

Sustainable Coastal Communities and Ecosystems Program (SUCCESS)

*A Component of the Integrated
Management of
Coastal and Freshwater Systems Program
(IMCAFS)*

Semi-Annual Report #5

January 1 – June 30, 2007



**Integrated Management of Coastal and Freshwater Systems
Leader with Associates Cooperative Agreement for
Sustainable Coastal Communities and Ecosystems (SUCCESS)**

**Semi-Annual Report # 5
January 1 – June 30, 2007**

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A partnership between:

**Coastal Resources Center
University of Rhode Island
and
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in association with:

**University of Hawaii Hilo, Pacific Aquaculture and Coastal Resources Center
Western Indian Ocean Marine Science Association (WIOMSA)
EcoCostas
Universidad Centro America
Conservation International
The Nature Conservancy
World Wildlife Fund
The Sea Grant Network**

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I. INTRODUCTION

On September 30, 2004, the University of Rhode Island (URI) was awarded a Leader with Associates (LWA) Cooperative Agreement in Coastal Management, Fisheries and Aquaculture for a five-year program with annual funding of \$750,000. This is the Sustainable Coastal Communities and Ecosystems (SUCCESS) Program.

The Coastal Resources Center (CRC) at URI is the Leader and the Pacific Aquaculture and Coastal Resources Center at the University of Hawaii (PACRC/UHH) is the sub-recipient. Strategic partners include the Sea Grant Association of Universities; the Nature Conservancy (TNC); World Wildlife Fund (WWF); and Conservation International (CI). Regional partners are the Western Indian Ocean Marine Science Association (WIOMSA) in Zanzibar, Tanzania; the Center for Ecosystem Research (CIDEA) at the University of Central America (UCA) in Nicaragua; and EcoCostas, a regional nongovernmental organization (NGO) based in Ecuador.

The SUCCESS Program provides global leadership in integrated coastal management (ICM) through innovative approaches in a participatory, issue-driven and results-oriented process to

- Promote sustainable use of marine resources
- Conserve marine biodiversity
- Improve food and income security

SUCCESS is developing and applying improved practices of global importance: eco-friendly and sustainable nearshore fisheries, mariculture of native and/or long-proven successful mariculture, and livelihoods in biologically significant and/or formally designated protected areas.

The Program is building capacity in effective coastal and marine management that supports biodiversity conservation through: 1) systems to manage and disseminate new knowledge being generated and 2) design of an innovative certification program, which unlike one-off training courses takes a long-term view to building regional networks of professionals with the requisite knowledge and skills to manage coasts and marine protected areas.

1. Biodiversity Conservation and the Sustainable Coastal Communities and Ecosystems (SUCCESS) Program

Coastal ecosystems contain biologically productive habitat, supporting a disproportional amount of economic output per unit of area, through fisheries and other productive activities.¹ Yet, these biodiversity-rich ecosystems are under accelerated threat. Integrated coastal management (ICM) takes a long-term view to addressing many of the root causes behind these threats and as such the ICM-based SUCCESS Program contributes to USAID biodiversity conservation goals.

The SUCCESS emphasis on ICM takes a different approach to biodiversity conservation as compared to most conservation-oriented programs, but aims to achieve similar goals². First, it works both within and outside of formally designated marine and coastal conservation areas. While managing protected areas is an important approach to biodiversity conservation, scientists have pointed out that in and of itself, this is insufficient unless areas outside of as well as

¹ USAID. 2005. Biodiversity Conservation: A Guide for USAID Staff and Partners.

² For a discussion of ICM and conservation see: Best, B. 2003. Conservation and Integrated Coastal Management: Looking Beyond Marine Protected Areas. p. 325-342. In: Olsen, S.B. (ed.) Crafting coastal governance in a changing world. Coastal Resources Center, University of Rhode Island. p.376.

surrounding protected areas are also better managed³. Second, SUCCESS emphasizes USAID-recommended conservation approaches¹ including sustainable use, community-based and cross-sectoral approaches, linking to the fisheries sectors. Third, SUCCESS operates on the premise that stakeholders in sustainable use and conservation efforts must realize tangible benefits if these programs are to be effective and sustainable beyond the life of USAID investments⁴. Therefore, livelihood and enterprise development are featured in SUCCESS interventions and help address poverty issues⁵—a feature of most communities where SUCCESS works. Lastly, SUCCESS incorporates many of the principles identified by USAID for effective biodiversity conservation: 1) adaptive and results-oriented, 2) highly participatory, 3) fosters sustainability, 4) builds in-country capacity, 5) incorporates learning, and 6) complements other conservation initiatives. Following are examples of how the SUCCESS contributes to biodiversity conservation.

1.1 Tanzania

The waters around Fumba, located in the Menai Bay Conservation Area on Zanzibar Island of Tanzania, are biodiversity-rich with fishes, coral reefs, and mollusks. Here, SUCCESS and its partners—including local bivalve collectors (mostly women)—are addressing the threat of a depleted bivalve population due to over-harvesting. The root problem is poverty (little income to buy other food protein), inequality (females have fewer alternative employment options than males), and local market forces (scant market for other income-generated products from Fumba) put constant pressure on this one resource for food and income.

That women need to venture farther into the ocean to collect sufficient bivalves attests to the over-harvesting of this resource. Without intervention, the natural environment will be changed, and a valuable food and income source lost. SUCCESS is changing this by introducing a zoning scheme—e.g., designating selected “no-take” zones during certain periods—and by introducing shellfish and half-pearl farming as eco-friendly sources of food (oyster) and income (pearls).

SUCCESS has also demonstrated the economic potential of milkfish farming in Tanzania – a native species of fish that can be cultured in ponds and generate annual revenues per hectare of approximately US\$ 1,000. This activity is an opportunity as well as a potential threat to biodiverse estuarine areas. Therefore, SUCCESS is working with Tanzanian national agencies on specific policies that will allow the industry to grow and prosper – contributing significantly to employment and income generation, as well as food production in coastal communities in a sustainable manner that ensures adoption of responsible mariculture practices that limit environmental or biodiversity impacts. SUCCESS is also seeking to influence on-going coastal projects (MACEMP, TCMP, RUMAKI, Tanga Coastal Zone, SEMMA) that have significant resources devoted to livelihood development and promotion of coastal mariculture.

³ For discussion of the need to look beyond protected areas to fully achieve marine biodiversity conservation see: Allison, G.A. J. Lubchenco, and M. Carr. 1998. Marine reserves are necessary but not sufficient for marine conservation. *Ecological Applications Supplement* 8(1) S79-S92. and; Jameson, S.J. M.H. Tupper, and J.M. Ridley. 2002. Three screen doors: can marine “protected” areas be effective? *Marine Pollution Bulletin* 44: 1177-1183.

⁴ For a discussion of ICM sustainability factors see: Christie, P., K. Lowry, A.T. White, E.G. Oracion, L. Sievanen, R.S. Pomeroy, R.B. Pollnac, J.M. Patlis, R.V. Eisma. 2005. Key findings from a multidisciplinary examination of integrated coastal management process sustainability. *Ocean & Coastal Management* 48(3-6):468-483. and; Pollnac, R.B., and R.S. Pomeroy. 2005. Factors influencing the sustainability of integrated coastal management projects in the Philippines and Indonesia. *Ocean & Coastal Management* 48(3-6):233-251.

⁵ For a discussion of the links between poverty and biodiversity conservation see: Adams, W.M., R. Aveling, D. Brockington, B. Dickson, J. Elliot, J. Mutton, D. Roe, B. Vira and W. Wolmer. 2004. Biodiversity conservation and the eradication of poverty. *Science*. 306(5699):1146-1149.

1.2 *Nicaragua*

A biodiversity threats assessment identified environmental, social and economic issues affecting biodiversity at the Aserradores, Padre Ramos and Puerto Morazán sites—ecological reserves or areas of recognized biological importance. Padre Ramos and Puerto Morazán have extensive mangrove systems (designated protected areas) with great environmental and economic value, while Los Aserradores has extensive mangroves, but lacks the reserve designation. SUCCESS promotes adoption of best management practices, alternative livelihoods and implementation of management systems to encourage local communities to change behavior and improve quality of life while effecting positive environmental changes and conserving biodiversity conservation.

SUCCESS is demonstrating co-management methods for molluscan fisheries with a focus on the two species of black cockle (*Anadara* sp). These fisheries are a food and income mainstay for poor coastal communities. They also have national and regional importance as they are transported within the country and exported (illegally) to other Central American countries. Developing feasible co-management methods for the black cockle species can provide a model for other Latin American countries where cockles are a threatened and/or important fisheries. SUCCESS is also working on water quality monitoring and improvement and on shellfish sanitation as bivalves are among the most likely seafood for serious or fatal diseases.

SUCCESS is working to improve the environmental, economic and social aspects of an important national export commodity—shrimp. Approximately 80% of the nation's shrimp is produced in ponds located in protected areas, many operated by poor farmers organized in cooperatives with few technical or financial resources. SUCCESS is assisting these farmers to improve their practices and production and at the same time reduce environmental impact. SUCCESS is also supporting national efforts to codify best mariculture management practices into formally adopted guidelines and regulations.

SUCCESS is helping groups in protected areas start livelihoods that provide alternatives to illegal resource use practices or reduce pressure on overexploited fisheries (e.g., bread making for female post-larval fishers, and eco-tourism for men and women).

1.3 *Ecuador*

In Ecuador, SUCCESS and local partners are tackling accelerating threats to biodiversity of the Cojimies Estuary. The Estuary, islands within, and adjacent shoreline are nesting grounds for several species of marine turtles. The upper watershed, a designated protected area, comprises significant amounts of primary coastal forests. Still, the estuary's overall health suffers from the 1) collapse of lagoon shellfisheries from overfishing; 2) exploitation of coastal timber resources from excessive cutting and the resultant sedimentation that changes the estuary's hydrology, pulsing, and water quality; and 3) conversion of mangroves to shrimp ponds.

A reduction in goods and services from what historically had been a highly productive ecosystem has, in turn, created a vicious cycle of poverty. This added to an absence of governance—i.e., a lack of laws and/or enforcement, of government support or revenues, and long term planning—has put the estuary and its biodiversity at great risk. SUCCESS is changing this by introducing eco-friendly livelihoods such as a revived culture of the native fish *Chame*, home gardening, and beekeeping/honey production and eco-tourism. Equally important, SUCCESS is working with communities to create a longer term vision for their place—one that includes conserving and restoring the estuary's remaining resources and biodiversity so that the Cojimies provides food, income and biodiversity for today and tomorrow. Efforts at resource management are directed at assisting municipalities with shorefront development planning along an important tourism

development coastal strip, reforestation of the watershed, and engaging with the shrimp industry and other stakeholders on strategies aim at restoration of estuarine ecosystem health.

2. Overview and Executive Summary of Accomplishments

This report covers activities from January 1-June 30, 2007. Following is a summary of Program achievements to date and for this reporting period. Subsequent sections list by SUCCESS Program element the current highlights, activities, “success” stories and priorities for the upcoming quarter. Later sections outline key management issues, challenges and constraints, summarize highlights from Associate Awards, overviews of other activities being implemented by the Leader (CRC/URI) that are relevant to SUCCESS, and contacts made with USAID Missions. Appendix 1 provides a summary of Performance Management Plan results.

2.1 Cumulative Program Accomplishments (October 1, 2004 – June 30, 2007)

- Over US \$323,500 leveraged in support of Program activities
- 453 persons and 202 enterprises benefiting from equitable and sustainable natural resource based enterprises
- Individual capacity built for 622 persons, through implementation of 28 training courses that support better ICM enabling conditions and best practices
- Five US volunteer professionals fielded in support of Program activities, with a time commitment valued at over \$28,300
- Over 2,000 individuals participated in coastal resources and conservation planning meetings—48% were female, achieving a more equitable participation for this traditionally disadvantaged group
- 43% of sustainable enterprise beneficiaries are female, achieving more equitable distribution of benefits for this traditionally disadvantaged group
- One national policy and one large estuary management plan are now approved at the national government level (Nicaragua).

2.2 Program Highlights Current Reporting Period (January 1-June 30, 2007)

- 22,253 hectares in areas of biological significance under improved management (4,000 marine and 18,253 terrestrial)
- National Code of Conduct for Shrimp Farming approved by the Government of Nicaragua
- Demonstration of alternative fisheries co-management regimes continued with community support in Fumba, Tanzania and Aserradores, Nicaragua
- Alternative livelihoods involving poor coastal fisheries now producing eco-friendly products (e.g. shell jewelry in Tanzania; bread in Nicaragua; *Chame* fish, passion fruit, trees and plants in Ecuador)
- Over US \$ 15,000 leveraged for activities in Tanzania, Ecuador, and Nicaragua
- 586 persons (45% women) participated in ICM-related planning meetings in sites
- Four training course held and attended by 61 persons (72% women)
- Ten publications finalized (six in Ecuador, two in Tanzania, and two in Nicaragua)
- Twenty-six ha in Mache-Chindul watershed reforested and funding to reforest 3,000 ha more

2.3 On-The-Ground Results

2.3.1 Tanzania

SUCCESS has initiated dialogue with the Menai Bay Conservation Area (MBCA) concerning additional adjustments to its existing management plan to incorporate issues and threats not

addressed at present. This includes mariculture development issues and its expansion in the bay—now occurring absent a policy framework. In addition, interest has been expressed by the MBCA in expanding co-managed no-take zones on the reef flats which at present are the only fully protected closed zones within the conservation area.

SUCCESS has completed economic studies on seaweed farming and mariculture. Floating seaweed farming methods piloted by SUCCESS provide the potential to realize the goals of the seaweed development plan (developed with support from the USAID mission) to increase seaweed production and exports. This method is more profitable than the peg-and-line method and also considered more environmentally benign—reducing impacts to seagrass habitat. Milkfish farming—a native species—shows great economic promise and is spreading within the country. While SUCCESS has helped establish pilot farms that show economic feasibility, we have also been demonstrating best management practices that reduce impacts on estuaries and mangroves. SUCCESS is now working with the national government on addressing policy and regulatory issues that will help the industry grow along an environmentally sustainable trajectory.

The pearl specialist traveled to Zanzibar to evaluate the development of half-pearls and provide training to four women's groups (17 female, 8 male) in jewelry training and processing of half-pearls. Significant progress had been with grafting pearl oysters, testing a hanging culture system for grafted pearl oysters, entrepreneurship training for the women making jewelry (24 females, 7 male), and a self-generated effort by the women to learn beading skills from a Maasai trainer. Although most half-pearls were not ready for harvest, the developing pearls were in good shape and promise to be of good quality with a unique rosy-golden luster. The women have started a fund to maintain and replace equipment and are now selling their jewelry, having made. Profit margin on the jewelry is estimated at 16-20%.

