9	AW attends a workshop at the British Council on Aquarium Fish Collection and Export
November 13	SN attended national workshop on municipal waste and sanitation in Colombo
November 14	SN met with Dr.Panwar, GEF Adviser regarding Hikkaduwa Sanctuary
November 15	AW and SN met with officials of Metropolitan Environmental Improvement Project (MEIP) regarding Hikkaduwa waste management
November 16-28	CRMP Administrative Secretary attended a training program on administrative and financial procedures at the Coastal Resources Center, University of Rhode Island.
November 17	Meeting in Hikkaduwa with local government and cooperative society regarding sanctuary regulations and office
November 21	Discussion on integrated development in Rekawa SAM Project area with Presidential Task Force for Southern Area Development (SN, SG)
November 23	Rekawa SAM Coordinating Committee Meeting
November 27	MEIP meeting with Hoteliers Assoc., CCD, CEA, MPPA to discuss pollution enforcement in Hikkaduwa and waste management
November 30	Resource Users Workshop to discuss SAM Plan in Hikkaduwa
December 1	HSAMCC meeting (SN, KB)
December 8	AW, SN and SG met with TEWA Ministry officials
December 7	AW makes presentation on Coastal Zone Management and Special Area Management at the Department of Agricultural Economics, University of Peradeniya.
December 9	The Director/CCD meets the field staff of CRMP at NAREPP SAM Officer's meeting in Colombo
December 12	District Officials SAM Plan Workshop in Hikkaduwa (AW, SN)
December 14	Meeting to review the Hikkaduwa SAM Plan at CCD (AW, SN, KB)
	NAREPP Coordinating Committee Meeting (SG)
December 17/18	20 members of the NAREPP Coordinating Committee visits Hikkaduwa and Rekawa SAM sites. AW and SG accompanied them.
December 12	Workshop to review the Hikkaduwa SAM Plan at Hikkaduwa (AW, SN)

December 21 Workshop to review the Rekawa SAM Plan at Rekawa (AW, SG)
December 26 Meeting with DWLC, local government and GBB to discuss
sanctuary regulations and establishing GBB Cooperative Society (SN)
December 26 Meeting at CCD (AW)
December 29 Meeting at M/TEWA with Lalanath de Silva (SN)

AW - Alan White, Project Manager
JP - Justin Premathilake, CCD Field Officer/Rekawa
KB - Karunaratne Banda, Project Officer/Hikkaduwa
MW - Mervyn Wijeratne, In-Country Project Administrator
SG - Sena Ganewatte, Consultant (SAM Project, Rekawa)
SN - Steven Nakashima, Consultant (SAM Project, Hikkaduwa)
TA - Tissa Ariyaratne, Project Officer/Rekawa

Travel and Field Trips during 1995

January 6	A. Premaratne	Rekawa/training of catalysts
January 6,7	I. Ranasinghe	Rekawa
January 8-9	P. Ganewatte	Rekawa
January 09	A. White	Rekawa
January 10-11	A. Premaratne	Rekawa/training of police officers and Rekawa community
January 17	S. Nakashima	Hikkaduwa - planning for the clean up campaign
January 17	C. Jayawardene	Hikkaduwa
January 17/21	G. Tantrigama	Hikkaduwa
January 22/23	A. White	Hikkaduwa clean up campaign
January 22/23	S. Nakashima	Hikkaduwa clean up campaign
January 21/22	C. Jayawardene	Hikkaduwa clean up campaign
January 23-24	R.A.D.B. Samaranayake	Rekawa to attend SAMP steering committee meeting
January 30	P. Ganewatte	Rekawa
February 2	S. Nakashima	Hikkaduwa to attend HSAMCC meeting
February 6	A. Rajasuriya	Rekawa to attend educational (awareness) program
February 8	P. Ganewatte	Rekawa
February 8-9	S. Nakashima	Hikkaduwa to start GBB and Solid Waste Surveys
February 16,17	P. Ganewatte	Rekawa
February 18	A. White	Hikkaduwa
February 22	P. Ganewatte	Rekawa
February 23/24	S. Nakashima	Hikkaduwa to attend field officers meeting
February 27	P. Ganewatte	Rekawa
March 2/3	S. Nakashima	Hikkaduwa to attend SAM coordinating committee meeting
March 2-3	C. Jayawardene	Hikkaduwa to discuss issues pertaining to the Marine Sanctuary
March 2-3	A. Rajasuriya	Hikkaduwa to attend meeting and to meet with S. Nakashima & C. Jayawardene on future protection for the reef
March 2-4	G. Tantrigama	Hikkaduwa on for a solid waste study
March 10-11	S. Nakashima	Hikkaduwa to locate an appropriate field office
March 12	C. Jayawardene	Hikkaduwa to inspect the fishery harbor and sewerage problems
March 21/22	P. Ganewatte	Rekawa
March 21-22	S. Nakashima	Hikkaduwa to discuss the lease of the field office, meet some of the principle participants in the Rekawa site and advise about the potential sites selected for the proposed Rekawa Environmental Center
March 26/27	P. Ganewatte	Rekawa
March 26-27	R.A.D.B. Samaranayake	Rekawa
March 28	N. Nakashima	Hikkaduwa for discussions with local government officials and to negotiate terms for renting premises for the Hikkaduwa field office
April 3-5	G. Tantrigama	Hikkaduwa
April 5-6	P. Ganewatte	Rekawa
April 5-7	R.A.D.B. Samaranayake	Rekawa Kirinda and Bundala
April 7/8	S. Nakashima	Hikkaduwa to observe the tour guides' workshop conducted by our field staff
April 7-8	C. Jayawardene	Hikkaduwa to attend awareness program for tour guides
April 7-9	G. Tantrigama	Hikkaduwa
April 24/26	P. Ganewatte	Rekawa
April 25	S. Nakashima	Hikkaduwa to meet the SAM coordinating committee and to plan for the upcoming visit of the Minister of Fisheries

