Outcome Mapping, Evaluating CAMP-Lab’s Influence on Behavior in Pearl Lagoon, Nicaragua: July 2002 –May 2003

Prepared by: Mark Hostetler

October 5 2003
Executive Summary

The following is an evaluation of the Coastal Areas Monitoring Project and Laboratory (CAMP-Lab) project’s influence on its key partners using Outcome Mapping (OM), a monitoring and evaluation method developed by the International Development Research Center’s (IDRC) evaluation unit (Earl, Carden and Smutylo 2001). CAMP-Lab is an IDRC funded project working towards participatory resource management for the Pearl Lagoon communities in the South Atlantic Autonomous Region (RAAS) of Nicaragua (see Map 1). The evaluation reveals the strong contribution made by CAMP-Lab to the project’s “dream” for development and sustainability in the Pearl Lagoon Basin developed in a workshop July 15th - 17th, 2002 which introduced the OM methodology to the project. OM reveals this contribution by reviewing CAMP-Lab’s key partners’ progress towards achieving outcomes challenges - assessed using predefined and measurable progress indicators - and then logically linking this progress to CAMP-Lab’s activities in narratives that integrate key strategies employed by the project.

Based on their progress indicators, CAMP-Lab’s key partners’ change in their overall performance score went from 46% to 56% between October 24th 2002 and May 21st 2003. This improvement in boundary partner’s performance is logically linked to CAMP-Lab through narratives that integrate the project’s strategies and practices. In addition to demonstrating the positive influence that CAMP-Lab had in Pearl Lagoon, the evaluation also offers a number of important lessons for using OM at the project level and demonstrates OM’s value as a tool for both project learning and accountability.
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Part 1: Introduction

CAMP-Lab’s OM process began with a workshop in July 2002 that: 1) identified the macro level changes that the project is trying to support (dream statement); 2) clarified the project’s role in supporting these changes (mission statement); 3) identified who the project will be working with (boundary partners) to pursue these changes; 4) identified what progress towards these changes will look like for boundary partners (outcome challenges); and 5) determined how to measure progress toward these challenges (progress indicators). The result of the workshop is a framework for monitoring both boundary partners’ progress towards these desired outcomes and the strategies and process employed by the project to contribute to this progress. The resulting monitoring includes graduated indicators of behavioural change in boundary partners (Appendix 3-6) and a descriptive review of the strategies (Appendix 7) and organizational practice (Appendix 8) used by the project.

The OM monitoring method was introduced to the CAMP-Lab project during a workshop held July 15-17, 2002 in the town of Pearl Lagoon, Nicaragua. Current and former CAMP-Lab staff, representatives from CAMP-Lab’s home institution, the University of Central America’s Centre for the Investigation and Documentation of the Caribbean Coast (CIDCA-UCA), community participants, local government officials, and representatives from other institutions working in the area all attended this workshop (see Appendix 1 for a full list of participants). Further planning for the use of OM took place in a CAMP-Lab staff follow up to the workshop on July 25, 2002 in the village of Haulover.
The end result of the workshop and follow up was the identification of four boundary partners, CAMP-Lab Committees, CAMP-Lab Radio Committee, Students and Schools, Pearl Lagoon Communities, and the development of graduated progress indicators for each. These partners were monitored on three occasions (Oct. 24th 2002, Feb. 14th 2003, and May 21st 2003) and demonstrate the following changes in progress indicator scores: the CAMP-Lab Committees went from 54% to 64%, the Radio Committee went from 46% to 75%, there was no change for Students and Schools at 28%, and the Communities went from 55% to 58%. The overall progress indicator score went from 46% to 56% during this time (see Table 1).

### Table 1: Overall Boundary Partners' Progress

<table>
<thead>
<tr>
<th>Monitoring Date</th>
<th>Overall Indicator Score as a %</th>
<th>Communities</th>
<th>Students and Schools</th>
<th>CAMP-Lab Radio Committee</th>
<th>CAMP-Lab Committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 24 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 14 2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>May 21 2003</td>
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</tbody>
</table>

Both the workshop and follow up were facilitated by Mark Hostetler, a Ph.D. candidate in Geography at York University and York’s CAMP-Lab Project.
Manager. Mark Hostetler and the Nicaraguan project staff conducted monitoring that resulted from the initial workshop. Further compilation of the data and narrative and analysis that follows in this document were completed by Mark Hostetler.

This report has seven parts including this introduction. Part two provides a brief introduction to Pearl Lagoon and the CAMP-Lab project. Part three outlines the OM approach to project monitoring and evaluation and explains the method used for quantifying and summarizing the monitoring data. Part four is a descriptive summary of both CAMP-Lab’s July OM workshop and the follow up to the workshop. Part five presents CAMP-Lab’s dream and mission statements developed and refined during the workshop and the follow up. Part six reviews the outcome challenges and progress indicators for the four project boundary partners, including graphical displays of indicator progress and a narrative analysis of each partner’s progress towards their outcome challenge. Part seven draws conclusions that summarize CAMP-Lab’s progress and reviews the lessons learned for OM based on CAMP-Lab’s experience with the methodology.
Part 2: Introduction to Pearl Lagoon and CAMP-Lab

Geographic and Historical Context

Pearl Lagoon is located about 55 km north of Bluefields in the South Atlantic Autonomous Region (RAAS) (see Map 1). The basin of Pearl Lagoon is 5,200 square kilometers containing a rich endowment of natural resources and a diverse set of cultures and religions. There are twelve communities surrounding the lagoon with a total population of approximately 6,500 inhabitants. There are four main ethnic groups in the area: the Miskitu, Creole, Garifuna and Mestizo. Economically the inhabitants are largely dependent on natural resource extraction including a mixture of fisheries, agriculture and forestry. The ecosystems of the region are diverse, and include lowland rainforest, swamp forest, pine savanna and mangrove, as well as rivers and the lagoon itself.

The Caribbean coast of Nicaragua, including Pearl Lagoon, has perpetually existed on the margins of Nicaraguan society. Throughout its history the multi-ethnic communities of the area have resisted - with varying degrees of success - domination by the predominantly Spanish speaking Mestizo government in Managua. The region has historically had strong ties to the United States and earlier the British, through their colonial and military presences, and a series of multinational industries. These industries have extracted various natural resources from the area on a large scale, resulting in a succession of boom and bust economies focused on single resources (Vernooy 2000; Vilas 1989; Dozier 1985).
Map 1: CAMP-Lab in Pearl Lagoon
The Sandinista revolution during the 1980’s represented a period of significant change throughout Nicaragua, and resulted in increased space for political participation and improvements in social programs and education. However, during the early years of the revolution the historic tensions between the Caribbean coast and western Nicaragua coupled with the lack of sensitivity of the Sandinista government to the unique history and traditions of the area, led to the region becoming one of the main arenas of the Contra war (Christie et al. 2000; Gordon 1998; Hale 1994).

The eventual realization by the Sandinista government of the futility of armed conflict in the area led to a process of negotiation between local communities and the central government that in 1987 resulted in Autonomy Law #28. On paper the Autonomy Law gave significant political autonomy, recognition of cultural diversity, and control over resources, to the Caribbean regions. The national constitution also recognizes the multi-ethnic nature of the coast and grants rights to the people of the area to preserve their culture and language and to benefit from the area’s natural resources. In practice, however, the devastation of Hurricane Joanne in 1988, the electoral defeat of the Sandinistas in 1990 by the National Opposition Union Party (UNO), and the subsequent election of the Liberal Alliance Party (PLC) in 1996 and 2001, combined to prevent significant implementation of the autonomy law or constitutional guarantees. The successive neo-liberal governments have worked to erode the rights promised within the Autonomy Law in the name of national progress and the championing of a neo-liberal agenda focused on securing export earnings and satisfying

The national and international trend towards economic liberalization and privatization has led to a situation in Pearl Lagoon wherein the ecosystems on which local people have traditionally been dependent are being eroded by increased extractive activities for international markets. Local mechanisms for controlling resource use in the area have either been eroded or have been unable to keep up with the pace of change in resource use patterns. While the regional government has some interest in protecting ecosystems of the coast, it suffers from a lack of resources and legal uncertainty about its exact mandate. In addition, national level institutions with responsibility in these areas have their agendas set by national and international policy priorities that stress the importance of securing the foreign exchange that can be earned through the exploitation of resources like those available in Pearl Lagoon (Bradford et al. 2000; Hostetler 1998). Nevertheless, Pearl Lagoon continues at this time to have a viable artisanal fishery that includes species like white shrimp (P. schmitti), sea bob (Xiphopenaeus kroyeri) and a variety of scale fish that directly or indirectly provide a large part of the livelihood for most people in the community.

The CAMP-Lab Project Context

The Coastal Area Monitoring Project and Laboratory (CAMP-Lab) is centered in the village of Haulover just south of Pearl Lagoon Town and works regularly with eight of the communities surrounding Pearl Lagoon through CAMP-Lab
Committees. In Tasbapauni CAMP-Lab works directly with the Communal Board. In the communities of Pearl Lagoon and Rocky Point, CAMP-Lab works regularly with interested individuals who are included in most activities. The communities of Set Net and Pueblo Nuevo are occasionally included in special activities for which extra funds are available to facilitate their participation (see Map 1).

Currently at the end of its third phase, the CAMP-Lab project was initiated in Pearl Lagoon in 1993 through the efforts of a M.Sc. student from the University of Michigan and a local marine biologist working with a marine laboratory located in Haulover. From its beginnings, CAMP-Lab has had as the core of its research methodology Participatory Action Research (PAR). In practice, the use of PAR for CAMP-Lab has meant a focus on efforts to collectively produce and interpret knowledge about the local environment with groups of interested people in the community. Ideally this knowledge then provides a basis for local people to have an increased say in the way in which the natural resources on which their communities depend are used and managed (Christie et al. 2000).

CAMP-Lab’s overall efforts have focused on working with the people of the Pearl Lagoon communities to establish and implement a management plan for the natural resources of the Pearl Lagoon Basin that has a basis in their interpretations and understanding of the resource problems as well as their needs. As part of this effort, CAMP-Lab works to increase the local communities’ capacities for conducting research relevant to the creation and implementation of a management plan that will help them better analyze their situation and to develop local people’s capacity to engage with business and various levels of
government in meaningful dialogue about the future of their communities and natural resource base. In the last two years, CAMP-Lab has utilized popular communication methods including a community run radio program and a Creole language newsletter that focus on local environmental issues (Hostetler 2002). In the last year CAMP-Lab has adopted the use of OM as a tool to address some of its project learning and accountability needs.

The current (third) phase of the project is funded by the IDRC and is institutionally a partnership between CIDCA-UCA in Nicaragua and York University in Canada. York University’s commitment to the project includes participation by graduate students and faculty helping with the facilitation of various activities, and providing skills and expertise that complement the abilities and efforts of Nicaraguan CAMP-Lab staff and local people (Found and Hostetler 2002; Found and Hostetler 2001; Bradford et al 2000).
Part 3: Outcome Mapping

The Outcome Mapping Methodology

The Outcome Mapping methodology used in this evaluation starts with the premise that progress towards development is achieved by the confluence of a number of factors, many of which are outside of a project’s control. As a result, it is most often impossible to assign causality for development successes and failures to a particular program\(^1\). Instead of attempting to demonstrate direct development impacts, OM focuses its attention on the role of a program in changing the behaviour of people, groups or organizations with whom it works directly (boundary partners) in a way that contributes to ecological and human well-being. Rather than trying to demonstrate causal relationships, OM attempts to show a logical link between program activities and the behavioural changes in its boundary partners that contribute to the project’s broader vision (Earl et al 2001).

Outcome Mapping Workshop Approach

The standard format of OM, developed by the IDRC evaluation unit, begins with a three day workshop involving 18-25 people who are comfortable in a workshop setting and share a common cause. In this format the workshop includes a variety of actors such as program staff and participants, representatives of parent organizations and funding agencies, and any other key actors who have an interest in the success of the program.

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\(^1\) Outcome mapping was originally designed for monitoring at the program level. In the case of CAMP-Lab it is being adapted for project monitoring.
The OM workshop as it is envisioned by the IDRC evaluation unit, has three stages. The first stage “Intentional Design”, establishes consensus among key actors about the macro level goals that the project or program is trying to support (vision\(^2\)), clarifies how the program will contribute to these changes (mission), determines who the project will be working with to pursue these changes (boundary partners), identifies what progress towards these changes will look like for each boundary partner (outcome challenges), and how this progress can be measured (progress markers\(^3\)), and outlines how these changes are being supported by the program (“strategy maps” and “organizational practices”).

The second stage OM workshop, “Outcome and Performance Monitoring”, sets the project’s monitoring priorities and develops a framework for monitoring both boundary partners’ progress towards the desired outcome and the strategies and practices employed by the project to contribute to this progress. This framework includes graduated indicators of behavioural change in boundary partners and a

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\(^2\) CAMP-Lab has adopted the term dream rather than vision.

\(^3\) CAMP Lab has adopted the term progress indicators rather than progress markers.
descriptive review of the strategies and organizational practice used by the program.

The final stage of the OM workshop, “Evaluation Planning”, prioritizes evaluation topics, develops strategies for using evaluation findings, and identifies responsibility for conducting the evaluation. Evaluation Planning is rooted in the context of the particular program taking into account both its monitoring needs and the resources it has available for monitoring activities.

**Method for Quantification and Summarization of OM Data**

One useful aspect of OM for accountability purposes is that it allows for quantification of outcome data which makes comparison over time possible. The method used for the quantification of the data in this report was developed by Mark Hostetler and it differs from the method offered by Earl et al (2001). Earl et al (2001) offered a weighted system for the quantification of progress indicators that assigns different values based on the graduated indicator levels assigned in the OM workshop. In addition, their system provides bonuses for perfect achievement of all the indicators at the first two graduated levels.

Earl et al’s (2001) quantification method poses problems for CAMP-Lab’s OM in two ways. First, the method assumes that there is the number of indicators prescribed by Earl et al (2001) at each of the graduated levels for each of the boundary partners. This was not the case for CAMP-Lab because the number of indicators selected in the workshop varied and did not fit neatly into the graduated levels. Second, the categorization of progress indicators into “expect
to see”, “like to see”, and “love to see” levels, was a fairly arbitrary and inaccurate process for CAMP-Lab, that based on subsequent experience with boundary partner’s indicator sores, is only a partial reflection of reality. As a result, weighting indicators based on these levels would not add much to the quality, or accuracy of efforts to quantify CAMP-Lab’s OM results.

The OM quantification method developed for CAMP-Lab does not reflect variations in the difficulty of achieving progress on each indicator. However, the method is consistent between different boundary partners, easy to use, less arbitrary than the weighted system, and it still provides excellent grounds for demonstrating boundary partner and overall project progress over time.