Lastly, SUCCESS has undertaken a large-scale survey of USAID coastal project beneficiaries in order to better understand how livelihood efforts impact coastal households and the degree to which these have helped improve coastal resource management efforts. Initial analysis has shown that households engaged in seaweed farming do not necessarily have higher incomes than non-seaweed farming households, but do tend to rely less on fishing (suggesting that this livelihood relieves pressure on overexploited nearshore fisheries) and have more diversified sources of income generating and productive activities – improving household resilience and economic security.

2.3.2 Nicaragua

SUCCESS continued to support alternative livelihoods non-reliant on natural resources. Bread-making by women who are shrimp postlarvae fishers has provided a low-cost supply of bread to the community and a market for retail sales. SUCCESS also provided technical assistance to alternative tourism development, focusing on an aquatic tourist route through mangrove and bird roosting areas. A nearby international marina has urged FINCAMAR to develop this as a draw for the marina users. Conditions for tourism are in place and community member are fully trained. Future efforts will focus on marketing as the members gain practice with eco-tourism.

Ongoing water quality sampling in the cockle fishing areas of Aserradores, El Realejo and Padre Ramos measured levels of *E. coli*, *Salmonella* and *Vibrio parahaemolyticus* and analyzed shellfish tissues for *Hepatitis A*—pathogens that may accumulate in filtering bivalves and which present public health threats to consumers of shellfish. To date, only *E. coli* has been detected (during some seasons and at some sampling stations). While sampling was scheduled to end in September, the AquaFish CRSP will provide \$37,000 to continue sampling for two more years. This allows for development of rigorous models to indicate appropriate seasons and areas for safe harvesting of cockles and other shellfish, which will allow Nicaragua to start building in

environmental health and sanitation aspects to its cockle management program. It will also provide information on areas subject to contamination, and which require work to improve water quality. Monitoring continues of cockle no-take zones voluntarily established by communities and adjacent areas to assess this alternative management regime. The national government is interested in this model and if results are positive, is considering widespread expansion elsewhere.

Promotion continued of best management practices with a focus on shrimp farms at AGROPESCA, FINCAMAR and Cristo Rey (all legally located within protected areas). All have undergone several production cycles with technical assistance from UCA and are keeping records, improving production, and lowering inputs through better use of feeds and fertilizers. Farmers have been provided with and taught to use water quality monitoring equipment to improve water quality management. Revenues are increasing due to the improved management.

2.3.3 Ecuador

A workshop in ICM was held in Pedernales with 37 participants from major governmental agencies, community groups and educational institutions in the Cojimies region and with support by the Pedernales Mayor's office. Clearly, EcoCostas has successfully established some of the enabling conditions for ICM and has created stakeholder demand for intensified conservation and management efforts. Groups such as the shrimp farmers, who until now have been reluctant to become involved in such efforts, are now expressing interest. Pedernales has invited EcoCostas to lead planning activities for the beach areas, which are the site of rapidly growing tourist activities. This is a turning point for the ICM effort in Cojimies, as this strong constituency will now allow EcoCostas to take more direct action to restore the estuary and watershed in SUCCESS Year 4.

Efforts to reforest the Mache-Chindul watershed continue. Twenty-six acres of cacao trees have been planted, and funding obtained to reforest another 25 acres in *Nuevo Milenio* and 3,000 ha in Esmeraldas. The USAID/Ecuador-funded *Nuevo Milenio* nursery will provide some of the seedlings for this effort.

Otherwise successful trials of *Chame* and shrimp polyculture have been challenged by a scarcity of fingerlings. *Chame* normally breed either in artificial or in natural ponds and wetland areas. Currently, all the shrimp ponds in Cojimies have been stocked and local shrimp production has been rebounding. With this rebound has come the use of *barbasco* (toxin from local shrub) to control the mosquito fish which negatively impact shrimp production. *Barbasco* use has, in turn, negatively affected the *Chame* fingerling supply. If future work in *Chame* is to continue, the use of *barbasco* must be addressed or other sources of *Chame* fingerlings identified. The *Chame* effort has also resulted in two studies (a characterization of *Chame* culture and biology; and a feasibility study for a *Chame* training center).

Testing and promoting of alternative livelihoods continues, with products and income from these increasing—a successful passion fruit harvest, establishment of ornamental and medicinal plants, completion of the first guided tours in Mompiche, and the addition of three new beekeepers.

2.4 Regional Capacity Building

2.4.1 Certification

The SUCCESS Program has turned its attention in Years 3-5 on designing and implementing certification programs for coastal/marine practitioners/professional. In East Africa this takes the form of a certification program for marine protected area (MPA) professionals, while in Latin America the focus is a certification program for individuals working in integrated coastal management (ICM) at the municipal level.

The driver for this effort on certification programs is the growing body of evidence pointing to the limitations of one-off training courses as a vehicle for building the needed human capacity for effective management of the world's coasts and protected areas. SUCCESS surveys and workshops with existing experts in these regions has highlighted the need for a new more long-term and sustainable approach to capacity building as well as strong demand for capacity building in these two focal areas – MPAs and municipal-scale coastal planning.

In East Africa, the highlights this reporting period include: 1) a regional workshop that further vetted a strawman model for the program; 2) leveraged support for the program from the European Union funded RECOMAP (Regional Coastal Management Program); and contracting of a South African expert in certification programs to further detail out the program, its technical content, its mechanics, and its administrative functions and structure.

In Latin America, highlights of the ICM certification program initiative included: 1) leveraged funding support from the Land Ocean Interface along the Coastal Zone (LOICZ) program; and garnered interest and support from a suite of universities in the region that can serve as delivery venues for the Program's course work

2.4.2 Regional Networks and Knowledge Management

The EcoCostas-CRC Network KMS has been turned over to EcoCostas and is online at <http://www.EcoCostas.org/kms/> and now includes a blog (WebLog) for member posting.

WIOMSA and CRC are beginning construction of a web forum for mariculture activities in East Africa with moderated discussions on specific topics relevant to the practice and SUCCESS.

The Cross-portfolio Learning Topics (CPLT) system on the CRC website is cross-linking 167 documents related to three mariculture sub-topics of 1) General Approaches to Addressing Mariculture as an Element of ICM Programs, 2) Managing Pond-Based Mariculture Systems in the Coast (Shrimp and Fish), and 3) Managing Open-Water Mariculture Systems in the Coast and Oceans (Seaweed and Mollusks). Content for the first subtopic and launch of the web-page is expected by the end of this fiscal year.

The SUCCESS Monitoring and Evaluation System (MandE) was completed and upgraded so that field partners can securely login and remotely enter data for and supporting evidence documents for indicators. Reporting options were upgraded to include a format that shows progress toward Life-of-Program goals by intermediate result.

SUCCESS published the second edition of the *Basins and Coasts* newsletter on the theme topic of Environmental Security. The newsletter and other information on the SUCCESS and the Global Water for Sustainability (GLOWS) Programs can be found at <http://www.imcafs.org/>

2.5 Science for Management

2.5.1 Tanzania

The main field focus in Tanzania is the community-based and scientist supervised monitoring of no-take zones in the Menai Bay Conservation zone. A second sampling six months after the baseline was conducted took place. This second sampling experience has pointed out the need to refine sampling procedures for more representative data collection. An initial analysis of the data has been conducted that serves as a model for future time series analysis for assess whether the reserve effect and recruitment effect are occurring. One of the areas is already showing signs that abundance and size of cockles is increasing. The other area of research is addressing mariculture fingerling supply – seasonality and abundance. This effort has been funded through leveraged funds from SIDA. Initial analysis of data confirms the hypothesis of larvae abundance is timed to rainy seasons – which then provides farmers with a better seasonal calendar of when ponds need to be prepared for stocking. Additional work on geographic distribution is needed and this research effort is continuing with the SIDA funds.

2.5.2 Nicaragua

Two research efforts are underway: 1) assessment of microbiological water quality in the black cockle (*Anadara tuberculosa* and *A. similis*) extraction areas; and 2) application of real time PCR to detect the Hepatitis A virus in cockle tissue samples. Water and tissue samples are coming from areas of heavy cockle extraction—the Aserradores, Padre Ramos and El Realejo Estuaries. These tests detect pathogens that threaten human health, Hepatitis A, *Salmonella spp.*, *Vibrio parahaemolyticus* and *E. coli*. To date, Hepatitis, Salmonella and Vibrio have not been detected. *E. coli* levels vary considerably between sampling stations and estuary, but show a trend towards higher contamination during the rainy season. This phase of sampling will be completed in September and the data will inform MARENA and local cockle harvesters of areas that contain safe or dangerous levels of *E. coli*. This work will continue for an additional two years under pending funding (\$37,000) from the USAID-funded Aquafish CRSP. This will allow development of rigorous models for the purpose of developing shellfish sanitation plans for the three estuaries—plans similar to those used in the U.S. to assure the safety of shellfish.

2.5.3 Ecuador

A second round of water quality sampling was completed in the Cojimies Estuary. This sampling/monitoring is being funded from Ecuador's national coastal management program (PMRC) with SUCCESS providing critical information on water quality for decision-making. Preliminary findings were presented to a technical panel of 12 experts from government and universities for their review and comments, which will be incorporated into the final report.

II. PROGRESS IN MEETING PLANNED OUTCOMES OF WORKPLAN PROGRAM ELEMENTS

3. Tanzania On-the-Ground Results

3.1 Background

The Program is assisting local communities to improve income earnings through mariculture and is promoting improved resource management and conservation through community-based management approaches. In Fumba, Bweleo and Unguja Ukuu in the Menai Bay Conservation area in Zanzibar, the program is assisting women shellfish farmers with improved production techniques and with managing harvests of wild stocks. Trials of half-pearl production are also underway and the first half pearl was harvested in May, 2007. In Mpafu village in Mkuranga and Changwahela village in Bagamoyo, milkfish production is being piloted. In Mlingotini, Changwahela, Pande and Kondo villages in Bagamoyo district, new seaweed farming practices are being developed and farming expanded to new beneficiaries and communities. In all the mariculture sites, the Program is supporting the development of zoning schemes and other policies to ensure that sustainable mariculture practices are followed and to show how national and district-level ICM and conservation plans and policies can be linked to and be implemented at the village-scale.

3.2 Report Period Accomplishments (January 1 – June 30, 2007)

Activities in Tanzania are grouped into two main categories of activities: 1) promotion of mariculture as a diversified livelihood option and 2) community-based resources management and zoning initiatives. Activities are dispersed in three sites within Tanzania: the Menai Bay Conservation Area, Bagamoyo district, and Mkuranga district.

3.2.1 Promotion of Sustainable, Low-tech, Mariculture Practices Appropriate in the East Africa Region as Diversified Livelihood Options for Coastal Communities

In all sites, baseline records and data are collected on a continuous basis in order to monitor environmental changes. The SUCCESS Tanzania Program is taking action to ensure its activities comply with the integrated coastal management (ICM), mariculture development guidelines and other government policies aimed at safeguarding the environment. Parallel economic analyses were done to evaluate the advantages of new versus traditional methods (e.g., off-bottom method versus floating seaweed farms) and provided a comparative assessment of profitability of the mariculture systems being promoted. Cost benefit analyses on seaweed farming is complete and that for milkfish farming is being reviewed.

Piloting sustainable low-cost techniques for milkfish farming in East Africa

After termination of extension activities with two farmer groups in Mkuranga (Kirago farm and Mkadam farm) SUCCESS is now extending services to a new group with existing ponds in Kisiju village who have repeatedly been asking for technical assistance. Beginning the 2nd quarter of the third year, SUCCESS assisted the Kisiju ponds re-doing the construction and surfacing both of which were done wrongly. The pond construction is nearing completion.

In Bagamoyo, the successful farmer at Regent enterprises has re-stocked his ponds for a fifth time and continuing technical assistance is being provided

Conduct regional and national outreach on milkfish farming

The extension manual on milkfish farming has undergone internal peer review and final edits have been completed with the text is now ready for publishing. This extension manual will serve as an excellent “how to” resource for individuals wishing to venture into this livelihood, and as the basis for the extension course on milkfish farming scheduled for July 2007. There are requests from several donor projects for technical assistance and advice on milkfish farming and these groups will be targeted for the planned training event later in Year 3.

The SUCCESS Program has developed a draft policy paper on milkfish farming including environmental concerns and safeguards which is scheduled to be reviewed with the Tanzania Department of Fisheries in the next quarter as part of the Departments current process of developing an aquaculture strategic plan. The Department wants to include the policy issues and recommendations raised by SUCCESS into the draft frame work.

Seaweed farming

SUCCESS has completed the zoning of Mlingotini bay which will be attached to the village bylaws that have already been signed by the District Commissioner to enable the village leaders to take action against the fishermen violating the bylaws. The zoning maps have been completed and village meetings will be called soon to approve the zones. Signboards with the Mlingotini bay maps will be put in each village and buoy will be used to mark passageways, mooring areas and seaweed farms. The farmers in Pande and Kondo are confident that they can then re-deploy and make more plots for seaweed farming.

The seaweed farming is in trial in Bweleo, Zanzibar and showing similar results. Seaweed farming on the floating-lines is also progressing well with no die-offs and high growth rates in Bweleo, similar to the Bagamoyo results. The floating-line system was introduced to Kisakasaka village where three plots have been deployed and four dema traps are under construction. Farmers are convinced the floating-line method is better than and also a good complement to the off-bottom method. It allows farmers to grow more *K. alvarezii* variety of seaweed, which commands a much higher price than the *E. denticulatum*. There is high potential throughout the country for expanded seaweed production and higher income generation from this new farming method. The floating line seaweed farming innovation has the potential for widespread dissemination and will be presented in the 3rd Regional training workshop on mariculture due in July 2007.

The economic analysis report has been completed and shows that independent farmers and the floating-line method both increase profits for current growers.

Shellfish farming in Menai Bay

The SUCCESS pearl specialist returned to Tanzania to evaluate the half-pearl initiative and provide a second intensive training in half-pearl processing and shell jewelry- making. The half-pearl grafting had progressed well with local community members now able to implant the half-pearl nuclei with reduced mortality rates. The floating-line system for bivalves deployed in Bweleo in April 2006 proved a better method than the method of using enclosures. The number of line plots was increased from the initial five to ten. One plot each has been introduced to Fumba Bondeni and Fumba Chalení. The floating-lines are being used for culturing *Pinctada* as well as pearl production. Ninety eight large bivalves were seeded for pearl production. Unfortunately, the March 2007 equinox spring tides the tide got so low that the many of the bivalves died leaving only 24 seeded oysters. In May 2007 the first pearl was harvested and it was then noted that the *Pteria* species takes more than the anticipated 9 months. The actual harvesting will be done in October-November, 2007. Grafting of more pearl oysters of both species will

continue in preparation for a second harvest in June 2008. Testing of a floating line system for holding the grafted pearl oysters continued. However, this system is proving inadequate for anything other than small numbers of pearl oysters, as it sinks under too much weight. A move is needed toward more “standard” culture systems for bivalves—systems such as the submerged long line method. The Institute of Marine Sciences provided 1 masters scholarship to assist in studying the bivalve farming from spat collection to pearl production.

