



USAID
FROM THE AMERICAN PEOPLE



COASTAL RESOURCES CENTER
University of Rhode Island

Thailand Post-Tsunami Sustainable Coastal Livelihoods Program

Cooperative Agreement No. 486-A-00-05-00004-00

March 14th 2005 – September 30th 2007

**U.S. Agency for International Development
Regional Development Mission/Asia
Bangkok, Thailand**

Amended Program Statement

August 5, 2005

Submitted By:

**Coastal Resources Center
The University of Rhode Island
220 South Ferry Road
Narragansett, RI 02882**

In association with:

**Asian Institute of Technology
P.O. Box 4 Klong Luang
Pathumthani 12120 Thailand**

**University of Hawaii-Hilo
200 W. Kawili Street
Hilo, Hawaii 96720-4091**

**A Program of the:
Leader with Associates Cooperative Agreement
Sustainable Coastal Communities and Ecosystems (SUCCESS)**

Post-Tsunami Sustainable Coastal Livelihoods Program Regional Development Mission/Asia

1. INTRODUCTION

The Post-Tsunami Sustainable Coastal Livelihoods Program supported by the United States Agency's (USAID) Regional Development Mission/Asia (RDM/A) was launched on March 14, 2005 and is presently funded at \$2 million (Cooperative Agreement No. 486-A-00-05-00004-00). This award was made to the Coastal Resources Center (CRC) at the University of Rhode Island (URI) through the USAID-URI Leader with Associates (LWA) Cooperative Agreement for Sustainable Coastal Communities and Ecosystems (SUCCESS).

The original program statement was prepared for an effort of 36 months (March 14, 2005 – March 15, 2008). This program statement is an amendment to the previous, taking into account a reduced program time horizon and additional budgetary resources. The program time horizon is reduced from March 14, 2005 to September 30, 2007 since by congressional mandate, tsunami supplemental funds must be expended by September 30, 2007. In addition, the scope of this amended program statement is expanded to include an additional \$1 million of budgetary resources. An additional award of \$1 million in support of the Program was announced on May 16th, 2005 increasing total Program funding from \$2 to \$3 million.

The 26 December tsunami devastated Thailand's entire Andaman coast strip. A total of 392 villages and some 54,500 people were affected by the tsunami, with more than 5,000 deaths recorded and many others missing. The tsunami resulted in economic losses of several billion dollars. The Royal Thai Government (RTG) Department of Fisheries estimates 7,446 fishing boats were lost or severely damaged. Many that survived have had their livelihoods disrupted since coastal tourism, fisheries, mariculture and agricultural sectors have been seriously affected. Housing and public infrastructure were destroyed.

In the wake of any major natural disaster, the first priority is to respond to urgent humanitarian needs such as medical assistance, food, water and shelter. In the case of the December tsunami, the second priority is to rebuild damaged communities and re-establish the livelihoods that sustain a largely rural population. In the long term, there is also a need to develop an improved disaster preparedness and response system that can provide the lead-time for evacuation in the event of similar wave or storm-induced coastal damage.

The Post-Tsunami Sustainable Coastal Livelihoods Program is focused on restarting and diversifying livelihoods and small enterprises, sustainable use and management of natural resources, infrastructure rehabilitation, and tsunami disaster preparedness. The Program is designed in response to the priority needs for international assistance requested by the Royal Thai Government through several task forces formed by the Subcommittee for the Post-Tsunami Rehabilitation of Ecosystems and Livelihoods that was established by a Cabinet Resolution on Tsunami Response on January 11, 2005.

The Program demonstration site encompasses five villages along the Andaman Coast in Suk Samran District, Ranong Province, encompassing a population of about 5,000 people and 1,000 households. The villages are Talay Nok, Tub Nua, Kampuan, and Phu Khao Thong and Hat Sai Khao. All are within the Kampuan Tambon. These villages will serve as a demonstration of sustainable and diversified coastal livelihoods for other communities and nations in the region.

The goal of the Post-Tsunami Sustainable Coastal Livelihoods Program is to rebuild livelihoods and rehabilitate coastal communities affected by the tsunami through participatory ICM and capacity building. The objectives of the Program are to:

1. Negotiate with local and national Thai authorities, and most specifically with communities themselves, on a set of principles and unified approach to rehabilitation in the targeted communities
2. Reestablish sustainable livelihoods that feature the reduction of pressures on overexploited fishery resources, promote low impact aquaculture practices, and make full use of the benefits of responsible tourism
3. Develop a diversity of alternative coastal livelihoods and micro enterprises that are viable and environmentally sustainable
4. Assist local authorities and communities in the siting, design and construction of damaged coastal infrastructure and shoreline protection that are environmentally responsible and reduce vulnerability to future natural hazards
5. Build capacity at village, Tambon and provincial levels for disaster prevention and preparedness, and improved integration of government policies and procedures in the coastal zone
6. Promote learning and the efficient exchange of techniques and experience in tsunami rehabilitation in Thailand and other tsunami-affected countries

2. PROGRAM DESCRIPTION

A. Summary of Overall Expected Results

This Post-Tsunami Sustainable Coastal Livelihoods Program is undertaken as an Associate Award to the SUCCESS Leader with Associates Program. This summary is structured to highlight the linkages between the two programs. It follows the four major categories of results anticipated from SUCCESS.