CAMP-Lab progress indicators are measured on a scale of “None” – “Fair” – “Good” – “Excellent” (see Figure 2 for a sample indicator). For the purpose of quantifying the data this scale is transformed into numbers from 0-3 (None=0, Fair=1, Good=2 and Excellent=3). This allows for the graphing and comparison of the individual indicators’ progress over time based on these numbers (see Table 3, 5, 7, 9).

To quantify the overall progress of a single boundary partner the scores of their individual progress indicators are added together and divided by the maximum possible score for that partner (3 x the number of indicators). This results in a percentage score that represents the boundary partners’ progress towards complete success in achieving the progress indicators at the time of the monitoring. These percentages can then be compared over different monitoring
periods to illustrate overall progress over time for a given boundary partner (see Table 2, 4, 6, 8).

Finally, to illustrate CAMP-Lab’s overall progress towards its boundary partners success, the percentage score of each boundary partner for a given monitoring period is divided by the number of boundary partners and they are added together to give an overall percentage score. The overall project boundary partner scores can then be compared between each monitoring period. When displaying this in graph form the contribution of each boundary partner to the overall score can be isolated in the graph to enable comparison of individual boundary partner’s contribution to overall progress (see Table 1).

<table>
<thead>
<tr>
<th>Indicator 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>The radio committee has regular meetings.</td>
</tr>
<tr>
<td>Source of Information:</td>
</tr>
<tr>
<td>Log Book</td>
</tr>
<tr>
<td>Comments for Monitoring 1-3:</td>
</tr>
<tr>
<td>1) Between August 19th and October 9th, 2002 there was no program because of a lack of power to run the radio transmitter, as a result, formal meetings were held seven out of twelve weeks and two informal meetings during the power outage to continue interest.</td>
</tr>
<tr>
<td>2) The committee met ten of thirteen weeks. There were three weeks that the radio did not broadcast due to a power outage.</td>
</tr>
<tr>
<td>3) The radio committee has met all but one week, often more than one time per week.</td>
</tr>
<tr>
<td>Scale:</td>
</tr>
<tr>
<td>(F) 2 per month</td>
</tr>
<tr>
<td>(G) 3 per month</td>
</tr>
<tr>
<td>(E) 4 per month</td>
</tr>
<tr>
<td>Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Excellent</td>
</tr>
</tbody>
</table>

Figure 2: Sample Progress Indicator

The link between boundary partners’ progress and CAMP-Lab activities is established through the use of a narrative that describes CAMP-Lab strategies and practices and their relationship to the progress indicators. These narratives
describe the influence of CAMP-Lab on the particular boundary partner and also explore other factors affecting the partner's performance. While the quantified progress indicators provide a vivid snapshot of the overall performance of CAMP-Lab, it is these project narratives that contribute the detail necessary to truly understand the project’s contribution to boundary partner progress and ultimately progress towards achieving the project’s “Vision”.

Part 4: The OM Workshop and Follow Up Summary

Workshop Summary

The workshop began with a review of the project’s history and activities. This reminded participants familiar with the project of the activities in which CAMP-Lab had engaged over its nine year history and for those less familiar with the project helped them to better understand CAMP-Lab’s purpose and history. Following the review of CAMP-Lab’s history, the group explored the questions of what evaluation is and how it should look within the context of the project. This was accomplished by asking the question “what are the first three words you think about when you hear the word evaluation?” (as suggested in Earl et al 2001). After this exercise, participants eliminated the characteristics that they did not wish to include in their evaluation and summarized the remaining characteristics. The resulting statement of intent for CAMP-Lab’s monitoring is as follows: “measuring achievements and failures over a time frame to learn from it, better define and correct our future and also to motivate us”.

Most of the workshop activities used small group discussions of four or five participants per group including a CAMP-Lab staff member in each group. The groups worked simultaneously on the same issue making use of flip charts or cards to record their group’s ideas. These small group exercises were followed by the presentation of each groups’ ideas to the whole and a collective effort at synthesis. Workshop participants thought that using small groups was the most effective way to promote the widest possible participation and that having the
different groups working simultaneously on the same issues contributed to the richness of the results.

Terminology for the various steps of OM was modified from that presented in Earl et al (2001) to make the ideas more accessible to participants in the context of Pearl Lagoon. This was done by phrasing the goal of each step as a question and supplementing this question with the facilitation questions (often slightly modified) offered in Earl et al (2001). The steps and facilitation materials for OM were presented to the participants using Power Point on a laptop computer attached to a thirty inch television (see Appendix 2 for Power Point slides). The computer and television display were also used in the workshop to display, review and revise the collective results of the workshop activities. This information was later edited for content in the follow up meeting of CAMP-Lab staff.

**Follow Up Summary**

The follow up began with review and revision of the project’s dream statements, mission statements, and the outcome challenges for each boundary partner. The team chose to monitor three of the six boundary partners (CAMP-Lab Committees, Radio Committee, Schools and Students) that they considered most important to the project and most practical in terms of the time and resources available for monitoring. In addition, the team decided that the remaining three boundary partners (Communal Boards, Communities, and Fishers and Farmers)
would be used in the future depending on the needs of the project and the time and resources available for monitoring by the team\textsuperscript{4}.

The group then reviewed the three selected boundary partners and their progress markers developed and established rating schemes and data collection methods for each. These rating schemes were later slightly modified to facilitate more effective compilation and summarization of the data. There was insufficient time available to develop concretely the monitoring methods for project strategies and performance so the team agreed that these aspects of the monitoring would be covered through discussions between the staff during future monitoring meetings.

The follow up to the original workshop resulted in the establishment of the values for graduated progress indicators for three boundary partners: CAMP-Lab Committees, the CAMP-Lab Radio Committee and Students and Schools. Most indicators were given a graduated scale of (F) Fair, (G) Good, or (E) Excellent to which a concrete measurement was assigned, while other required a more qualitative measurement that were rated on the same scale. In a few cases it was decided that indicators would be measured by presence or absence of the indicator.

One important result of this effort at identifying progress indicators was that staff decided to reinitiate some monitoring activities that had been previously

\textsuperscript{4} In the end these three categories were combined by Mark Hostetler under the title of Communities including key indicators from each. The evaluation scales were developed by Mark Hostetler and reviewed by CAMP-Lab staff prior to their use.
employed by CAMP-Lab but abandoned. These were reintroducing the use of
standardized information forms for CAMP-lab Committee meetings and keeping
copies of the work plans from individual CAMP-Lab Committees. Monica
Schuegraf, a York Masters of Environmental Studies (MES) student working with
the project, agreed to look at the standardized forms that had been used
previously for CAMP-Lab Committee meetings and revise them to include extra
information needed for our OM monitoring. In the case of the CAMP-Lab Radio
Committee, it was agreed that we would begin keeping the detailed show plans
that are prepared prior to each show in addition to tapes of any interviews, socio
drama’s, etc.. Finally it was decided to begin keeping a log book in CAMP-Lab to
record basic information about all CAMP-Lab activities including the who, what,
when, and where in order to ensure the documentation of activities that might
otherwise go unrecorded.
CAMP-Lab Dream Statement

“Various levels of government will play a more important role in environmental issues working in cooperation with the communities toward the implementation of their management plan. CAMP-Lab Committees are strong and self reliant. People are environmentally conscious and use natural resources in a sustainable way based on both traditional and scientific knowledge. The advance of the agricultural frontier will stop and community lands will be demarcated and titled. Fisheries production will be regulated and diversified and alternative sources of income will be available to community people. Conflict between communities will be resolved in a peaceable way. The well being of people in the communities will be improved economically, in education and in health. The Pearl Lagoon municipality will serve as a good example for other municipalities and will attract appropriate support from outside.”

CAMP-Lab Mission Statement

“CAMP-Lab will link its dream with the communities’ through continued and increased opportunities for community participation. It will engage in both formal and informal environmental education and participatory monitoring activities to increase local awareness of environmental issues. CAMP-Lab will provide training and technology to local communities that will assist them to address issues of concern to them; it will also assist the communities to search for

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5 Originally the vision statement, mission statement and outcome challenges were written by the project staff in Nicaraguan Creole English. These statements and challenges have been edited in this report to improve their clarity for an audience outside of Caribbean Nicaragua.
financing for projects that the communities see as important. CAMP-Lab will facilitate the coordination of activities between various institutions and communities and it will work with the communities to help them influence various levels of government and encourage co-management of natural resources.

Finally, CAMP-Lab will pass on information about Pearl Lagoon and CAMP-Lab beyond the communities.”
Part 6: Boundary Partners and Their Progress

A Note About Progress Indicators

Unless otherwise indicated the evaluation scale for the indicators is None (N) – Fair (F) – Good (G) – Excellent (E), based on levels developed in the July 2002 OM workshop and refined during the monitoring process. Only indicators measured on this scale were included in the quantification and graphing of results. Detailed descriptive information for all four boundary partners' indicators during each monitoring period can be found in Appendices 3-6.

Overall there were clear gains made by CAMP-Lab’s boundary partners in their progress indicators. However, it is important to remember that the indicator scores are meant to measure CAMP-Lab's partner’s progress towards outcome challenges that are difficult to achieve. It should be noted that CAMP-Lab is only one of a myriad of factors that contribute to our partners' performance. As a result, progress indicator scores viewed in isolation are neither an affirmation nor an indictment of either the individual partner or of CAMP-Lab.

Outcome Mapping indicator scores should be seen as a snapshot of progress towards difficult to achieve objectives, which viewed along with project strategy and performance monitoring, provide an indication of how the project can improve efforts to assist our partners. When OM monitoring is done at various points in time and is adequately contextualized in narratives it can provide potentially valuable information to contribute to reporting for the purpose of accountability.
Partner 1: CAMP-Lab Committees

Outcome Challenge

“CAMP Lab Committees have specific work plans for their environmental activities and are able to function with no support from CAMP-Lab. They have a good understanding of CAMP-Lab objectives and mission. They apply knowledge acquired in CAMP-lab workshops and transmit this knowledge to others in the communities. They are able to identify and solve environmental problems, and promote, monitor, and care for protected areas. They participate in monitoring activities. Committees also work in cooperation with the schools to make viveros (nurseries), and work along with students who are conducting investigations related to natural resources.”

Table 2: Total Progress Indicator Change for CAMP-Lab Committees

<table>
<thead>
<tr>
<th>Monitoring Date</th>
<th>Overall Indicator Score as a %</th>
</tr>
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<tbody>
<tr>
<td>October 24 2002</td>
<td>40%</td>
</tr>
<tr>
<td>February 14 2003</td>
<td>60%</td>
</tr>
<tr>
<td>May 21 2003</td>
<td>100%</td>
</tr>
</tbody>
</table>
Indicators (see Appendix 3 for details)

Expect to see
1) Committees hold regular meetings with the help of a communal investigator.
2) Committees identify environmental problems in their communities.
3) Committees are involved in environmental activities and projects.
4) Committees coordinate their activities with other institutions.
5) Committees work with local students doing environmental research.
6) Committees maintain their own finances and budget.

Like to see
7) Committees work with the communal board.
8) Committees hold regular meetings without communal investigators.
9) Meetings are held between committees and communities to share information.

Love to see
10) Committees act as the environmental appendage of communal board.
11) Meetings are held between different CAMP-Lab Committees without communal investigators.
12) Committees look for funding for environmental projects.

Table 3: Individual Progress Indicator Change for CAMP-Lab Committees

<table>
<thead>
<tr>
<th>Progress Indicators</th>
<th>24-Oct</th>
<th>14-Feb</th>
<th>21-May</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<td></td>
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<td>2</td>
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Narrative of CAMP-Lab Committee’s Progress Toward Its Challenge

While the degree of progress differs between communities, Camp-Lab Committees have made steady improvements towards achieving their outcome challenges (see Table 2 and 3). CAMP-Lab Committee meetings are held regularly in almost all communities when communal investigators are available to assist. The Haulover committee is one recent exception, due to committee leadership difficulties and misunderstandings related to the relationship between the Haulover CAMP-Lab Committee and the Radio Committee (also based in Haulover). Efforts are currently underway to improve this situation by clarifying the role and position of the two groups and encouraging co-ordination and overlap in people and activities. It should also be noted that while the Haulover Committee has not had formal meetings recently, it has participated as a group in activities such as water and forest monitoring as well as in some of the Foundation for Autonomy and the Development of the Atlantic Coast of Nicaragua’s (FADCANIC’s) activities. In addition, there have been a number of Committee members participating with Monica Schuegraf (a York Project Participant) in her sea grass monitoring activities.

The CAMP-Lab staff’s ability to visit all of the communities regularly has been hampered by transportation difficulties caused by the theft of the project’s outboard motor, and the loss of two staff members when funding from Norwegian Peoples Aid (NPA) ended. The remaining CAMP-Lab staff has made efforts to compensate for this by taking longer trips to the communities and making use of public transportation or trips by other institutions. This effort has served to
reinvigorate these CAMP-Lab committees and has assisted them in strengthening their focus on issues and activities related to the environment.

A number of the CAMP-Lab Committees have had regular meetings independent of CAMP-Lab staff support. These Committees show signs that they will maintain CAMP-Lab activities past the end of formal project funding - working on their own or in coordination with other institutions in the area.

CAMP-Lab Committees in five of the eight communities continue to maintain some type of independent funds for CAMP-Lab related activities and emergency uses. The initial fifty dollars US provided to each Committee by the project - along with a money management workshop - was meant to be maintained by the committees for costs such as meeting refreshments. In some cases this fund has increased substantially and is used to help cover costs related to things like health emergencies, and deaths in the community. In these committees the fund is “worked” by members who are given small amounts and return it with a set amount of interest. The main goal of this activity is maintaining or increasing the size of the fund. Currently one committee’s fund amounts to roughly seven hundred dollars US. These funds have also been used by one committee to make a donation to Hurricane Mitch relief in other parts of Nicaragua.

CAMP-Lab Committee’s activities in identifying and dealing with environmental problems and undertaking projects related to the environment have improved over this period with some committees taking on more complex and ambitious projects. All of the CAMP-Lab Committees have been involved in basic
environmental projects like town cleaning and a number have been involved in
efforts like creating nurseries and reserve forest areas or the creation of small
scale facilities for ecologically friendly tourism. Projects of this nature have
included new benches in Haulover’s Fine Pine Wood and the creation of a
shelter for tourists on the beach in Kakabila. Awas and Raitipura committees
have engaged in efforts to improve the road to Pearl Lagoon including the
planting of trees to prevent erosion and provide shade. Awas currently has
concerns about erosion along its shoreline and they have been looking for
alternatives and partners for effort to prevent further damage. Some CAMP-lab
Committees have been actively involved in seeking small amounts of funding for
these sorts of activities from FADCANIC and other institutions. In many of the
communities FADCANIC has relied on CAMP-lab Committees to assist it with its
work rather than having to create its own independent groups. CAMP-Lab staff
has supported and encouraged these efforts by CAMP-Lab Committees through
workshops on themes like leadership, group organization, planning and
budgeting while also assisting more directly with specific FADCANIC activities
when requested.