Developing capacity for entrepreneurship of women groups

Terms of reference for a local group to provide extension assistance to the women’s groups involved in shell craft manufacture and bivalve (including half-pearl) farming was completed. The TORs were circulated widely and four scholars applied to do the training. After discussions with SUCCESS and WIOMSA officials a lecturer from the University of Dar es Salaam Dr Allan Shimba of the Marketing Department of the Faculty of Commerce of the University was selected and contracted to conduct the course. The course was conducted in May, 2007. Meanwhile 2 applicants from Department of Cooperatives in the Ministry of Agriculture, Zanzibar assisted Dr Allan during the training and are now working with the groups after the training to make sure that they are really taking off. The training was done in May, 2007. The evaluation revealed that the training was very successful. Currently, the 2 extension agents are working with the villagers to develop and run either cooperatives or Saving and Credit Cooperative Society (SACCOS). A second jewelry workshop was also conducted that focused on improving quality, precision cutting and carving skills and processing of half-pearls. The women producing and selling jewelry have made great strides. Upon their own initiative, they located and hired a Masaii woman to teach them beading. They are now producing attractive sets of beaded jewelry using shells and have sold several shows where they have also received press attention. The women started a revolving fund for equipment maintenance and replacement costs.

3.2.2 Promoting Community-based and District-scale Resource Management and Zoning Policies

Zoning plan for seaweed farming in Mlingotini Bay

The zoning maps that were developed jointly by the seaweed farmers and fishermen have been added to the base maps and arrangements are underway to discuss the maps in village meetings for their approval before the maps are mounted on signboards and buoys put in the bay to mark the different zones. Meanwhile SUCCESS is urging Bagamoyo district to launch the bylaw prohibiting fisheries in the seaweed farming areas.

Establishment of improved harvest practices (no-take zones) for cockles in Menai Bay

After a number of meetings, villagers in the four villages of Bweleo, Fumba Bondeni, Fumba Chaleni and Nyamanzi identified no-take areas for improved cockle management. The process was participatory and the decisions concerning closed locations, rules, penalties and management committees were made by the villagers. The Menai Bay conservation authority attended the opening orientation for the communities and is fully supportive of this effort. A draft ordinance for the no-take zones has been produced and accepted by the villagers, MBCA and the Department of Fisheries and Marine Products. The ordinances which were also reviewed by a lawyer have been reformatted to include the main laws governing conservation and local government. The bylaws have been returned to the village leaders, Menai Bay Conservation Area, Department of Fisheries and Marine Products, the District Commissioner, the members of parliament and house of representatives for the area for the final reading and approval.

Five key individuals from each village were identified to lead community monitoring efforts. These and other villagers (145 individuals, 87 female) attended training events in each village on how to monitor and conduct analysis of size distribution of the cockles. After the training, these individuals conducted the baseline assessments in the designated no-take zones, the collected areas, and control sites far from the villages—where collection is minimal. The second monitoring was conducted in the 2nd quarter of Year 3. It continue bi-annually for three years.

Development of a zoning plan for the mangrove estuary in Mkuranga to plan orderly and environmentally appropriate milkfish farming expansion

This activity was terminated so that resources and effort could be concentrated on the other above mentioned activities.

3.3 Tasks, Milestones, Dates, Status, Comments

Tasks still pending, completed during, or added as of June 30, 2007

Tasks and Milestones	Date Due	Status	Comments/Challenges and Constraints
Promotion of Sustainable, Low-Tech, Mariculture Practices Appropriate in the East Africa Region as Diversified Livelihood Options for Coastal Communities			
<i>Piloting sustainable low-cost techniques for milkfish farming in East Africa</i>			
Monitor and analyze harvest results from milkfish, bivalves, and seaweed in all sites	Continuous	Ongoing	Pearl harvesting has been postponed to October-November as growth has been slower than expected.
<i>In Mkuranga</i>			
Conduct monthly extension visits to two farmers at two pilot farms	continuous	Stopped at Mpafu and started at Kisiju	
<i>In Bagamoyo</i>			
Conduct monthly extension visits to advice, document and assess farming practices.	Continuous		Ponds restocked
<i>Policy</i>			
Conduct study on fry and fingerling abundance and seasonality (Leveraged funds from MASMA)	June 2007	Ongoing	The 1 st Progress report submitted to WIOMSA
Conduct assessment of fry and fingerling collection methods	November – December 2007	On-going	Funded by SIDA
Prepare policy brief on milkfish farming (two days working session at TCMP)	November December 2006	Completed	
Produce milkfish and seaweed economic reports	April 2007	Completed	
<i>Conduct regional and national outreach on milkfish farming</i>			
Complete milkfish guide integrating results from the	February, 2007	Progressing well	Last edits by Edwin incorporated. Ready for

pilot fish ponds			print layout
Seaweed farming			
<i>In Bagamoyo</i>			
Complete comparative economic analysis of floating an off-bottom seaweed farming methods	January – February 2007	Completed	
Extraction for carrageenan	May 2008	Ongoing	Two seasonal samples collected
Assess Dema traps being used to capture fish feeding on the floating line system and conduct routine monitoring	September 2006	First phase finished, second phase after launching village bylaws	Launching of the bylaws to be done in the 4 th quarter. Nylon dema traps being constructed instead of the short lived bamboo traps
<i>In Menai Bay</i>			
Conduct extension visits for seaweed farming to monitor and provide assistance on the floating line system	On going	On-going	
<i>Shellfish farming in Menai Bay</i>			
Monitor mortality and growth	ongoing	Equinox mortalities on the seeded oysters	Deeper sites being sought to avoid similar future incidences
Pearl shellfish and floating farms	On going	encouraging	First single pearl harvested in May 2007. More harvest delayed to October when the nacre layer will be thick enough
Monitor nacre production in oysters	ongoing	encouraging	Seeded oysters continue to show good growth of nacre.
Conduct additional implants of pearl oysters	ongoing	Stopped at 98 oysters, only 24 remaining after the equinox mortalities	Stocking to resume in next quarter after the strong southerly monsoon that discourages diving
Developing capacity for entrepreneurship of women groups			
Develop terms of reference for entrepreneurship training workshop (Haws) and conduct the training	October 2006	Training completed	The training was rated as excellent and there is a marked change among the women on salesmanship
Produce and market shell handcrafts	Ongoing	On-going	The women groups have started selling jewelry
Conduct extension visits	ongoing	ongoing	
Promoting community-based and district scale resource management and zoning policies			

<i>Zoning plans for seaweed farming in Mlingotini Bay</i>			
Complete existing map with proposed use zones	November 2006	Completed	boundaries drawn by fisher folks and endorsed by the seaweed farmers in the three villages ready for final submission
<i>Establishment of improved harvest practices (no take zones) for cockles in Menai Bay</i>			
Generate GIS maps with no take zones plotted	October 2006	Completed	
Draft by laws for three villages using Bagamoyo no take by-laws as example	November 2006	Completed	
Submit by-laws and maps to village council for approval	December 2006	Completed	Final submission done
<i>Development of zoning plan for the mangrove estuary in Mkuranga to plan orderly and environmentally appropriate milkfish farming expansion</i>			
GIS map created	October 2006	Completed	Activities terminated for the time being due to overstretched resources and staff

3.4 Priorities for Next Quarter (July 1- September 30, 2007)

- Launch policy for no-take zones in Menai Bay
- Launch the village bylaws in three Mlingotini villages, put up the signboards and put demarcating buoys in the bay
- Support gate construction for the Kisiju ponds
- Follow up and report on the developments in the aquaculture strategic plan frame work
- Complete milkfish farming manual
- Train shell handicrafts groups on entrepreneurship
- Harvest the first half-pearls
- Harvest the first bivalves from the floating line system
- Set up long line culture systems for bivalves and pearls
- Design and start spat collection work to assure a sustainable source of pearl oyster spat

4. Nicaragua On-the-Ground Results

4.1 Background

Community-based co-management of the black cockle fishery is progressing well in partnership with the Asseradores community. The community now works with UCA to respect the no-take areas and collaborate in monitoring populations and growth rates. Another community has also been brought into the effort and agreed to respect the no-take zones. The first annual sampling of population will occur in September, when it the success of the experiment will be assessed.

The farmed shrimp industry is of national and regional importance as a principal export commodity to Central America and the U.S. (principal market). Yet, approximately 60% of Nicaraguan shrimp farming takes place in protected areas. Hence, UCA extension staff have been

working with small-scale shrimp farmers at FINCAMAR, Cristo Rey and Agropesca to promote and implement good management practices (GMPs) in shrimp culture—practices that help prevent environmental problems and increase production efficiency.

Ecotourism efforts at Padre Ramos have advanced well, with all studies and trainings completed. This includes identification of aquatic and terrestrial tourist trails, trail development, training of local guides, training in food service and customer services and publication of a brochure of attractions and tourist routes. Community members are beginning to practice tourism and UCA is supporting by assisting with marketing and liaising with tourist operators and potential clients.

4.2 Report Period Accomplishments (January 1 – June 30, 2007)

4.2.1 Promotion of Sustainable, Low-tech, Mariculture Practices Appropriate in the Central American Region as Diversified Livelihood Options for Coastal Communities

Continue implementation of best management practices (BMPs) to improve environmental sustainability and operational efficiency

Good Management Practices (GMPs)

Implementation of best management practices (BMPs) for shrimp culture continued with extension visits to shrimp producers of FINCAMAR and AGROPESCA as well as visits to another farm in Padre Ramos, Cristo Rey, in coordination with another funder's program. Recommended BMPs include the proper use of field equipment, maintenance of production records, monitoring of water quality, improvement of survival and growth rates, and management of feed and fertilization. These practices simultaneously improve production, reduce costs and mitigate potential environmental impacts. One farm whose pump broke faced a decision—complete the production cycle and risk losing most of the crop from insufficient water supply, or as recommended by UCA, sell the shrimp for bait. The farmers chose the latter and harvested and sold 8,000 pounds as bait. All three farms have now stocked and begun a new production cycle.

Overall, achievements to date are significant. For the first time, there are improved yields, reduced costs and consistent monitoring of water quality. Findings from this work will be used to analyze the effects of implementation of BMPs.

Policy

For years, UCA has worked with the Nicaraguan Association of Aquaculturists (ANDA). More recently this has included working with the government to develop a national code of practice for responsible aquaculture. During this reporting period, the National Government approved the code, making it part of the Nicaraguan legal framework. This approval is a major step in moving the shrimp industry and a major national export commodity further along the spectrum of sustainability. Once officially published by the government, UCA will help disseminate the information in and assist producers in compliance with the code.

4.2.2 Technical Support for Alternative Livelihoods

Since the Padre Ramos estuary was declared a protected area, there have been a number of impacts on local communities due to strict management regimes. For instance, harvest of post

larvae shrimp, an activity undertaken almost exclusively by women, is no longer allowed. Cockle harvesting—another major income earner especially among women, is banned for several months of the year. There are few income alternatives available to these coastal communities surrounding the estuary, which are considered some of the poorest communities in the country. However, SUCCESS implemented a strategy to pilot potential alternative livelihoods that could improve the economic welfare of individuals living around the estuary and at the same time prevent people from being “forced” to engage in illegal resource management practices to survive.

Technical assistance to women’s group producing bread

SUCCESS assisted members of the women’s Cooperative *Altagracia* to establish a small bakery. Bread production helps these women, who are fishers of shrimp post larvae (an illegal activity in the Padre Ramos Reserve), to generate alternative revenues and hopefully persuade them to reduce their illegal fishing. Students for Free Enterprise (SIFE) and instructors from the UCA tourism department provided training on quality control, hygiene and entrepreneurial vision. Early problems with inaccurate measurements of ingredients and too-complicated bookkeeping have been resolved. Bread is now being made on a regular basis, all the bread produced is sold, and an economic analysis shows the activity is more profitable than shrimp postlarvae fishing.

The success of this bread-baking has lead other communities to request similar support to start bakeries. Three more are planned and will primarily be funded through the private sector and other donors, but with technical support from SUCCESS.

Alternative tourism development in protected coastal areas



Lunch on ecotour of shrimp pond farm

Extension assistance continued to Fincamar members in Padre Ramos working on community-based ecotourism. The aquatic and terrestrial trails were defined and mapped out. Areas where the terrestrial trail needs work to improve access were identified and work begun to fix these. Information on good customer service and client communication was provided to Fincamar and a brochure with a map of the trails and a listing of the tourist attractions on the route was produced.

During the annual SUCCESS workplanning meeting in Managua in July, the SUCCESS team completed a field trip which included taking the aquatic and part of this terrestrial trail. During this tour, Fincamar members demonstrated high quality skills in food service and guiding. UCA will now assist them with marketing and liaising with tour operators and other potential clients.

Rabbits and iguana rearing

Work with rabbit and iguana rearing will be continued by the participant although no further funding will be provided by SUCCESS. These activities are being folded into the various tourist attractions present at Fincamar which include the shrimp pond and other agricultural activities.

4.2.3 Promoting Community-based and Municipal-scale Resource Management and Zoning Policies

Monitoring of the Estero Real

Monthly water quality monitoring of the Estero Real continues with financing from the ANDA. The Program produced GIS maps, which include physical-chemical and microbiological information from the 14 monitoring stations and which allow users to better understand relationships between parameters and activities such as aquaculture and agriculture. Results will support implementation of the Estero Real management plan, which was approved last year.

Environmental education and good practices

As mentioned earlier, when the Code of Conduct for Responsible Aquaculture is published, UCA will assist with distribution to and awareness-raising of various stakeholders.

UCA continues to work with two Peace Corps Volunteers in small business development and environmental education. Fourteen small business events were held at the high school in Puerto Morazán as part of program “Creative Business” (LEC), which trains students in entrepreneurship. Two short practices were conducted in May with the community of El Manzano to follow-up on a mangrove nursery previously developed for reforestation efforts. An event to establish a similar nursery in Puerto Morazán will be held next quarter.

Alternative forms of management for the cockle fishery in Aserradores and El Realejo

A major focus of SUCCESS has been to conduct participatory research with the goal of improving management of the cockle fishery. Initially, two study sites were planned—one within and one outside of the protected area of Puerto Morazán. Because permission to work within the protected area was denied, this work is instead being conducted with the cockle-collecting communities in Aserradores in Chinandega, which lies outside the protected area. However, community members from the protected area continue to be included in this work. In this reporting period, nine more families in Aserradores became involved in the co-management efforts, making a total of 48 women and 27 men supporting this work.

