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## **Tanzania Coastal Management Partnership**

### **Sustainable Coastal Communities and Ecosystems in Tanzania**

#### **FINAL REPORT**

**(Cooperative Agreement Number: 623-A-00-05-00339-00)**



**COASTAL RESOURCES CENTER**

*University of Rhode Island*

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## **Executive Summary**

The Tanzania Coastal Management Partnership for Sustainable Coastal Communities and Ecosystems (TCMP SUCCESS) Project was funded by the United States Agency for International Development (USAID) to support the Government of Tanzania to implement the National Strategies on Integrated Coastal Environment Management, and Economic Growth and Poverty Reduction at national and local levels in selected coastal areas. This US \$3,373,632 project was a cooperative agreement between USAID and the University of Rhode Island (URI)<sup>1</sup>. It built sustained governance capacity at the national and local levels, while securing tangible on-the-ground results. At the local level, it focused on coastal and marine conservation in three land-seascape areas—the Mkuranga land-seascape, the Pangani-Bagamoyo land-seascape, and the Wami River basin landscape. The Project assisted the districts of Bagamoyo, Mkuranga, and Pangani to advance from integrated coastal management (ICM) planning and testing to ICM implementation. It also promoted sustainable natural resources based livelihoods in these areas as well as in the Menai Bay area of Zanzibar. TCMP SUCCESS built upon the foundation created by first three phases of the Tanzania Coastal Management Partnership (TCMP) Project, which was in operation between 1997 and 2005.

### **Summary of life of project accomplishments by program objective**

Over the life-of-project, SUCCESS met or exceeded all but one of its indicator targets. The exception was the PEPFAR indicator: Number of individuals reached through community outreach that promotes HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful. We estimated reaching a target of 54,000 individuals. However, we aimed too high and by Project end had reached only just over 44,000 individuals. A summary of all the project accomplishments in relation to each of the intermediate results categories are provided below:

#### National Policies, Strategies and Legal Issues (IR 1)

- The Integrated Coastal Management Unit (ICMU) informally established at the National Environment Management Council (NEMC) in 2008.
- National guidelines for district action planning (DAP) revised, under final review by NEMC, and applied to district action plans in all coastal districts in Tanzania.
- Three sustainable natural resource management policies, strategies, and guidelines implemented.
- Over 180,000 hectares under improved natural resource management, including biologically significant areas, watersheds, forest areas, and sustainable agricultural lands.

#### Strengthen Landscape–Seascape Scale Conservation (IR 2)

- *Capacity Building*. Improved human resource capacity through training of 1,166 persons on integrated conservation and development—47% are women.

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<sup>1</sup> The USAID contribution was US \$3,100,000 and the URI match was US \$273,632.

- *Collaborative Fisheries Management (CFM)*. Approval of a Bagamoyo District collaborative fisheries management plan by the district council in September 2006; demarcation of no-take zones; strengthening of the CFM Central Coordinating Committee (CCC) and its development of a workplan; and ongoing monitoring of designated no-take zones, which show improved reef conditions and fish abundance. Initial one-year reef closures extended for an additional three years in 2009.
- *Wami River Sub-Basin Management*. Assessment of the Wami River Sub-Basin and estuary was completed. A profile of the Wami River Basin and a dry season flows assessment was also completed and published, and is being used in water supply decisions. Fourteen staff members of the Wami-Ruvu Basin Water Office improved skills in operating their watershed geographic information system. An assessment of surface and groundwater withdrawals and water quality in villages in the upper water basin was completed.
- *Water and Sanitation*. Latrines, hand washing and rain water collection units were installed in five high-need public schools along with training on the participatory hygiene and sanitation transformation (PHAST) tool, benefiting 8,552 school children (52% girls) in the Wami and Pangani River areas. Autoclaves donated to four health centers, further improve sanitary conditions and benefit over 50,000 individuals.
- *Environmental Management Systems*. Several sugar and sisal agro-industries are starting to improve water use and wastewater management practices based on recommendations provided through environmental management assessments.
- *District Action Planning*. Grants to the coastal districts of Pangani, Bagamoyo and Mkuranga have enabled the districts to continue implementing their prioritized ICM activities aimed at conservation of coastal biodiversity and improvement of livelihoods for local residents. Accomplishments in each district include:
  - *In Bagamoyo*: Continuation of land-sea patrols in the district to stop and prevent destructive fishing, specifically dynamite fishing. While a small number of fishers were caught fishing in no-take areas and fined, dynamite fishing has almost completely ceased in the area.
  - *In Mkuranga*: A decentralized district-level pond mariculture zoning scheme has been approved by the District Council. The adoption of mariculture zoning guidelines in Mkuranga is a first step towards sustainable mariculture development in the district—something that has the potential to encourage income generating opportunities among local communities and to increase local food security.
  - *In Pangani*: Over 3,000 liters of honey produced by beekeepers supported through the district grant. These beekeepers also protect small tracts of coastal forests and mangroves reserved exclusively for beekeeping. Two SACCOS (Savings and Community Credit Associations) were formed in beekeeping communities. These SACCOS are now showing increased rates of savings rates and have begun making small scale loans in the communities.
- *Reducing Impacts on Forestry Resources in and Surrounding Saadani National Park (SANAPA)*. Over 160 stoves adopted by households in six villages surrounding SANAPA resulting in a reduction of 240 tons of fuel wood annually (1.5 tons/stove)

### Increased Equitable Benefits from Natural Resources Based Enterprises (IR 3)

- SUCCESS supported formation of 494 microenterprises, involving 688 entrepreneurs.
- One hundred eighty two entrepreneurs are members of Project-supported SACCOs in Mkuranga and Pangani.
- Bread-making enterprises using energy efficient stoves in the Pangani District increased profitability realizing a 90% net profit—well above previous levels.
- Enterprise cooperatives and associations related to beekeeping and jewelry-making in Pangani and Zanzibar respectively have allowed the members to move up the value chain, improving their products, marketing, and sales.
- Based on a random survey sample of Project beneficiary households conducted in 2007, TSH 574,392 were generated annually for each household enterprise assisted by TCMP—this represented 23 % of total household income.

### HIV/AIDS Communication (IR 4)

- Over 44,000 coastal residents surrounding Saadani National Park reached through community outreach that promotes HIV/AIDS prevention.
- Six multi-sectoral HIV/AIDS committees were strengthened through training and participatory action planning to promote HIV/AIDS prevention through behavior change other than abstinence and/or being faithful.
- Sixty two condom social marketing outlets established.
- Two hundred and ninety three individuals trained in HIV/AIDS prevention and multi-sectoral action planning.

### Gender

- Gender-related issues mainstreamed into UZIKWASA theater performances and population, health, and environment communications materials.
- More than 50,000 community members, most of them mothers and children, benefitting from the autoclave equipment donated by TMCP SUCCESS village dispensaries.
- Fifty-six percent of all enterprise beneficiaries (659 individuals) supported by TCMP SUCCESS are women.
- Fifty-seven percent of all individuals reached by UZIKWASA's communications activities are women.

### Climate Change

- SUCCESS assisted six local communities surrounding Saadani National Park in decreasing their carbon emissions. Project monitoring has shown that local households and restaurants that adopted fuel efficient stoves consume less than 50% of the fuel wood used in traditional stoves.
- In collaboration with local communities, SUCCESS is helping offset carbon emissions by planting and nurturing more than 38,861 trees planted in the Wami River Sub-basin through the Water and Development Alliance (WADA) initiative.

- In collaboration with district and village authorities, SUCCESS is currently supporting protection of approximately 11,250 ha of mangrove forests in Mkuranga, Bagamoyo and Pangani coastal districts—mangrove forests that help stabilize and protect the shores from erosion caused by possible sea level rise and sequestering carbon.