CAMP-Lab Committees have also participated in Monica Schuegraf’s research
related to the disappearance of lagoon grass. This partnership has both helped
Monica with her work and sparked the interest and concern of CAMP-Lab
committee members who view the lagoon grass as crucial habitat for young fish
and shrimp. As a result, local people have initiated some independent
investigation by people in support of Monica’s work and are showing increased
interest in her research as well as in research on other species.
CAMP-Lab Committees have worked well with Communal Boards on environmental issues. In smaller communities there is a large degree of overlap between the communal board and the CAMP-Lab Committee which has led to a natural cooperation. In larger communities, the CAMP-Lab Committee is often consulted by the Communal Board on environmental issues and asked to participate in any activities related to the environment. CAMP-Lab Committees have also coordinated well with other relevant institutions working in their communities, most significantly FADCANIC, Accione Medica and the local universities.
Partner 2: CAMP-Lab Radio Committee

Outcome Challenge

“The Radio Committee has an understanding of and skills in using popular communication methodology. They understand the objectives of the radio program and integrate the objectives and mission of CAMP-Lab into the program. They are well organized and self reliant with their own leadership and are able to continue radio programs in the absence of communal investigators. They use creative and varied ideas to help capture the attention of the people listening.”

Table 4: Total Progress Indicator Change for CAMP-Lab Radio Committee

<table>
<thead>
<tr>
<th>Monitoring Date</th>
<th>Overall Indicator Score as a %</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 24 2002</td>
<td>40%</td>
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<tr>
<td>February 14 2003</td>
<td>60%</td>
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<tr>
<td>May 21 2003</td>
<td>80%</td>
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</tbody>
</table>
**Indicators** (see Appendix 4 for details)

*Expect to see*

1) The Radio Committee has regular meetings.
2) The Radio Committee ensures that each radio program is relevant to management plan.
3) The Radio Committee uses popular communication methods in the production of the radio program.\(^\text{6}\)
4) The Radio Committee includes live interviews on the radio program.

*Like to see*

5) The Radio Committee produces a program consistently (weekly).
6) The Radio Committee ensures that each radio program is presented using a variety of techniques.
7) The Radio Committee shares their popular communications methods / skills with other people.
8) The Radio Committee ensures that voices from all of the communities are being heard in the radio program.

*Love to see*

9) The Radio Committee organizes its own shows without support from CAMP-Lab staff.

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**Table 5: Individual Progress Indicator Change for CAMP-Lab Radio Committee**

<table>
<thead>
<tr>
<th>Progress Indicators</th>
<th>24-Oct</th>
<th>14-Feb</th>
<th>21-May</th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>9</td>
<td>0</td>
<td>0</td>
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\(^6\) Indicator 3 is measured as either a yes or a no. It was a yes for each monitoring period.
Narrative of Radio Committee Progress Toward Its Challenge

The Radio Committee has made strong progress towards its outcome challenge (see Table 4 and 5). It now meets consistently for planning and produces radio shows every week that the radio station is broadcasting. The overall objectives and mission of CAMP-Lab have been consistently integrated into the radio show content through a weekly focus on one of the norms of CAMP-Lab’s management plan. Whenever possible, the norm is integrated with local current events related to the environment and natural resources to increase its immediate relevance in the minds of the listeners.

The committee has integrated an increasing variety of popular communications techniques in its shows including the occasional use of live interviews with local people. The broadening of techniques used by the Radio Committee has been encouraged through the use of an open checklist of techniques posted in the CAMP-Lab office. This list is periodically referred to while planning shows and new techniques are added to the list as they are developed or discovered.

There is a consistent and successful effort to encourage involvement by new people in the radio program, thereby creating an influx of participants who assist with the planning, production and execution of the program. Efforts to ensure that a broad range of the Pearl Lagoon communities is represented in each show have been somewhat hampered by the expense and difficulty related to travel between Pearl Lagoon communities. As a result, efforts to diversify the community voices heard on the program have been largely opportunistic. The project staff has taken advantage of occasional trips to the communities for
CAMP-Lab Committee meetings and the serendipitous appearance of people from other communities in Haulover on other business to acquire taped segments for the show.

Efforts to foster the Radio Committee’s independence from CAMP-Lab staff are ongoing, with the occasional show now being executed without the presence of a staff member. A further indication of the Radio Committee’s strength is evidenced by its members being asked to host other radio programs on the local station. Efforts to improve the Radio Committee’s abilities and confidence in show planning have most recently included having them produce and execute a show without staff support once a month.

The Radio Committee’s progress can at least partly be attributed to the strong support that it has received from CAMP-Lab staff and its York University partners. The energy, support and technical ability of a student from York University, Christine McKenzie, early in the development of the radio program, combined with the energy and ongoing support of one of the communal investigators, Eduardo Tinkam, has laid a strong foundation that has allowed the Radio Committee to flourish and begin moving towards independence from CAMP-Lab staff.

The periodic monitoring of the Radio Committee progress using the OM methodology has served to maintain the staff’s focus on the Radio Committee’s outcome challenge. This has allowed the staff to target its efforts more effectively in ways that have served to move the Radio Committee efficiently toward
achieving its outcome challenge. The continuation of the radio program after the end of current CAMP-Lab funding has been secured through an agreement with URACCAN (one of the local universities) to cover the expenses related to radio show production, and a commitment from the one of the communal investigators to continue supporting the Radio Committee on a voluntary basis.
Partner 3: Students and Schools\(^7\)

Outcome Challenge

“Environmental education is a separate subject within the school given by teachers with specialized training in the field. Students are involved in extracurricular activities related to the environment. Good libraries of materials about the environment in Pearl Lagoon are kept in each school, including research done by local students. Students will become interested in environmental issues and go on to study for related careers. Graduating university students will return and make use of their education in the communities.”

Table 6: Total Progress Indicator Change for Pearl Lagoon Schools and Students

<table>
<thead>
<tr>
<th>Monitoring Date</th>
<th>Overall Indicator Score as a %</th>
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<tbody>
<tr>
<td>October 24 2002</td>
<td>20%</td>
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<tr>
<td>February 14 2003</td>
<td>40%</td>
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<tr>
<td>May 21 2003</td>
<td>60%</td>
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</table>

\(^7\) In this case data for one of the progress indicators was not gathered during the first evaluation. As a result, this data has not been included in these totals to enable comparisons between monitoring periods. If the data from this indicator is included in the calculation overall progress for the second and third monitoring periods changes from 25% to 33% and 28% to 36% respectively.
**Indicators** (see Appendix 5 for details)

*Expect to see*
1) High school students are involved environmental field work.
2) Schools save research done by local students about Pearl Lagoon in their library and it is accessible to other students.

*Like to see*
3) Students continue their education after high school\(^8\).
4) Students return to do their thesis research in their community.
5) Teachers have adequate training to give environmental education.
6) Schools offer environmental education as a separate subject.
7) Schools maintain adequate libraries.

*Love to see*
8) Students return to work in communities after graduating university\(^9\).

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**Table 7: Individual Progress Indicator Change for Students and Schools**

<table>
<thead>
<tr>
<th>Progress Indicators</th>
<th>Progress Indicator Score</th>
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<td>1</td>
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<td>6</td>
<td>1</td>
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<td>7</td>
<td>0</td>
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\(^8\) No data was collected for this indicator during the first monitoring period and this data was not included in the overall totals.

\(^9\) Indicator 8 is measured as a raw number. There is currently one student who has returned to work in the Lagoon after graduating.
Narrative of Pearl Lagoon Students and Schools Progress Toward Their Challenge

The progress indicator scores for Pearl Lagoon Students and Schools suggest a lack of overall improvements for this partner during this monitoring period (see Table 6 and 7). There are a number of positive influences of CAMP-Lab’s efforts that can be identified through closer analysis. There are a promising number of students (seventeen) from the Pearl Lagoon and Orinoco high schools continuing their education in Bluefields or elsewhere. This number of students represents just under half of those graduating high school. Three university students from Pearl Lagoon have returned to the area to work on their theses which are related to local environmental issues and one person has taken up a position coordinating FADCANIC’s activities in Pearl Lagoon after completing his/her university education in Bluefields. Many of the students who are beginning their post secondary education were influenced in their decision to continue their education through involvement in CAMP-lab activities such as the CAMP-Lab Committees, the monitoring activities, CAMP-Lab staff’s environmental education efforts in the schools, or most recently working with Monica Schuegraf on her lagoon grass research. All of the students who have returned to work on their theses in Pearl Lagoon were previously involved with CAMP-Lab activities. These returning students have also begun to take on a leadership role in their local CAMP-Lab Committees by adding their education and energy to the groups.

The practice of CAMP-Lab staff offering formal environmental education classes in the Pearl Lagoon and Haulover schools ended during this monitoring period due to the inability of the staff to commit to the full school year because of
uncertainty about project funding. Project staff continues to give classes at the 
Pearl Lagoon and Haulover schools when they receive requests from teachers. 
There have been ongoing efforts by some teachers to include environmental 
education in their curriculum by using the CAMP-Lab newsletter AWAKE as 
course material. Formal training of teachers for environmental education is 
limited to a short course offered by Desarrollo Integral de la Pesca Artesanal II 
(DIPAL II) before the end of this project in 2000. This training is considered 
inadequate by the CAMP-Lab project staff who took the course.

Recently, school libraries have improved somewhat due to the efforts of other 
projects including Base Dos and Foro de Desarrollo por el Empleo y la Calidad 
(FODECA) that concentrate on improving education in the lagoon. These 
libraries are still insufficient and do not yet include research done about Pearl 
Lagoon either by outsiders or local students.
Partner 4: Communities

Outcome Challenge

“Communities respect the norms of the management plan and act as its eyes, ears and mouth. People in the communities are environmentally conscious and think about the environmental impacts of their activities. Communities’ activities are ecologically and economically sustainable. Fishers and farmers apply environmentally friendly technology and have access to fair markets. Communal boards are proactive in efforts to protect the environment, are well organized, and have transparent finances. The communal boards have strong leadership and promote coordination on environmental issues with other institutions, and between communities.”

Table 8: Total Progress Indicator Change for Pearl Lagoon
Communities

<table>
<thead>
<tr>
<th>Monitoring Date</th>
<th>Overall Indicator Score as a %</th>
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<td>February 14 2003</td>
<td>60%</td>
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<td>May 21 2003</td>
<td>80%</td>
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**Indicators** (see appendix 6 for details)

*Expect to see*
1) Community members rebel against actions that are not friendly to the environment or natural resources.
2) Communal boards have systematic and open meetings in the communities.
3) Communal boards coordinate their efforts with other institution working in the area.

*Like to see*
4) Communities establish and carrying out regulation and activities to protect and enhance their environment and natural resources.
5) Fishers avoid the use of environmentally harmful gear.
6) Farmers limit their use of chemical products.
7) The communities create, respect, and protect reserve forest areas.

*Love to see*
8) Intercommunity Committees work to solve conflicts between communities.
9) Communal boards have consistent and transparent reporting about board projects and finances.
10) Communal board budgets are made using methods that include active participation by the broader community.

### Table 9: Individual Progress Indicator Change for Communities

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<th>Progress Indicators</th>
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Narrative of the Communities’ Progress Toward Their Challenge

The progress indicator scores for the Communities indicate a small overall progress towards the Communities’ outcome challenge (see Table 8 and 9). As with the Pearl Lagoon Students and Schools boundary partner, closer analysis suggests a number of ways not captured through the indicator scores that CAMP-Lab’s activities have had a positive influence. A number of actions have been taken by community members against environmentally unfriendly activities. Most recently these actions have included the blocking of the removal of dolphins from the lagoon area for aquariums, protest against the Kukra Hill company’s changes to the road between Kukra and Pearl Lagoon, and efforts to prevent new settlements along the lagoon by Nicaraguans from outside the area. Also during this time an initiative by a local processing plant to begin shrimp farming was essentially halted due to the widely held belief by local people that more study and understanding of the environmental impact of this activity was necessary before it should be allowed to proceed. This weight of public opinion arose at least partially as the result of a shrimp farming information seminar organized and facilitated by CAMP-Lab and sponsored by the Alcaldía. Many of these instances of resistance have become broader based and more organized through the use of radio (including CAMP-Lab’s program) as a way of informing the population about problems and encouraging public debate and action.

Community people are increasingly aware of their impact on the environment. Most local fishers and farmers use environmentally friendly technologies and
methods. Local people’s use of pesticides in farming has been fairly limited. Local people are against the use of more destructive fine mesh gill nets and the majority of people are against trawling in the lagoon. Community members make an effort to prevent these activities among the small number who break these rules by reporting them to the police and Alcaldía or occasionally by taking direct action.

The communities of Haulover and Kakabila have both established reserve forest areas including 40 manzanas of latifolia in both communities and a large section of pine savanna in Haulover. With assistance and encouragement by CAMP-Lab Committees and staff, these reserve areas have been approved by the communal boards and the mayor’s office. In the case of Haulover, there has been some difficulty with people clearing small parts of the reserve areas for agriculture but the areas are respected by most people. Any difficulties with incursion into these areas have been addressed by people through the communal board and mayor’s office with support from CAMP-Lab. In the case of Kakabila, some individuals have begun trailing (demarcating) other sections of forest as additional reserve forest areas.

Five out of nine of the Pearl Lagoon communities have relatively regular and open communal board meetings. In three out of four of the communities that have financial resources the use of these resources is transparent. In two of these communities the planning for the use of community funds is open and participatory. All of the communal boards attempt to co-ordinate their efforts with other institutions working in the area. In the case of Tasbapauni where CAMP-
Lab works directly with the communal board rather than through a CAMP-Lab Committee, the board has requested and received special training from CAMP-Lab in planning and financial administration which they have begun to implement.
Part 7: Conclusions

Conclusions for CAMP-Lab Progress

The data collected about CAMP-Lab’s boundary partners between October 2002 and May 2003 using Outcome Mapping - combined with information about the strategies employed by the project to support these partners - demonstrates significant achievements that can be logically linked to CAMP-Lab’s efforts. The overall progress indicator score for CAMP-Lab’s partners during the monitoring period went from 46% to 56%. Individually CAMP-Lab Committees went from 54% to 64%, the Radio Committee went from 46% to 75%, there was no change for Students and Schools at 28% and the Communities went from 55% to 58%.