Cockles samplings were conducted at a limited number of points marking six months since the establishment of the no-take zones. Preliminary sampling served as a practice for the community members in preparation for the first annual sampling. It also served to boost community enthusiasm for the work. Early indicators point to there being an increase in the number of cockles found in the no-take zones with large numbers of small cockles being found. Verification of this must await the annual sampling of all the study zones (fishing and no-take) in September.

Monitoring cockle growth rates: UCA scientists have been working to determine the minimum size at which two commercial species of cockles should be harvested. Since October 2005, UCA and community members have conducted monthly sampling of the cockles at Ballona (Padre Ramos). Initial data analysis showed a likely sampling bias, so new data was collected in May (at Aserradores to minimize logistical problems). Hereon, sampling will occur every two months.

Cockle fisheries data: A meeting was held with the cockle vendors to review the data on total volumes of cockles taken in the area. The meeting occurred during the period of the annual ban on cockle-collecting (except when restaurants make orders), which also coincides with the period when fisheries are yielding the most fish and hence when women and children temporarily cease large-scale cockle collecting.

Marketing assessment for cockles: A student has been collecting data on the demand for the black cockles collected in Managua as compared to those being harvested in Aserradores in order to determine if direct marketing from Aserradores to Managua is economically feasible. It was determined that the amount supplied by Aserradores is small in comparison to the demand in

Managua and that the costs of establishing a marketing effort far outweighed potential economic benefits. Although the results were not favorable to the expectations of the Aserradores cockle harvester, the report was given to the Mayor's office in Leon which is supporting the efforts of another group of cockle gathers in case the information is useful to them.

4.2.4 Science for Management: Water quality of shellfish collection areas and microbial analysis of shellfish meats to improve public health and decision-making for cockle fisheries management

In July 2006, the microbiological study of water in shellfish extraction zones began in the Padre Ramos, Aserradores and El Realejo estuaries. Monthly water sampling has been conducted for a year and samples analyzed for *E. coli*, *Salmonella* spp., and *Vibrio parahaemolyticus*—major pathogens found in contaminated waters and which can cause serious human illness or death. Their presence would indicate that environmental degradation is occurring due to contamination with human or animal wastes. In August 2006, the study of the presence of *Hepatitis A* in cockle tissues was begun, with cockles sourced from commercial collection centers along the Pacific coast. To date, *Salmonella*, *Vibrio* and *Hepatitis A* have not been detected in their respective analyses. Varying levels of *E. coli* have been detected for the three sampling stations within each of the three estuaries under study. By the end of Year 3, there should be sufficient data to begin to identify areas and times for safe shellfish collection. This work will continue for another two years with \$37,000 from the AquaFish CRSP, providing time and funds to develop a more comprehensive and reliable model upon which to base shellfish sanitation plans.

4.2.5 Communications and Outreach

CIDEA adheres to USAID branding requirements for SUCCESS published materials and signage. The latter are located in high traffic areas within the communities where SUCCESS is active. CIDEA and their SUCCESS partners and activities continue to be profiled in the local press. The Year 4 workplan will include a more detailed and proactive communications and outreach plan.

4.3 Tasks, Milestones, Dates, Status, Comments

Tasks, Milestones, Dates, Status, Comments completed as of June 30, 2007

Task	Date Due	Status	Comments/Challenges/Constraints
1. Promotion of sustainable, low-tech, mariculture practices appropriate in the Central American Region as diversified livelihood options for coastal communities			
1.1 Continue the implementation of best management practices (BMPs) to improve environmental sustainability, operational efficiency and to reduce production			
Continue to conduct applied research and work with communities to select bivalve species and culture systems	Continuous through January 2008	On track	Work continues as planned; new community members involved.
<i>Best/Good Management Practices</i>			
Conduct series of one-day, mini-extension workshops	NA	On track	Workshops continue on twice monthly basis.
Provide technical assistance	On-going	On track	Extension visits made twice monthly;

extension visits to continue implementation of BMPs (as possible within economic constraints of farms) at Rosita farm and Cristo Rey in Fincamar and Agropesca	through Year 3		new production cycles started.
Provide water quality monitoring equipment and other items to shrimp farmers working to implement BMPs (costs partially supported by OIKOS)	October 2006: equipment purchase August 2007: final report	On track	Water quality equipment (salinity, pH, dissolved oxygen and HACH kit) purchased for Rosita and Mario Carrillo farms (both in FINCAMAR) and Agropesca farm; monitoring in progress and report due August 2007
Provide technical assistance and extension support to monitor and track key parameters over the culture cycle, including production and environmental data	October 2006-onwards	On track	Monitoring underway, final report to be submitted August 2007 with technical, economic and environmental data from the farms
Provide support to farms in securing financial support for implementation of other BMPs through meetings with donors, government agencies and financial institutions	On-going during Year 3	On track	Profile of proposed project developed and submitted to Millennium Challenge Account representative Arlene deFranco
<i>Policy</i>			
Provide support to Nicaraguan government on outreach for adoption of BMPs once Code of Conduct approved at national level; hold joint meetings with other institutions promoting BMPs for awareness-raising and dissemination of BMPs to ANDA members, unions of cooperatives, and independent shrimp farmers	On-going once Code of Conduct approved by government	On track	Code of Practice now approved by government. Awaiting government publication of Code to proceed with outreach activities.
Print and distribute BMPs once approved by government	On-going once Code of Conduct approved by government	TBD: to be determined once Code of Practice published by government	Code of Practice approved but awaiting guidance from government on outreach activities.
Publication and distribution of the mangrove manual	October 2006	Completed.	Copies still need to be sent to CRC and UHH.
1.3 Continue technical support to other forms of alternative livelihoods			
Continue extension to support Best Management Practice	Continuous	On-track	Extension visits conducted twice monthly, details presented in this report;

efforts by FINCAMAR and Agropesca			technical assistance visits conducted in El Manzano, Los Clavos, Agropesca and FINCAMAR
1.3.1 Support AltaGracia women's cooperative to produce and sell hammocks			
Finalize feasibility study for hammocks and present to Altagracia Cooperative	October 2006	Completed	Feasibility study completed with negative indications. Women are now focused on bread making instead of hammocks.
Continue technical assistance to women's group producing bread			
Develop documentation, evaluations and business plans for alternative livelihoods and diversification of aquaculture	January 2006	Completed	Study for bread-making completed and production/financial data continues to be collected.
Conduct second phase of small business workshop in coordination with SIFE	November - December 2006	Completed.	Final work with SIFE was completed in March 2007.
Conduct extension workshops and follow up to commercial bread-making	November 2006 - February 2007	On-track	Extension visits continue.
Document the experience	November 2006 - March 2007	On-track	Documentation on-going
Provide assistance in record-keeping of costs and sales	On-going	On-track	Work now being conducted to further simplify and adapt record keeping methods.
Continue technical assistance to alternative tourism development in protected areas coastal areas			
Deliver extension support services to/for development of alternative livelihoods and natural resources management		Completed	All tourism related studies completed. Brochure published with aquatic and terrestrial trails indicated. Community-members are beginning to practice with invited groups. Remaining work will focus on marketing the tours and extension visits to reinforce skills.
1.4 Promoting community-based and municipality-scale resource management and zoning policies			
<u>Monitoring of Estero Real</u>			
Conduct monthly water quality monitoring of Estero Real	On-going	On-going	GIS maps produced containing physical-chemical and microbiological information from the 14 monitoring stations; October 2006 Management Plan for the Estero Real approved by government; put forth for public comment by Central and Municipal Governments

<u>Environmental Education and Good Practices</u>	On-going	On Track	Work continues in coordination with Peace Corps Volunteers, one of whom is focusing on environmental awareness. Two short events held and planning for a reforestation training event conducted.
<u>Institutional Agreements and Collaboration</u>	On-going	On-going	Institutional agreements and/or collaboration continue with <i>SIFE</i> (Students in Free Enterprise), Department of Economic and Business Sciences-Tourism Degree Program (FCYTA), students and faculty in UCA tourism department, Municipal Government, local high schools, Peace Corps, ANDA (Nicaraguan Association of Aquaculturists), MARENA, and Lornica (French NGO) – see body of report for details on each
1.5 Alternative forms of management for the cockle fishery in Aserradores and El Realejo			
Implement activities related to cockles to increase revenues	On-going	On Track	Marketing study completed to determine if direct marketing from Aserradores indicated.
Meet with community to establish Management Committee and agreements on the voluntary measures for management	September 2006	First meetings completed; to be continued through end of management effort	Multiple meetings held with community
Conduct extension visits to the trial areas to work with the community to ensure continuation of management regime in no-take and fishing areas	December 2006 - June 2007	On-track	Extension visits conducted on regular basis
Work with cockle buyers (consolidators) to develop record-keeping system to estimate collection volumes in study area	October 2006	On track	Visits and discussions with cockle buyers conducted; collectors agreed to work with UCA; sampling begun. Several meetings have been held with buyers to collect data.
Visit cockle collectors in Maderas Negras area in Aserradores estuary to disseminate results of study	November 2006	On track	Two visits were made in February and March. Community agreed to respect the no-take zones.
Meet with community to evaluate results of research including discussion of results of sampling and compliance with commitment (verbal) to adopt management system	May 2007 and September 2007	On track	Meeting will be held in September to discuss results of the 6 month and annual sampling.
Install sign in Aserradores that includes name of research	December 2006	Completed	Signed installed with project name and sponsors.

project, its participants and its management guidelines			
Continue and finalize governance baseline for Aserradores	December 2006- February 2007	On-track	Data collection initiated.
Other activities related to cockle management			
Continue collection of growth rate data for cockles in the established trial in Padre Ramos	New dates: March 2007- April 2008	Re-initiated	Due to sampling bias discovered during data analysis, a new effort to monitor cockle growth rates was started in Aserradores.
Science for Management: Water quality of shellfish collection areas and microbial analysis of shellfish meats to improve public health and decision-making for cockle fisheries management			
Conduct monthly water quality monitoring	June 2006 - May 2007	On-track	Water quality being monitored in shellfish growing areas to assess potential for future bivalve culture and evaluate sanitation of collected bivalves; microbiology of water at shellfish extraction sites and cockle tissue samples begun in three sites (Aserradores, El Realejo, and Padre Ramos)
Conduct laboratory analysis of water samples	June 2006 - May 2007	On track	PCR techniques being applied to detect the presence of Hepatitis A; to date none has been detected.

4.4 Priorities for Next Quarter (July 1-September 30, 2007)

- Finish collecting baseline data for Aserradores
- Continue working with shrimp farms Rosita, Cristo Rey, and Agropesca on BMPs
- Work with bread-making group to expand marketing efforts to small stores in area
- Conduct exchange visit with a commercial bakery
- Conduct exchange visit by Fincamar eco-tourism participants to other eco-tourism endeavor(s)
- Continue support to cockle collectors for testing of co-management system; take first annual population samples

5. Ecuador On-the-Ground Results

5.1 Background

SUCCESS provides technical assistance to local groups that are testing and implementing alternative livelihood activities, promoting new forms of sustainable production and improving existing livelihoods. This includes beekeeping, family gardens, tree crops for reforestation, and ecotourism. Participatory methods are used to engage participants in planning for natural resources use and developing local capacity for integrated coastal management for the Cojimies estuary and surrounding watersheds. Through SUCCESS and other initiatives, EcoCostas has helped create enabling conditions for integrated coastal management involving major stakeholder and user groups with stakeholders now more active in conservation and management efforts.

EcoCostas has attracted other NGOs and sponsors to work in the Cojimies and Esmeraldas to support similar management and community development efforts. For example, the European Union recently awarded an EcoCostas partner NGO, Etos, major grants for reforestation of 3,000 ha and for a community sanitation project, which SUCCESS personnel will help execute.

5.2 Report Period Accomplishments (January 1 – June 30, 2007)

5.2.1 Promotion of Diversified Livelihood Options for Coastal Communities in the Cojimies Estuary to Raise Incomes and Promote Conservation-Oriented Practices

Develop diversified mariculture technologies using indigenous fish species (Chame)

Extension work continued with the *Chame* producers of *Nuevo Milenio*, although progress was impeded by the continued lack of the 1,000 fingerlings needed for the planned polyculture of shrimp and *Chame* in a 2.6 ha pond. In June, a fingerling source was located at a Salima shrimp pond and *Nuevo Milenio* producers are now negotiating purchases. Stocking will occur the first week of July. However, the scarcity of fingerlings (previously abundant) highlights the need to conserve wetland areas in Cojimies and to promote improved management practices with shrimp farmers who poison their ponds prior to stocking to eliminate organisms (including juvenile *Chame*) that might compete with shrimp. An improved practice would be to release the fingerlings into the wild or sell them to *Chame* farmers, now that there is a market for these.

Data collection on the seasonal prices for *Chame* in its principal market, Chone, continues. EcoCostas, UHH, and volunteer support from Dr. Quentin Fong from the University of Alaska are designing a rapid international market study to evaluate export potential.

Expand beekeeping livelihood to additional women beneficiaries

Polibio Morillo, a 30-year commercial beekeeper, oversaw a 50-hour internship training at a commercial beekeeping operation in Atacames for the one existing and four new beekeepers. The latter were each given basic equipment and two hives of domestic bees to start their enterprise. Next quarter, Morillo will visit the new beekeepers to reinforce their skills.



A label was designed to brand Cojimies honey for marketing in major nearby markets. The new brand name “Cojimiel” combines the Cojimies site name and the Spanish word for honey “miel”

Document impacts of backyard gardening activities and preparation of medicinal plant gardens

Family gardening is continuing to provide income and healthy food for local families. EcoCostas staff are collecting data on the garden outputs and providing occasional technical assistance.

Nuevo Milenio set up a large-scale plant and tree nursery (includes medicinal plants) for use in reforestation and for sales to the public. A \$2,000 USAID/Ecuador grant funds the activity, while SUCCESS provides maintenance support.

Implementation of the medicinal plant garden by members of the school EcoClub “Guayacanes” has been delayed as the original garden site was taken over for the construction of new buildings. The garden has been relocated and should be completed by July 2007. This school’s students are also volunteering their help in setting up the *Nuevo Milenio* nursery.

Establish low impact eco-tourism enterprises as an income generator and to promote improved conservation ethics among local residents

Tour guide training was provided to five women and four men from Mompiche, Bolivar and Mache already involved in tour guiding. One is now conducting bird and wildlife-watching tours on the road to Mompiche and aquatic trail tours along the coast and will soon add whale-watching. Another is building a small hotel. Two others play the marimba for small groups of tourists being taken to the coastal town of Bolivar by another NGO, FUNDECOL. (Tourist surveys to evaluate the needs and interest of tourists visiting the Mompiche-Bolivar area are completed and the data is being analyzed.)