## Background

Tanzania’s coastline is both ecologically and economically important to the nation. It stretches for approximately 2,300 kilometers and encompasses five coastal regions (Tanga, Pwani, Dar es Salaam, Lindi and Mtwara) and three large islands, (Mafia, Pemba and Zanzibar). The coastline is richly endowed with estuaries, mangrove forests, beaches, coral reefs, seagrass beds, and the deltas of large rivers such as the Rufiji, Pangani, Wami and Ruvuma. While these coastal districts cover only about 15 percent of the nation’s total land area, they support approximately 25 percent of the population, or eight million people. The coastal population is projected to increase to 20 million by 2025.

Tanzania is one of the poorest countries in the world with an annual per capita income of about US\$ 270 (World Bank 2003). Non-income dimensions of poverty are also severe. In 2002, Tanzania was ranked 151 (out of 173 countries) on the Human Development Index (World Bank 2003). In the coastal regions, the standard of living is generally even lower than the national average (Tanzania Coastal Management Partnership 2001). Communities depend on small holder farming, subsistence forestry, lime and salt production, coastal fisheries, seaweed farming, and small-scale trade. Most agriculture is found as small-scale subsistence farms. Only 10% of all cultivated land along the coast is comprised of commercial large-scale farms that grow sisal, cashew nuts, and coconuts. There are about 43,000 fulltime marine fishermen in Tanzania, predominately operating in shallow waters using traditional canoes, outrigger canoes, and dhows.

This was the context, when in 1997 CRC was invited by the USAID mission in Tanzania to develop a project that would work in partnership with NEMC to design a coastal management program for Tanzania. As the program design emerged, so did the shape of the entity that would implement it. This was the genesis of the TCMP.

**Table 1. TCMP I-III funding**

<b>Funding of the TCMP</b>	
TCMP Phase I & II: June 1997 - April 2003:	\$4,523,000
TCMP Phase III: May 2003 - September 2005:	\$1,800,000
<b>TOTAL Phases I, II, and III:</b>	<b>\$6,323,000</b>

Four factors shaped the TCMP design:

1. There was no national level policy to guide the accelerating transformation of coastal Tanzania. The design team saw the usefulness of creating a national policy for coastal management in Tanzania, to support and guide districts and communities as they embarked on planning and managing their coastal resources.

2. Environmental governance was sector-driven and top down. Collaboration between local and national-level administrations was weak or not present. The design team found it essential to build the TCMP as an integrated project that depended on inter-sectoral collaboration.
3. There was insufficient human capacity to deal with environmental management issues. Those who did exist were already employed by the government. Asking these skilled managers to leave their jobs to work for the TCMP would only lead to discontinuity in the very agencies that needed to be strengthened. As a result, a decision was made to hire a small team supported by inter-disciplinary working groups. This ensured maximum competence while keeping talented individuals in their existing jobs.
4. Poverty was a major issue along the coast. It was acknowledged as impossible, if not irresponsible, to focus TCMP efforts exclusively on resource conservation. One of the key goals for the TCMP was to create mechanisms for addressing emerging economic opportunities. In response, the TCMP committed to developing investment guidelines for mariculture and tourism.

Facilitating and promoting the national ICM policy process was the core of the TCMP work. This process began shortly after the Core Working Group was formed in 1998 and involved a series of stakeholder meetings and negotiations until the Cabinet approved the National Integrated Coastal Environment Management Strategy in December 2002. The vision of the national coastal strategy is of a coast with thriving settlements, where people who rely on the sea and its abundant resources for their food and livelihood are actively working to protect and sustain their resource base. It further envisions the development of new coastal economic opportunities that sustainably contribute to both local and national development and diversified employment opportunities for coastal residents. It calls for the creation of partnerships between government and all segments of Tanzanian society—resource users, the private sector, academic and research institutions, and others—who work together to implement the strategy.

While the strategy was the cornerstone of the first years of TCMP, other parts of the process leading up to it and other outputs and outcomes along the way should also be acknowledged. This includes the State of the Coast 2000 and 2002 reports, which brought national attention to Tanzania's pressing coastal issues. It includes the mariculture and tourism investment guidelines, which are an example of national-level guidance that can assist future development within the coastal region. The Mariculture Working Group restructured the mariculture permit process and did so while modeling a new and more productive way for agencies to work together. Another effort that helped set the pre-conditions for approving the Strategy was the TCMP work to promote coastal management in Tanzania through awareness raising activities such as the Coastal Environmental Awards Scheme.

Implementation of the major ideas outlined in the national strategy began almost two years before the Cabinet formally approved the document. This was critical to maintain

momentum and demonstrate the benefits the strategy could have in the coastal districts. After reviewing various methods for implementation, the TCMP selected district action planning as a suitable and potentially powerful mechanism. The action planning strategy concept was adapted from the Tanga program, which had played a major role in helping the TCMP prepare the national guidelines.

The goal of district ICM action planning was (and still is) to implement the national coastal strategy in the coastal districts. The first step was the development of guidelines for district action planning. In 2000, after the first version of the guidelines was developed, the TCMP launched the “Local ICM Action Planning Program” in two pilot districts—Pangani, in the Tanga region, and Bagamoyo, in the Pwani region. Two years later, TCMP expanded the ICM action planning concept to the Mkuranga District. By 2005, TCMP had seen some positive results in the three districts. In the Pangani District, TCMP had seen an increase in the number of women involved in decision-making, a reduction in illegal fishing and mangrove cutting, a decrease in beach pollution, and the onset of co-management of resources between villages.

In Bagamoyo, the district ICM process contributed to:

- Development of a Community-Based Fisheries Management Plan
- Reduction in mangrove cutting and destructive fishing practices—this outcome can be attributed to a greater awareness, created by the ICM action planning process.
- Replanting of mangroves and corals—done in collaboration between villagers, researchers, and district extension officers.
- Reduced conflicts between trawlers and artisanal fishermen—by bringing the issue to the attention of the Department of Fisheries’, the district succeeded in decreasing the number of trawlers in the Bagamoyo waters.

Sustainable livelihoods (e.g. beekeeping, seaweed farming, milkfish farming, and tour guiding) were piloted in all three districts. With project support, seaweed farming production in Bagamoyo increased from 2.5 tons in 1998 to 14.8 tons in 2003 (Torell and Nzali 2004). In Mkuranga, livelihood activities, especially the adaptation of salt ponds into fish ponds, were well received. The district also developed and adopted four fisheries management bylaws. TCMP worked with FINCA international to provide microfinance services to communities in Bagamoyo and Mkuranga in support of these livelihoods development.

The above and more were experiences that URI-CRC built upon when designing the TCMP Sustainable Coastal Communities and Ecosystems Project in 2005.

### **TCMP SUCCESS Goal**

The overarching program goal was **to conserve coastal and marine biodiversity while improving the well being of coastal communities through the implementation of Tanzania’s National Integrated Coastal Environmental Management Strategy (NICEMS) and other related ICM policies and strategies.** This goal contributed to the

USAID/Tanzania mission Strategic Objectives for Natural Resources Management /Environment and Economic Growth (NRM/E and EG).

### **Project Results and Relationship with USAID/T/SO13/12 and PEPFAR Results**

SUCCESS had four Intermediate Result (IR) categories that directly contributed to the USAID/T/SO13 /12 IRs as well as some of the PEPFAR and water earmark result areas:

1. The Tanzania Integrated Coastal Environment Management Strategy is mainstreamed into NEMC and into related sectoral policies, laws, and strategies and decentralized governance (This project result contributed to USAID/T/SO13-IR 1—Policies and Laws that Integrate Conservation and Development Applied).
2. Seascape-landscape scale conservation is practiced in targeted areas through local level governance (This project result contributed to USAID/T/SO13-IR 2—Participatory Landscape Scale Conservation Practiced).
3. Increased and equitable benefits are being realized from expanded opportunities in sustainable, natural resource-based micro-enterprises specifically targeting HIV/AIDS vulnerable groups (This project result contributed both to USAID/T/SO13 and SO12. For SO13, it specifically contributed to IR3—Conservation Enterprises Generate Increased and Equitable Benefits from Sustainable Use of Natural Resources).
4. Gender equity and HIV/AIDS preventive behaviors promoted through communicating HIV/AIDS, environment, and equity messages (This project result is related to USAID/Tanzania’s cross-cutting objectives and was added in Year 2. It also contributed to four PEPFAR indicators, as shown in the indicator results framework presented in Appendix I).