Of these four boundary partners the CAMP-Lab Radio Committee and the CAMP-Lab Committees are the most directly and exclusively influenced by CAMP-Lab. Improvements in their progress indicators during the monitoring period suggests these boundary partners’ have made significant improvements. Students and Schools and the Communities are less directly influenced by CAMP-Lab and have a greater range of factors besides CAMP-Lab influencing their performance. In addition, these boundary partners are much larger in terms of the number of people and bureaucracy to be influenced. Based on their progress indicators these boundary partners demonstrated less progress that could be strongly linked to CAMP-Lab. There are however, still a number of positive influences of CAMP-Lab that are identified by the narratives included in the OM evaluation.
The CAMP-Lab Radio Committee had the most marked improvement of the boundary partners with the consistency and quality of their efforts improving dramatically, while at the same time making progress towards independence from the staff. The popular communications methodology has been embraced by the Radio Committee and they have done an excellent job using a variety of techniques to hold listeners’ attention. The objectives and mission of CAMP-Lab have been consistently integrated in the show’s content in interesting and thought provoking ways and a variety of voices form the communities have been able to access the radio through the program. Finally the Committee is gradually becoming more independent from the staff, thereby, requiring decreasing levels of support to produce quality radio programs. Improvements to the CAMP-Lab Radio Committee’s performance can be linked quite closely to the efforts and strategies of the project including notably the use of OM which greatly assisted with the identification of avenues for strengthening the Committee.

The CAMP-Lab Committees also demonstrated great improvements overall. The progress of these committees differed between communities, and was often influenced more strongly by factors outside of CAMP-Lab’s control than was the Radio Committee. A number of the CAMP-Lab Committees have demonstrated a great deal of strength and initiative in their activities and behavior. They engage in the planning and execution of increasingly complicated environmental activities and projects; they maintain a significant fund to be used for their activities; and they identify and address environmental problems in increasingly sophisticated ways including searching for resources and lobbying government or NGO’s to assist them. In most cases these committees represent strong and organized
groups of people that NGO’s working in the area have identified as preferred partners in their efforts.

The Students and Schools of Pearl Lagoon had no measurable improvements in their performance based on their overall progress indicator scores; however, it is still possible to identify some positive influences of CAMP-Lab on this partner. In terms of the schools, CAMP-Lab’s direct contribution was through the provision of environmental education. Due to the impending end of the project, this contribution has been scaled back from the actual provision of regular environmental education courses by the staff to occasional classes and an effort to encourage regular teachers to give environmental education using the CAMP-Lab newsletter Awake as course material and inspiration.

Students in Pearl Lagoon have become increasingly interested in post secondary studies. This interest is can be partly linked to the relatively recent possibility of post secondary education through local universities in the region allowing students to study closer to home. At the same time CAMP-Lab has clearly played a role in nurturing students’ interest in further study - especially related to the environment – through environmental education, monitoring activities, and the work of CAMP-Lab committees. This is visible in the large number of continuing students who have been involved in CAMP-Lab activities in one way or another.

The return of local post secondary students to their communities to conduct their thesis research and later to work is dependent on resources and job opportunities that are mostly outside of CAMP-Lab’s control. The small amount of
funding available to CAMP-Lab to assist students with their research was used to assist two local students to complete their thesis work in Pearl Lagoon. Currently there is one person working for an NGO in Pearl Lagoon who was inspired to continue her education by CAMP-Lab. A more complete picture of the contribution that local students are able to make in their communities is largely a question to be answered in the future as more significant numbers of local students complete their degrees and enter the job market.

The Communities of Pearl Lagoon show a small improvement in their progress indicators. The communities are also the group that is influenced least directly by CAMP-Lab’s activities. Nevertheless, the degree of community organization and action around environmental concerns appears to be increasing and this can at least partially be linked to CAMP-Lab’s efforts. Community organization and demands related to the possibility of shrimp farming in the area can be closely linked to the CAMP-Lab organized workshop on the issue. In addition, a number of other environmental issues that have been brought to the fore by the communities have at least partially come as a result of CAMP-Lab’s radio program raising awareness and concerns in the communities. CAMP-Lab has also had an influence on the development of reserve forest areas in three locations and has assisted the communities in efforts to protect and maintain these areas. Finally, CAMP-Lab has had a degree of influence on the organizational capacities of communal boards in a number of communities, most notably Tasbapauni where workshops done at the communal boards’ request have contributed to the leadership, planning and budgeting capacities of these institutions.
Lessons Learned For OM

This application of the OM methodology represents a break from its original anticipated purpose of monitoring at the program level (Earl et al 2001). CAMP-Lab’s experiences with the methodology suggest that it is also quite useful when scaled down to the project level.

In the case of CAMP-Lab, OM has proven itself to be a useful tool to illustrate the influence that the project has had on its partners in the Pearl Lagoon Basin. The methodology has been conducive to the development of a variety of meaningful indicators for which data can be collected with relative ease and summarized in concise ways that tell an effective story about the project’s influence on its boundary partners over time. As a result, OM has provided an effective means of demonstrating CAMP-Lab’s contribution to the local development agenda as it is defined in the project’s vision and has provided a potentially useful tool for meeting its accountability needs.

CAMP-Lab’s OM experience has also demonstrated that the method can provide a consistent source of project self reflection and improvement. Much of the effectiveness of OM in this regard is rooted in the process of developing the monitoring framework. The process of developing CAMP-Lab’s OM framework had three important impacts on its effectiveness as a tool for project learning.

First, the process resulted in a monitoring framework that is, for the project staff, largely free of traditional monitoring fears related to externally imposed
monitoring and evaluation. Staff concerns and inhibitions that often accompany project monitoring efforts, such as fears of external judgment, criticism and ultimately job loss, were replaced by the positive feelings rooted in the idea that the monitoring process would help the project learn from its mistakes and increase the value of its work in the light of project goals in which the CAMP-Lab staff are personally invested. In addition, by playing a central role in the creation of the monitoring framework, CAMP-Lab staff had a sense of control over and responsibility for, the monitoring activities that was conducive to their successful implementation. These factors enabled the project staff to embrace the monitoring efforts more freely which resulted in periodic constructive self critiques that led to immediate corrective measures and improvements to project activities.

Second, the process of boundary partner identification, indicator selection and the development of indicator evaluation scales were accomplished through a participatory process involving a range of participants either from, or familiar with, Pearl Lagoon. The depth of local knowledge and understanding possessed by the participants in the OM workshop, led to a monitoring framework that integrates a good understanding of the Pearl Lagoon context and reflects local priorities. As a result, the monitoring framework has served to strengthen the project both by helping target its efforts more directly at local priorities and by ensuring that its goals were realistic within the local context.

Third, rooting the development of indicators within the project’s vision and mission statements led immediately to a great deal of reflection by CAMP-Lab staff on the project’s activities and direction. This proved to be a useful
mechanism to refocus the project’s efforts, giving those efforts a solid basis in local priorities related to development and the environment.

CAMP-Lab’s experience with OM has also lead to a number of useful lessons and observations for the methodology. First, during the process of using the monitoring it became apparent that different boundary partners required monitoring on different timetables. For example, many of the indicators related to Students and Schools monitoring were only useful once a year in a schedule linked to the school year, while monitoring of the indicators related to CAMP-lab Committees or the Radio Committee could be done productively a number of times a year.

Second, during the early efforts at using the monitoring framework, flaws in indicator scales were discovered and opportunities for, and barriers, to the collection of information were encountered. As a result, the development of indicator scales and the information sources used in the monitoring is better viewed as an evolutionary process that takes place during the first few monitoring sessions rather than in the initial OM workshop as suggested in Earl et al (2001).

Third, the method for quantification of results advocated in Earl et al (2001) was not useful in the context of CAMP-Lab. The attempts by this method to reflect graduated indicator scales would have been overly complicated and arbitrary in the case of CAMP-Lab because the number indicators and their dispersal between categories did not match that prescribed by Earl et al (2001), and because the graduated ranking of indicators was fairly arbitrary and inaccurate.
While this methodology may prove productive in some efforts to use OM, many could face similar difficulties to CAMP-Lab’s. The use of simple percentages in the quantification process adopted in CAMP-Lab’s evaluation may provide a useful alternative model for these cases that provides equally useful grounds for comparison over time.

Finally, due to the changing social, political, and economic circumstances in which a project operates, a regular review and updating of indicators, evaluation scales and boundary partners may prove useful. This review process would help maintain the relevance and effectiveness of the monitoring in terms of its project learning mandate. This practice is encouraged in Earl et al (2001) but it needs to be considered carefully based on the particular project's needs. A potential problem with substantial changes to the monitoring framework is that it may diminish the usefulness of OM as a tool for meeting the project’s accountability needs due to a potential lack of comparability in indicator scores over time. As a result, the usefulness and appropriate frequency for a review process will be dependent on: 1) the relative importance of OM for learning vs. accountability in the particular project, 2) the pace of local change affecting the relevance of the monitoring framework, and 3) the capacity of the particular project to undertake reviews and make changes. One avenue that would partially address this difficulty would be to use both the old and updated monitoring framework at the time revisions are made so that comparability maintained between chronological monitoring periods is maintained.
Appendices
## Appendix 1

### Workshop Attendance

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Home</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claribell Gof Araan</td>
<td>CAMP-Lab Committee</td>
<td>Orinoco</td>
<td>All Days</td>
</tr>
<tr>
<td>Eduardo Tinkam</td>
<td>CAMP-Lab Communal Investigator</td>
<td>Haulover</td>
<td>All Days</td>
</tr>
<tr>
<td>Ramon Guevara</td>
<td>CIDCA</td>
<td>Managua</td>
<td>All Days</td>
</tr>
<tr>
<td>Gerardo Peret Avellas</td>
<td>CBA (Corredor Biológico Atlántica) / Carl Bro</td>
<td>Bluefields</td>
<td>All Days</td>
</tr>
<tr>
<td>Oswaldo Morales</td>
<td>CAMP-Lab Communal Investigator</td>
<td>Pearl Lagoon</td>
<td>All Days</td>
</tr>
<tr>
<td>David Bradford</td>
<td>CBA / Carl Bro (ex CIDCA Director)</td>
<td>Bluefields</td>
<td>All Days</td>
</tr>
<tr>
<td>Monica Shuegraf</td>
<td>CAMP Lab/York</td>
<td>Toronto</td>
<td>All Days</td>
</tr>
<tr>
<td>Donna Hammond</td>
<td>CBA / Carl Bro</td>
<td>Pearl Lagoon</td>
<td>All Days</td>
</tr>
<tr>
<td>Bertha Simons</td>
<td>CAMP-Lab Project Leader</td>
<td>Bluefields</td>
<td>All Days</td>
</tr>
<tr>
<td>Marnie Tinkam</td>
<td>FADCANIC (CAMP-Lab Participant) (Fundación para la Autonomía y el Desarrollo de las Costa Atlántica de Nicaragua)</td>
<td>Haulover</td>
<td>All Days</td>
</tr>
<tr>
<td>Lydia McCoy</td>
<td>MECD (Ministry of Education)</td>
<td>Pearl Lagoon</td>
<td>All Days</td>
</tr>
<tr>
<td>Roberto Cutbert</td>
<td>Consejo Municipal</td>
<td>Haulover</td>
<td>Days 2, 3</td>
</tr>
<tr>
<td>Pedro Ordonez</td>
<td>CAMP-Lab participant</td>
<td>Peral Lagoon</td>
<td>Days 1, 3</td>
</tr>
<tr>
<td>Ray Garth</td>
<td>CBA / Carl Bro (ex CAMP-Lab Communal Investigator)</td>
<td>Kakabila</td>
<td>Days 2, 3</td>
</tr>
<tr>
<td>Mark Hostetler</td>
<td>CAMP-Lab/York</td>
<td>Toronto</td>
<td>All Days</td>
</tr>
</tbody>
</table>

### Timing

- **Monday July 15**: 10:30 - 5:10
- **Tuesday July 16**: 10:00 - 5:20
- **Wednesday July 17**: 9:00 - 5:10
### Staff Follow Up Attendance

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eduardo Tinkam</td>
<td>CAMP-Lab Communal Investigator</td>
<td>Haulover</td>
</tr>
<tr>
<td>Oswaldo Morales</td>
<td>CAMP-Lab Communal Investigator</td>
<td>Pearl Lagoon</td>
</tr>
<tr>
<td>Monica Schuegraf</td>
<td>CAMP Lab/York</td>
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<tr>
<td>Bertha Simmons</td>
<td>CAMP-Lab Project Leader</td>
<td>Bluefields</td>
</tr>
<tr>
<td>Mark Hostetler</td>
<td>CAMP-Lab/York</td>
<td>Toronto</td>
</tr>
</tbody>
</table>

### Timing

- **Thursday July 25**
  - 9:00 - 5:00
Appendix 2

OM Core Ideas

What is Different About Outcome Mapping

- OM views **development** as a **complex process** involving many actors and influences that are often outside a project’s control.
- OM does **not** attempt to claim **causality** for changes.
- OM focuses on monitoring a project’s **influence on the behavior** of the individuals or groups it works with.
- OM’s primary goal is **project learning**, with a secondary emphasis on accountability.

Three stages of OM

- **Designing Our Monitoring**
  (Why and what do we monitor?)

- **Planning Our Evaluation**
  (How will we use the monitoring?)

- **Planning our Monitoring**
  (How will we monitor?)
### Designing Our Monitoring

- What are CAMP-Lab’s dreams for Pearl Lagoon (Our Vision)?
- How will we contribute to achieving CAMP-Lab’s dreams for Pearl Lagoon (Our Mission)?
- Who are our partners?
- What do we hope our partners will accomplish?
- How will we know if our partners are making progress?
- What are our strategies to help out partners?
- What do we do as a group to make our work stronger?

### Dream Statement

**What are CAMP-Lab’s dreams for Pearl Lagoon?**

- What would total success for CAMP-Lab look like?
- What changes will have happened in Pearl Lagoon?
- What would people and organizations be doing differently?
Mission Statement

How will we contribute to achieving our dreams for Pearl Lagoon?

- How can CAMP-Lab best contribute to our dreams for Pearl Lagoon?
- What does CAMP-Lab need to be like in order to contribute to our dreams for Pearl Lagoon?

Boundary Partners and Their Progress

Who are our partners?

- What people or groups do we work with directly?
- Which groups or individuals are we trying to influence so as to contribute to the dream?
What do we hope our partners will accomplish?

- Ideally, in order to contribute to our dreams for Pearl Lagoon what will our partners be doing differently?

How will we know if our partners are making progress?

- How will we know if they are moving towards the goal?
- What will milestones be?
Project Strategies

What are our strategies to help our partners?

• What are the strategies we use now to help our partners contribute to the dream?
• What other strategies might help our partners contribute to the dream?