5.2.2 Shrimp Best Management Practices

The draft governance baseline focusing on shrimp farming and the environment was sent to CRC in June and is under review. An ICM public event in Pedernales in June was a rich source of information for the baseline. This owes to the participation of area shrimp farmers, who play a key role in using and managing estuary resources. Through the efforts of SUCCESS, they now have an increased awareness of the need to prevent further degradation of the estuary. For example, the president of the Pedernales shrimp association paid for a radio campaign aimed at preventing further deforestation of the Mache-Chindul watershed. Dialogue with shrimp farmers continues to evaluate the potential of conducting training in and implementation of BMPs in Year 4. They are also discussing other ways of getting involved in estuary and watershed management.

5.2.3 Natural Resource Management

Reforestation Strategies Using High Value Crops

To date, 10.45 ha (26 acres) of cacao trees have been planted in *Nuevo Milenio*. The first harvest will occur in 2009. Meanwhile, the trees are already providing shading and soil stabilization. Four groups of farmers (8 individuals) within *Nuevo Milenio* have planted a total of 5.52 ha (13.8 acres) of passion fruit. Initial harvests totaled 1,253 kg (2756 pounds), selling for eleven cents per kg and generating revenues of \$138. Yield per ha should increase as the plants enter full maturity. As mentioned earlier, EcoCostas personnel are also assisting an EU-funded project to reforest 3,000 ha of land. Some of the trees will be purchased from the *Nuevo Milenio* tree nursery.

Build skills and capacity of local promoters

The local promoters continue to be active in the family gardening, tree nursery, EcoClubs, beekeeping, *Chame* culture and ecotourism efforts.

A workshop to build ICM capacity and skills was held in June in Pedernales. Thirty-seven people from various organizations, NGOs, user groups, authorities and technical institutions in Muisne and Pedernales attended. Workshop findings were incorporated into a report and the governance baseline. The workshop helped SUCCESS orient its future workplan towards more intensive watershed and estuary restoration in the Cojimies area, as SUCCESS efforts have created a demand for management and conservation actions. A compilation of reports and findings from the EcoCostas studies was distributed and is being used as a guide for management efforts.

Environmental awareness-raising and constituency-building

EcoCostas has been collaborating with schools' EcoClubs on the Scholar's Network (Red Escolar). EcoClubs are designed to raise awareness of management and conservation, and convey practical skills in these areas and in alternative livelihoods to the Cojimies area youth and educators. Preparations are underway for the annual school competitions on the environment and on a composting/worm rearing effort. The compost and worms are for local gardening and sales.

5.2.4 Outreach

The resource document used in the ICM workshop in Pedernales was widely distributed to other stakeholders. It bears the USAID identity and acknowledges USAID/EGAT SUCCESS Program contributions and USAID/Ecuador funded-efforts (characterization of watersheds, *Chame* studies). The Year 4 workplan will include a detailed, proactive communications/outreach plan.

5.3 Tasks, Milestones, Dates, Status, Comments

Tasks still pending, completed during, or added as of June 30, 2007

Task	Date Due	Status	Comments/Challenges/Constraints
Promotion of diversified livelihood options for coastal communities in the Cojimies estuary to raise incomes and promote more conservation oriented practices			
Establish Livelihood Diversification Fund for sustainability of local economic development	November 2005	On track	Small grants awarded to novice beekeepers and to build commercial scale plant/tree nursery in <i>Nuevo Milenio</i> .
Develop diversified mariculture technologies using indigenous species (<i>Chame</i>)			
Livelihood diversification pilot projects	Ongoing	Delayed	<i>Chame</i> culture impeded by lack of fingerlings; new source of fingerlings now located and stocking should occur in July 2007
Prepare business plans with stakeholders for various livelihood alternatives	On-going	Completed	General business plan and feasibility studies completed.
Continue to monitor and document <i>Chame</i> development; evaluate production economics and price variations during the year in wetlands and ponds stocked with <i>Chame</i> and shrimp	On going	On track	A new source of fingerlings has been located at a shrimp pond near Salima. Stocking expected to take place. Seasonal price variations being tracked.
Research and document marketing channels for <i>Chame</i>	On going	On track	Currently collaborating with UHH and the Fisheries Industry Technology Center at Univ. of Alaska to design a simple market study to assess international potential.
Extension meeting for <i>Chame</i>	June 2007	Delayed	Due to problems with stocking

producers to exchange experiences and methods			and fingerling sources, this meeting has been delayed until Sept. or Oct.
Expand beekeeping livelihood to additional women beneficiaries			
Livelihood diversification pilot projects	Ongoing	On track	Santiago Yin and four new producers underwent training at a commercial beekeeping facility. Basic beekeeping equipment provided to new beekeepers. Two extension visits will take place next quarter to assist novices.
Prepare business plans with stakeholders for the various livelihood alternatives	Ongoing	On track	First phases of studies for bees completed; data collection continues. Label for branding Cojimies honey completed.
Improve product quality through technical assistance to use centrifuge/filters for processing	On going	Completed.	Centrifuge for honey extraction and improved filtration resulting in better honey product.
Document impacts of backyard gardening activities and medicinal plant gardens			
Livelihood diversification pilot projects	Ongoing	On track	Family gardens continue in Bolivar with little assistance. Now continuing data collection to assess economic value of gardens. <i>Nuevo Milenio</i> garden/nursery set-up and planting completed. Chamanga EcoClub garden delayed, due to displacement of garden by new construction, but now underway in a new site.
Establish low impact eco-tourism enterprises as an income generator and to promote improved conservation ethics among local residents			
Prepare business plans with stakeholders for the various livelihood alternatives	December 2005	On track	Nine guides trained this quarter. Four of the nine now conducting tourist activities.
Map newly formed islands and define their legal status	December 2006	50% completed	Mapping completed. Determination of legal status begun, awaiting government response.
Natural Resource Management			
Reforestation strategies using high value crops			
Livelihood diversification pilot projects	Ongoing	On track	First passion fruit harvested yielding 1,253 kg and \$138 in revenues.
Prepare business plans with stakeholders for the various	Ongoing	On track	Work continues with planting and cultivating the two crops.

livelihood alternatives			EcoCostas also collaborated with other NGOs which obtained a major grant for the EU for reforestation of 3000 ha in Esmeraldas. Some of the trees will be provided by the nursery at NM.
Two visits by specialists to teach and monitor organic methods.	February to August 2007	On track	New EcoCostas personnel resident in Cojimies assigned to task and working on this with a new Peace Corps volunteer.
Build skills and capacity of local promoters			
Conduct ICM workshop to kick-off natural resources initiatives and present alternative management practices	February 2007	Completed	Workshop held in June with 37 participants. Report issued and results incorporated into governance baseline.
Environmental awareness-raising and constituency-building			
Provide continued support to EcoClubs	Through September 2007	On-track	Preparatory work for this year's activities with composting and vermiculture underway.
Disseminate and diffuse materials produced during year	On going	On-track	All studies and research findings were compiled and distributed to authorities, organizations and stakeholder at the ICM workshop.
Begin development of an ICM network for coast of Ecuador	July 2006	Completed	Workshop on BMPs for ICM was held in March and document, "Connecting leaders for social change from the Ecuador Coast" has been published and distributed.
Complete biodiversity threats assessment	January 2007	On track	Study completed, a draft issued which is now under review.
Develop and maintain inter-institutional agreements and collaborations	On-going	On-track	Three volunteers from the Omaere Foundation worked with EcoCostas for one month. A new Peace Corps Volunteer is now working with EcoCostas, which is also providing housing. EcoCostas also collaborated with other groups to help them obtain two major grants-one for reforestation (above) and one for community sanitation efforts in the area. EcoCostas data and research were used to support the proposals for these projects.

Water quality monitoring for Cojimies Estuary			
Conduct water sampling in Cojimies Estuary	November 2006 and February 2007	On-track	Water sampling was completed. Preliminary report presented to board of technical experts. Final report to be issued in July.

5.4 Priorities for Next Quarter (July 1-September 30, 2007)

- Complete definition of legal status of islands to determine possible use for tourism
- Continue technical assistance for passion fruit and cacao cultivation and monitor results
- Support two extension visits by agriculture specialist on organic methods and cultivation
- Finalize and publish findings of water quality study
- Continue to monitor and document *Chame* development: production economics, price variations, culture methods (e.g. stocking in wetlands, polyculture), marketing channels
- Conduct meeting for *Chame* producers to exchange lessons and methods

A SUCCESS-Ecuador Story

Developing local eco-tourism in Mompiche

Mompiche is a small, but rapidly growing beach town with some of the finest surf breaks in the Americas. It is attracting increasing numbers of international and national tourists. In an effort to promote sustainable, locally based tourism, EcoCostas has been conducting studies to evaluate possibilities for developing local tour guides and has even started to conduct tour guide training.



Carlos Garcia

Carlos Garcias, a resident of Mompiche and a supporter of sustainable-tourism development efforts is an active member of the local promoters group in the Cojimies area. Carlos' interest in tourism began years ago with his work at the Casa Blanca de Same Resort in Esmeraldas (a major tourist resort). When he returned to Mompiche, he encouraged his father to abandon fishing for a living and build a small hotel, now owned by the father and managed by Carlos. Once the hotel was operating, Carlos began to provide walking tours along the Mompiche River free-of-charge to their hotel visitors.

Since attending a SUCCESS event to build capacity for local leaders, Carlos has been promoting good practices to prevent destruction of natural resources (e.g. forests, rivers, fauna) in the Mompiche area and more recently attended the SUCCESS guide training course. Since then, Carlos has been advertising to tourists in Mompiche and conducting two-hour guided trail tours to observe the rainforest and fauna such as monkeys and toucans. He charges \$3 per person with up to eight persons per trip. He and his father also offer a boat tour for \$40 per group using their family-owned boat with outboard motor—formerly used for fishing. During tourist high season when Ecuadorians from the highlands visit the beach, Carlos will also offer whale-watching tours.

This is an example of how minimal training combined with intensive community interaction can not only catalyze new economic activities that minimize negative impacts on natural resources, but can actively engage ordinary citizens in conservation, planning and management efforts.

6. Regional Capacity Building

6.1 Background

There is international recognition that the lack of human capacity is a, if not *the*, key factor limiting forward progress in coastal management (ICM). While past decades have seen many one-off training courses in ICM and MPA management around the world, these have not produced the level capacity needed to practice ICM effectively. No standards of performance are attached to training and there is no mechanism to ascertain the capacities of a given ICM or MPA practitioner. To exacerbate the problem, numerous regional and global conferences, conventions, and declarations are calling for a significant increase in investments in integrating, or ecosystem-based approaches to the management of coastal and marine resources. One expression of this renewed interest and commitment are the calls for increasing the extent of MPAs around the world. Yet already, MPAs tend to be understaffed or staffed with individuals lacking in the full suite of training and skills needed for proper management of these areas. There is also increasing recognition that the principles and tools developed through the practice of ICM over the past three decades need to be applied at regional scales and link management of coastlines to the management of watersheds and freshwater systems.

The proposed response to this challenge is to design and deliver in the Western Indian Ocean (WIO) region, a Certification Program for professionals working in MPAs and in Latin America a Certification Program for ICM practitioners working at the municipal level. This response to these initiatives in both regions has been positive and indicates there is a true need for and that this is the correct approach for addressing the pressing capacity gap. In the case of both certifications, these are pilot programs designed to be adapted for replication in other countries and regions.

6.1.1 East Africa

At a February regional workshop, the “strawman” framework for the program, which was circulated early in Year 3, was further vetted and detailed. This included a decision that limiting a Certification Program to MPA Managers (as originally conceived) would be too limiting and hence a three-level program was agreed upon—with different levels targeting individuals with fewer or greater years of experience and supervisory responsibility. All agreed it is essential to draw upon the wealth of knowledge and curricula on MPAs already existing in the region.

In June, a South African who attended the workshop and is experienced in certification initiatives was contracted to flesh out the components, identify potential program partners (course deliverers, examiners, practicum hosts, funders). The consultant’s outputs (due in September) will first be reviewed and approved by the WIOMSA Secretariat and CRC, next with the Certification Program Board, and then with those who have provided input to and support for the initiative.

This reporting period, SIDA provided leveraged funds to the certification initiative while WWF, IUCN and others—including the World Commission on Protected Areas/Marine—offered verbal support to and/or have participated in developing the concept. Meanwhile, the EU-funded Regional Coastal Management Program has been in discussion about possibly providing some funding and other support to the initiative.

6.1.2 Latin America

At the EcoCostas Assembly in May 2007 it was agreed to partner with the SUCCESS Program to jointly develop a Certification Program directed at ICM practitioners operating at the municipal scale. The proposed strategies for developing this program are similar to those put forward for practitioners involved at the MPA-scale in East Africa and will have the same four program components—the (four Es) of Education, Experience, Examination, and Ethics—while course content will be complementary rather than identical.

Stella Viejo, former director of the well known and respected UN-sponsored Train-Sea-Coast program, was asked about her interest and availability to assist in developing this program and she has agreed to do so. A scope of work will be developed and she will be contracted this year

As mentioned earlier, during this reporting period significant sources of leveraged funds were secured in support of this initiative. This includes funds from the Swiss Avina Foundation (through EcoCostas) and the LOICZ Program. This is in addition to the contributions of time from numerous individuals of the EcoCostas network.