A.1. Tangible On-the-Ground Results

Improved societal and environmental conditions in rural coastal environments. The rural communities along the Andaman Sea coast are dependent upon the goods and services provided by their immediate coastal ecosystem. Priority needs in these areas call for restoring livelihoods that improve community members' quality of life while maintaining or improving coastal environmental quality.

Ecosystem-based management of coastal fisheries. The problems facing the many communities of fishers along the coasts of Thailand include the overexploitation of inshore stocks, intrusion by industrial trawlers into near-shore fishing grounds, and destructive fishing practices. Our fisheries management efforts will focus on shifts in human behavior that can lead to improved fish stocks.

The Program will provide new boats to fishers who lost their vessels, engines and gear in the tsunami. While this effort will help them to restart their livelihoods, it is essential that the process be carried out in a socially and economically responsible manner. This requires an understanding of pre-tsunami vessel ownership and financing practices, crew share systems and types of gear and engines that were used previously. Special attention must be made to discourage return to destructive fishing practices and the re-purchase and use of illegal gears such as push nets. In addition, by meeting the immediate needs of fishers to continue their profession through a boat replacement program, it provides an opportunity to gain their attention concerning the establishment of sustainable fisheries management regimes that can rebuild fish stocks and

improve production in the long term. The time scale of this Program and the selection of a site that involves only five villages along this extensive coastline will limit the ability to achieve true reform and substantial improvements in the fisheries. However, some initial steps in this direction can be taken and a foundation of knowledge and better practices established.

Community-level actions that can be taken include the designation of “no-take” marine reserves or seasonal closed areas, improved enforcement, elimination or reduction of the destructive fishing methods practiced by fishers in the community and better fish handling and marketing practices. Such actions must be linked to initiatives at the provincial and national levels that address the root causes of overexploitation of a common property resource.

Ecosystem-based, low-impact aquaculture. Aquaculture has plays an important role in the Thai economy. This program will apply small-scale culture practices for indigenous species of shellfish and finfish – practices that have proven to bring benefits to communities by generating products that can be marketed locally as well as internationally.

Regulated and well-planned development. The Program will apply participatory problem-solving and collaborative action at the grass roots level to promote redevelopment initiatives for coastal development, and guide larger infrastructure investments concentrated on water quality improvements, tourism and fisheries shore-based facilities.

A.2. Increased capacity through training that draws from, and enhances on-the-ground activity

Enhancing skills within local government agencies with primary responsibility for coastal management and rehabilitation, within NGOs and the private sector, as well as within the communities themselves, will be critical to Program sustainability. The Program will launch training events which provide trainees with a solid foundation on developing sustainable natural resource-based enterprises as well as on the practical means of locally based resource management such as fisheries co-management. Training will also be provided in practical aspects of entrepreneurship and business management.

A.3. Regional networks supported by effective knowledge management.

While the Program will concentrate on local site based activities, it is important that the activities undertaken through this Program are shared with similar efforts in other nations of the region affected by the tsunami as well as with the multitude of other donors and local groups working in Thailand. Information, technical expertise, experience and ideas will be shared through various coordinating mechanisms already operating in Thailand and the region as a whole, and through the networks of ICM practitioners involved in the SUCCESS leader award.

A.4. Science applied to management and good governance

CRC and its partners will work to increase our understanding of the relationships between human activities, tsunami impacts and the condition of the coastal environment and its resources. Goal-based performance monitoring of selected project variables will serve as the basis for assessing progress toward stated goals.

B. Key Principles and Approaches Employed

The design and implementation of the *Post-Tsunami Sustainable Coastal Livelihoods Program* will apply internationally recognized principles of reconstruction and rehabilitation. In particular, the Program adopts the following principles that have been endorsed by coastal management professionals in a meeting convened by the United Nations Environment Program (UNEP) in Cairo on Feb 17, 2005:

1. Reduce the vulnerability of coastal communities and coastal activities to natural hazards while acting swiftly to provide housing to displaced families in suitably selected sites
2. Avoid increases in fishing power and resumption of destructive fishing practices while rebuilding fishing livelihoods for those affected
3. Restore habitats in order to function naturally to protect people and generate a diversity of sustainable livelihoods, especially in tourism
4. Encourage low-impact aquaculture
5. Correct past mistakes and inequities in the design and placement of community infrastructure
6. Promote government accountability, celebrate success and widely disseminate good practices as they emerge

C. Technical Program Elements and Life-Of-Program Results

The Program will be composed of four interrelated program elements:

- Assess Impact, Facilitate Consensus and Create a Unified Vision for Action
- Rebuild and Diversify Sustainable Livelihoods
- Coastal Public Infrastructure and Disaster Management Preparedness
- Enhance Capacity in Sustainable Livelihoods, Co-Management and Disaster Prevention

These program elements are further described below:

C.1. Assessing Impact, Facilitating Consensus and Creating a Unified Vision for Action

The tsunami produced great losses, new problems and created confusion and uncertainty in communities over their future. The purpose of this program element is to assist communities and local government in defining a vision for the future and in doing so rebuild a sense of empowerment, ownership and hope. There are many other donor and government groups operating in the five communities and this Program will provide a coordinating role for planning and responses, and promote information sharing. A participatory rapid appraisal (PRA) undertaken with the participation of key stakeholder groups within the communities and local government will provide critical information on community context, needs for livelihood and infrastructure rehabilitation, and what assistance is being delivered. Additional information essential for successful Program interventions to restart fishing livelihoods, move towards sustainable fisheries management, and establish alternative livelihoods will also be collected in the communities in the first year. Community meetings will be held to define what community's want, how to proceed and how to integrate community visions for future development into government planning at local, Provincial and national levels. We will work with other donors, local government, and communities through a Kampuan Advisory Council and periodic donor coordination meetings. The Program's coordinating role through regular community meetings and interactions with government agencies and coordinating bodies will continue throughout the life of the Program.