Project Organizational Practice

What do we do as a group to make our work stronger?

• What do we do as a project to remain effective?
• What other things could we do as a project to improve ourselves?
Appendix 3

CAMP-Lab Committees’ Data

Monitoring Dates:
1) Oct. 24th 2002
2) Feb. 14th 2003
3) May 21st 2003

Level: Expect to see

Indicator 1
Committees hold regular meetings with the help of a communal investigator.

Source of Information:
Meeting logs

Comments for Monitoring 1-3:

1) Lack of outboard motor has meant that there has been only one trip to the more distant communities in the past 3 months. As a result meetings with communal investigators have been limited.

Haulover 2x month
Awas 1x month
Raitipura 1x month
Kakabila 1x in 3 months
La Fe 1x in 3 months
Brown Bank 1x in 3 months
Orinoco 1x in 3 months
Marshal Point 1x in 3 months
Tasbapauni 1x in 3 months

2) Office work related to the news letter and planning and a lack of travel funds during certain periods has limited the staff’s ability to travel to all of the communities. Special efforts were made to reinvigorate the committees of Brown Bank and Kakabila through three day stays by a communal investigator.

Haulover 4x in 3 months
Awas 1x month
Raitipura 1x month
Kakabila 1x month
La Fe 2x in 3 months
Brown Bank 1x month
Orinoco 2x in 3 months
Marshal Point 2x in 3 months
Tasbapauni 2x in 3 months

3) The lack of outboard motor continues to limit the number of visits. However, staff made extended trips to the communities of Kakabila, La Fe, and Brown Bank and Tasbapauni making use of alternative transportation in an effort to strengthen these committees.

Haulover 2x month
Awas 1x month
Raitipura 1x in 3 month
Kakabila 2x month
La Fe 1x month
Brown Bank 1x month
Orinoco 1x month
Marshal Point 1x month
Tasbapauni 2x in 3 months

Scale:
(F) less then once a month
(G) once a month
(E) twice a month

Evaluation for Monitoring 1-3: 1)Fair 2)Fair 3)Good

Indicator 2
Committees identify environmental problems in their communities.

Source of Information:
Meeting logs, Workplans

Comments for Monitoring 1-3:
1) Awas and Kakabila have been discussing the need for closed season on Lagoon fish.
2) Questions about sea grass disappearance have come up in most committees through the work of an MES student from York. The need for town cleaning was also raised in a number of committees. Other issues raised included the need to protect mangroves and the problems of the agricultural frontier and damaging farming practices.
3) Issues that were raised by committees include cleaning of the lagoon edge, deforestation on the lagoon edge, and issues related to upcoming land demarcation.

Scale:
(F) Listing environmental problems.
(G) Discussion of implication the problems identified.
(E) Discussion of causes of problems identified and potential solutions

Evaluation for Monitoring 1-3: 1)Fair 2) Fair/Good 3)Fair

Indicator 3
Committees are involved in environmental activities and projects.

Source of Information:
Log book, Anecdotal information from staff and the committees

Comments for Monitoring 1-3:
1) All of the committee have been involved in town cleanup and some have been involved in other more difficult projects.

Haualover Cleaning, creation and maintenance of nurseries for fruit trees
Awas Fencing for animals to limit filth – Planting on the road to prevent erosion
Raitipura Planting on the road to prevent erosion
Kakabila Creation and maintenance of nurseries for fruit trees (4 people in group 2 working individually)
La Fe Cleaning, Protection of Santa Maria tree discussed but no action taken (anecdotally whole town took part)
Brown Bank Cleaning (according to written records this took place 3 times with 11, 14 and 7 people respectively)
Orinoco Cleaning and finding previously planted mahogany trees (anecdotally “plenty people were involved”)
Marshal Point Cleaning (anecdotally 30 People were involved), a snake infestation had limited other activities (11 reported bites 1 death)

2) Orinoco and Haulovers activities have decreased during this time. 
Haulover Nursery work continues but not as strong.
Awas Planting pine trees efforts to remove farm animals from the town
Raitipura Efforts to plant trees for preventing erosion
Kakabila Plants distributed from the nursery, efforts to start a nursery for medicinal plants.
La Fe Town cleaning
Brown Bank Town cleaning
Orinoco none
Marshal Point Planed for cleaning

3) All committees have been involved in town cleanup and some have been involved in other more difficult projects.
Haulover Fine Pine cleaning, Water Monitoring
Awas Town cleaning
Raitipura none
Kakabila Creation and maintenance medicinal plant nursery cleaning of beach area for possible tourism
La Fe Town cleaning
Brown Bank Town cleaning
Orinoco Town cleaning and creation of a nursery
Marshal Point Town cleaning

Scale:
Subjective based on # of activities, plus description of activity.
(F) 
(G) 
(E) 

Evaluation for Monitoring 1-3: 1) Good 2) Fair 3)Fair-Good

Indicator 4
Committees coordinate their activities with other institutions.

Source of Information:
Ask in Meetings, Work Plans

Comments for Monitoring 1-3:
1) CAMP-Lab committees coordinate with all other relevant institutions working in the area. The strongest relationships are with FADCANIC and Accione Medica
2) The relationship with between FADCANIC and CAMP-Lab committees has become stronger as FADCANIC is now relying on the CAMP-Lab Committees for their local agenda efforts.
3) The relationship with FADCANIC continues to be strong and both Accione Medica and URACCAN have agreed to take on the cost of some of the activities of CAMP-Lab.

Scale:
Based on the percentage of relevant institutions working in their communities that they are coordinating with.
(F) 25%
(G) 75%
(E) 100%
Evaluation for Monitoring 1-3: 1) Excellent 2) Excellent 3) Excellent

**Indicator 5**
Committees work with local university students doing environmental research.

**Source of Information:**
Logbook, Workplans, Copies of resulting research

**Comments for Monitoring 1-3:**
1) There has been some work done with students who are CAMP committee members.
2) There has been none of this activity in the past three months because local students fieldwork on their thesis has not been occurring. Opportunities should arise to work along with URACCAN students who have received funding for there research from CAMP-Lab.
3) There has been some work done in Haulover with two students who are writing there thesis on the sustainable use of Fine Pine.

**Scale:**
Based on the percentage of students whose research was assisted by CAMP-Lab committees.
(F) 25%
(G) 50%
(E) 75%

**Evaluation for Monitoring 1-3: 1) Excelent 2) None 3) Excelent**

**Indicator 6**
Committees maintain their own finances and budget.

**Source of Information:**
Inquiry with individual committees.

**Comments for Monitoring 1-3:**
1) Five out of eight (62.5%) committees carry their own funds. Haulover Committee is planning to reestablish its fund through sales from its nursery.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Has Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haulover</td>
<td>no</td>
</tr>
<tr>
<td>Awas</td>
<td>no</td>
</tr>
<tr>
<td>Raitipura</td>
<td>no</td>
</tr>
<tr>
<td>Kakabila</td>
<td>yes</td>
</tr>
<tr>
<td>La Fe</td>
<td>yes</td>
</tr>
<tr>
<td>Brown Bank</td>
<td>yes</td>
</tr>
<tr>
<td>Orinoco</td>
<td>yes</td>
</tr>
<tr>
<td>Marshal Point</td>
<td>yes</td>
</tr>
</tbody>
</table>

2) Haulover has established a small fund from the sale of plants from the nursery. Six of eight committees have funds now (75%).

<table>
<thead>
<tr>
<th>Committee</th>
<th>Has Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haulover</td>
<td>y</td>
</tr>
<tr>
<td>Awas</td>
<td>n</td>
</tr>
<tr>
<td>Raitipura</td>
<td>n</td>
</tr>
<tr>
<td>Kakabila</td>
<td>y</td>
</tr>
<tr>
<td>La Fe</td>
<td>y</td>
</tr>
<tr>
<td>Brown Bank</td>
<td>y</td>
</tr>
<tr>
<td>Orinoco</td>
<td>y</td>
</tr>
<tr>
<td>Marshal Point</td>
<td>y</td>
</tr>
</tbody>
</table>
3) Five out of eight (62.5%) committees carry their own funds. Haulover committee has had difficulties related to leadership and does not have a fund.

Haulover  no
Awas  no
Raitipura  no
Kakabila  yes
La Fe  yes
Brown Bank  yes
Orinoco  yes
Marshal Point  yes

Scale:
(F) 50%
(G) 75%
(E) 100%

Evaluation for Monitoring 1-3: 1) Fair – Good 2) Good 3) Fair - Good

Level: Like to see

Indicator 7
Committees work with the communal board.

Source of Information:
Inquiry at CAMP-Lab Committee meetings.

Comments for Monitoring 1-3:
1) All CAMP-Lab committee’s currently cooperate with the community boards.
2) CAMP-Lab committee’s currently cooperate with the community boards in every community but Haulover where there currently is no functioning board.
3) There is currently no functioning board in Haulover but the process of selecting a new board is underway. Many of the communities have significant overlap between the communal board and the Camp Lab committee.

Scale:
(F) 50% of Committees
(G) 75%
(E) 100%

Evaluation for Monitoring 1-3: 1) Excellent 2) Excellent 3) Excellent

Indicator 8
Committees hold regular meetings without communal investigators.

Source of Information:
Work Plans, Log book, inquiry in CAMP-Lab committee meetings

Comments for Monitoring 1-3:
1) Orinoco and Haulover have meetings without the communal investigators. In the case of Haulover communal investigators are invited by the committee to attend the meetings.

Haulover  2 per month
Marshal Point  1-2 per month
Orinoco  2 per month
La Fe  2 per month
Brown Bank  1 per month but declining
Kakabila: no meetings lately
Raitipura: no
Awas: no

2) Kakabila and Orinoco meet regularly without the communal investigator. Kakabila’s meetings combine CAMP-Lab activities with other institutions and activities ongoing in the community. Orinoco has increased its meetings to one per week on Friday. This is at least partly due to the efforts of a member who finished her studies at URACCAN in Bluefields.

Haulover: No official meetings (problems with Committee leadership) but strong participation in activities like water monitoring occurs.

Marshal Point: No (Plans to use neighboring Orinoco committee to stimulate more activity)

Orinoco: Have begun weekly meetings in the last month
La Fe: 1 in November none this year
Brown Bank: 2 per month
Kakabila: 2x per week for CAMP-Lab related work
Raitipura: No meeting
Awas: 1

3) Orinoco and Kakabila both have regular meetings without the communal investigators. In the case of Haulover there has been tension between the CAMP-Lab committee and staff related to jealousy of time spent with the radio committee that is also based in Haulover.

Haulover: 1
Marshal Point: 2 in three months
Orinoco: every week
La Fe: 1 per month
Brown Bank: 1
Kakabila: 2 per month (all organizations in the community)
Raitipura: 0
Awas: 1

Scale:
(F) Happens
(G) Once a Month
(E) Twice a Month

Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good

Indicator 9
Meetings are held between committees and communities to share information.

Source of Information:
Workplans

Comments for Monitoring 1-3:
1) This happened once in Haulover and once in Awas related to efforts to improve the road.
2) This happens occasionally in Kakabila, Haulover and Awas. In the smaller communities separate meetings to share information are somewhat redundant because of the large percentage of the population involved with CAMP-Lab committees.
3) This happened in Kakbila and Awas.

Scale:
**Level: Love to see**

**Indicator 10**
Committees act as the environmental appendage of communal board.

**Source of Information:**
Work Plan

**Comments for Monitoring 1-3:**
CAMP-Lab Committees are often consulted by the communal board when environmental issues arise. In addition in smaller communities there is often overlap between communal boards and committees. None of the committees have an official place as the communal board’s environmental appendage.

**Scale:** Subjective

(F) Some Role
(G) Strong Role
(E) Official Role

**Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good**

**Indicator 11**
Meetings are held between different CAMP-Lab committees without communal investigators.

**Source of Information:**
Workplans

**Comments for Monitoring 1-3:**
1) None
2) Efforts underway to have Orinoco committee strengthen the Marshal Point committee in this way.
3) Orinoco is interested in Meeting with both Marshal Point and Haulover (they want to take part in a Radio program).

**Scale:**
(F) Happens
(G) Once a year
(E) Twice a year for each committee

**Evaluation for Monitoring 1-3: 1None 2) None 3) None**

**Indicator 12**
Committees look for funding for environmental projects.

**Source of Information:**
Workplans, General Knowledge

**Comments for Monitoring 1-3:**
1) None
2) CAMP-Lab committees in Awas and Raitipura have been look for money for trees to plant on the road and to build a breakwater to slow erosion. Kakabila committee has
asked for and received material help for a project to fence of their nursery and create a barrier for animals to reach the beach that they hope to promote for Easter tourism. This has been occurring more at least partly due to small amounts of money available from FADCANIC for projects.

3) Awas is looking for assistance in building a breakwater to help prevent erosion. Kakabila is looking for help with a number of small projects.

Scale:
(E) If it Happens

Evaluation for Monitoring 1-3: 1) None 2) Excellent 3) Excellent

Further Information

1) Monitoring Oct. 24th 2002
Changes
Haulover meetings are being called by the committee itself, who invite the communal investigators to attend.

Eduardo has encouraged this behavior using the outcome challenges as a motivator for this group.

Communal investigators have been unable to visit many of the communities as frequently as before. This has led to some decline in activity of committees in these communities.

The lack of a functioning outboard engine (it was stolen) for transportation combined with the reduction in staff size by 40 %.

Lessons and Future Plans
There are continuing efforts to reactivate an old motor.

2) Monitoring Feb. 14th 2003
Changes
Change over in some CAMP-Lab committees.

Beginning of the School year causes turn over in CAMP-Lab committees as student participants move to Bluefields to go to University.

Student return from University to Orinoco will help strengthen the Orinoco committee.

Efforts to strengthen Haulover CAMP-Committee through returning University students have not been as successful do to conflicts over leadership in this committee.

In some committees CAMP-labs work has been limited by strong pushes by other institutions to get their work done. This has included long workshops for a ford foundation project run through the two universities and the work of the Biological corridor. This slows some of the CAMP-Lab specific efforts as many of the participants are active in all of these activities.
Lessons and Future Plans
Further efforts will be made to strengthen weaker CAMP-lab committees through longer visits by staff members to help with planning and organization and through efforts to cross over activities between neighboring communities like Orinoco and Marshal Point.

3) Monitoring May 21st 2003
Changes
Relations with the communal boards have been strengthened

Kakabila’s group has been getting stronger due to Eduardos extra efforts in this community.

There has been increased cooperation between FADCANIC and CAMP-Lab committees. FADCANIC has begun working directly with CAMP-Lab committees to organize and help carry out there activities. This has included the funding off small projects.

Tasbapauni communal Board has a strong connection with CAMP-Lab as a result of training that they received from CAMP-Lab at there request.