6.2 Tasks, Milestones, Dates, Status, Comments

Tasks still pending, completed during, or added as of June 30, 2007

Task	Date Due	Status	Comments/Challenges/Constraints
Training Courses			
Tanzania: Shellcraft jewelry-making training		Completed	
Tanzania: Entrepreneurship/business training		Completed	
Certification			
<i>East Africa</i>			
Contact potential partners to socialize certification concept	October 2006-February 2007	Completed	Drafts of concept and curriculum for MPA Manager certification circulated in region; verbal discussions on same indicate serious interest
Develop February 2007 meeting agenda and planning	January 2007	Completed	
Hold meeting with partners and participants from Mozambique Kenya, Tanzania and South Africa, Madagascar, Seychelles	February 2007	Completed	Workshop conducted; need for program affirmed
Start initial implementation activities	March 2007	Completed	The “start” was completed; implementation will be ongoing
Finalize concept paper for certification with the East Africa strategy included	June 2007	Completed	Revised with inputs from workshop. Rest to be developed by consultant (see new task added next)

Develop scope of work (SOW) and hire consultant to detail all aspects of program	September 2007	On-going	SOW finalized; consultant contracted
Latin America			
Continue working with EcoCostas regional network to assess interest in the certification program	April 2007	Completed	At EccNet meeting in April 2007 agreed upon to move forward in support of this initiative
Finalize certification concept paper including the full description of standards and requirements	March 2007	On going New target date September 2007	See last item under East Africa section above.
Dissemination of Extension Materials			
With partners, develop overarching communications and dissemination strategy for SUCCESS materials	February 2007	Delayed	Draft overarching strategy presented to CTO May 2007; detailed plans for each country to be included in Year 4 workplans
Identify list serves and other distribution lists to which SUCCESS can announce availability of these documents	December 2006 then on-going	On Target, on-going	First such vehicles made public in December 2006 through IMCAFS, SUCCESS websites and <i>Basins and Coasts</i> Newsletter
Post selected training materials on CRC theme-based knowledge management web system	December 2006 then on-going	Delayed	Pending appropriate development of KM system; selected sessions/modules may, however, now be posted on SUCCESS website
Distribute at Summer Institute and other SUCCESS and non-SUCCESS partner training courses	March 2007 then on-going	On Target	Being shared/disseminated as appropriate at field-based and CRC/UHH based training courses

6.3 Priorities for Next Quarter (July 1-September 30, 2007)

East Africa

- Hire coordinator to be based at WIOMSA offices to manage Certification Program
- Review and provide comment on final consultant report
- Submit at least one proposal to non-USAID donor agency seeking support for the Program
- Continue working with RECOMAP project to identify certification components to fund
- Continue conversations with WWF, WCPA-Marine, WWF, TNC, others re Program
- Begin to identify potential Program Board members

Latin America

- Complete first draft of code of good practices as foundation for ICM Certification Program
- Work out details of certification progress
- Contract one or more specials for the certification team
- Structure process for EcoCostas business plan, which focuses on this Certification Program

7. Regional Networks and Knowledge Management

7.1 Background

SUCCESS is partnering with EcoCostas in assembling a Knowledge Management System (KMS) to serve a network of Latin American projects. The EcoCostas-CRC Network KMS is hosted in Guayaquil, Ecuador and managed by EcoCostas. In East Africa, SUCCESS is partnering with WIOMSA to develop a regional network of practitioners, initially focused on mariculture and then expanding to include MPAs – linked to the certification program, which will interact through a KMS hosted at the WIOMSA office.

7.2 Report Period Accomplishments

7.2.1 Development of a web-based knowledge management system Latin America

The EcoCostas-CRC Network KMS has been turned over to EcoCostas. The site is online at <http://www.EcoCostas.org/kms/> and was designed and developed with support from SUCCESS. The site includes a blog (WebLog) for member posting.

7.2.2 Development of a web-based knowledge management system, East Africa

WIOMSA began construction of a web forum for mariculture activities in East Africa. The forum will provide for moderated discussions on mariculture and will be organized around specific topics relevant to the CRC and SUCCESS approach. WIOMSA has developed and will be hosting a web forum for mariculture activities in the East Africa region. It would provide for a moderated discussion on mariculture and would be organized around specific topics relevant to the CRC and SUCCESS approach. CRC will assist with this system as it develops and work to integrate the system into CRC initiatives on the mariculture theme.

Three consultants have been contracted to collect information on the status of mariculture in Tanzania, Kenya and Mozambique. The reports that are due in the next quarter will provide an initial information base for the web-based information system as well as help to determine initial discussion topics for the forum. The forum is due to start in the next quarter.

7.2.3 Cross Portfolio Learning

The Cross-portfolio Learning Topics (CPLT) system on the CRC website has been programmed and completed. Content development on selected topics is under development with the freshwater to estuaries theme page completed and can be viewed at http://www.crc.uri.edu/topics.php?id_topic=1. The second theme is on mariculture, one of the fastest growing food sectors and heavily traded commodity worldwide. While it is an opportunity for coastal development and poverty reduction in coastal areas, if not guided properly, can be a significant environmental threat as well. There are three mariculture sub-topics of 1) General Approaches to Addressing Mariculture as an Element of ICM Programs, 2) Managing Pond-Based Mariculture Systems in the Coast (Shrimp and Fish), and 3) Managing Open-Water Mariculture Systems in the Coast and Oceans (Seaweed and Mollusks). Content for this second subtopic is almost completed and this web page will be launched by the end of the fiscal year. SUCCESS is also planning to link these theme pages on the SUCCESS project web site as well in Year 4.

7.2.3 KM Support to other SUCCESS Activities

The SUCCESS Monitoring and Evaluation System (MandE) was completed and is being used for reporting monitoring and evaluation data from SUCCESS field sites. Field partners can securely login to the system and remotely enter data into forms for indicators spanning the complete range of intermediate results (IRs) in the Program's performance monitoring plan (PMP). Evidence files submitted remotely by the field sites provide an auditable collection of information. Reports can be generated as needed for any location, person submitting data, or reporting period. A second report format was developed that shows indicator targets alongside indicator results. This format shows progress toward life of project goals by intermediate result.

7.2.4 Disseminating the SUCCESS Experience

The SUCCESS and Global Water for Sustainability (GLOWS) Programs, under the umbrella of the Integrated Management of Coastal and Freshwater Systems (IMCAFS), produced and distributed the second edition of the *Basins and Coasts* newsletter on the theme topic of Environmental Security. The newsletter is hosted at <http://www.imcafs.org/>. The site includes not only the newsletter but information on SUCCESS and GLOWS and pointers to their websites.

7.3 Tasks, Milestones, Dates, Status, Comments

Tasks still pending, completed during, or added as of June 30, 2007

Task and Milestones	Date Due	Status	Comments/Challenges/Constraints
Development of a web-based knowledge management system (in LA)			
Expand the KM system to include monitoring of selected on-going activities conducted by network members as a common monitoring and evaluation process	April - September 2006	This task has been taken over by EcoCostas directly	The LAC KMS is being run from EcoCostas headquarters in Guayaquil, Ecuador
Preparation for development of web-based knowledge management system (EA)			
Prepare templates for assembling data and conducting analysis of mariculture initiatives region	September 2006	Delayed to second half 2007	Data system design has been discussed and systems will be developed in the second half of 2007
Produce theme-based KM section on Mariculture	December 2006	Delayed New target September 2007	Additional effort devoted to <i>Basins and Coasts</i> newsletter delayed launch of web-based content site; information structure completed content development has started
KM support to other SUCCESS activities			
Complete PMP web-based database system	December 2005	Completed	Completed and operational, now being used remotely with secure access enabled
Disseminating the SUCCESS Experience			
SUCCESS and IMCAFS Websites	November 2006	Completed	Websites for both IMCAFS and SUCCESS built and launched
IMCAFS Electronic Newsletter	May 2007	Completed	Issue #2 of <i>Basins and Coasts</i> launched

7.4 Priorities for Next Quarter (July 1 – September 30, 2007)

- Work with WIOMSA to develop online systems to track mariculture activities in the region
- Complete content evaluation and load information on mariculture cross-portfolio learning topics into theme-based KMS at CRC
- Launch third issue of *Basins and Coasts* newsletter
- Continue to refine and update SUCCESS and IMCAFS websites; improve ‘Stories from the Field’ section specifically

8. Science for Management

8.1 Background

SUCCESS science for management includes two sub-components: 1) cross-project learning and, 2) site-level science for management. These are closely linked to the SUCCESS knowledge management and monitoring and evaluation activities.

A primary premise of SUCCESS Program is that tangible benefits to quality of life through a livelihoods approach are a necessary (but not alone sufficient) condition to sustained success of ICM programs. Unfortunately, there is a growing body of anecdotal evidence suggesting many livelihood activities are not increasing household income in coastal communities, or reducing pressure on coastal and marine resources. For this reason, SUCCESS selected this topic as the main theme for a cross-portfolio global learning agenda. Since all three field sites (and the associate award site in Thailand) have significant livelihood components, they provide living laboratories for this learning agenda, and local partners involved in their implementation are clients for the learning outputs.

The learning agenda was launched in earnest in Year 3. Two main outcomes are expected:

- Assessment project livelihood strategies on coastal households, and ICM initiatives
- Improved understanding of factors leading to successful and unsuccessful livelihood components of ICM initiatives

The learning agenda intends to use these findings as a basis for achieving additional outcomes:

- A set of recommended strategies that improve the probability of achieving successful livelihood activities as part of marine conservation and resource management initiatives
- Improved capacity built among local partners for integrating successful livelihood strategies into on-going ICM initiatives
- Information, including a training module, made available to donors and practitioners on how to design and implement better livelihood strategies

The microenterprises and beneficiaries in Thailand and Tanzania were studied in Year 3, with quantitative surveys conducted in February and March, 2007. In Year 4, similar qualitative case studies will be conducted in Nicaragua and Ecuador.

A second component of the SUCCESS learning agenda is/was to conduct biodiversity threats assessments for each of the SUCCESS field sites. Working with partners in the field, assessments were completed for Nicaragua, Ecuador and Tanzania. The three assessments identified existing

and anticipated direct and indirect threats to biodiversity in each site. They also described local biodiversity conservation efforts that address these threats. The assessments recommend conservation goals and targets, suggest investments/activities to address priority threats, and as necessary, recommend adaptations to the current SUCCESS goals and activities in each site.

A third SUCCESS learning component is to revisit and improve the governance baselines for Ecuador and Nicaragua. These baselines were revised during this reporting period.

8.2 Site-Specific

Ecuador

EcoCostas conducted water quality monitoring to establish a baseline of the water quality of the Cojimies Estuary. This is supported by \$30,500 of leveraged funds from PMRC (Ecuador's national coastal program agency). A U.S. company donated a water quality probe and an ESPOL scientist is leading this monitoring effort. The final water sampling representing the rainy season was performed in April. The preliminary technical report was represented to a group of 12 technical specialists for their review and comment. The final report is expected in September.

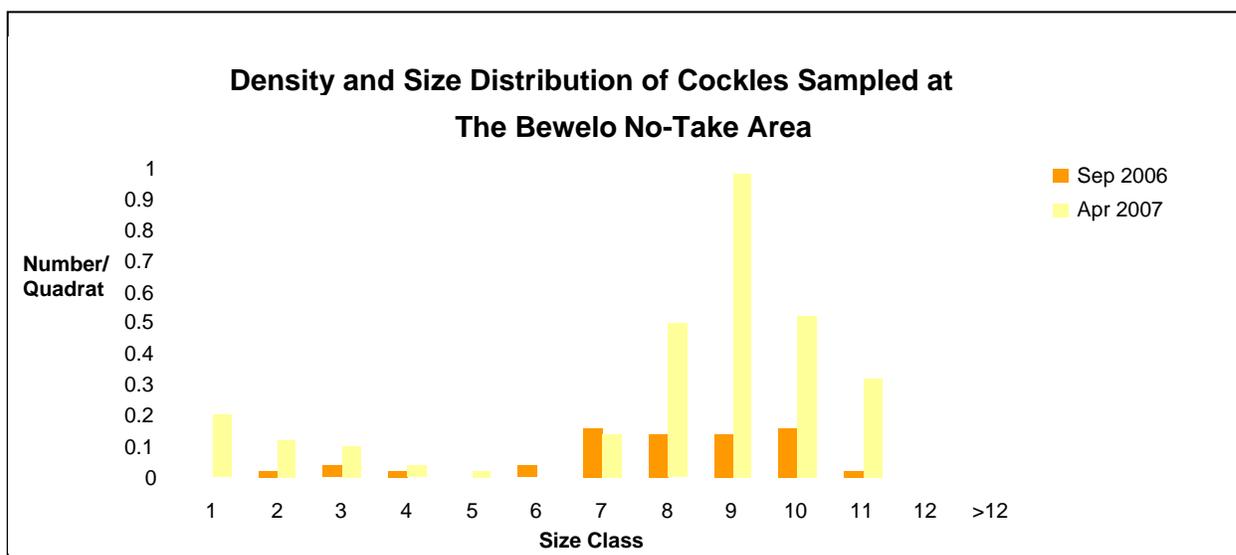
Nicaragua

In Nicaragua, the black cockle has great economic and ecological value, but is also threatened by fishing and habitat loss. Unfortunately, there is scant scientific information for MARENA to use in formulating management regimes or for guaranteeing that this widely consumed shellfish is safe to eat. Meanwhile, CIDEA continues to work on: 1) cockle fisheries management; 2) researching the microbiological aspects of food safety for cockles; and 3) researching growth rates to determine optimal minimum harvest size. The latter involves working with commercial collection centers where fishers sell their cockles. To date, some concern about shellfish safety may be allayed as none of the suspected pathogens except *E. coli* were found in water or cockle tissue. While *E. coli* did exceed safe levels at some sampling stations, this was primarily during the rainy season. Final results from a year of sampling are due in September. Cockle size measurements were re-started in Aserradores as data previously collected at La Bayona appeared to have sampling bias. Additional funding to continue this research for an additional two years is being provided by the AquaFish CRSP.

Tanzania

In Tanzania, the use of Fiji-style no-take areas is being developed in the Menai Bay conservation area as an approach to address declining harvests of cockles. An Institute of Marine Science (IMS) graduate student is assisting with the community development process and is undertaking thesis research linked to bio-physical monitoring of cockle abundance both inside and outside the no-take areas designated. The student is using a before-after-control impact (BACI) analysis to assess conservation performance of the no-take areas. This is participatory action research linked to the community-based monitoring. A second round of sampling was conducted in late March and initial time series results assessed. One site is showing preliminary signs of increased cockle abundance and size inside the no-take zone

A separate study funded by SIDA (\$6,000) is evaluating milkfish fry and fingerling seasonality and abundance in several mainland areas where milkfish farming is viable. This study is also investigating the best gears for collection of fingerlings with least disturbance to the environment and catch composition of milkfish as well as other species caught by these gears. Preliminary results show that milkfish fry abundance is linked to rainy season periods.



8.3 Tasks, Milestones, Dates, Status, Comments

Tasks still pending, completed during, or added as of June 30, 2007

Task and Milestones	Date Due	Status	Comments/Challenges/Constraints
Tanzania, Nicaragua, and Ecuador biodiversity threats assessments	November 2006	Completed	
Tanzania microenterprise case study completed	December 2006	Ongoing	Draft completed.
Tanzania quantitative survey of microenterprise beneficiaries	March 2007	Completed	
Thailand quantitative survey of microenterprise beneficiaries	March 2007	Completed	
Ecuador and Nicaragua governance baselines	June 2007	Completed	

8.4 Priorities for period (July 1 – September 30, 2007)

- Finalize reports on microenterprise studies in Tanzania and Thailand
- Begin planning for SUCCESS final learning products and events

9. Global Leadership

9.1 Conferences and Committees

As leader of the Land Ocean Interface in the Coastal Zone (LOICZ) committee on coastal governance, Olsen garnered support for a three-year effort to design governance baselines in different regions beginning with Latin America in 2007. This will be funded by LOICZ and the Inter American Institute (IAI) for Climate Change Research. The International Human Dimensions program also expressed interest in supporting this effort. At the annual LOICZ Scientific Steering Committee (SCC) Olsen facilitated a symposium on "Applying the Best

Available Science to Policy Decision-making and to Changes in Societal Behavior". He was re-appointed to the SCC for a three year term and will serve on the LOICZ Executive Committee.