The TCMP SUCCESS Project emphasized local actions that promote best practices – e.g., co-management for near-shore fishery areas including the establishment of no-take conservation zones, and small-scale enterprise development in mariculture and tourism. The Project also implemented actions to mitigate the impacts of HIV/AIDS on biodiversity conservation in the Saadani National Park landscape-seascape area. Activities are nested within the management and action plans being implemented by districts, individual marine reserve and park authorities, and river basin authorities.

### **Changes in Life of Project Scope**

The scope of the TCMP SUCCESS Project increased significantly during its implementation as the USAID funding doubled from an initial US \$1,575,000 to US \$3,110,000<sup>2</sup>. The Project expanded in three areas as shown in Table 2.

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<sup>2</sup> The final Project budget was US \$3,373,632, which included US \$276,632 in URI match

**Table 2. SUCCESS original and final budget**

Year	Original budget (Biodiversity earmark only)	Actual budget			
		Biodiversity	PEPFAR	Water and Sanitation	Total from all earmarks
FY 06	315,000	315,000			315,000
FY 07	315,000	565,000			565,000
FY 08	315,000	565,000	260,000	70,000	895,000
FY 09	315,000	565,000	220,000	550,000	1,335,000
FY 10	315,000	-	-	-	-
<b>Total</b>	<b>1,575,000</b>	<b>2,010,000</b>	<b>480,000</b>	<b>620,000</b>	<b>3,110,000</b>

Starting in the Project’s second year it received an additional US \$250,000 per year from the biodiversity earmark. Second, the “Gender equity and HIV/AIDS preventive behaviors promoted through communicating HIV/AIDS, environment, and equity messages” result area was added in FY 07 when the SUCCESS program merged with the Population, Equity, AIDS and Coastal Environment (PEACE) project. In FY 08, this initiative was strengthened through funding from the President’s Emergency Plan for AIDS Relief (PEPFAR). In FY 08 and 09, SUCCESS also received funding from the water and sanitation earmark to add activities that built upon the Water and Development Alliance (WADA) Program, which ended on February 29, 2008.

**The Population, Equity, and AIDS in Coastal Environments (PEACE) Project**, in operation from 2004 to 2006 and supported by USAID/Washington, was innovative in its goal to integrate HIV/AIDS, gender, and population dimensions into coastal conservation initiatives using a participatory and adaptive management-based approach. The project tested cross-sectoral approaches for integrating HIV/AIDS, gender and population dimensions into site-level coastal conservation and sustainable use governance initiatives; assessed, documented and disseminated lessons learned, policy implications and recommendations for cross sectoral approaches to ICM, with particular emphasis on HIV/AIDS; and disseminated experience and lessons learned at the local, national and regional levels. The PEACE concept was mainstreamed into the SUCCESS Project in FY 07.

**The Water and Development Alliance (WADA)** is a public-private partnership, funded by USAID and the Coca Cola Company. The WADA Tanzania initiative, which ended in August 2008, supported the conservation and sustainable use of Tanzania’s water and watershed resources in the Wami and Pangani River Basins—from the upper watershed to the estuaries where the rivers drain into the Indian Ocean. WADA built alliances between communities, local government, the private sector and the Wami-Ruvu Basin Water Office. These alliances are laying the foundation for improved water resource management, including improved water supply and sanitation, and are increasing the capacity, knowledge and tools for the sustainable use and conservation of Tanzania’s water assets. The USAID/Tanzania mission provided additional water earmark funds in FY 09 to continue the strong foundation of accomplishments started through the WADA program.

This increased funding from the sources outlined above allowed the Project to strengthen its results across all activity areas and produced the following:

### Biodiversity earmark

- A training manual now used by community reef monitors to measure changes in fish abundance and other key indicators
- An environmental baseline of the reefs in Mkuranga
- A zoning plan for mariculture areas (present and future) in Mkuranga
- A Coastal Tourism Profile for the Bagamoyo District
- Monitoring of intertidal no-take zones on the Fumba Peninsula
- Half-pearl farmers and jewelry-makers on Zanzibar received business development assistance and training

### Water and sanitation earmark

- A published profile of the Wami River Basin
- A GIS database for the Wami River Basin
- Water and sanitation needs assessments for two villages on mainland and two in Zanzibar's Fumba peninsula
- Seven latrines, plus hand washing and rain water collection units installed in five high-need public schools benefiting 8,923 persons in the Wami and Pangani River areas
- Hygiene equipment provided to health centers in Mvomero, Msovero, Dumila, and Bweleo (Zanzibar)
- One rain water harvesting facility

### HIV/AIDS earmark

- Over 44,000 coastal residents living around Saadani National Park reached through community outreach that promotes HIV/AIDS prevention
- Members of Ward Multi-sectoral AIDS Communities (WMAC) and Village Multi-sectoral AIDS Committees (VMAC) along with facilitators from six villages now have the skills to facilitate community participatory planning processes for HIV/AIDS and are overseeing the implementation of village and ward HIV/AIDS action plans
- In six pilot villages, the VMACs, WMACs and other local stakeholders have improved capacity to better address HIV and AIDS-related needs
- Six project villages are implementing community participatory HIV/AIDS action plans
- Behavior change assessments to measure the impacts of Project activities in six villages are completed
- Sixty two condom social marketing outlets were established

## Overview of activities and accomplishments

### **Result 1. The Tanzania Integrated Coastal Environment Management Strategy is mainstreamed into NEMC and related sectoral policies, laws, strategies and decentralized governance**

#### **IR 1. Expected Results (*from TCMP SUCCESS 2007 Revised Program Statement*)**

- 1) The Tanzania National Environmental Management Council (NEMC), with dedicated staff and budget, is fully coordinating implementation of the Integrated Coastal Management Strategy through its coastal unit (ICMU).
- 2) The knowledge and skills of NEMC and district staff and other key individuals, including community leaders in the three targeted districts, is strengthened such that they are effective resource stewards and can implement district ICM action plans.
- 3) The ICMU is working in public-private partnership to promote sustainable coastal development and is supporting the coastal districts in implementing the Integrated Coastal Management Strategy (ICMS).
- 4) Guidelines for district action planning have been assessed, revised and applied to development of district action plans in the SUCCESS districts as well as districts supported by other donor projects.
- 5) Action research is conducted around low-cost, modified trawl-gear designs, which have been proven to reduce impacts on bottom habitats, reduce by-catch of juvenile finfish, and reduce incidences of sea turtle mortality.
- 6) Use of modified, more sustainable trawl gears is recommended as a national policy/regulation that promotes adoption throughout the marine trawl industry.

The initial focus of the TCMP program (1997 – 2005) was implementation of the national integrated coastal management strategy (ICMS) and improved planning and policies in mariculture and tourism. Execution of the ICMS emphasized decentralized coastal management and conservation. Participatory approaches and tools for ICM action planning were piloted in selected coastal districts and tangible short-term results that enhance societal wellbeing and protect coastal ecosystems had begun to emerge. In contrast, the execution of ICM strategies at the national and local level remained a great challenge, because of scarce resources and multiple priorities. Implementation of laws, policies and strategies remained weak, due to the limited capacity of those institutions responsible for implementation. Recognizing this, the TCMP SUCCESS focused in two areas:

1. Improving human and institutional capacity to implement the ICMS and decentralized governance, and
2. Ensuring policies and strategies for coastal conservation and sustainable livelihoods were applied.