MOUs or similarly appropriate instruments will be developed to cement relationships with key government entities (e.g. TAO, Provincial or National agencies). The MOU with the TAO will be particularly important for clarifying expected roles, responsibilities, and how key decisions will be made. MOUs might also detail what the TAO (or other organizations) contributions and commitments will be to this Program. To build partnerships with local government further and promote coordinated interventions, the Program's work planning process will be synchronized to the extent possible with the TAO work plan cycle.

The key results expected in this program element are:

- Clear understanding of the key issues and needs facing affected communities, vision for the future, priorities for action, conflicts, governance capacity, socio-economic context, and environmental threats
- Partnerships for tsunami rehabilitation among government institutions, University, community groups, private sector and non-governmental organizations
- A set of principles and a unified approach to rehabilitation in the targeted communities
- Political support at the village, Tambon and provincial level for the actions to be undertaken and the participatory processes used to implement them

C.2. Rebuild and Diversify Sustainable Livelihoods

The Program will assist tsunami affected communities to restart livelihoods in fisheries, aquaculture and other livelihoods lost or damaged by the destruction of the tsunami, as well as promote a diversity of new and alternative coastal livelihoods and micro enterprises that are viable and environmentally sustainable. New enterprise development and opportunities for supplementary occupations of fishers will, in the long run, reduce vulnerability of fisher families and reduce fishing effort.

For many capture fishers and fish farmers, all capital equipment necessary to their livelihood, including vessels, gears and engines have been lost. An immediate priority is therefore a replacement scheme of boats and gear lost in the tsunami in the five villages. By meeting the immediate needs of fishers to continue their profession through a boat replacement program, this also provides an opportunity to gain their attention concerning the establishment of sustainable fisheries co-management regimes.

Approximately 20 boats will be constructed through a subagreement with the American Refugee Committee (ARC) in Thailand. ARC's distribution criteria will be used as a starting basis for boat donations to fisher households in these villages. The distribution criteria delivers replacement boats to impacted persons in the following order of priority: 1) women who have suffered a death in their immediate family; 2) other persons who have lost a family member; 3) persons whose house is destroyed; and 4) persons whose only boat was destroyed. Those receiving boats will be provided with a complete package that includes engine, fittings, lines, fishing gear, anchor, etc. so that they are able to return to sea and fully re-establish their fishing livelihood. The boat replacement program will also include free educational sessions on good fisheries practice and marine safety.

Rebuilding fisheries livelihoods will be tied to fisheries co-management involving community enforcement of prohibitions on illegal and destructive fishing gears (e.g. push nets) and establishment of small-scale marine protected areas. The Program will work with fishers, the Department of Fisheries, Laem Son National Park and other relevant government authorities to reach consensus on the goals and objectives of a rehabilitated fishery/aquaculture system. While many of the Program's fisheries co-management activities will be concentrated at the community level, these need to be nested within larger-scale fisheries ecosystem management strategies. The time scale of this Program and the selection of a demonstration site that involves only five villages along this extensive coastline will limit the ability to achieve true reform and substantial improvements in the fisheries of the Andaman Sea. However, some initial steps in this direction can be taken and a foundation of knowledge and better practices established.

The Program will further help local residents to get themselves back on their feet through a cash for work program, revolving funds and micro credit, and sustained technical assistance, training and extension. The cash for work scheme will focus on providing income relief to tsunami affected families. Activities may include: improvement of walkways to allow passage during rain and flooding; mangrove planting; construction of chairs and desks for schools washed away by the Tsunami; clearing and improving drainage canals; and clean-up of debris left by the Tsunami.

A Revolving Fund for Tsunami Relief will be established in partnership with a local NGO (e.g. Rak Thai or the Population and Community Development Association). Money will be released from the fund to provide micro businesses a low or no interest revolving loan to restart livelihoods and support their families again. As loans are repaid, new families will be able to borrow. The Program will provide training and assistance for community members to manage the Revolving Fund, building the financial management skills of local residents.