Olsen also attended the global Symposium on Integrated Coastal Management in Arendal Norway, where he was a keynote speaker and chaired the session on Coastal Governance.

9.2 Publications

CRC finalized and disseminated The Fisheries Opportunity Assessment Report. USAID commissioned CRC to lead development of this report to identify and recommend opportunities for the Agency to contribute to *Improving Management of Fisheries to Enhance Conservation, Ecosystem Health and Productivity*. The report informs why small-scale fisheries are important and the relationship to biodiversity conservation. It describes issues affecting the sustainability of fisheries and associated threats to biodiversity. It includes a review of past and current activities of USAID and others in order to identify strategic opportunities for USAID. The final section of the report offers recommendations for action at global, regional, and national levels.

As a member of The National Academy of Sciences Committee on Capacity Building for Ocean and Coastal Stewardship, Olsen worked extensively on writing and editing sections of a report on this topic. He was also lead author of the two final chapters. The report is out for external review.

10. Cross-Cutting Elements

10.1 Gender Mainstreaming

In SUCCESS field sites, women usually have few educational opportunities and little political representation, access to income, and say in natural resources decision-making. Therefore, SUCCESS focuses on working with women to overcome gender-based barriers to resource management and increase their engagement in income-generating activities. For example, in Tanzania, SUCCESS is working with women to pilot bivalve grow-outs, half-pearl farming, and seaweed farming (both men and women, with the latter comprising more than 50%). In Ecuador and Nicaragua, women comprise the majority of the cockle harvesters in SUCCESS sites and, thus make up a large share of key stakeholder groups and targeted program beneficiaries.

The expectation is that supporting livelihoods for women and vulnerable groups will build their income and sense of empowerment, improve their overall awareness of ICM, and increase their willingness and interest in participating more fully in other aspects of the Program's ICM activities. The microenterprise learning agenda explores the extent this expectation is being met.

CRC made a presentation at the Woodrow Wilson Center's program for Environmental Change and Security highlighting CRC's gender mainstreaming efforts including those supported by the USAID global programs, and using examples from SUCCESS and the completed PEACE project.

In this reporting period, women comprised 33% of the individuals participating in coastal resources and conservation planning initiatives, 60% of those trained, and 75% of those benefiting from natural resources based enterprises. Over the life of the project, women comprise 41% of the individuals trained, 47% of those participating in coastal resources and conservation planning initiatives, and 69% of those benefiting from natural resources based enterprises.

10.2 Health and HIV/AIDS

As part of its learning agenda, SUCCESS compared two forms of seaweed farming as an alternative livelihood activity for HIV/AIDS affected households. The assessment concluded that the higher value “*cottonni*” variety of seaweed is a better alternative for these households than is the “*spinosum*” variety as *cottonni* requires less labor for the same level of earnings and less labor-intensive livelihoods have been recommended as a coping strategy for HIV/AIDS affected households. While there are complexities to growing the *cottonni* variety, SUCCESS conducted trials of alternative technologies, which demonstrated that use of these technologies can help overcome some of the complexity issues. Diffusion and adoption of these new methods will make *cottonni* farming a more realistic alternative for HIV/AIDS households.

In Nicaragua, illnesses such as hepatitis and diarrhea are common in coastal communities. SUCCESS has been investigating whether the consumption of cockles from estuaries may be a contributing factor. Preliminary results of a study to assess water quality in cockle growing areas for *E. coli* contamination have documented levels well above US standards for safe harvest and consumption of shellfish during rainy periods. This information will help in setting the stage for further discussions concerning management of shellfish beds to ensure safe and sanitary harvests.

10.3 Priorities for Next Quarter (July 1 – September 30, 2007)

- Assess gender impacts as part of overall analysis of microenterprise case study in Tanzania

11. Volunteers

11.1 Background

Following its long tradition of using volunteers in its international work, CRC through the SUCCESS Program has successfully assigned Volunteers for Prosperity (VfP) in Thailand, Nicaragua and Ecuador.

11.2 Report Period Accomplishments

Katie Wolff returned from her assignment assessing water quality in Klong Naka, Thailand. Her experience is being written as a story to be sent to VfP and posted on the SUCCESS website. Dr. Jurij Homziak, University of Vermont Extension, Lake Champlain Sea Grant, is a natural resources management, fisheries and aquaculture development specialist assigned to Nicaragua to assist CIDEA in developing a framework for an effective and financially sustainable coastal extension program. UCA is also using a Fulbright Volunteer, co-supported by SUCCESS, to assist with institutional strengthening and extension planning. Meanwhile, in Ecuador Dr. Randy Lehr from Grays Harbour College in Washington to assist with water quality monitoring of the Cojimies estuary. Other volunteers have been identified for placement in Nicaragua and Tanzania in Year 4. The Volunteer for Prosperity Global Giving Project has yielded \$335 in on-line donations for volunteers on assignment in Tanzania. The site is currently advertising for a volunteer to assist as a small business specialist with experience in costume jewelry trade.

11.3 Tasks, Milestones, Dates, Status, Comments7

Task	Date Due	Status	Comments/Challenges/Constraints
Recruit and screen volunteers	November 2007	On-going	Recruit small business jewelry volunteer for Tanzania
Orient and assign volunteers	June and July 2007	Completed	Nicaragua and Ecuador
Evaluate and make recommendations for volunteer program	September 2007	On-going	The evaluation will be included in the decision to continue the International volunteer program
Engage CRC, WIOMSA, EcoCostas and UCA in the volunteer program by identifying detailed volunteer job description for posting on the CRC web site.	July 2007	On-going	Continue to receive new volunteer assignments for posting
To decide on continuation with the Volunteer for Prosperity Giving Portal	July 2007	On-going	CRC's participation in the Giving Portal has been at no-charge. If and when this changes CRC will re-evaluate its participation.
Update CRC web site with new volunteer assignments	July 2007	On-going	
Decide on continuing or ending CRC's International Volunteer Program	January 2008	On-going	CRC's SUCCESS program will discontinue funding the International Volunteer for Prosperity program in Year 4. Alternate funding will need to be secured for the program to continue beyond Year4.

11.4 Priorities for Next Quarter (July 1 –September 30, 2007)

- Advertise for small business/jewelry volunteer for Tanzania
- Submit Volunteer story from Thailand to VfP and post on CRC web
- Debrief returned volunteers from Ecuador and Nicaragua
- Write stories from Ecuador and Nicaragua volunteers and submit to VfP; post on CRC web
- Evaluate membership with on-line Giving Portal
- Investigate funding alternates for volunteer program and decide if it will continue

12. Monitoring, Evaluation and Reporting

12.1 Background

The SUCCESS monitoring and evaluation (M&E) activity includes two components: 1) Performance Management and 2) Learning. The background to and accomplishments of the second component are described in the science for management section of this report.

The SUCCESS Performance Management Plan (PMP) was approved in January 2006. A summary of indicators and results for January-June 2007 is included in Appendix 1. This includes

fifteen indicators collected quarterly that feed into the USAID/EGAT NRM team’s indicators and strategic objectives. The web-based database system that was launched in Year 2 allows field site personnel to now directly input their PMP data. This reporting period, the report-writing feature of this system was improved and indicator names and definitions revised based on a revised PMP.

Under the learning component, activities are underway to promote applied research and adaptive management. The three major elements, described in the science for management section, are:

- The SUCCESS learning agenda (including IMCAFS learning)
- Governance baselining
- Biodiversity threats assessments (new element in third quarter)

12.2 Report Period Accomplishments (January 1 – June 30, 2007)

The SUCCESS PMP was revised in January 2007 to more fully correspond with USAID’s indicators. This included revising the names and definitions of four indicators, which now are:

- Indicator 1. Number of hectares in areas of biological significance under improved management
- Indicator 2. Number of hectares in areas of biological significance showing improved biophysical conditions for selected parameter(s)
- Indicator 3. Number of policies, laws, agreements, or regulations promoting sustainable natural resource management and conservation implemented
- Indicator 6. Number of people with increased economic benefits derived from sustainable natural resource management and conservation.

As part of revising the indicator names and definitions, the program also reviewed targets. While targets for indicator three and six remained the same, targets (including the baseline) for “hectares under improved management” were changed. This included changing the reporting to define the hectares as marine or terrestrial. The new indicator definitions are presented in Appendix 1.

During Year 3, SUCCESS undertook a major internal review of activities for field activities as well as global and regional based activities. This review looked at accomplishments to date, priorities over the past 2.5 years, and priorities moving forward over the remainder of the project. Each regional/global program element was reviewed and Life of Project Strategies mapped out and budgeted. The same process was initiated for the field sites, which was considered preparatory work prior to the annual partners meeting in July, where review of on-the-ground results in the three countries was slated as a major topic of discussion.

12.3 Tasks, Milestones, Dates, Status, Comments

Tasks still pending, completed during, or added as of March 31, 2007

Task	Date Due	Status	Comments/Challenges/Constraints
PMP indicators and targets revised	April 15, 2007	Completed	
Web-based monitoring system developed	June 2006	Completed/ Ongoing	System established, but reporting formats options being expanded.
Mid-term program evaluation and review of program activities	June 2006	Ongoing	CRC-based workshops were held in April and May. Results vetted at annual partners meeting in Nicaragua (July 2007).

II. MANAGEMENT

In planning for the upcoming Annual Partners meeting it was decided to use a new format to allow in-depth thinking on Program direction, including critical thinking about what SUCCESS is doing and achieving and how this links to biodiversity conservation and the broader ICM practice and learning at national, regional, and global scales. This would include looking to the longer term, through to and past the SUCCESS life-of-Program. It was also decided that the team should discuss reducing the level of effort and budget for field activities and increasing those focused on regional and global initiatives including certification, knowledge generation and outreach.

The initial thrust of SUCCESS Program was on livelihoods and characterization of the “place” through development of governance baselines, threats assessments, etc. Today, three years into the SUCCESS Program, the emphasis has shifted towards building on (vs. abandoning) this work, and focusing more on identifying priority actions directed at more classic natural resource management and ICM goals, including linking SUCCESS activities to biodiversity conservation threats. However, this mid-course shift or re-balancing of emphasis presents some challenge for the field sites and CRC will work closely with the sites during this transition period. Our initial premise that we could start with a livelihoods approach to build support for and demand for ICM has proven successful, the main caveat being the need to keep the field programs focused on the larger ICM issues of concern, and leveraging the livelihood activities into initiatives with more emphasis on resource management and conservation issues.

An external mid-life-of-Program assessment has been suggested. While this presents an opportunity to demonstrate the achievements of SUCCESS, it is also a chance to receive a fresh assessment of adaptations SUCCESS might make to reap even more significant results over Life-of-Program. The cost of such an assessment, however, will stress what is already in a relatively small budget for the Program activities planned for Year 4. Budget scenarios are underway to identify where the monies may be shifted to accommodate the cost of the assessment.

III. UPCOMING CHALLENGES, CONSTRAINTS, AND OPPORTUNITIES

Opportunities

There are two potential opportunities to build on and expand SUCCESS initiatives in Year 4. Discussions continue with the USAID Global Climate Change Program for an approximate US \$84,000 “add-on” to the SUCCESS Leader Award to address global climate change as it specifically affects developing country coasts and how coastal management must adapt actions and plans to be ready to mitigate the impacts.

Discussions are also underway with the USAID West Africa Regional Bureau regarding their potential interest in an Associate Award focused on small-scale fisheries issues. Very preliminary discussions are underway regarding potential opportunities and ideas for work on a sustainable and certified blue crab initiative in Southeast Asia. SUCCESS has been engaged in a dialogue with Phillips seafood and major exporter of crab meat from SEA to the U.S and with the MSC.

Challenges/Constraints

The newest allocation strategy of USAID funding is that the Global Bureau will fund primarily (if not exclusively) activities that have at least regional and preferably global relevance and impact, while the country missions fund country/local focused initiatives. Unfortunately, USAID missions in two SUCCESS Program countries—Ecuador and Nicaragua—have significantly reduced budgets for the environment component of their portfolio. This seriously limits opportunities for Associate Awards, now or in the future, should the SUCCESS Leader Award be renewed. In Tanzania – we have been highly successful in convincing the mission to invest in activities that were initiated by the SUCCESS program as well as other global bureau initiatives (freshwater to estuaries, linking HIV/AIDS to conservation). However, these have not been funded through the LWA mechanism but through a direct cooperative agreement with CRC and through a contract with the GETF.

IV. ASSOCIATE AWARDS

Thailand

A six-month no-cost extension of three project elements (Learning Center, microfinance, and learning-exchange program) was proposed to the RDMA for their review and approval. The regional mission thought it was a reasonable request but requested approval from Washington. The no-cost extension request was approved by USAID Washington and the mission (in July). This extension will help enhance quality, impacts, and sustainability of project efforts.

Highlights of activities and accomplishments in the past six months are provided below:

A January 2007 workshop, with participants from the Provincial Fisheries Office, Kaolak National Park, Kasetsart University Marine Lab, and the Ranong Coastal Aquaculture Station, focused on water quality monitoring for watershed management.

Six training workshops were held in February on the topic of community-based disaster management with the Kamphuan villages, TAO, Thai Department of Disaster Prevention and Mitigation (DDPM), National Disaster Warning Center, and the Suksamran District Government. The workshops concluded with drills, simultaneously evacuating over 900 people in three villages to safe areas in less than 20 minutes. After the drills, there was discussion with each village volunteer group, DDPM, and representatives of police and military to provide feedback. The Governor moderated each of these animated, open, and inclusive sessions.

From January to March 2007, a volunteer from the U.S. EPA assisted local government authorities and scientists with water quality monitoring for watershed management. Survey information will guide sustainable development of aquaculture in the rich Klan Naka estuary. The final report will be presented to the governor's office and DoF offices in Ranong and Bangkok.

Reconnaissance missions to Sri Lanka and Banda Aceh were completed in November 2006 and February 2007, and the Maldives in April as steps in implementing the regional exchange program on best practices. The first two of the peer-to-peer regional exchanges were completed in June. In the first, ten participants from Aceh, Indonesia and the Maldives visited Phuket to learn from the microfinance and livelihood initiatives of the SCL project. In the second, participants visited Indonesia to learn about seaweed farming and recent improvements in small-scale grouper production techniques. With the help of small grants from the Program, participants will apply what they learned in the exchanges to their work at home.

A workshop (February 2007) facilitated by the University of Hawaii School of Tourism Industry Management was held at the Kamphuan Community Learning Center as part of the project's efforts to improve community governance of natural resources through promotion of sustainable eco-tourism while enhancing diversification of livelihood options in tsunami-affected areas. Participants shared experiences and exchanged information on the status and future of tourism development, including tourism vision and strategies for Suk Samran sub-District. The workshop outlined national and provincial strategic plans to coincide with the district and local level plans.