Based on the revised 2007 Revised Program Statement, the expected results and the actions that were undertaken in order to achieve these were as follows

***1) The Tanzania National Environmental Management Council (NEMC), with dedicated staff and budget, is fully coordinating implementation of the Integrated Coastal Management Strategy (ICMS) through its coastal unit (ICMU)***

Although an ICMU was never formally established by the NEMC Board as initially envisioned under the ICMS, ICM activities have been integrated into NEMC's normal activities. Four staff members operating under the Department of Research and Planning are responsible for coordinating and carrying out the activities called for in the NICEMS. In addition, the ICMU steering committee has met on two occasions with technical support and assistance provided by the Project. Overshadowing the ICMU concept, the Government of Tanzania designed and was awarded \$10 million from the Global Environmental Facility to establish MACEMP, the Marine and Coastal Environment Management Project. Much of the focus of this program has been to implement portions of the NICEMS.

In addition to District Action Planning, TCMP SUCCESS was involved in the development of several policies, plans, and procedures that support the implementation of the NICEMS. While SUCCESS did not play a leading role in all these activities, it did provide important technical inputs. For example, SUCCESS played a key role in establishing the Tanga Coelacanth Marine Park, which was declared an official park in the Government Gazette Notice No. 300 of August 28, 2009. SUCCESS also provided technical inputs and assisted in writing the Urgent Strategic Actions to Protect Marine Areas, Lakes, Rivers and Dams. These actions have since been endorsed by the Tanzania Cabinet and their implementation is being funded by the government's Division of Environment.

***2) The knowledge and skills of NEMC and district staff and other key individuals, including community leaders in the three targeted districts, is strengthened such that they are effective resource stewards and can implement district ICM action plans***

Through previous and ongoing capacity support from TCMP, NEMC began development of integrated coastal environment management (ICEM) action plans for 11 coastal districts. By the end of 2009, Pangani, Bagamoyo and Mkuranga coastal districts had finalized revising their action plans. Rufiji, Mafia and Kilwa, who were new to ICM action planning, have all had their new plans endorsed by their respective Councils. The Dar es Salaam coastal districts of Ilala, Kinondoni and Temeke have finished their district coastal profiles and issues while the rest of the coastal districts are now in the process of writing the draft plans. SUCCESS acted as a technical resource to NEMC and these districts. This is an excellent example of scaling-up, where a technique funded by USAID has been adopted by the government of Tanzania, with funding from MACEMP, and replicated throughout coastal Tanzania. TCMP SUCCESS supported this effort by serving as trainers in MACEMP events, providing ongoing mentoring to district officers and villages in Pangani, Bagamoyo and Mkuranga, and offering support to several local officials for participation in the Summer Institute in Coastal Management held at the University of Rhode Island.

**3) *Guidelines for district action planning have been assessed, revised and applied to development of district action plans in the SUCCESS districts as well as districts supported by other donor projects***

Working with local districts to develop ICEM action plans described above, NEMC used national guidelines revised under the leadership of the SUCCESS Project. The revisions were based on several years of implementation experience in Bagamoyo, Mkuranga, and Pangani. The revised guidelines incorporate issues such as fisheries co-management, coastal environments and uses, climate change, and microenterprise development.

**4) *The ICMU is working in public-private partnership to promote sustainable coastal development and is supporting the coastal districts in implementing the ICMS***

While the ICMU remains an informal mechanism, the MACEMP funded through the Global Environmental Facility (GEF) has carried out a comprehensive effort to establish district action plans coast-wide as well as utilize the Tanzania Social Action Fund (TASAF) to implement early actions.

**5) *Action research conducted around low-cost, modified trawl-gear designs, which have been proven to reduce impacts on bottom habitats, reduce by-catch of juvenile finfish, and reduce incidences of sea turtle mortality***

The SUCCESS Project sought to play a role in improving the practices within the trawling industry through low-cost, modified trawl-gear designs, which have been proven to reduce impacts on bottom habitats, reduce by-catch of juvenile finfish, and reduce incidences of sea turtle mortality. In FY 08, fisheries experts from URI traveled to Tanzania where they assessed the Tanzanian trawl fishery regarding fishing practices, gear designs, as well as attitudes of fishermen and owners concerning marine turtle conservation, innovative gear designs, and best practices to reduce marine turtle mortality. SUCCESS hosted a stakeholder workshop to introduce the concept of Turtle Excluder Devices (TEDs) and Bycatch Reduction Devices (BRDs) to the local trawl fishery as a way to reduce marine turtle by-catch as well as reduce commercial trawler impacts on the small scale fishery. This was the first time that the Government, commercial trawl fishery sector, non-governmental organizations and small scale fishers sat down to discuss these issues. A strategy to test BRDs and TEDs was developed as an outcome of that workshop. The costs to trial TEDs using commercial vessels and gears was projected to cost over \$30,000—considerably more than the initial estimate. However, at the same time that SUCCESS was attempting to leverage additional funds for these trials, the Government of Tanzania placed a moratorium on trawl fishing in marine waters. The marine trawl vessels stopped trawling and the majority left Tanzania to fish in other national waters in East Africa. Due to the costliness of this activity, the moratorium on trawling, and the departure of the trawl vessels that were to be used in TED trials, further research on the issue and proposed gear trials were suspended.

**Key Document:**

[Rapid Assessment of the Tanzanian Commercial Trawl Fisheries: Management Issues and By-Catch Reduction Strategies \(2008\)](#)

**6) *Use of modified, more sustainable trawl gears is recommended as a national policy/regulation that promotes adoption throughout the marine trawl industry***

This activity was suspended as noted in the text above.

**Lessons Learned from Implementing the National ICEM Strategy**

- Tanzania remains committed to coastal management and has embarked on a serious attempt to strengthen district level planning and decision-making through MACEMP, TCMP SUCCESS and other programs. At the Final Reflection and Learning Workshop, Eng. Bonaventura Baya, Director General of the NEMC indicated the agency's support for an integrated approach that responds to the country's commitment to poverty alleviation and its Millennium Development Challenge goals, and acknowledged the contributions of TCMP SUCCESS to these efforts.
- In early 2010, TCMP is participating in round tables led by NEMC to revisit and update the NICEMS, which unfortunately does not address climate change adaptation. While implementation of the Environmental Management Act of 2004 has also been slow, it does include new policy and regulatory responsibilities for shore development.
- The planning process aimed at the districts is helping mainstream coastal management issues, participation processes and forward-looking planning. However, it has been largely implemented by national level ministries (i.e., MACEMP) and without a robust and permanent funding program for the districts, or a meaningful sharing of decision-making for issues of regional or national concern. Greater focus on local level implementation is still needed, as is continued integration of coastal issues into district-wide environmental and development programs.



**Three Tanzanian shrimp trawlers impacted by the moratorium on trawling**

## **Result 2. Seascape-landscape scale conservation is practiced in targeted areas through local level governance**

Four Project components were aimed at achieving this result: 1) landscape scale conservation in the Wami Ruvu River basin; 2) district action planning; 3) collaborative fisheries management; and 4) mitigation of the impacts of HIV/AIDS on coastal conservation in the Saadani National Park area.