There has been a difficulty with the Haulover CAMP-Lab Committee that is at least partially related to tension and jealousy over the amount of attention that is received by the Radio Committee that is also centered in Haulover.

Lessons and Future Plans
The committees with stronger links with the community boards have become more effective.

Extra staff time spent organizing committees that are faltering has proven very effective.
Appendix 4

CAMP-Lab Radio Committee’s Data

Monitoring Dates:
1) Oct. 24th 2002
2) Feb. 14th 2003
3) May 21st 2003

Level: Expect to see

Indicator 1
The radio committee has regular meetings.

Source of Information:
Log Book

Comments for Monitoring 1-3:
1) Between August 19th and October 9th, 2002 there was no program because of a lack of power to run the radio transmitter, as a result, formal meetings were held seven out of twelve weeks and two informal meetings during the power outage to continue interest.
2) The committee met ten of thirteen weeks. There were three weeks that the radio did not broadcast due to a power outage.
3) The radio committee has met all but one week, often more than one time per week.

Scale:
(F) 2 per month
(G) 3 per month
(E) 4 per month

Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Excellent

Indicator 2
The radio committee insures that each radio program is relevant to management plan.

Source of Information:
Eduardo’s Note book

Comments for Monitoring 1-3:
1) The team decided to ensure relevance to the management plan by choosing a management plan norm each week as at least a partial theme for the program.
2) Every week a management plan norm is selected to be included in the program.
3) The radio program has covered all the management plan norms in previous shows and is beginning to review them. In addition, the program has begun to link current events related to the environment and natural resources with elements of the management plan.

Scale:
(F) 50%
(G) 65%
(E) 85%

Evaluation for Monitoring 1-3: 1) Excellent 2) Excellent 3) Excellent

Indicator 3
The radio committee uses popular communication methods in the production of the radio program.

Source of Information:
Written show plan

Comments for Monitoring 1-3:
A variety of popular communications methods have been used in each show

Scale:
Yes or No

Evaluation for Monitoring 1-3: 1) Yes 2) Yes 3) Yes

Indicator 4
The radio committee includes live interviews on the radio program.

Source of Information:
Written show plan

Comments for Monitoring 1-3:
1) No live interviews have occurred.
2) Two Live interviews were included during this period
3) There have been five live interviews including Monica Schuegraf (a graduate student from Canada), Ensworth Fox (the person in charge of natural resources for the municipal government), Robert Cutbert (regional councilor), and two URACCAN students working on a thesis related to the sustainable use of Fine Pine.

Scale:
(F) 1 per month
(G) 2 per month
(E) 1 per show

Evaluation for Monitoring 1-3: 1) None 2) Fair 3) Fair-Good

Level: Like to see

Indicator 5
The radio committee produces a program consistently (weekly).

Source of Information:
Log Book

Comments for Monitoring 1-3:
1) Radio programs have happened every week in which the radio station was broadcasting.
2) The radio program happened nine of thirteen weeks because the station was not broadcasting for three weeks due to a blackout. In addition, there was no show on Christmas day.
3) One show was missed during Easter week and one was reprogrammed on a different day during the Atlantic Baseball Series held in Pearl Lagoon.

Scale:
(F) 2 per month
(G) 3 per month
(E) weekly

Evaluation for Monitoring 1-3: 1) Fair 2) Good 3) Good-Excellent

Indicator 6
The radio committee insures that each radio program is presented using a variety of techniques.

**Source of Information:**
Written show plan

**Comments for Monitoring 1-3:**
1) Techniques used in the radio program include songs, socio dramas, poems, taped interviews, round tables, and stories. Due to this monitoring the team has posted a list of various Popular Communications techniques in the office to refer to while planning the show. New techniques can be added to the list as ideas arise.
2) Eleven different techniques were used during this period.
3) Testimonies and live interviews were added to the repertoire.

**Scale:**
(F) 5 per month
(G) 7 per month
(E) 10 per month

**Evaluation for Monitoring 1-3: 1) Fair 2) Good / Excellent 3) Excellent**

**Indicator 7**
The radio committee shares their popular communications methods / skills with other people.

**Source of Information:**
Log book, written show plan

**Comment for Monitoring 1-3:**
1) Three new on the air people and one planning person have taken part in the show during this period.
2) There were two new participants in this period.
3) There were two new people involved in creating socio drama and a number involved in taped round table discussions.

**Scale:**
(F) 1 every 3 months
(G) 1 every 2 months
(E) 1 every month

**Evaluation for Monitoring 1-3: 1)Excellent 2) Good/Excellent 3)Excellent**

**Indicator 8**
The radio committee insures that voices from all of the communities are being heard in the radio program.

**Source of Information:**
Written show plan

**Comment for Monitoring 1-3:**
1) The ability to include participation from all communities has been partly hindered by the current lack of an outboard motor for CAMP Lab to travel to other communities. Contributions have been used from seven communities during this period but most participation has come from Haulover and Pearl Lagoon.
2) Communities included were Marshal Point, Kakabila Awas, Rocky Point, Haulover, Pearl Lagoon.
3) Haulover, Pearl Lagoon, Awas and Rocky Point participated during this time period. The communal investigator did not have an opportunity to get input from elsewhere because of three weeks of travel to Canada and preparation for that travel.

Scale:
(F) 4 per month  
(G) 6 per month  
(E) 8 per month

Evaluation for Monitoring 1-3: 1) Fair 2) Fair/Good 3) Fair

Love to see
Indicator 9
The radio committee organizes its own shows without support from CAMP-Lab staff.

Source of Information:
Eduardo’s notes, Written show plan

Comments for Monitoring 1-3:
1) This has not occurred.
2) Three radio shows were done without the presence of the communal investigator.
3) The Radio show was done by the committee alone on some occasions but they have not planned a show alone yet. Eduardo will be encouraging the committee to do this at least once a month from now on.

Scale:
(F) 1 per month  
(G) 2 per month  
(E) 4 per month

Evaluation for Monitoring 1-3: 1) None 2) Fair 3) Fair

Further Information

1) Monitoring Oct. 24th 2002
Changes
A lack of power in Pearl Lagoon for a five-week period meant that there was no radio show.

Bluefields’ radio stations’ signals have become weaker resulting in more people tuning in to the local station and increasing the number of listeners for our program.

A new participant in the program began copying the style of a Bluefields’ station resulting in some complaints from the audience and other radio show participants.

Lessons and Future Plans
Imitation of the Bluefield’s radio show has been stopped.

A decision was made to make a conscious effort to diversify the techniques used on the radio program by creating a checklist (posted in the office) of techniques, that can be consulted each week by the committee, and added to as new ideas are developed.

2) Monitoring Feb. 14th 2003
Changes
A Spanish language program has been started on Fridays in an effort to reach Mestizo communities.

More programs have come about as a result of people’s questions and current events in Pearl Lagoon. Programs have dealt with issues such as, outsider’s attempts to catch dolphins for an aquarium, outsider Mestizo communities that had been set up on the edge of the lagoon and the removal of farm animals from inside the community to reduce contamination. All of these issues have been rectified in the Pearl Lagoon basin.

Lessons and Future Plans
Eduardo will be traveling to Toronto to participate in a popular arts workshop. Efforts to find a funding source to continue the program past the project end date are ongoing.

3) Monitoring May 21st 2003
Changes
Radio committee is increasingly able to do the show without the support of the communal investigator. This can at least partly be attributed to efforts to ensure the show’s continuation in the absence of the communal investigator for three weeks during this period.

Also, the communal investigator has been out in the other communities on some broadcast days forcing the Radio Committee to do the program without support.

Lessons and Future Plans
There will be ongoing efforts to encourage independence in the radio committee by leaving them on their own once a month to produce a show.

Efforts to ensure the continuation of the radio program have been successful. The communal investigator’s trip to Canada has lead to a partnership with URACCAN to cover the costs of the CAMP-Lab radio program until at least until January 2004.
Appendix 5

Students’ and Schools’ Data

Monitoring Dates:
1) Oct. 24th 2002
2) Feb. 14th 2003
3) May 21st 2003

Level: Expect to see

Indicator 1
High school students are involved environmental field work.

Source of Information:
School directors (Haulover, Pearl Lagoon, Orinoco)

Comments for Monitoring 1-3:

Scale:
(F) every 3 months
(G) every 2 months
(E) every month

Evaluation for Monitoring 1-3: 1) None 2) None 3) None

Indicator 2
Schools save research done by local students about Pearl Lagoon in their library and it is accessible to other students.

Source of Information:
School Libraries

Comments for Monitoring 1-3:

Scale:
(F) Some of this research is available in the school system.
(G) All of this research is available in the school system.
(E) All of this research is available in each school.

Evaluation for Monitoring 1-3: 1) None 2) None 3) None

Level: Like to see

Indicator 3
Students continue their education after high school.

Source of Information:
School Directors

Comments for Monitoring 1-3:

1) Promotion (Graduation) takes place in November so we will be better able to answer this question in the next evaluation.
2) 13 students from Pearl Lagoon School 4 from Orinoco go to Post secondary 30 graduated from PL and 7 from Orinoco.
3) 13 students from Pearl Lagoon School 4 from Orinoco go to Post secondary 30 graduated from PL and 7 from Orinoco (Same Data as last).

Scale:
Indicator 4
Students return to do their thesis research in their community.
Source of Information:
Local universities, general knowledge
Comments for Monitoring 1-3:
1) Of the six students from Pearl Lagoon currently working on their thesis three are doing their research in Pearl Lagoon. All of these students working in Pearl Lagoon have previous experience with CAMP-Lab.
2) Same
3) Same
Scale:
% of Pearl Lagoon students working on thesis
(F) 25%
(G) 50%
(E) 100%
Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good

Indicator 5
Teachers have adequate training to give environmental education.
Source of Information:
School Directors
Comments for Monitoring 1-3:
1) Some training was provided by DIPAL before their departure, but this was not considered adequate by the CAMP-Lab staff who attended.
2) Same
3) Same
Scale:
(F) Some teachers have some training.
(G) Some teachers have good training
(E) There are teachers with good training in each school
Evaluation for Monitoring 1-3: 1) Fair 2) Fair 3) Fair

Indicator 6
Schools offer environmental education as a separate subject.
Source of Information:
School Curriculum
Comments for Monitoring 1-3:
1) Environmental education is being taught once weekly in the final year of high school in Pearl Lagoon by Oswaldo. Classes are occasionally given in Haulover and Pearl Lagoon Primary school by Eduardo and Oswaldo. In addition, CAMP-Lab committee members are beginning to give environmental classes in Orinoco and Brown Bank making use of the Awake publication.
2) No agreement possible with ministry because of the end of project funding however some special classes are given by the staff when requested and some teachers continue to use Awake as a resource for some environmental education.
3) Same as before.

**Scale:**
(F) Some students are being exposed to environmental education.
(G) Environmental education is being taught to upper year primary and secondary students.
(E) Environmental education is being taught in all schools and grades.

**Evaluation for Monitoring 1-3:** 1) Fair/Good 2) Fair 3) Fair

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**Level: Love to see**

**Indicator 7**
Schools maintain adequate libraries.

**Source of Information:**
Schools

**Comments for Monitoring 1-3:**
1) There are libraries in most schools but they are poorly organized, not well used, and inadequate.
2) Same.
3) The libraries are a little better due to projects like FODECA and Base Dos who provided some materials for school libraries.

**Scale:**
(F) There are libraries in some schools
(G) There are libraries in all schools and they have significant content.
(E) There are libraries in all schools they are well organized and they have good content

**Evaluation for Monitoring 1-3:** 1) None/Fair 2) None/Fair 3) Fair

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**Indicator 8**
Students return to work in communities after graduating university.

**Source of Information:**
General Knowledge

**Comments for Monitoring 1-3:**
1) One student has completed her degree at URACCAN and is working with FADCANIC in Pearl Lagoon.
2) A second student is working along with a second NGO Carl Bro at least partially in the Pearl Lagoon area.
3) The second student is now working on their thesis in another part of the region.

**Scale:**
Raw #

**Evaluation for Monitoring 1-3:** 1) 1 2) 2 3) 1

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**Further Information**

1) Monitoring Oct. 24th 2002

Changes
Some environmental education is now beginning to be offered by CAMP-Lab committee members in schools that CAMP-Staff cannot visit regularly. This has been encouraged by the communal investigators.

**Lessons and Future Plans**
The idea of making use of the CAMP-Lab newsletter Awake as a teaching aid for communal investigators has been helpful.

This effort to offer environmental education from CAMP-Lab committee members could be expanded to other communities.

**3) Monitoring May 21st 2003**

**Changes**
CAMP-Lab staff has been unable to continue work with schools because of end of project.

**Lessons and Future Plans**
There are significant financial barriers for children from communities without a secondary school to continue their education.
Appendix 6

Communities Data

Monitoring Dates:
1) Oct. 24th 2002
2) Feb. 14th 2003
3) May 21st 2003

Level: Expect to see

Indicator 1
Community members rebel against actions that are not friendly to the environment, or natural resources.

Source of Information:
Inquiry during visits to communities

Comments for Monitoring 1-3:
1) A number of communities have engaged in efforts to prevent logging by outsiders on community land either through direct confrontation or the use of the police. There has also been action taken by various communities to limit sand mining in their communities.

2) Broad based successful effort to prevent outsiders from capturing local dolphins for aquariums. Local opposition to shrimp farming without appropriate consultation and environmental analysis seems to have stopped the move towards the activity for now. Haulover and Pearl Lagoon people have successfully demanded that outsiders setting up houses on the edges of the Lagoon to support exploitation of lagoon fish leave the area.

3) Pearl Lagoon, Haulover and Rocky point have taken action against the destruction of the road by the company in Kukra (efforts to make it passable to trucks in the dry have made it impassable in the rainy).
Action has been taken to prevent timber cutting by a group of Spaniards who have come to the region.
Awas has been attempting to stop people from mining sand in their community.

Scale:
Descriptive number of incidents per community
(F) Some actions taken.
(G) More organized resistance.
(E) Broad based organized resistance including lobbying of various levels of government.

Evaluation for Monitoring 1-3: 1) Fair 2) Good 3) Good

Indicator 2
Communal boards have systematic and open meetings in the communities.

Source of Information:
Inquiry during visits to communities

Comments for Monitoring 1-3:
1) Tasbapauni one per month
   Marshal Point one per month
Indicator 3
Communal boards coordinate their efforts with other institution working in the area.

Source of Information:
Inquiry during visits to communities

Comments for Monitoring 1-3:
1) All of the boards coordinate with the other institutions working in Pearl Lagoon. Orinoco developed a consejo consultivo to work with and coordinate the efforts of the different institutions working in their community.
2) Same as above however Haulover currently has no board.
3) Same as above.