In addition to the capture fishery, the following types of income generating livelihoods in the communities may be supported:

- Aquaculture: fish cage culture and green mussel culture; freshwater aquaculture, such as catfish culture. Cage fish culture is an aquaculture technology with low ecological impact when standard best management practices are applied
- Crops and livestock: cow and goat raising, frog raising, mushroom farming, cashew nut processing and banana processing. The Program will assess the damage to crops, fruit trees and soil from salt-water intrusion and spray and seek strategies to rehabilitate and diversify this important component of rural livelihood
- Industries linked to fisheries: net-making, trap making, boat engine repair and fish processing (steamed mackerel, shrimp chip, fish sauce, shrimp paste, dried squid, salted fish and sweetened fish, and shrimp chili paste).
- Other industries: clothing manufacture (dresses, Muslim headdress, batik), groceries and small commercial trade, hairdresser and barber, herbal soap manufacture, and bakery

For two reasons, the Program will not focus on expanding shrimp aquaculture. First, there are many environmental issues associated with shrimp farming and most of the existing farms in the area border on Laemson National Park. Second, there are socio-economic concerns as many of the farms are not owned by local residents and employ undocumented aliens as farm labor. However, the Program will work with existing shrimp farmers to promote best management practices (BMPs) that can reduce environmental impacts on adjacent communities and the National Park. Opportunities to increase the local benefits of this industry to communities through local employment and other means will also be explored. CRC and the implementing partners of this Program have extensive experience in many parts of the world in the area of BMPs in shrimp farming. As part of capacity building activities, this Program will explore the interest of RTG agencies in partnering in training and capacity building in better institutional and technical practices for the shrimp farm sector with an emphasis in Suk Samran District.

Through subagreements with local groups such as the Kenan Institute Asia, the Program will provide training and extension services in basic financial accounting, small business planning, management skills, vocational training to build technical skills, and marketing analysis. Technical assistance is also needed in coordinating the start-up timing of various businesses. For example,

the opening of home stay businesses needs to be timed to other tourism services so that a package of services and products can be offered to visitors to make the stay attractive.

A Small Business Development and Learning Center will be established to convene meetings, provide individual and group training, house information for the business community, and offer communications technologies to entrepreneurs. The goal is for the Small Business Development and Learning Center to be sustained over the long-term with funding that supports training, extension, advisory, and advocacy services. Support for a sustained program could draw from government, the business sector, local technical colleges and Universities, and financial institutions. The Center itself would be constructed with features and materials suitable to the climate, culture, environment and the disaster preparedness objectives of this Program. The design will bring in the technical assistance of the University of Hawaii's (UH) Center for Smart Building and Community Design and Habitec, the green design center located at AIT. The Center would be equipped with computers and Internet and support the objective of bringing Internet and improved information technology to rural areas. The Program will seek co-financing for the facility from the private and public sectors.

To increase the geographic impact of livelihood development activities, the Program will explore with local authorities and communities how to involve participants from coastal communities in the second Tambon of Suk Samran District in livelihood and small business development training. In addition, if the absorptive capacity for small business development of the 5 demonstration communities becomes exhausted, the Program will explore the feasibility of expanding to additional communities.

The package of activities and services provided for rebuilding and diversifying livelihoods in the communities will be decided through a participatory process of community consultation and involvement of local government (TAO). Constant care will be given to facilitating a participatory process and helping community members organize to solve their problems together. Funding is important, but without common goals and strong sense of community to nurture them, money can often create conflicts in communities especially when people are forced to make decisions concerning allocation of scarce resources to priority beneficiaries.

A key success factor will be how the Program fits with and is perceived as fitting with overall government plans. Consultation and coordination with local government and community leadership has begun at an early stage of this Program and will continue over the long term to ensure that no Program elements conflict with government plans and other donor activities. There are two mechanisms for coordinating and linking with local plans – the first is through the newly forming Kampuan Advisory Council and the second is through the TAO's planning process. The TAO has a three-year development strategy and action plan and each year writes an operational plan. This Program will work with the TAO to link their operational plan with this Program's annual work plan.

Results expected from this program component include:

- Income generating activities re-established in fisheries, aquaculture, eco-tourism, livestock husbandry, and agriculture
- More sustainable fisheries enterprises have been identified and are being tested
- Local demonstration of fisheries co-management for the Andaman Sea coast of Thailand
- Diversity of new income-generating enterprises are started and/or expanded
- Increased number of legal and low-impact fishing gear made available
- Loans to entrepreneurs from the Program's microfinance initiatives made available

- Training of business and social entrepreneurs in the community conducted
- High percentage of microfinance loans repaid on time and in full
- Agricultural markets (crops, fruit trees, fisheries and aquaculture) identified and links to larger markets promoted
- Sustained small business development and training program established that is housed at the Small Business Development and Learning Center at TAO headquarters
- Computers and internet made accessible to project site at the small business learning center
- Increased access to information and resources, communications, direct marketing, and educational materials

C.3. Coastal Public Infrastructure and Disaster Management Preparedness

The Program will assist project communities and government authorities in coordinated infrastructure rehabilitation and planning, hazard mapping, exploration of potential for zoning and construction setbacks, and development of a community-based tsunami disaster preparedness and response system to serve as a model for Thailand and the region.

With respect to public infrastructure, the Program will simultaneously work in partnership with communities and local government to help design the rehabilitation of coastal physical and community infrastructure in a manner that is environmentally sound and reduces the potential for loss of life from future natural hazards. One of the most striking physical affects of the tsunami is the devastation of standing structures. The destruction hit both private properties such as houses and shops, as well as public buildings (schools and community centres, mosques, etc) and infrastructure. Much of the damage can be attributed to the fact that physical infrastructure was inappropriately sited and constructed before the tsunami struck.