### **Landscape Scale Conservation in the Wami Ruvu River basin**

#### **IR 2. Landscape Scale Conservation Expected Results**

- 7) Assessments are made of the impacts on the lower basin's estuarine biodiversity, ecological health, and fisheries caused by reduced freshwater flows and on the potential economic impacts of the above influences.
- 8) Environmental Flow Assessment techniques are applied to the Wami River watershed to identify freshwater flow needs to meet conservation priorities and assess threats to maintaining desired ecosystem qualities for the coastal areas in and around Saadani National Park.
- 9) Information from the initial Wami River environmental flows assessment is used in basin-wide planning by the Wami-Ruvu River Basin Office.
- 10) A profile of the Wami River is published
- 11) A GIS database is created for the Wami River basin
- 12) Partnerships with the agro-industrial sector in the Wami-Ruvu and Pangani River basins produces recommendations for reducing water use and environmental contamination that are voluntarily adopted by the private sector

The SUCCESS Project promoted landscape-seascape scale conservation in the Wami River basin. The Wami watershed is critical for biodiversity conservation in the Saadani National Park and contains ecologically important wetland, mangrove and estuarine habitat. In FY07, SUCCESS expanded its level of effort to conserve and promote sustainable use of the water and watershed resources in the Wami and Pangani river basins—from the upper watershed to the estuaries where the rivers drain into the Indian Ocean. This was possible through a new partnership with the Coca-Cola Company and their WADA program. When WADA ended in 2008, SUCCESS expanded to include follow up activities in selected strategic areas that help strengthen landscape-seascape scale conservation through local level governance.

- 7) Assessments are made of the impacts on the lower basin's estuarine biodiversity, ecological health, and fisheries caused by reduced freshwater flows and on the potential economic impacts of the above influences*

The Water and Development Alliance funding allowed the TCMP SUCCESS to conduct a rapid ecological assessment of the Wami River estuary as well, which was enhanced further by the volunteer effort of Cathy McNally, a PhD candidate at the University of Rhode Island. In addition, the efforts of Jason Gritzner, Doreen Sumerlin and Roy Jemison

provided through the cooperation of the US Forest Service added to our knowledge of the wetlands and ecosystem issues of the area.

**8) *Environmental Flow Assessment techniques are applied to the Wami River watershed to identify freshwater flow needs to meet conservation priorities and assess threats to maintaining desired ecosystem qualities for the coastal areas in and around Saadani National Park***

Environmental flows were also assessed to facilitate water allocation decisions and to profile the geomorphologic zones of the Wami River, including creating surface catchment maps. Weather was a major challenge affecting implementation of a wet weather environmental flow assessment—i.e., there was never sufficient water in the Wami River to allow for an assessment prior to the Project’s completion in 2009.

**9) *Information from the initial Wami river environmental flows assessment is used in basin-wide planning by the Wami-Ruvu River Basin Office***

The Project emphasized capacity building of the Wami-Ruvu Basin Water Office (WRBWO). This included assisting the WRBWO to make good water allocation decisions, by locating all water extraction points from Wami tributaries and boreholes around the Mtibwa area, testing the water quality, and communicating information to local and national leaders.

**10) *A profile of the Wami River basin is published that serves as an example of how to communicate technical information in a form suitable for raising public awareness, understanding and urgency***

The profile document is among the first of its kind in Tanzania, and in conjunction with other documents such as the summary report on the Environmental Flows Assessment, has been used by both sides of the debate over the wisdom of establishing biofuel agro-businesses in the basin.

**11) *A GIS database is created for the Wami River basin***

An in-service capacity-building approach was used to train staff to gather, process, and interpret data, improving operations and insights about the severity of the water use problem. Dr. Mwanukuzi of the University of Dar es Salaam provided a number of training interventions over a several month period to help Basin Office staff better utilize their computer systems. This in turn led to the provision of and training in the use of GPS units employed in surveys of water use—these surveys uncovered a much larger number of ongoing water abstractions than expected by the Basin Office.

**Key Documents:**

- [Wami River Sub-Basin Wetland Assessment and Training, June 15 - 29, 2009 \(2009\)](#)
- [A Profile of the Wami River Sub-Basin \(2008\)](#)
- [A Rapid Ecological Assessment of the Wami River Estuary, Tanzania \(2007\)](#)
- [A Follow-up Dry Season Rapid Ecological Assessment of the Wami River Estuary, Tanzania \(2007\)](#)
- [Rapid Assessment of the Interdependence of the Wami River to the Ecosystems and Biodiversity of Saadani National Park, United Republic of Tanzania \(2007\)](#)

***12) Partnerships with the agro-industrial sector in the Wami-Ruvu and Pangani River basins produces recommendations for reducing water use and environmental contamination that are voluntarily adopted by the private sector***

SUCCESS also partnered with private agro-industries to improve their environmental management systems. This included mobilizing and providing information to the management team at the agro-based New Msowero farm in Kilosa. The environmental monitoring survey (EMS) reports inspired the Mtibwa Sugar Estate to recruit environmental officers for the first time, repair its wastewater ponds, and dump less molasses into the Wami River—something that resulted in a better relationship between the company and surrounding communities. Previous reported cases of dead fish along Wami Mbiki conservation area were unheard of during the Project cycle.

***Community-based water and sanitation activities (2008 add on, not in 2007 revised program statement)***

At the community-level, the Project supported Participatory Hygiene and Sanitation Transformation (PHAST) trainings, constructed ventilated improved pit (VIP) sanitation facilities in five schools, benefitting 8,552 school children (52% girls); improved access to drinking water in four villages; and conserved watersheds through tree planting. Eleven VIP latrines and three rain water harvesting systems with a capacity of 22,000, 5,000 and 89,000 liters were built. SUCCESS also provided health centers in Mvomero, Msovero, Dumila, and Bweleo (Zanzibar) with four autoclaves for sterilization of equipment for minor surgeries. Seven village water committees were formed to strengthen local ownership of water resources management, including water supply and sanitation services. Building on the WADA project, the SUCCESS water and sanitation activities had a positive impact on over 100,000 individuals in ten wards and six districts as follows:

- Increased villager awareness of the causes of diseases spread by poor hygiene.
- In Kilosa, 120 households constructed VIP latrines on their own initiative.
- Five schools that were about to be closed due to lack of or inadequate sanitation facilities now have functioning VIP toilets and can remain open.
- Increased personal hygiene leading to reduced incidences of water borne and other related diseases in the participating schools and community at large, including evidence of no cholera incidences in the participating villages since 2007— excepting the Hale village, which suffered from cholera in September 2009 due to lack of water.
- 50% increase in school enrollments.
- 50% increase in school retentions—especially among girls due to improved privacy.
- Modeled on the SUCCESS-constructed VIP latrines, Dumila community members independently constructed an additional one at one of its schools.
- Autoclaves provided to health centers helped reduce infections from unhygienic minor surgeries, benefitting over 100,000 people, mainly women and children.
- To date, the WRBWO has formed seven water user committees in the Mkondoa sub-catchment area in Kilosa district and the work continues—strong water user committees

are important in decision-making on water allocations, management and conflict resolution.

### **Story from the Field: Impacts of VIP Latrines**

During the recent shooting of videos for the 'Voices from the Field' at Dumila Primary School, the head teacher Mrs. Magreth Mangare said the newly constructed latrines at the school have highly contributed in improving the school's performance. "For the first time we have managed to be among the ten best schools in the whole region, a thing we had never expected." Later elaborating on this, the class seven teacher, Mr. Kesi, said the new latrines literally helped the school to improve its academic program and the health of its students.

"Formerly, we had trouble with students, particularly girls who had to skip school or ask for permission just to go back home to relieve themselves. In most cases, those who were allowed to go back home, never came back. They missed their subjects, and as a result they performed poorly in their exams. In the time when we had no toilets it was only a few 'serious' students who were able to pass regional or national examinations. But, since the toilets were handed over to the school in June 2008, the performance of teachers and students at the school has improved and attendance, particularly of girls who now have privacy when they visit the latrines, is high."

Mr. Kesi predicts even greater success after the recent handover of the rain water harvesting system. "This rain water harvesting system is going to be like 'insurance' to our children against cholera. Unfortunately, here in Dumila we have a problem of water-borne diseases, particularly cholera. Now with this system that serves the school and the nearby dispensary, we have found a solution to this nasty and shameful disease."