Scale:
As a percentage of institutions working in the community
(F) 50 %
(G) 75%
(E) 100%
Evaluation for Monitoring 1-3: 1) Excellent 2) Excellent 3) Excellent

Level: Like to see
Indicator 4
Communities establish and carrying out regulation and activities to protect and enhance their environment and natural resources.
Source of Information:
Inquiry during visits to communities
Comments for Monitoring 1-3:
1) All other communities were engaged in community cleaning. Kakabila also made efforts to trail (demarcate) its land to protect it from incursions from outside. Discussions in Tasbapauni about a local lobster veda (closed season).
2) All communities were engaged in community cleaning. Kakabila also made efforts to develop a nursery for medicinal plants and they are cleaning a beach area for tourism. All of the communities are at various stages of eliminating animals from inside the communities to improve well water and local health.
3) All of the communities engaged in community cleaning. Kakabila is working on a medicinal plant nursery, La Fe has been working on a nursery, and Awas is attempting to get money for a breakwater.
Scale:
Descriptive and # of incidence per community
(F) Basic activities (ex. town cleaning)
(G) Some more complex activities and efforts at regulation.
(E) Development and enforcement of regulations and more complex activities.
Evaluation for Monitoring 1-3: 1) Fair-Good 2) Fair-Good 3) Fair-Good

Indicator 5
Fishers avoid the use of environmentally harmful gear.
Source of Information:
Inquiry during visits to communities
Comments for Monitoring 1-3:
1) All communities visited claim that they use regulation size gill net and do not trawl in the lagoon. However, they do say that some people from other communities trawl and that there are efforts to prevent it.
2) Same
3) Same
Scale:
(F) Majority of people do not use these gears.
(G) Majority of people do not use these gears and efforts are made at enforcing others compliance.
(E) No community members use these gears.
Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good

Indicator 6
Farmers limit their use of chemical products.
Source of Information:
Inquiry during visits to communities
Comments for Monitoring 1-3:
1) Use of herbicides and pesticides is fairly limited. Some herbicide was used in Brown Bank to try to kill problematic grass near the health center. In many cases local bush medicine was used for problems like ants.
2) Use of chemical herbicides and pesticides is fairly limited at least partly due to lack of access.
3) Same.
Scale:
(F) Majority of people do not use chemicals.
(G) Majority of people do not use chemicals and efforts are made to encourage others compliance.
(E) No community members use chemicals.
Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good

Indicator 7
The communities create, respect, and protect reserve forest areas.

Source of Information:
General Knowledge/ Inquiry during community visits

Comments for Monitoring 1-3:
1) There was a reserve forests established in Haulover (including pine and latifolia forest) and Kakabila (latifolia forest). There have been problems with some farming in the Haulover reserve area which are being addressed through the communal boards and Alcaldia.
2) Same
3) Some people in Kakabila have established privately controlled reserves forest areas.
Scale:
(F) Community has reserve forest area
(G) Efforts are made to enforce reserve area
(E) Efforts to enforce reserve area are effective
Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good

Level: Love to see
Indicator 8
Intercommunity committees work to solve conflicts between communities.

Source of Information:
Inquiry during visits to communities

Comments for Monitoring 1-3:
1) Not at present
2) Not at present
3) Not at present
Scale:
Incidents of inter community meetings to solve conflict and description of outcomes.
(F) There is occasionally an inter community meetings to address conflicts
(G) There is an intercommunity board that meets occasionally to address conflicts
(E) There is an intercommunity board that meets regularly and is effective in solving conflicts
Evaluation for Monitoring 1-3: 1) None 2) None 3) None

**Indicator 9**
Communal boards have consistent and transparent reporting about board projects and finances.

**Comments for Monitoring 1-3:**

1) Haulover no board  
Raitipura no money  
Awas no money  
Tasbapauni monthly posted reports  
Marshal Point no money / no current projects  
Orinoco Finances not transparent  
La Fe no money / no current projects  
Brown Bank Are keeping detailed records  
Kakabila Town meetings to decide on use of money secretary keeps budget records

2) Haulover no board  
Raitipura no money  
Awas no money  
Tasbapauni monthly posted reports  
Marshal Point no money / no current projects  
Orinoco Finances not transparent  
La Fe no money / no current projects  
Brown Bank Are keeping detailed records  
Kakabila Town meetings to decide on use of money secretary keeps budget records

3) Haulover no board  
Raitipura no money  
Awas no money  
Tasbapauni monthly posted reports  
Marshal Point no money / no current projects  
Orinoco finances not transparent  
La Fe no money / no current projects  
Brown Bank keeping detailed records  
Kakabila town meetings are held to decide on use of money secretary keeps budget records

**Source of Information:**
Inquiry during visits to communities

**Scale:**
(F) Average Reporting every 6 months  
(G) Average Reporting every 3 months  
(E) Average Reporting monthly

**Evaluation for Monitoring 1-3: 1) Good 2) Good 3) Good**

**Indicator 10**
Communal board budgets are made using methods that include active participation by the broader community.

**Source of Information:**
Inquiry during visits to communities

**Comments for Monitoring 1-3:**

1)  
- Tasbapauni: yes
- Marshal Point: no
- Orinoco: no
- La Fe: no money
- Brown Bank: yes
- Kakabila: yes
- Haulover: no
- Awas: no money
- Raitipura: no money

2)  
- Tasbapauni: yes
- Marshal Point: no
- Orinoco: no
- La Fe: no money
- Brown Bank: yes
- Kakabila: yes
- Haulover: no board
- Awas: no money
- Raitipura: no money

3)  
- Tasbapauni: no
- Marshal Point: no money
- Orinoco: no
- La Fe: no money
- Brown Bank: yes
- Kakabila: yes
- Haulover: no board
- Awas: no money
- Raitipura: no money

**Scale:**
- (F) 0>
- (G) 50%
- (E) 100%

**Evaluation for Monitoring 1-3: 1) Fair 2) Fair 3) Fair**

**Further Information**

2) Monitoring Feb. 14th 2003

**Changes**
The move towards shrimp farming in Pearl Lagoon has slowed and possibly stopped. This is at least partially the result of CAMP-Labs seminar on shrimp farming.
There was move by the municipal government to eliminate farm animals from the communities to improve sanitary conditions. CAMP-Lab’s water monitoring may have contributed to this change.

**Lessons and Future Plans**
We will look for other issues and opportunities similar to that of shrimp farming.

3) Monitoring May 21st 2003

**Changes**
National Demarcation law has forced communities to begin to organize as communal boards are supposed to be the central actors in this process.

As a result Pearl Lagoon has conducted a process to form a new board and Haulover is beginning a similar process as well.

**Lessons and Future Plans**
Strategy Journals

October 24th Monitoring

Strategy Journal # 1

Description of Strategy
A two day Shrimp farming seminar held Oct 21-22. This event was funded by ASDI and organized by CAMP-Lab. It involved participants from all Pearl Lagoon Communities, Marena, Mede Pesca, Regional Council, Alcaldía (including mayor and vice mayor) and Local Universities (URACCAN, BICU). Facilitators for the event were from CAMP-Lab, York University, URACCAN, UCA.

How did the strategy influence our partners?
The event caused increased discussion around the issue of shrimp farming and increased local awareness of the impacts of shrimp farming.

Community members present demanded the right to be involved in any decision regarding future shrimp farming in the area.

What outputs are there?
The issue was discussed at length on local radio programs.

Local authorities and businesses interested in shrimp farming will likely be forced to take a slower and more cautious approach if they still intend to go ahead with shrimp farming.

The Alcalde and vice Alcalde made public promises to consult the people on any potential shrimp farming activity in the area.

What follow up should we do?
In order to increase the number of people with access to this information about shrimp farming the following actions will be taken.

Future radio programs on the local radio station to further expand local knowledge on the subject.

The memoria from the seminar and other resources about shrimp farming should be included in the next CAMP-Lab news letter (Awake).

The materials from the seminar should be presented in CAMP-Lab committee meetings in each community.

Follow up seminars will be developed on the topic in the future.

What did we learn and how can we use this information?
We have the ability to obtain funds from outside the project for activities like this.

Our influence in terms of local conflict resolution is strong.

We have increased confidence and respect from both authorities (who sponsored the event) and community people.

Mar Caribe (the business most interested in shrimp farming) left the event angry in the first half hour. This angered most participants who thought they should stay and defend their plans if they believed they were good.

**Strategy Journal # 2**

*Description of Strategy*

A weekly radio program. “Living in Progress with our Natural Resources". This program is facilitated by CAMP-Lab staff and carried out by the "Radio Committee".

*How did the strategy influence our partners?*

The program creates discussion in the communities around the issues that are covered by the programs.

More people want to be involved by being on the radio.

People directly involved in the radio program are developing skills related to radio program production.

Another person involved with CAMP-lab has begun his own radio program twice weekly focused on the environment.

The program encourages people to make claims related to the communities' natural resources.

*What outputs are there?*

A weekly radio program when the radio is functioning.

The program provides “a voice for those who don’t have voice” (Eduardo Tinkam) (a way for people to express their ideas throughout the basin).

*What follow up should we do?*

Continue weekly meetings of radio committee.

Attempt to involve more communities in broadcasts.

Look for ways of sustaining the show past the end of the project.
Develop a Spanish language program for Mestizo listeners.

*What did we learn and how can we use this information?*
New techniques for using the radio have been adopted.

Community people have provided an excellent source of information and material for use on the radio.

People are willing to do things like the radio program in an effort to protect their rights to resources.

**Strategy Journal # 3**

*Description of Strategy*
Newsletter every 3-4 months called “Awake”.
The newsletter is created by CAMP-Lab using methods of popular communication.

*How did the strategy influence our partners?*
The newsletter provides an opportunity for people to read about their own reality in their own language.

It has stimulated people and students in particular to read more.

People contribute to the production of the newsletter through writing, poetry, or art.

It has provided a way of finding, exposing and fostering community people’s talents.

*What outputs are there?*
A Creole language newsletter is published every 3 or 4 months.

The newsletter provides a resource for use in the schools especially for environmental education.

*What follow up should we do?*
Look for ways of continuing past the end of the current funding.

Find out more detailed information about who is reading the newsletter.

Look for ways of increasing community involvement in production and contribution of material.

*What did we learn and how can we use this information?*
We have an increased comfort with criticism in the editorial process.
We have begun crossing over material with the radio program in order to strengthen the content of both.

We have improved our knowledge of what type of materials most interest people.

**Strategy Journal # 4**  
**Description of Strategy**  
Environmental Education

Occasional classes are given in the senior years of primary school in Pearl Lagoon and Haulover.

Regular weekly 2 hour classes are given in the final year of high school in Pearl Lagoon.

There are efforts by CAMP-Lab committee members to give environmental education in communities (Orinoco) that are not regularly accessible to CAMP-Lab staff.

**How did the strategy influence our partners?**  
The strategy has raised environmental consciousness of youth in the communities.

Students often choose to write their essays on topics related to the environment.

The strategy exposes teachers to the more active teaching methodology used by the communal investigators.

The strategy creates interest in further studies that may lead to some students continuing past secondary school.

**What outputs are there?**  
Environmental education in the schools

There is increased interest and knowledge of environmental issues among the youth of the communities.

**What follow up should we do?**  
Follow up on teaching efforts of Orinoco CAMP-Lab committee.

Encourage CAMP-Lab committee members to assist with environmental education in other communities that CAMP-Lab staff cannot get to regularly.

Promote the use of the newsletter as a teaching resource for these efforts.

**What did we learn and how can we use this information?**
Strategy Journal # 5

Description of Strategy
A workshop was given to the communal board of Tasbapauni.

This workshop was provided at the request of the communal board and covered themes of finance control, leadership, organization, and work planning. Expenses were partly covered by the Tasbapauni communal board.

How did the strategy influence our partners?
The workshops lead to increased planning and efforts to control finances by the Tasbapauni communal board.

What outputs are there?
The Tasbapauni communal board has requested more workshops in the future with emphasis on the themes of conflict resolution, elaboration of small projects, and review of finance control.

What follow up should we do?
Future workshops that are requested by the community should be offered.

What did we learn and how can we use this information?
Communities are having increased confidence and trust in us as an organization.

Strategy Journal # 6

Description of Strategy
Annual forest monitoring in Hunting Road.

How did the strategy influence our partners?
Haulover committee has an increased ability to conduct monitoring without assistance.

What outputs are there?
Monitoring results have been gathered for the transect over a three year period.

What follow up should we do?
Continued monitoring.

What did we learn and how can we use this information?
Loss of some tags in the transect indicates a need to further communicate with the community the location and purpose of the transect.

Strategy Journal # 7

Description of Strategy
Office open and staffed

How did the strategy influence our partners?
**What outputs are there?**
The office provides access to the library for students and help from the staff on researching assignments.

CAMP-Lab Staff are available to local community for discussion on environmental issues.

CAMP-Lab staff is available to answer questions from outsiders.

**What follow up should we do?**
Continue

**What did we learn and how can we use this information?**
Discussions with community people in this context gave rise to the idea of a seminar on shrimp farming.

Strategy Journal # 8
*Description of Strategy*
Well water monitoring in the communities of Kakabila and Awas

*How did the strategy influence our partners?*
Students learn techniques for water monitoring.

**What outputs are there?**
Recommendations are given for well water based on the findings.
One sample was spoiled.

**What follow up should we do?**
Lack of energy in Pearl Lagoon combined with need to keep materials refrigerated makes this process difficult.

**What did we learn and how can we use this information?**
February 14th Monitoring

Strategy Journal # 1
Description of Strategy
Individual staff travel to the communities of Kakabila and Brown Bank to strengthen these CAMP-Lab committees.

How did the strategy influence our partners?
Staff helped with planning and provided information on environmental issues.

What outputs are there?
Kakabila - efforts to create a nursery for medicinal plants is underway
- cleaning of the community and the lagoon edge in an effort to create a destination for the Easter holiday and raise money for CAMP-Lab committee

Brown Bank - organizing for more regular meetings and the planning of activities - reestablishment of a fund for the CAMP-Lab committee

What follow up should we do?
Check Progress
Continue with follow up visits

What did we learn and how can we use this information?
- in Kakabila problems with leadership were identified and a group was formed to help motivate and support the CAMP-Lab committee president.
- People have the ability to develop a good plan if given enough time.

Strategy Journal # 2
Description of Strategy
Efforts to develop Management plan sanctions based on the community consultations.

How did the strategy influence our partners?
This should increase the communities’ ownership of any ordinance and provide a greater degree of validity to it in their eyes.

What outputs are there?
A summary document that outlines sanction ideas

What follow up should we do?
Follow up efforts related to creating ordinances with the alcaldía.