May 1st celebrate the opening of the KCLC, which featured the Tsunami Museum, touch-screen computer kiosks, display panels and computer room. Local government officials and some 70 community representatives attended. In June, the KCLC Director was hired and took office. Other accomplishments include improvements to the facilities and grounds, facilitation of a number of trainings and workshops, the writing of proposals to support the Center, coordination with

partners on use of the Learning Center, and improvements to the Center's business plan. A walking path around the Center's perimeter has been completed and exercise stations and benches installed around the trail overlooking the river. Green features of the Learning Center include a walking/exercise path, open space, display of local vegetation, solar cell powered electricity, rain collection for Center use, orientation/construction of the building and a constructed wetland to treat Center waste. A brochure is being developed that highlights these "Green" features.

In April there was a study tour to observe Cooperative Banking systems and their management. Following the tour, a strategy was developed to convert the most successful village microfinance group into a Cooperative Credit Union. The application process is underway and Village 3 is well along in becoming incorporated as a Cooperative Credit Union. If the new Credit Union proves successful, individuals from other villages with successful credit records will be encouraged to join the Credit Union and other villages with successful microfinance groups encouraged to start their own Union. The Cooperatives link with Thailand's national level cooperative banking unit and offer the opportunity for greater financial services and long term benefits to the communities.

Other notable activities completed include:

The Learning Center

- Biannual meeting with five villages for input, project progress reporting, consultation in planning for the Kamphuan Community Learning Center
- Official opening of KCLC, featuring the KCLC Tsunami Museum, touch-screen computer kiosks, display panels, computer room; local officials and community representatives present
- Learning Center Director hired and took office in June
- Business plan finalized for KCLC
- Meetings of governing Board and two meetings of Local Advisory Committee
- By-laws drafted and presented to governing Board and Local Advisory Committee

Livelihoods:

- A group of 14 women started Muslim headress business after a month of training; purchased two sewing machines with village microfinance loans, another machine with their own funds
- A group of 10 prepared land and planted yellow ginger with SCL technical and loan support.
- Second socioeconomic assessment completed and assessment of data nearly complete
- Livelihood and microfinance assessment and report completed
- Study tour conducted for microfinance village committee members to observe Cooperative Banking systems and their management
- Completed ToT on microenterprise entrepreneurship

Community-Based Disaster Management

- Talay Nok village welcomed 30 community members and government officials from Krabi and Ranong to share experience in CBDM. The study tour, supported by CARE International, was led by community members from the SCL program of capacity building in CBDM
- Prepared outreach materials on CBDM and waste management

Regional Capacity Building and Networking

- A training of trainers workshop was conducted in preparation for Coastal Institute Asia (23 participants from IOTWS, ADPC, AIT, CORIN, the National Park, Wildlife and Plant Conservation Department
- Trip to Maldives for planning of exchange program
- Exchange visits to Thailand and Indonesia

V. CONTACTS WITH USAID MISSIONS

Tanzania

In February, Crawford briefed the mission on the livelihoods learning survey including results on income of households and revenues generated from enterprises supported and on the economic analysis of seaweed and milkfish which was nearing completion at the time and showing positive results and opportunities for these practices. Squillante and Ricci visited the Kenya mission and briefed them on the certification program for MPA professionals and the milkfish mariculture training to be held in Tanzania and in which a number of Kenyans were participating. Squillante also visited the Tanzania mission to speak about the certification initiative and provided Juniper Neill with highlights of SUCCESS. In June, Aviti Mmochi, Baraka Kalunga, and Maria Haws met with Juniper Neill and Mr. Kijuna to discuss milkfish, zoning, pearl farming, and shellcraft activities. The mission suggested working with the SUCCESS team to create a video of some of these SUCCESS Program activities.

Nicaragua

Agnes Saborio, CIDEA Director, invited Steven Fondriest, Director of the USAID-Nicaragua mission Office of Agriculture Development Office to visit the Program field sites and participate in the Annual SUCCESS Partners Meeting. Scheduling conflicts kept him from attending.

Ecuador

EcoCostas contacted Rocio Cedeño of the USAID Ecuador Mission Office regarding financial reporting for the *Nuevo Milenio* nursery project, which is being supported by USAID/Ecuador.

Thailand

The SUCCESS Thailand Chief of Party (COP) made visits to the Thailand regional development agency (RDMA) to provide routine updates. In February, the COP and national partners met with RDMA officials for a semi-annual coordination and planning meeting. The RDMA attended the May opening of the Learning Center and led a pre audit of PMP systems at the field site in June.

APPENDIX 1. SUCCESS PERFORMANCE MANAGEMENT REPORT

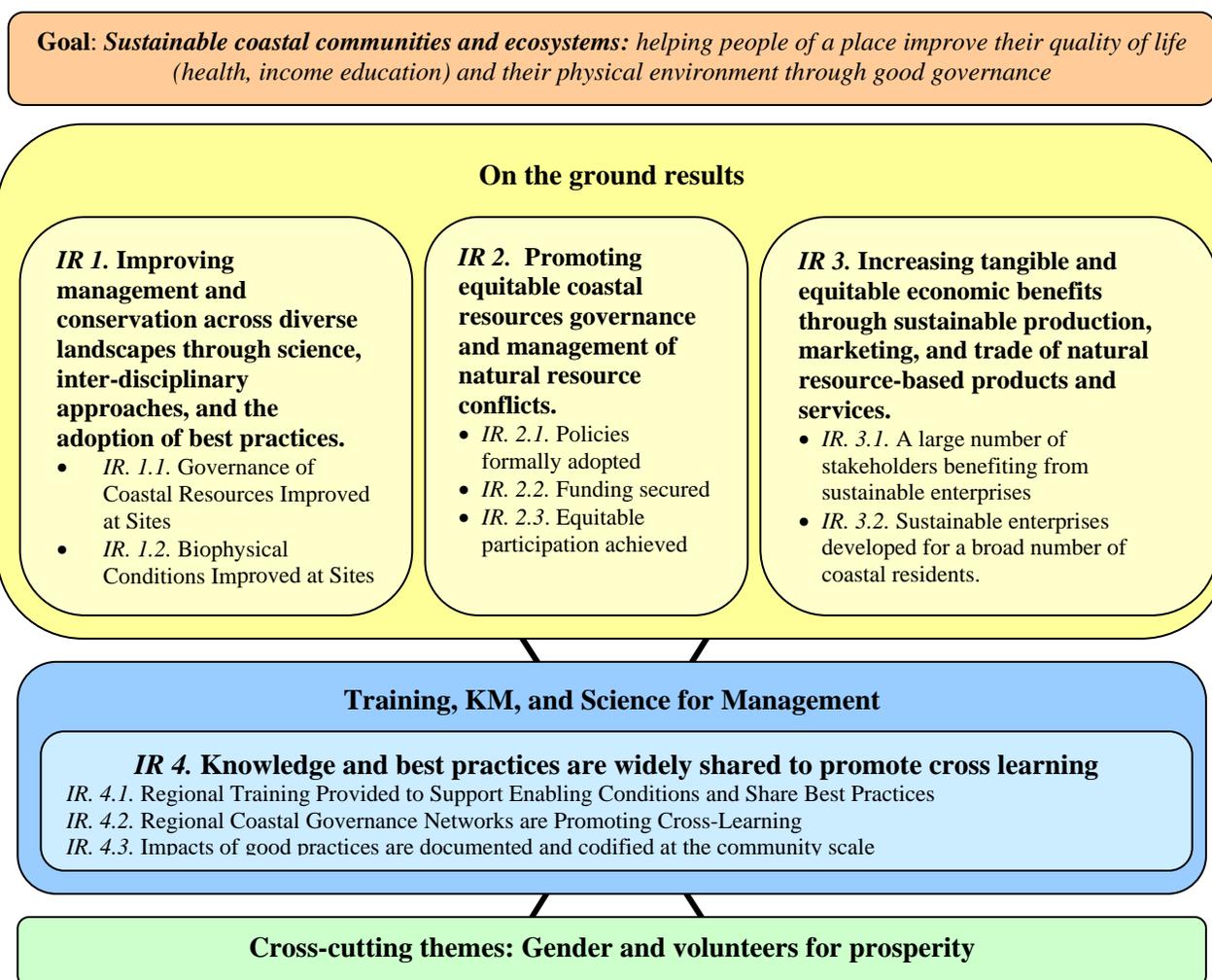
This Performance Management (PMP) Report shows the progress that the SUCCESS program has made towards its targets to date. The report is based on the Performance Monitoring Plan, which was revised in January 2007. This reflects recent changes in USAID’s indicators and definitions.

The SUCCESS program’s goal is to provide global leadership in integrated coastal management through innovative approaches in a participatory, issue-driven and results-oriented process to:

- Promote sustainable use of marine resources
- Conserve marine biodiversity
- Improve food and income security

This is a long-term objective (a third order outcome) that the project will contribute to over the life of the project. To achieve this goal, the program has established four Program Elements with underlying Intermediate Results (IRs) shown in Figure 1. These reflect the regional and global elements of the program as well as actions in three countries that are implementing innovative practices, adaptations, and learning across the place-based portfolio.

Figure 1. The SUCCESS Program Results Framework



Overview of the Results for the SUCCESS Program to Date and the Current Reporting Period

This table gives an overview of the “rolled-up” results for SUCCESS to date, including the current reporting period. Detailed results per indicator and/or field site and quarter can be provided upon request.

IR. 1 Improving management and conservation across diverse landscapes through science, inter-disciplinary approaches, and the adoption of best practices.	indicator	FY 07 Targets	FY 07 cumulative results	FY 07 Q2 and Q3 results	LOP Target	Cumulative results FY 05 – FY 07	Comments
Sub IR 1.1 Governance of Coastal Resources Improved at the Site Level	1. Number of biologically significant hectares under improved management	40,880	22,253	22,253	238,443	145,359	This indicator was revised in Jan 07
	<i>Marine hectares</i>	28,801	4,000	4,000	181,723	115,668	
	<i>Terrestrial hectares</i>	12,079	18,252	18,253	56,720	29,691	
Sub IR 1.2 Biophysical Conditions Improved at the Site Level	2. Number of hectares in areas of biological significance showing improved biophysical conditions for selected parameter(s)	no target		80	No target	80	Hectares reported from Nicaragua. Hectares from Tanzania will be presented in the next report.
IR. 2. Promoting equitable coastal resources governance and management of natural resource conflicts.	indicator	FY 07 Targets	FY 07 cumulative results	FY 07 Q2 and Q3 results	LOP Target	Cumulative results FY 05 – FY 07	Comments
Sub IR 2.1 Policies formally adopted	3. Number of policies, laws, agreements, or regulations promoting sustainable natural resource management and conservation implemented	4	1	1	9	2	On target. Two policies are expected to be adopted in Tanzania during the coming reporting period.

Sub IR 2.2 Funding secured	4. Leveraged funding and financing	no target	24,679	15,170	No target	323,530	
Sub IR 2.3 Equitable participation achieved	5. Number of persons participating in coastal resources and conservation planning initiatives	755	733	586	2381	2,020	On target
IR 3. Increasing tangible and equitable economic benefits through sustainable production, marketing, and trade of natural resource-based products and services.	indicator	FY 07 Targets	FY 07 cumulative results	FY 07 Q2 and Q3 results	LOP Target	Cumulative results FY 05 – FY 07	Comments
Sub IR 3.1 A large number of stakeholders benefiting from sustainable enterprises	6. Number of people with increased economic benefits derived from sustainable natural resource management and conservation.	255	43	7	981	453	Below target. The SUCCESS program has de-emphasized its microenterprise development efforts to correspond with changes in USAID's priority areas.
Sub IR 3.2 New or improved sustainable enterprises developed for a broad number of coastal residents.	7. Number of new or improved enterprises developed	60	27	2	222	202	
Sub IR 3.3 Increased monetary value generated from new or improved enterprises	8. Monetary value generated from sustainable natural resources or conservation initiatives (USD or equivalent)	no target		0	No target		Report forthcoming in the next quarterly report.

IR 4. Knowledge and best practices are widely shared to promote cross learning	indicator	FY 07 Targets	FY 07 cumulative results	FY 07 Q2 and Q3 results	LOP Target	Cumulative results FY 05 – FY 07	Comments
Sub IR 4.1 Regional Training Provided to Support Enabling Conditions and Share Best Practices	9. Number of people trained (gender disaggregated)	100	61	61	500	622	Above target
Sub IR 4.1 Regional Training Provided to Support Enabling Conditions and Share Best Practices	10. Number of training courses implemented	3	4	4	22	28	Above target. Due to changes in program priorities, training now holds a more central role in the SUCCESS program
Sub IR 4.2 Regional Coastal Governance Networks are Promoting Cross-Learning	11. Number of active participants in web-based regional networks (gender disaggregated)	8	21	21	28	21	
Sub IR 4.3 Impacts of good practices are documented and codified at the community scale	12. Publications documenting impacts of best practices	no target	11	10	No target	22	
CT 1. Volunteers for Prosperity	indicator	FY 07 Targets	FY 07 cumulative results	FY 07 Q2 and Q3 results	LOP Target	Cumulative results FY 05 – FY 07	Comments
CT 1. Volunteer international opportunities provided to US professionals to work on technical projects overseas.	13. Number of American volunteers	2	1	1	10	5	On Target. Two additional volunteers will be reported in the upcoming quarter

CT 1. Volunteer international opportunities provided to US professionals to work on technical projects overseas.	14. Volunteer person days	24	75	75	120	130	
CT 1. Volunteer international opportunities provided to US professionals to work on technical projects overseas.	15. Value of volunteer time (\$)	13,276	11,262	11,262	66,419	28,301	
Gender mainstreaming	indicator	FY 07 Targets	FY 07 cumulative results	FY 07 Q2 and Q3 results	LOP Target	Cumulative results FY 05 – FY 07	Comments
Sub IR 2.3 Equitable participation achieved	16. % females participating in coastal resources and conservation planning initiatives	42%	43%	45%	57%	48%	
Sub IR 3.1 A large number of stakeholders benefiting from sustainable enterprises	17. % females with increased economic benefits derived from sustainable natural resource management and conservation.	47%	30%	43%	43%	68%	
Sub IR. 4.1 Regional Training Provided to Support Enabling Conditions and Share Best Practices	18. % females trained	30%	72%	73%	40%	44%	
Sub IR 4.2 Regional Coastal Governance Networks are Promoting Cross-Learning	19. Number of female participants in web-based regional networks	38%	38%	38%	43%	38%	
American volunteer effort	% female American volunteers	50%	100%	100%	50%	40%	