### **Photos of prototype VIP latrine building and handicap VIP in Dumila Juu**



### **Lessons from Implementing Landscape-scale Conservation in the Wami-Ruvu River Basin**

- Tanzania has adopted an unusually progressive, ecosystem-based governance system for water basins. They are governed not on political boundaries, but on ecosystem boundaries. This facilitates landscape-seascape conservation efforts and environmental flow assessments (EFA).

- EFAs serve as a basis for water supply management, but are typically performed by external consultants as long and expensive research activities—in contrast, SUCCESS in partnership with the WRBWO pioneered a methodology that can be carried out effectively with local experts and in a short period of time.
- The WRBWO, like other Water Basin Offices in Tanzania, is empowered to manage the water basin, but lacks the resources, staff, and tools to effectively manage—making the Office eager to acquire new skills in GPS, geographic information systems, and environmental flow assessment, skills that will help in making better decisions including setting priorities within the context of these limited resources.
- SUCCESS identified opportunities to improve and make more cost-effective the environmental management systems in all the agro-industries it worked with—motivating these companies to make changes that reduce cost and yet at the same time have environmental benefits (this process cannot be rushed, however).
- Public celebrations and events take resources and time, but can be good investments in terms of publicly expressed commitments to environmental health and sustainable economic activities.
- Village reforestation can build a conservation ethic in the community and awareness of water and soil ecological links—its success, however, requires local champions with the motivation and energy to get the community to volunteer and make it work over the long term and while Tanzanian communities have been very receptive to this idea, few local groups have emerged to provide leadership in land conservation.



**Wami River Basin  
during the dry season**

## District Action Planning

### IR 2. District Action Planning Expected Results

- 13) The three target districts continue demonstrating the benefits of ICM—implementing ICM action plans that are mainstreamed into the district planning cycle, linking to national priorities, and addressing major issues that cut across the districts (e.g., action research around low-cost, modified trawl-gear designs)
- 14) Two districts' ICM action plans (Pangani and Bagamoyo) are updated, using the revised district action planning guidelines, and based on the first five years of implementing the original plans
- 15) At least 60,000 hectares in the Pangani, Bagamoyo, and Mkuranga districts with improved natural resource management, including biologically significant areas, watersheds, forest areas, and sustainable agricultural lands
- 16) The Bagamoyo, Pangani, and Mkuranga districts are providing resources to support ICM action planning and implementation

***13) The three target districts continue demonstrating the benefits of ICM—implementing ICM action plans that are mainstreamed into the district planning cycle, linking to national priorities, and addressing major issues that cut across the districts (e.g. action research around low-cost, modified trawl-gear designs)***

Using a learning-by-doing strategy, the SUCCESS Project worked with the Bagamoyo, Pangani and Mkuranga districts to implement district ICM action plans and incorporate these into the overall district development plans. All three districts had approved ICM action plans at the outset and have received implementation grants since 2004. By the end of the Project, District Councils had embraced ICM concepts and procedures and mainstreamed ICM activities into District Development Plans. In collaboration with MACEMP, the three districts revised their ICM action plans, and at the end of SUCCESS, they had attained more specificity than original versions. Some of the key accomplishments at the district level include: 1) enabling conditions for implementation in place, 2) staff capacity built, 3) implementing committees formed, and 4) an ICM office established in each district.

***14) Three districts' ICM action plans (Pangani, Bagamoyo, and Mkuranga) have been updated, using the revised district action planning guidelines, and based on the first five years of implementing the original plans***

TCMP SUCCESS staff and some of the district officials it trained played an important role during this process. The Mkuranga document, prepared by a long time associate of TCMP, did a noteworthy job of following the new guidelines and creating a document that captures information about coastal issues in a useful way. While all three districts followed participatory procedures, two did not take maximum advantage of the opportunity to create documents that could motivate interest and provide the supporting facts and policies to the lists of implementing actions.

***15) Over 180,000 hectares in the Pangani, Bagamoyo, and Mkuranga districts with improved natural resource management, including biologically significant areas, watersheds, forest areas, and sustainable agricultural lands***

Over the life-of-the-Project, SUCCESS improved natural resource management, covering an area of 180,117 hectares.

**Table 3. Number of hectares under improved management**

<b>Natural Resource Management Plans, etc.</b>	<b>Hectares covered by plan</b>
District ICM Action Plans	130,000
Bagamoyo Collaborative Fisheries Management Plan	24,258
Lower part and estuary of Wami River (improved through environmental flow assessment, GIS data-base, and profile)	20,300
Mkuranga mariculture zoning	5,559
<b>Total</b>	<b>180,117</b>

***16) The Bagamoyo, Pangani, and Mkuranga districts are providing resources to support ICM action planning and implementation***

Implementation of district action plans has often been supported through co-funding that included district grants as well as other donor contributions (e.g. MACEMP and the Regional Programme for the Sustainable Management of the Coastal Zones of the Countries of the Indian Ocean/ ReCoMaP). Actions at this scale of our land-seascape approach focused on micro-scale sustainable livelihoods as well as various local-scale resource management and conservation initiatives within the land-seascape areas.

Results from the implementation grants varied depending on the specific activities implemented by each district. In all cases, however, the grants' results emphasized improved resources management and/or providing tangible benefits to coastal communities through improved livelihoods development (contributing to Project IR 2 as well as IR3). In Pangani, the district actions concentrated on coastal livelihoods, including paprika, milkfish, beekeeping, and bread-making. Further, SUCCESS supported SACCOs. In Bagamoyo, the emphasis was on collaborative fisheries management (described below) and ecotourism planning (described under IR 3) and in Mkuranga, activities included support to mariculture zoning to ensure conservation of mangrove habitat, and enterprise development (supporting beekeeping and development of a SACCO).

**Lessons from implementing District ICM Action Planning**

- The coastal districts have proven both motivated and capable of addressing coastal issues using the framework of district action plans. A risk of carrying out a massive scale preparation of the plans in all coastal districts, as was the case in the past two years by MACEMP, is that time and funding limits will lead to perfunctory movement through steps, the completion of a product, but the absence of sustained local understanding and support, or mainstreaming of the product into the overall district approach to natural resources management.

- SUCCESS TCMP provided a small amount of funds to districts as did the MACEMP program via TASAF II. Districts are receptive to complementary type in-kind efforts that provide goods and services rather than cash directly to a government agency. While it is useful when such efforts are carried out in the context of broader scale planning, the context in Tanzania is unlike that of other countries that have followed the planning stage with several years of implementation funding (e.g., the Philippines, Ecuador, Sri Lanka).
- The design of the PWANI program will address this fundamental problem by focusing in fewer districts but over a relatively longer period, engaging in an integrated set of activities including health, livelihoods, conservation, shore development and climate change adaptation and governance capacity.

## **Collaborative Resource Management in the Bagamoyo and Mkuranga Districts**

### **IR 2. CRM in Bagamoyo and Mkuranga Expected Results**

#### ***Fisheries***

- 17) A collaborative fisheries management plan (CFMP) and associated no-take fishery reserves are established in the Bagamoyo District
- 18) A training manual, developed by SUCCESS, is used by community reef monitors to measure changes in fish abundance and other key indicators
- 19) An environmental baseline is conducted of the reefs in Mkuranga
- 20) Local capacity is established to monitor the condition and health of the ecosystems within the CFMP area and the data is being used to adaptively manage coastal resources.
- 21) Abundance and diversity of fish and live coral cover inside no-take marine fishery reserves in CFMP areas remains stable or increases

#### ***Mariculture and mangroves***

- 22) A zoning plan for mariculture areas (present and future) in Mkuranga is developed in collaboration with coastal villagers, scientists, and the Mangrove Management Project

### **Fisheries**

Throughout the developing world, artisanal fishers are often among the poorest of the poor. The problems they face include overexploitation of inshore stocks, intrusion by industrial trawlers into near-shore fishing grounds, destructive fishing practices and overall environmental degradation. In Bagamoyo, the Project's village-based natural resources management efforts focused on bringing about changes in human behavior that lead to improved fish stocks and reef conditions in crucial ecosystems at the district level.