What did we learn and how can we use this information?
There is a constant process of readjustment and change needed for management plans based on shifting ideas and opinions related to the current
circumstances. As a result, there is a need for an open and ongoing process that accommodates this.

Strategy Journal # 3
Description of Strategy
Radio Program

How did the strategy influence our partners?
The Radio program:
- Created greater awareness of CAMP-lab activities.
- Created greater awareness and understanding of the management plan norms.
- Provided an opportunity for local people to voice their uneasiness to a broader audience.
- Developed interview and other skills for radio program participants.

What outputs are there?
The issue of outsiders attempting to capture Dolphins for an aquarium was discussed on the program and this activity was then stopped.

There has been continuing skills development in the radio committee members.

A weekly Spanish language program has been started by CAMP Lab with help from other local radio personalities aimed at explaining environmental issues to this constituency.

Two radio program participants were offered jobs as hosts of youth centered program. They did not accept because of their studies.

The radio program participants have become interested in studying communication at the local University.

What follow up should we do?
Work on improving the number of participants in the radio committee. Occasionally provide refreshment as incentive for new participation.

What did we learn and how can we use this information?

Strategy Journal # 4
Description of Strategy
Mestizo Program weekly on Friday 5-6 pm
This is a social rather than popular communications effort. The program focuses on themes related to the environment, demarcation and local history.

How did the strategy influence our partners?

What outputs are there?
Survey by the radio station indicates that this is the most popular Spanish language program among Mestizos.

*What follow up should we do?*
- Need to involve more people in the on air production so that it can continue in the absence of the current participants.
- Request feedback from other institutions working in the area.
- Integrate some of the popular communications methods used in the other program such as the use of local poetry.

*What did we learn and how can we use this information?*

**Strategy Journal #5**

*Description of Strategy*

Environmental Education in Pearl Lagoon high school.

*How did the strategy influence our partners?*
Provided environmental education to senior high school students
Created interest in environmental issues and continued studies in this area among some students.

*What outputs are there?*
Students are interested in studying environment related fields at the universities

*What follow up should we do?*
Effort is ending because of uncertainty about camps future and the resulting inability to commit for a full school year.

Encourage the use of the Awake newsletter as a resource for environmental education.

Provide occasional informal support in environmental education for teachers upon request.

*What did we learn and how can we use this information?*

**Strategy Journal # 6**

*Description of Strategy*

Forest Monitoring in Pine Ridge, Pinal, Gunpoint

*How did the strategy influence our partners?*
Kakabila has become very protective of their transect.
The Gunpoint transect area was cleared for farming due to a misunderstanding in the community.

**What outputs are there?**
Forest monitoring data from remaining transects.

**What follow up should we do?**
Begin monitoring reforested areas.

**What did we learn and how can we use this information?**
More technical assistance is needed for reforestation because of problems with replanting efforts.

We need to make more broadly known and understood the transect areas and their purpose.

**Strategy Journal # 7**
*Description of Strategy*
Monitoring of drinking water

**How did the strategy influence our partners?**
Provides information about which wells have problems so that people can use alternative sources or treat the water appropriately.

There is movement supported by a municipal ordinance to remove farm animals from within the communities for hygiene reasons that can be partly attributed to this monitoring.

**What outputs are there?**
General information about the quality of water in various wells is made available to the community.

**What follow up should we do?**
Create a checklist for proper water monitoring methodology.

Follow up monitoring at the beginning of the rainy season to contrast it with the dry.

Provide information to the health authorities.

**What did we learn and how can we use this information?**
May 21st Monitoring

Strategy Journal # 1
Description of Strategy
Intensive Multi day visits to communities to strengthen and organize CAMP-Lab committee's. Eduardo visited Kabila twice for three days. Oswaldo spent two days in each of Tasbapauni, Orinoco and Brown Bank.

How did the strategy influence our partners?
These activities served to strengthen the committees. It allowed multiple meetings in a short space of time as well as opportunities to reconnect with people through informal discussions and participation in daily life. It also provided a useful opportunity to both disseminate and collect information.

What outputs are there?
This activity helped the groups reflect on their activities and see the need for more organization. It served to increase these communities's confidence in CAMP-Lab and reestablished / reviewed what the role of the committee's should be. It also helped to move some committees focus more towards environmental issues and less towards concern with money and sports activities that were gradually becoming the focus.

What follow up should we do?
Ideally this type of activity should continue but the end of current funding makes this at least temporarily unlikely. Some encouragement and follow up will be done using the radio show. Also the FADCANIC projects working in the area will be working along with CAMP-Lab committee's giving them encouragement.

What did we learn and how can we use this information?
The extra effort of occasional extended trips to the field is an effective method of strengthening local CAMP-Lab committee's.

Strategy Journal # 2
Description of Strategy
Encouraging FADCANIC to make use of CAMP-Lab committees for their activities in Pearl Lagoon communities.

How did the strategy influence our partners?
This strategy provides more support and environment related activities for CAMP-Lab committees while also providing FADCANIC with an organizational structure to work with in each community. It also will provide continued support for CAMP-Lab committees beyond the current funding available to CAMP-Lab as an organization.

What outputs are there?
FADCANIC has small amounts of funding available to support locally designed and implement projects related to the environment. As a result CAMP-Lab committee's have been able to access these funds to help with projects like the
creation of nurseries and improvements to the recreational value of Fine Pine wood (reserve forest area).

**What follow up should we do?**
There should be increased communication between CAMP-Lab staff and FADCANIC staff to help better streamline this collaboration. In addition, these activities should be discussed on in the radio programs.

**What did we learn and how can we use this information?**
It is helpful to coordinate with other institution as it serves to strengthen the activities of both, and is more economical both in terms of money and staff time. It also prevents non productive jealousies and rivalries between the organizations working in the area.

**Strategy Journal # 3**
**Description of Strategy**
Approached ASDI (a Swedish NGO working to strengthen Municipal government) to assist with the conversion of CAMP-Lab’s management plan into a municipal ordinance. With ASDI’s support CAMP-Lab funded (organized transport etc. for councilors to attend) a special meeting of the municipal council to review and vote on the ordinance.

**How did the strategy influence our partners?**
The municipal ordinance was passed by council which was very encouraging to CAMP-Lab Committees who had been waiting a long time for the plan to be legalized.

**What outputs are there?**
CAMP-Lab’s management plan is now municipal law which also gives it standing at the national level because of the national level laws governing the rights and duties of municipalities.

**What follow up should we do?**
A second municipal ordinance including sanctions needs to be developed. The plan also will be reviewed on the radio and directly in the communities to help begin putting it into effect.

**What did we learn and how can we use this information?**
Partnering with other institutions such as ASDI with strong ties to certain levels of government can help move government processes forward.

**Strategy Journal # 4**
**Description of Strategy**
Continuation of the Radio Program

**How did the strategy influence our partners?**
There has been a problem with jealousy between the Radio Committee and the Haulover CAMP-Lab committee that has lead to a lack of effort and motivation in the CAMP-Lab committee.

**What outputs are there?**
Weekly radio programs

**What follow up should we do?**
Efforts are underway to minimize this problem by encouraging crossover between groups.

**What did we learn and how can we use this information?**

**Strategy Journal # 5**

*Description of Strategy*
Mestiso radio program broadcasting weekly that is designed to reach Mestiso communities in the river areas.

**How did the strategy influence our partners?**

**What outputs are there?**
This program has had a role in creating understanding and debate around issues such as upcoming land demarcation and issues related to electricity in the municipality.

**What follow up should we do?**
Continue with program.

**What did we learn and how can we use this information?**
The apparent popularity of this program indicates that it may be an effective way of reaching the Mestiso communities.

**Strategy Journal # 6**

*Description of Strategy*
Preperation for the end of funding to CAMP-Lab.  
Arrange for FADCANIC to use and maintain CAMP-Lab buildings.  
Arrange Passover of equipment like Panga and water testing gear to Haulover Health committee.  
Arrange for Accione Medica to continue water testing activities.  
Arrange with URACAAN to fund the cost of continuing the radio programs.

**How did the strategy influence our partners?**
This strategy makes CAMP-Lab committees and the communities aware of the projects likely end and allows them to prepare to continue some of the efforts initiated by the project.

**What outputs are there?**
These measures should maintain some of CAMP-labs activities and maintain the viability CAMP-Labs equipment and facilities.

**What follow up should we do?**

**What did we learn and how can we use this information?**

**Strategy Journal # 7**

*Description of Strategy*
Continuation of the newsletter.

*How did the strategy influence our partners?*

**What outputs are there?**
There is currently a number of articles prepared for a final newsletter but no funding available for publication.

**What follow up should we do?**
Efforts are underway to have more people write for the newsletter and to find funding to continue producing it in some form.

**What did we learn and how can we use this information?**
Performance Journals

October 24th Monitoring

1) Looking for new ideas

Activities
Shrimp Farming seminar idea came from interest of community members.

Lessons Learned
We have the ability to successfully seek funds for activities from other organizations on the coast.

Future Plans
Follow up by passing information to CAMP-Lab committees.
Possible future seminars

2) Getting feedback from key people

Activities
Increased communication with the alcaldía both in organizing the shrimp farming seminar and in future efforts to turn parts of the management plan into municipal ordinance.

Lessons Learned

Future Plans
Continue fostering this improved communication.

3) Obtaining support from our bosses

Activities
Asked for and received support from UCA for the shrimp farming seminar in the form of one of their experts to participate. His expenses were covered by the UCA.

Lessons Learned
Under the right circumstances UCA has useful resources we can access.

Future Plans

4) Reviewing and improving our activities

Activities
Outcome mapping

Lessons Learned
Has given rise to new ideas and strategies for our activities.

Future Plans
Continue

5) Strengthening and protecting what we have already done

Activities

Lessons Learned
Future Plans
CAMP-Lab staff trying to work with the alcaldía on turning parts of the management plan into municipal ordinance. Begin looking for future funding.

6) Sharing what we learn with the world
Activities
Production of news letter Awake and memorias from our other activities
Lessons Learned

Future Plans

7) Trying new things
Activities
Staff and Haulover committee began trying to work with Monica on sea grass monitoring activities and keystone species monitoring.
Lessons Learned

Future Plans

8) Thinking about our way of organizing to improve it
Activities

Lessons Learned

Future Plans
February 14th Monitoring

1) Looking for new ideas
   Activities

   Lessons Learned

   Future Plans

2) Getting feedback from key people
   Activities
   a) Sought feedback from CAMP-Lab committees.
   b) Feedback regarding the popular communications components was given by Deborah Barndt during her visit to Haulover.
   Lessons Learned
   a) Need more time in the communities.
   Future Plans
   a) Attempt to spend more time in the communities.
   b) Eduardo will be attending a workshop in Canada organized by Deborah.

3) Obtaining support from our bosses
   Activities
   a) Monthly reporting to CIDCA
   b) First OM evaluation given to CIDCA.
   Lessons Learned
   No response or comment has been received from CIDCA on either report.
   Future Plans
   Continue

4) Reviewing and improving our activities
   Activities
   a) Evaluation of water monitoring activities
   b) Outcome Mapping
   Lessons Learned
   a) Located problems in our methods.
   Future Plans
   a) Developed check list for good water monitoring practice.
   b) Continue

5) Strengthening and protecting what we have already done.
   Activities
   a) Looking for funding to continue radio program.
   b) Brainstorming for new news letter ideas.
   c) Attempting to work with the Alcaldía on creating municipal ordinance for the management plan.
   d) Consulting with the communities to create sanctions for the management plan.
   Lessons Learned

   Future Plans
a) Continue searching for funding for the radio program possibly through URACCAN.
c) Continue efforts to turn the management plan into a municipal ordinance
d) Attempt to integrate these sanctions into a municipal ordinance.

6) Sharing what we learn with the world
   Activities
   a) Newsletter.
   b) Oswaldo presented information about CAMP-Lab at a conference at the UCA.
   Lessons Learned

   Future Plans
   Eduardo will travel to Canada for a conference where he will be sharing his experience with CAMP-Lab.

7) Trying new things
   Activities
   Oswaldo began producing a Mestizo radio program.
   Lessons Learned
   The radio program is very popular with Mestizos.
   Future Plans
   Continue

8) Thinking about our way of organizing to improve it
   Activities

   Lessons Learned

   Future Plans
May 21st Monitoring

1) Looking for new ideas
   Activities
   a) Eduardo travel to Canada to participate in popular arts conference.
   b) Evaluation activities with each CAMP-Lab Committee.
   Lessons Learned

Future Plans

2) Getting feedback from key people
   Activities
   We made effort to get feedback from CAMP-Lab committees about our performance.
   Lessons Learned

Future Plans

3) Obtaining support from our bosses
   Activities
   a) CAMP-Lab is working with Alvaro Rivas to find funding for the continued publication of Awake.
   b) Communications with CIDCA have been limited due to lack of time in spent in the south by the CIDCA director.
   Lessons Learned
   a) Alvaro has an interest in seeing Awake continue and is attempting to help find funding.

Future Plans

4) Reviewing and improving our activities
   Activities
   a) Spending more time with each CAMP-Lab committee
   b) Improving water monitoring activities through better instructions
   Lessons Learned
   a) Some CAMP-Lab committees responded very positively to an intense CAMP-Lab staff presence for a short amount of time to help them organize their activities.
   b) Flaws were located in the monitoring process and step by step instructions have been posted in the Lab office to prevent the mistake in the future.
   Future Plans
   Continue

5) Strengthening and protecting what we have already done
   Activities
a) Ensuring the continuation of the radio program and water monitoring past the end of project funding through agreements with URACCAN and Acione Medica respectively.
b) Linking activities with FADCANIC to continue some support of CAMP-Lab Committees past the end of project funding.
d) Planning to provide volunteer support for the radio programs after the end of project funding.

Lessons Learned

Future Plans
Continue efforts to preserve CAMP-Lab activities past the end of current funding.

6) Sharing what we learn with the world
Activities
Eduardo participated in popular arts conference in Canada.
Lessons Learned
Popular communication methods can be applied anywhere.
Future Plans
Follow up with contacts made during the conference.

7) Trying new things
Activities
Working through ASDI to get the management plan passed as a municipal ordinance.
Lessons Learned
Teaming with ASDI has proved to be a very effective strategy. Partnership was possible with ASDI partially because they also required our help to push their ordinance through.
Future Plans
We may undertake similar efforts in the future with a second ordinance that includes sanctions.

8) Thinking about our way of organizing to improve it
Activities
We are trying to adapt to a future without CAMP-Lab funding, including locating institutions willing to assist with certain CAMP-Lab activities.
Lessons Learned

Future Plans
Continue these efforts
References


Dozier, C.L. 1985. *Nicaragua’s Mosquito Shore, the Years of British and American Presence.* University of Alabama Press, Alabama, USA.