Expected activities that will minimize the impacts of future tsunamis, storms, high waves, and erosion on public and private infrastructure include co-financing of small-scale infrastructure in cooperation with government authorities, assisting the TAO and communities in coordinated infrastructure project planning, and providing technical assistance in environmental impact assessment. We will also work with local government authorities and communities on adaptation to housing and buildings and strengthening building codes to improve natural disaster preparedness. The Program will determine the interest and support of government authorities (e.g. Provincial Governor's Office, DMCR, TAO, etc.) for developing guidelines concerning construction standards, setbacks and no-build zones.

Modest financial support for co-financing of infrastructure will be provided and the Program will actively seek to catalyze additional financial support of the private sector in infrastructure projects. In all USAID supported infrastructure activities, engineering specialists will be brought in to ensure that designs are environmentally sound, draw on the most appropriate technology for the local conditions, and comply with USAID environmental impact assessment requirements (USAID Regulation 216).

Cognizant of the remotely sensed data and GIS information that already exists, the Program will prepare maps at a an adequate scale to understand the inland extent of the tsunami. This data will also be used to assess the potential for future coastal change from events such as anticipated sea level rise and erosion/accretion processes. The Program will work with the appropriate authorities to determine the interest and support for establishing criteria and processes for granting exceptions for new building structures that are seaward of agreed upon construction setback lines. Where such exceptions are granted, structures should be temporary, or they should be built to withstand projected flooding by strengthening structural members, elevating the first

floors and incorporating other construction standards that reduce potential for loss of life or property from natural coastal hazards.

With the additional award to the Program of \$1 million, the Program will include participatory planning, education and training with the demonstration communities and local government in tsunami disaster preparedness, communications and early response. The work on community-based tsunami preparedness and response systems will be developed with the intention of serving as a model for Thailand and the region. Key activities will include:

- Community education and training
- Emergency response planning
- Assessment of the preparedness of primary health centers, procurement and readiness of rescue material
- Development of Village and Tambon-scale evacuation plans and safe escape routes
- Arrangements to evacuate the elderly, the disabled, children and women
- Organization of village rescue volunteers and task forces
- Identify medical and relief teams
- Emergency communications planning
- Arrangements for supply of food, water, clothing and other items to relief camps and shelter for rescued people, and food and water storage for livestock

Public education about tsunamis will be a critical element in the mitigation program. Not only does the public need to understand the reason for evacuations, but also in the event of a locally generated tsunami, there may well be no time for even the best-planned evacuation procedures to be put into effect. In these situations, education about nature's warning signals of an impending tsunami may be the only possible means of preventing loss of life. Michael Blackford, former director of the International Tsunami Information Center, and former Geophysicist in Charge of the Pacific Tsunami Warning Center, stated the case for the need of public education about the tsunami threat:

“All the modeling, all the warning systems, and all the emergency management preparation are to no avail if the public is not continually informed about the existence of the hazard, about the nature of the hazard, and about what they need to do to reduce or eliminate the chances of becoming victims of the hazard.”

Disaster education materials need to be consistent, evaluated for their effectiveness, widely available, and adapted to the local culture and environment. Education about tsunami is best started early – while children are still receptive to accepting the tsunami danger as a normal part of life. Both Japan and Chile have landmark education programs about tsunamis in grade schools, and these will be used as models in this element of the Thailand expanded Program.

The components of a good public education program may include printed materials (brochures, posters, and booklets) in local languages, websites, audio and videotapes for public broadcast and use in school classes. Special training materials should also be provided for national park and tourism operations and fishermen (including safety at sea training). Team training must be available for Civil Defense, police, fire, emergency medical technician (EMT), and hospital personnel and these organizations declared “tsunami ready” when they have passed certain benchmarks.

Disaster preparedness and response activities will be modeled on the successful plans in use internationally including those in Japan, Chile, coastal Oregon, and the State of Hawaii. Recent

studies of current tsunami preparedness and failures in disaster communication will be used in developing effective communication models from the national level to the level of the village and individual. The University of Hawaii and the AIT Asian Disaster Preparedness Center (ADPC) will provide direction and leadership for this Program element.

Other infrastructure activities that were not included in the original program statement, but that will be undertaken with the additional award of \$1 million include bringing internet, computers and improved information technology to rural communities, and the renovation of community centers with green construction design. The five demonstration villages do not currently have Internet capability, although villagers have expressed considerable interest in having such capacity as an essential ingredient to their hopes of attracting sustainable tourism and developing other sustainable small enterprises. The sub-district office recently received a demonstration Internet platform and villagers are stopping by the office to see it. The Program will provide computers and Internet to the villages. This may be done through a satellite service and subscription, but other options will be explored such as high-speed digital subscriber lines (DSL) through telephone modem connections and wide area wireless Internet. These technology and communications services will be integral components to livelihood reconstruction, education, and youth development programs. Bringing computer technology and Internet to each of the villages promotes the U.S. administration's "Last Mile Initiative".

Renovation of community centers with green construction design incorporated is another new activity not covered under the original Program description. Each village has a community center intended to be used for reading and community-related activities. However, these centers are not fully functional as they are poorly built and lack basic seating, lighting and ventilation. Village rapid assessments found that each of the five demonstration villages places a high priority in the improvement of community centers.

Community centers are essential for community planning, and meetings and training in disaster planning and mitigation and livelihoods development. The Program will provide technical assistance and resources to retrofit the community centers using green construction design that reflects local value structures, is efficient for the local climate, and leaves a minimal ecological footprint. The design will bring in the technical assistance of the UH Center for Smart Building and Community Design and AIT's center for green design, Habitec.