***17) Collaborative fisheries management plan (CFMP) and associated no-take fishery reserves are established in the Bagamoyo District***

In Years 1-3, the Project established a collaborative fisheries management plan (CFMP) in the Bagamoyo district and supported implementation activities, especially surveillance and patrolling activities to reduce dynamite fishing that destroys biologically important coral reefs. Enforcement patrols contributed to the improvements in fish abundance in the no-take areas, and as a result increased numbers of small-scale fishers renewed fishing licenses (many fish without appropriate licenses). Licensing, in turn, helped to both improve the accuracy of data on fishing efforts and to raise revenues for the district.

In the last year, SUCCESS worked to develop alternative financing mechanisms for implementation of the CFMP through the CCC (Central Coordinating Committee). This included investigating a user fee system for tourists visiting the no-take zones and private sector involvement (hotel industry) as a means to support the high level of expenditure needed for constant at-sea patrols. The user fee system is designed to benefit all parties involved. The Dunda village (i.e., Bagamoyo town) has been assigned to collect fees as an agency of the Bagamoyo District Council through a scheme that allocates 20% of the fees collected to the District Council and 80% to the respective villages. In addition, the Dunda village receives 20% of the fees collected from visitors to historical buildings. Other sources of income identified are levies from tourists engaging in various cultural activities within the CFM area (e.g. tour guide, traditional dance and culture, or hiring a canoe and guide). Each of these activities is projected to generate between 2,000 and 5,000 TSH per tourist.



**Central Coordinating Committee members on patrol**

A key issue with the CFMP has been the demarcation of no-take zones. Buoys were deployed in 2008, but most have been “lost” for unknown reasons—likely either poor anchoring systems or theft/vandalism by fishermen. This issue was discussed with fishermen and another attempt was made at at-sea demarcation using 40 new bamboo buoys made by local artisans—buoys unattractive to thieves.

***18) Training modules, developed by SUCCESS, is used by community reef monitors to measure changes in fish abundance and other key indicators***

The SUCCESS Project developed training modules for the community-based monitoring activities. These training materials were based on standard methods used in the Western

Indian Ocean Region, adapted by the Australian Institute of Marine Science's methods manual.

***19) An environmental baseline conducted of the reefs in Mkuranga***

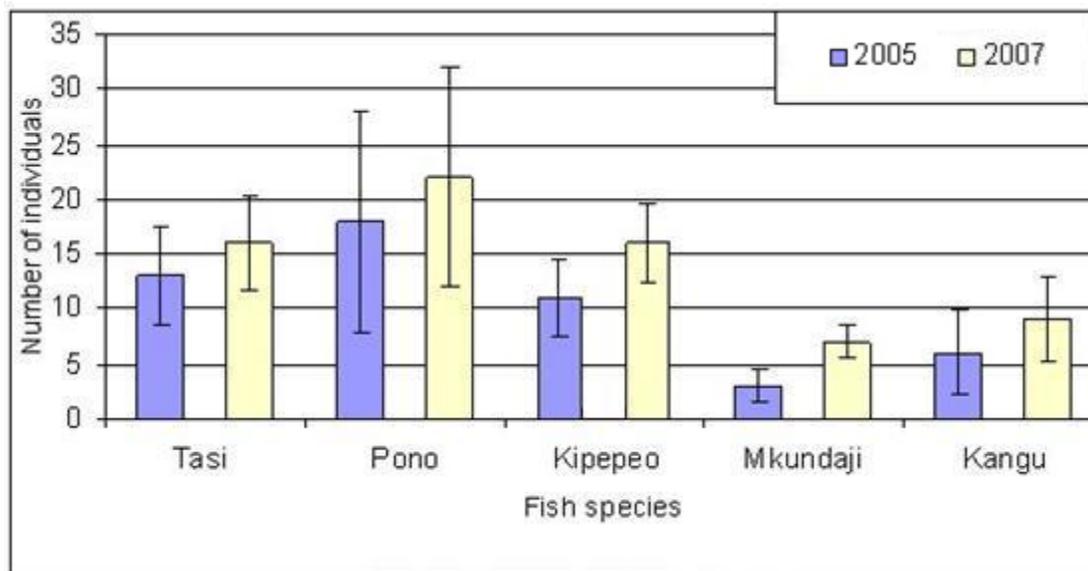
A community-based baseline of coral reefs and fish abundance was prepared in the Mkuranga District in 2007 and meetings held in seven villages to update villagers on the findings. The report indicated it was not worth investing in establishing no-take areas in Mkuranga as there are no significant coral reef areas in the district. SUCCESS determined a better investment was to prepare a zoning plan for present and future mariculture areas in the district (see below).

***20) Local capacity is established to monitor the condition and health of the ecosystems within the CFMP area and the data is being used to adaptively manage coastal resources***

All reef monitoring activities involved members of the community-based village fisheries management committees. These volunteer monitors were trained in simple monitoring methods using snorkel gear to conduct visual transects of the open and closed reef areas. Coral cover and fish abundance were the two main categories of environmental information collected. In some cases (Bagamoyo), refresher courses were provided to those that had been previously trained and during each subsequent monitoring event additional monitors were trained. In some cases, snorkeling lessons had to be provided first, before reef monitoring methods could be taught. In FY09, several SANAPA rangers were also trained in reef monitoring so they could start to monitor the extensive 60 sq. km marine zone (a no-take area) of the park.

***21) Abundance and diversity of fish and live coral cover inside no-take marine fishery reserves in CFMP areas remains stable or increases***

Community-based monitoring of the reefs conducted in 2005 and 2007 showed that coral cover has not significantly increased in the surveyed reefs. However, abundance per 20m<sup>2</sup> transect of some commercial fish species increased dramatically. For example, at Mwamba Mweduga and Mwamba Poyogo (shown in figure below) reefs, fish species such as Tasi (Rabbitfish), Pono (Scaridae), Kangu (Acanthuridae) and Changu (Snappers) showed a remarkable increase. Concomitantly, at Mwamba Poyogo, there was an increased abundance of species such as Mkundaji (Goatfish), which is also an important commercial fish and Kipepeo (Butterfly fish), which though not important commercially is a good indicator of the status of reef health.



**Figure 1. Changes in fish species over time at a closed reef area in Bagamoyo District**

### *Community-based management of cockles in Menai Bay, Zanzibar*

*(This activity is a FY 09 add-on, and did not appear in 2007 revised program statement)*

In the final year of SUCCESS, the Project supported a community-based initiative to support cockle management in the Menai Bay Conservation Area on Zanzibar. Since cockles are harvested primarily by women gleaners, this activity had an important gender dimension. This cockle management activity built on activities started under the Global SUCCESS Program, which ended its field activities as of March 2009. SUCCESS collaborated with local communities and the Western Indian Ocean Marine Science Organization (WIOMSA) to monitor and assess resource conditions in four community-based no-take zones in intertidal areas around the Fumba Peninsula. The expectation was there would be increased cockle abundance inside the no-take zones and adjacent areas. Results of the monitoring data, however, show this was true in one site only. A likely reason was poor site selection. For example, one of the no-take sites in Nyamanzi is periodically covered with sand during the southeast monsoon season, which leads to high seasonal mortality of cockles. The Project has discussed this issue with the community and recommended that they select an alternative site—one that is not subject to shifting sands. In two other sites the likely reason was the reported high levels of poaching that occurred leading up to the religious festivities in October 2008—just before monitoring took place. In response to this last issue, the communities may want to consider adopting traditional management practices such as those used in the Pacific, where closed areas are temporarily opened for a few days once a year during traditional celebrations, then closed again.