May 8	A. White and S. Nakashima	Hikkaduwa to meet the Hon. Minister of Fisheries and Aquatic Resources
May 11	A. White	Hikkaduwa to meet the USAID team
May 11	C. Jayawardene	Hikkaduwa to meet the USAID team
May 16-17	P. Ganewatte	Rekawa
May 18-20	A. White	Rekawa
May 23	G. Tantrigama	Hikkaduwa on the solid waste study
May 24-25	I. Ranasinghe	Rekawa to attend training program on SAMP at Angunakolapalessa
May 24/26	P. Ganewatte	Rekawa
June 06/07	P. Ganewatte	Rekawa with Peradeniya Engineering Faculty team
June 10/11	A. White and team	Hikkaduwa
June 18-19	I. Ranasinghe	Rekawa to attend coordinating committee meeting at Tangalla
June 18	A. White and team	Hikkaduwa to meet the Acting Director/USAID Colombo
June 19/20	A. White and team	Rekawa
June 21-22	P. Ganewatte	Rekawa to attend coordinating committee meeting
July 6-8	S.B.S. Abayakoon	Rekawa on modification of the Kapuhenwala causeway
July 6-8	H.N. Seneviratne	Rekawa on modification of the Kapuhenwala causeway
July 6 and 9	C. Jayawardene	Hikkaduwa to supervise construction of markers on the marine sanctuary
July 18	A. White	Hikkaduwa to attend the HSAMCC meeting
July 22	C. Jayawardene	Hikkaduwa to attend workshop as a resources person
July 22	A. Rajasuriya	Hikkaduwa
July 22	A. Rajasuriya	Hikkaduwa to attend educational program for fisherman, local NGO's and govt. officials
July 26/27	P. Ganewatte	Rekawa
July 30/31	A. White and team	Rekawa
August 13	S. Nakashima	Negombo to visit prototype sewage treatment plants
August 16/17	P. Ganewatte	Rekawa
August 29-01	S. Nakashima	Hikkaduwa for SAM Workshop
September 3	A. Rajasuriya	Hikkaduwa to deploy, swimmers resting platform and to demarcate the research zone
September 10	S. Nakashima	Hikkaduwa to meet members of the Hoteliers Association re waste Disposal methods
September	P. Ganewatte	Three field visits to Rekawa
September 15	C. Jayawardene	Hikkaduwa to locate suitable places to install floats in the sanctuary and demarcation of the research zones
September 19	C. Jayawardene	Hikkaduwa to locate suitable places to install floats in the sanctuary and demarcation of the research zones
September 28/30	C. Jayawardene	Hikkaduwa
September 28	A. Rajasuriya	Hikkaduwa to deploy, swimmers resting platform and to demarcate the research zone
September 29	S. Nakashima	Hikkaduwa to attend HSAMCC meeting
September 30	S. Nakashima	Hikkaduwa to attend hoteliers public awareness program
October 9,/10	P. Ganewatte	Rekawa - to attend Presidential Task Force Meeting on the Development of the Southern Province
October 18/19	P. Ganewatte	Rekawa
October 27	P. Ganewatte	Rekawa
October 28	P. Ganewatte	Rekawa
October 30	S. Nakashima	Hikkaduwa to discuss with local government officials the registration of Glass bottom boats

November 1/2	P. Ganewatte	Rekawa
November 1/2	S. Nakashima	Hikkaduwa and Rekawa with USAID team
November 3	S. Nakashima	Hikkaduwa to attend HSAMCC meeting
November 3/4	C. Jayewardene	Hikkaduwa
November 17	C. Jayewardene	Hikkaduwa to discuss Sanctuary regulations
November 17	S. Nakashima	Hikkaduwa to discuss Sanctuary regulations
November 22/23	P. Ganewatte	Rekawa
November 30	S. Nakashima	Hikkaduwa to discuss the SAM Plan
December 1	S. Nakashima	Hikkaduwa to attend HSAMCC meeting
December 12	A. White	Hikkaduwa to attend district officials SAM Plan workshop
December 12	S. Nakashima	Hikkaduwa to attend district officials SAM Plan workshop
December 17	A. White	Hikkaduwa
December 17/18	P. Ganewatte	Rekawa
December 20/21	A. White and P. Ganewatte	Rekawa to attend workshop to discuss the Rekawa SAM Plan
December 26	S. Nakashima	Hikkaduwa to discuss with local government officials the registration of Glass bottom boats