Results expected for this component include:

- Assessment of public coastal infrastructure needs
- Identification of construction setback lines based on the best available science and which takes into account both regional and global forces of change
- Preparation of GIS base maps highlighting hazard zones, critical habitats, existing infrastructure and proposed public rights of way and various categories of building zones
- Co-financing and technical assistance in the design of rehabilitated coastal physical and community infrastructure in a manner that is environmentally sound and reduces the potential for loss of life from future natural hazards (such as piers, fish market, agricultural markets, household structures, water sanitation, evacuation area, or shoreline stabilization)
- Construction of demonstration infrastructure facilities that can serve as models for development projects in the region (such as community centers)
- Village and Tambon-scale disaster preparedness and response plans, including evacuation plans and safe escape routes
- Tsunami education programs and high level of awareness and understanding of tsunami risks and responses

- Disaster communication systems
- Computers and internet made accessible to project site at village community centers
- Increased access to information and resources, communications, and educational materials
- At least one self sustaining internet café established
- Enhanced computer skills and computer-based services in rural area
- Increased awareness of green design
- Demonstrations of low cost methods for incorporating green design into retrofitted buildings
- Enhanced conditions for community meetings, planning, training, and communications (computers and internet located in the community center)

C.4. Enhancing Capacity in Disaster Rehabilitation and Coastal Resources Management

Many of the issues facing local governments and communities with respect to the shorefront development, livelihood promotion and hazard mitigation were present before the tsunami struck. The tragedy has provided an opportunity for communities and local officials to now rethink how they proceed with coastal development planning. However, in order to avoid the many pitfalls that produced the past problems of resource use conflicts, overfishing, construction in hazardous zones, it will be necessary to strengthen the capacity of local government in participatory planning and to increase their technical knowledge of the best practices implemented in many other parts of the world. As such, a strong capacity building element must be integrated into this Program – one that provides the necessary knowledge, skills and attitudes to promote sustainable natural resource-based livelihoods as well as to undertake environmentally sensitive shorefront development that also mitigates the potential for the loss of life and property from natural hazards. All training and capacity building activities carried out will strive for gender balance with respect to participation, and will also integrate gender dimensions to the various training curriculum.

Training events will be targeted at:

- Recipients of boat replacements and local government in fisheries co-management, safety-at-sea and use of less destructive fishing gears
- Small business operators in the communities on entrepreneurship and micro-credit schemes linked to creation of small businesses in fisheries, low impact aquaculture, tourism and other industries
- Strengthening the planning and management capacity of the TAO to undertake environmentally sound reconstruction of infrastructure, including facility siting, construction standards and use of spatial planning to regulate and plan coastal development
- Strengthening the capacity of the TAO in regional development and economic planning, including micro-enterprise and sustainable tourism development
- Strengthening the capacity of provincial fisheries officers, the National Park and communities in fisheries co-management
- Awareness raising in the community on local planning, siting and construction practices for coastal development to reduce risks to life and property from coastal hazards
- Dispute mediation and conflict resolution to strengthen the ability of community members and local government to respond to conflicts and establish open dialogue on issues such as land use, land rights, and coastal access

With the addition to the Program of \$1 million, the Program will expand its target audience to strengthen the capacity of national level RTG agencies and provide policy advice in the areas of marine protected area management, fisheries co-management, and integrated coastal management. Technical assistance and policy advice was one of the priority requests for assistance made by the RTG after the tsunami disaster. For instance, the Department of National

Park, Wildlife and Plant Conservation (DNP) has requested USAID expertise and assistance with the establishment of the first multiple-use zones within National Park waters. Laemson National Park has a master plan and is working on a zoning plan. The Program will work with the Danish International Development Agency (Danida), which is in the process of developing an assistance package with DNP and Laemson National Park. Workshops and targeted technical assistance will be identified after DANIDA has completed its initial assessment.

The Department of Fisheries (DOF) has requested expertise and assistance with capacity building and promotion of fisheries co-management strategies along the Andaman Coast. This includes the request for assistance to help ensure that the opportunity of replacing lost/damaged fishing boats is used to gain a new level of responsibility and “code of conduct” from Thai fisherfolk. While the tsunami disaster severely impacted the fisheries and the fishers, it presents a crucial opportunity for Thailand to review its management regime and promote a balance between the state of fisheries resources and the rate of their exploitation. Some key issues that must be addressed include the use of push nets, trawler fleet reduction, implementation of the National Fishing Action Plan (2002-2006), resource users’ conflicts, and responsible management of small-scale fisheries through community-based management and habitat management. When the new Fisheries Law is finally adopted it will give decision-making power to communities and local fisheries commissions. This Program will work with DOF particularly in approaches and practices to empower communities to solve their own problems locally and strengthen the negotiating capacity for small-scale coastal fishers. Problems in the fishery of the Andaman Sea can not be solved at the scale of the Tambon, but co-management that enhances local participation in policy development and builds capacity is perhaps the most promising avenue to find acceptable solutions to the over-capacity and destructive fishing practices that currently plague the fishery.

The Thai Department of Marine and Coastal Resources (DMCR) has requested expertise and assistance with improvements to its national ICM program—particularly in the areas of coastal planning, coastal hazard mitigation, and infrastructure siting. The Program will provide training and policy advice in these areas, but will first conduct interviews among DMCR’s regional office and national level stakeholders to assess training and advisory needs and target groups. This will be done in collaboration with the Coastal Habitats and Resources Management (CHARM) project, which has been working with DMCR in training, integrated decision making, interagency collaboration and information sharing.

With the supplemental budgetary resources the Program will also convene two regional workshops to be held in January of 2006 and 2007. These workshops will provide the venue for sharing experience and lessons learned among countries within the region concerning planning for and designing effective post tsunami initiatives. They will also seek to build a network of tsunami rehabilitation professionals, and sharing strategies and approaches to tsunami rehabilitation and reconstruction with particular emphasis on restarting livelihoods of tsunami affected households and communities.

Topics will include challenges of rebuilding the fisheries sector responsibly without returning to overcapitalization and overfishing, supporting income-generating activities and micro-enterprises, siting and reconstruction of coastal private and public infrastructure, hazard mitigation, disaster assessments and planning, and early response systems. Attendance will be particularly directed at participants from countries with USAID-supported rehabilitation projects and individuals involved in their implementation. The workshops will be held at the AIT campus in Bangkok and include field visits to the USAID demonstration site in Southern Thailand. Thailand recovery efforts are progressing more rapidly than some of the other nations in the region and therefore

early lessons from the Thai experience—accomplishments, challenges, and lessons—will be valuable for other countries in the region planning and implementing recovery and rehabilitation.

Results expected for this component include:

- Strengthened capacity of local government, community residents, and RTG to develop and apply appropriate policies and public services in support of hazard preparedness and mitigation, sustainable coastal development, and promotion of sustainable coastal livelihoods
- Greater awareness and support among community members for proper planning of infrastructure and private development to reduce coastal hazard risks
- Strengthened ability of local government and community leaders to respond to conflicts
- Community residents trained in small business management and management of community revolving funds
- Improved entrepreneurship skills of coastal residents and a greater number of small-scale start-up businesses that have become successful
- Increased knowledge and skills in low impact aquaculture and sustainable fisheries
- Collaborative strategy for advancing community-based fisheries co-management in Thailand with demonstration in Suk Samran District
- Support of fishers for preparation and implementation of collaborative fisheries management plans with DOF
- Information, technical expertise, experience and ideas are shared on priority thematic areas, allowing programs to better meet the priority needs of stakeholders and improve the transfer of technology
- Lessons learned and good practices are documented in post tsunami rehabilitation

3. PROGRAM MANAGEMENT, PERSONNEL, AND PARTNERS

The Coastal Resources Center (CRC) at the University of Rhode Island is the lead institution responsible for overall Program management, implementation and for program and financial reporting to USAID/RDM/A. The Asian Institute of Technology (AIT) is the primary in-country partner. The University of Hawaii at Hilo (UHH) will play a technical assistance role in several theme areas. These three institutions make up the core team for project implementation. However, it is expected that as the work planning process unfolds and as more detailed participatory assessments are made at the site level, there will be a number of other local institutions that become involved with implementation of various components of the Program.

CRC as the lead institution that has ultimate responsibility for achieving Program results, will oversee the activities and outputs of all main subcontractors and US based institutions, including AIT and UHH. In addition to providing managerial oversight, CRC will also provide a substantial level of short-term foreign technical assistance in the areas of fisheries management, livelihood development, tourism, coastal infrastructure planning, capacity building, and situational analysis/assessments. Short-term foreign technical assistance will be further supplemented by UHH in the areas of low-impact aquaculture development as well as small-scale tourism and/or in infrastructure siting and design. AIT will be responsible for providing local short-term and long-term technical assistance for the Program in the areas of rural development planning, aquaculture, GIS and hazard mitigation, and engineering among others.

Our approach to short term technical assistance is to link the foreign technical advisor team with the local technical assistance team and have this joint team together provide a package of services to the field site, including the local communities and local government. The foreign technical assistance team will guide and mentor the local technical advisors who, in turn, will provide a

more intensive and continuing level of assistance to the field site. In both cases, technical assistance will be provided throughout the life of the Program. It will be heaviest in the early phases of assessing needs and of conducting detailed planning of the various Program elements. This assistance should taper off in the last six months of the Program. The technical assistance teams will be carefully directed and coordinated by the Chief of Party to ensure the package of technical knowledge and expertise is fully applied to solving practical problems and ensuring the quality of planning and implementation of Program activities carried out on-the-ground. Technical assistance teams will also play an important role in the capacity building activities with respect to curriculum design and delivery.

AIT will establish and manage the Program field office located in Ranong Province. All local full time staff working for the Program will be contracted by AIT. Dr. Amrit Bart has been nominated and approved by USAID RDM/A as Chief of Party (CoP). The CoP for the Program is assigned to CRC/URI and seconded to AIT. The CoP is responsible for direct liaison with the USAID RDM/A office in Bangkok and for supervision of all in-country partner activities, therefore, he will make frequent travel between the field site in Ranong Province and Bangkok. The CoP will be the point of liaison with local and national government officials.