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- 06/1993 Annual Report for the period September 1, 1992 - August 15, 1993; Dr. J.I. Samarakoon.
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Major Equipment purchased with NAREPP funding

At CRMP Colombo Office

- 05 Air Conditioners
- 01 Pair of Binoculars
- 02 Book Racks
- 02 Book Rack with castors
- 02 Book Rack Three shelves
- 02 Book Shelves (Wooden)
- 01 Cash Box
- 04 Chairs-cushion seats and back rest
- 02 Chairs - slatted arm chairs
- 22 Chairs - banquet
- 05 Chairs - executive revolving delux
- 02 Chairs - typist's revolving
- 01 Clock
- 01 Computer - Compaq
- 01 Computer - IBM
- 01 Copy Holder
- 01 Copy Holder
- 01 Cupboard (Copier Stand)
- 01 Cupboard (office with 3 shelves)
- 01 Fax machine
- 02 Filing Cabinets (four drawer)
- 02 Filing Cabinets (two drawer)
- 02 Flip Chart Systems
- 01 Overhead Projector
- 01 Pajero Jeep
- 01 Paper Cutter
- 01 Paper Stand
- 01 Photocopier - Nashua 3018
- 01 Printer - Laserjet IV
- 01 Printer - Laserjet III
- 01 IBM Dot Matrix Printer
- 01 Refrigerator-Sisil R/60
- 01 Slide Projector-Kodak SAV 1030
- 03 Stabilizers
- 01 Table (small) with a side cupboard
- 01 Table (writing) 2"x4"
- 01 Table 4' diameter
- 02 Table - Computer Table
- 02 Table (office tables)
- 01 Table - special conference table
- 01 Table - typists
- 02 Tables - senior executive
- 01 Telephone - Nitsuko NX 206G key system with 6 extensions

At CRMP Field Office Hikkaduwa

- 01 Boat - 19ft Fibreglass fishing boat with motor
- 02 Chairs Cane
- 06 Chairs Walnut Dining
- 01 Cupboard with 01 drawer

- 01 Diving Mask
- 01 Fan (Pedestal) - Philips
- 06 Filing Cabinet - three drawer
- 02 Fins
- 01 Gas Cooker
- 01 Lumala Standard Cycle
- 01 Snorkel
- 01 Table - Formica Top
- 01 Tea Set

At CRMP Office Rekawa

- 01 Bed Double
- 01 Book Rack
- 01 Chair - Damro Executive Revolving
- 15 Chairs - penguin
- 17 Chairs - steel
- 01 Fan (Pedestal)
- 01 Gas Cooker
- 10 Push Bicycles
- 01 Table
- 01 Table 6x4
- 01 Table (Writing)

At CCD

- 01 Notebook Computer*
- 01 Ink Jet Printer*
- 01 Portable Movie Screen with Stand*
- 01 Desktop computer*
- 01 Stabilizer*

At NARA

- 01 Portable Movie Screen with Stand*
- 01 Okidata dot matrix printer*
- 01 Okidata laser jet printer*
- 01 Omnipro note book computer*
- 02 sets of diving equipment* consisting of
West suits (dive skins), Booties for fins, Fins, Masks, Snorkels, Pony cylinder bracket, Aquarius regulator for pony cylinder, regulators, regulator octopus units, pressure gauge consoles with dive computers, US Navy decompression tables, lens defogging liquid containers, O ring packet, buoyancy compensators, 80 cu ft bottles, 30 cu ft pony bottle
- The following water testing equipment*
 - 01 Digital Fluorometer with Chlorophyll application filter set and Petroleum application filter set;
 - 02 Portable Incubator
 - 03 Deionizing unit with cartridge kit (organic free)
 - 04 Stirrer with six paddles for Jar Test Equipment
 - 05 Roter Evaporator

Purchased by NAREPP/IRG

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Annual Expenditure 1991 - 1995				
Year		Budgeted Amount	Expenditure	Sub Totals
1991		533,000		
	4th quarter		79,284	
	Total for 1991			79,284
1992				
	1st quarter		66,629	
	2nd quarter		45,109	
	3rd quarter		58,924	
	4th quarter		77,344	
	Total for 1992			248,006
1993		463,288		
	1st quarter		79,474	
	2nd quarter		81,715	
	3rd quarter		73,372	
	4th quarter		106,005	
	Total for 1993			340,566
1994		461,446		
	1st quarter		125,638	
	2nd quarter		104,388	
	3rd quarter		65,219	
	4th quarter		103,763	
	Total for 1994			399,008
1995		446,400		
	1st quarter		104,213	
	2nd quarter		114,718	
	3rd quarter		86,147 *	
	4th quarter		80,000 *	
	Total for 1995			385,078
Grand Totals		<u>1,457,734</u>		<u>1,451,942</u>

* Estimated, accounting not yet complete

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