Other responsibilities and authority of the CoP include:

- Develop detailed terms of reference for both local and foreign technical assistance provided by AIT, CRC and UHH in close collaboration with the Program Leader at CRC
- Develop terms of reference for all local NGO partners that may be provided sub-grants for implementation of various Program elements such as the boat replacement scheme
- Supervise field program staff including the field site coordinators and administrative support staff.
- Report to CRC regarding all in-country Program activities and provide all formal reporting information that is required by USAID

Dr. James Tobey will serve as the CRC Program Leader with responsibility for overall Program management and supervision. Under the initial \$2 million Program, two full-time field site coordinators were hired by AIT and posted in the demonstration site area. These individuals are Thai nationals and are responsible for coordination with local government institutions, assisting with coordination and support of technical assistance in the field, and coordinating the assessment, planning and implementation processes at the demonstration site. The field site coordinators also oversee community extension volunteers who serve as the lead organizers, facilitators and liaison with the community. Extension staff are selected from the five communities that collectively, make up the demonstration site. These are considered part time positions, allowing these community members to continue carrying out their regular livelihood activities – and, after Program completion to continue with their normal occupations.

With the supplemental budgetary resources, the Program will hire a Field Site Manager/Deputy to the CoP. This will be a full time position and the individual will report to the CoP and supervise field staff and operations. The reduced program time frame and additional budgetary resources and activities makes this position essential to the successful execution of the Program. In addition, two Crisis Corps Volunteers will provide technical assistance to the Program for a period of six months beginning August 15th. The Volunteers are former Peace Corps Volunteers from Thailand and have significant experience and skills. It is anticipated that both individuals will be located at the field site working on revolving fund management and overall program management and monitoring.

The Post-Tsunami Sustainable Coastal Livelihoods Program is located under the RTG Office of Thailand International Development and Cooperation Agency (TICA). The Program will make use of existing institutional structures and planning processes at the Tambon, District and Provincial level. It will be important to work closely with and maintain the full understanding and support of the Provincial Governor, District Headman and Tambon officials. The Program will also coordinate with the Department of Fisheries (DOF), Department of Marine and Coastal Resources (DMCR), the National Parks Authority, the National Task Forces for Tsunami rehabilitation, as well as other tsunami recovery initiatives such as the “Andaman Forum” network comprising 45 international and local NGOs, the CHARM project, the DANIDA initiative in Laem Son National Park, and the Consortium established between FAO/NACA/SEAFDEC.

4. PERFORMANCE MONITORING PLAN

The Program’s performance monitoring plan (PMP) will conform to USAID’s Results Framework for the Regional Tsunami Reconstruction Special Objective (SpO) 498-045.

Results, indicators and units of measure are shown in Table 1. Targets will be defined in September 2005 at the time of the preparation of the detailed FY06 work plan. The Chief of Party will designate a monitoring and evaluation (M&E) coordinator responsible for compiling information and record keeping for the PMP. The Chief of Party, with the assistance of CRC, will be responsible for preparing and submitting semi-annual performance-monitoring reports to USAID RDM/A.

Table 1. Performance Monitoring Plan -- Post-Tsunami Livelihood Rehabilitation Program

USAID Regional Tsunami Reconstruction Results	Indicators	Description/Unit of Measure
S.O. To Save lives, help individuals rejoin the workforce and return to communities, and support host government led reconstruction and early warning/disaster preparedness	Number of persons employed (1)	People back at work, including cash-for-work-programs Unit of measure: number of people and person days, disaggregated by gender
	New businesses created	Businesses (including services) of one or more persons created as a result of a loan, grant or vocational training, disaggregated by gender of proprietor Unit of measure: number of businesses disaggregated by gender of proprietor and total number of people employed (m/f)
	Old businesses restarted	Businesses (including services) of one or more persons restarted as a result of loan, grant or vocational training, disaggregated by gender of proprietor

IR 1 Transition from Camps to Communities	Number of loans to micro and small enterprises (M/F)	Dollar amount of loans disaggregated by gender of proprietor
	Number of recipients receiving grant packages	Micro and small enterprise beneficiaries of financial assistance and/or skills and vocational training disaggregated by gender of proprietor. Unit of measure: recipients
IR 2 Rebuild Infrastructure	Number of community buildings and infrastructure repaired	Repair is defined as work done on buildings still standing, albeit in disrepair from the tsunami (2)
	Number of community buildings and infrastructure built	Rebuilt is defined as buildings that no longer exist or are beyond repair because of the tsunami (2)
IR 3 Early Warning System installed	Number of communities trained in disaster preparedness	Government officials, community leaders, and community members trained in disaster preparedness disaggregated by gender
IR 4 The capacity of governments to plan and undertake reconstruction strengthened	Number of government agencies that received technical support	Number of local, regional, and national government agencies receiving technical assistance (3)

- (1) Short term, project-supported employment, such as cash for work programs. People employed as a result of businesses restarted or new business established are not counted in this indicator.
- (2) Includes buildings and infrastructure repaired/rebuilt that the Program partially financed and buildings and infrastructure that adopt best practices for environmentally sound structures and coastal hazard mitigation as a consequence of the Program. Does not include buildings repaired/constructed that were not affected by the tsunami.
- (3) If the same agency receives technical assistance multiple times it is only counted once.

5. BUDGET

The following is a summary of the overall budget for this Program viewed in three different ways; by program element, object class category and by recipient. Budget notes are also provided below. A more detailed budget for CRC as well as all sub-recipients has been provided as an Excel file along with this program statement.