### **Lessons from Implementing Collaborative Fisheries Management**

- Community-based monitoring of open and closed reefs requires outside technical support for data analysis and quality control. A sustainable approach to providing such

support needs to be developed and built into the functions of the Ministry of Agriculture, Livestock and Fisheries support functions to districts.

- Poaching in designated no-take zones is an occasional problem that needs to be addressed by the village management committees and reinforced at the district level if the functioning of the no-take reserves is to work effectively.
- The small sized no-take reserves in Bagamoyo are a good start but insufficient to fully address overfishing issues in the district. Unless other issues of overfishing and illegal fishing (including extensive use of beach seine nets) are addressed, improvements in the fishery are unlikely to materialize. This may require changes in national fisheries policy to provide districts more authority to manage levels of effort and implement other means of managing the fishery.
- Patrolling district waters can be costly, owing mainly to the high cost of fuel for the patrol boats. This needs to be a line item in the District's natural resources management annual budget. A longer term solution to lessen the pressure on district budgets is establish some form of self- financing mechanisms (e.g. fees charged on tourist visitations to reef areas). Use of more shore-based patrolling efforts may also be more cost effective than at-sea enforcement.
- The departure of the trawler fleet from Tanzanian coastal waters is expected to have a positive impact on artisanal catches. Ideally, this should be monitored carefully and quantified by The Department of Fisheries, and at the very least, through monitoring fishermen's perceptions to changes in catches in time (prior to the trawlers departure from the waters) and time (after the trawlers stopped fishing those waters).

## **Mariculture Zoning in Mkuranga**

### ***22) A zoning plan for mariculture areas (present and future) in Mkuranga developed in collaboration with coastal villagers, scientists, and the Mangrove Management Project***

This process was pioneered by SUCCESS and involved the district ICM technical team, local communities and private sector salt pond operators and mariculture farmers. The zoning policies and procedures were approved for adoption in the Mkuranga District Council's meeting of September 30, 2009.

#### **Key Document:**

[Decentralized Minor Permitting Procedure for Pond Mariculture \(2009\)](#)

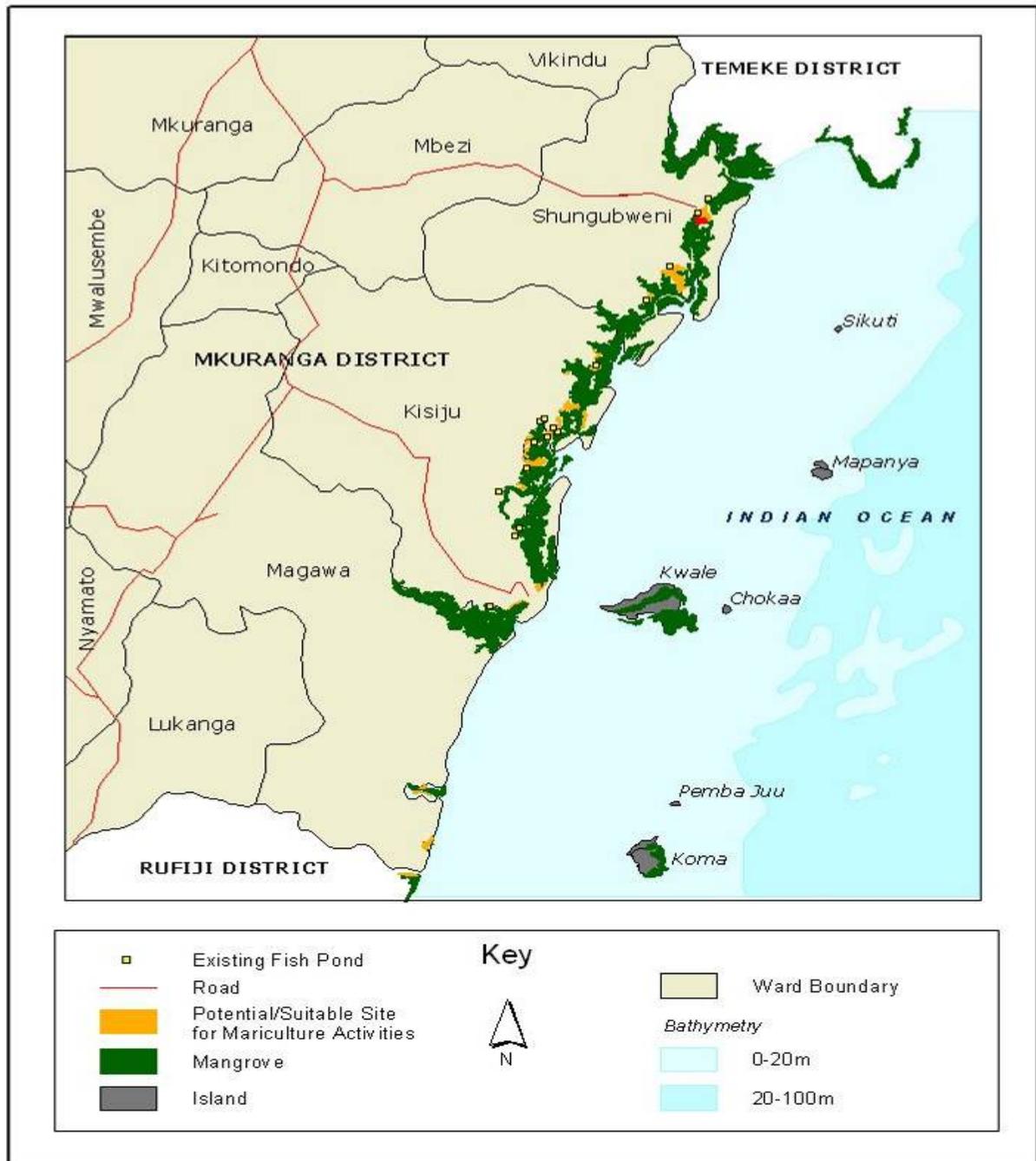
Through the work of SUCCESS, the Mkuranga District Council became the first coastal district in Tanzania to approve decentralized mariculture zoning guidelines/procedures for milkfish and prawn farming. Before the approval, these were reviewed by national reviewers and district technical team. These procedures/guidelines are now available in English and Kiswahili. Mkuranga has 5,559 hectares of salt flats plus mangroves. The adopted regulations will normalize 274 ha of existing ponds and allows for 106 ha of new ponds in areas that have been designated as having good potential. The following table summarizes the situation in seven estuaries. Only in the Magawa ward does the total area of salt flats assigned to ponds use up to 100 percent of the allowable build-out. Overall the

policy will utilize only 35 percent of the allowable area for fish ponds, leaving the rest in reserve for the future. In sum, 5,496 ha of coast are now under improved management in Mkuranga, with 4,949 ha of mangroves (including Type IV areas where pond construction is permissible) provided local level recognition and conservation.

**Table 4. Mkuranga estuaries and areas suited for pond mariculture**

<b>MKURANGA ESTUARIES (listed North to South)</b>	<b>Mangrove s all types (ha)</b>	<b>Salt Flats, Fish Ponds and Salt Works (ha)</b>	<b>Combined Mangroves+ Salt Areas (ha)</b>	<b>Existing Fish Ponds (ha)</b>	<b>Designated new areas for ponds</b>	<b>Maximum Allowable Ponds in Estuary (20%)</b>
<b>Mbezi River</b>	1161	66.7	1228	62	0	246
<b>Boko Mkubwa River</b>	443	42.8	486	0	0	97
<b>Boko Mdogo River</b>	727	99.8	828	86.1	0	166
<b>Makutika-Palacha Area</b>	1243	55.1	1298	90.4	49	260
<b>Kivukoni River</b>	670	94.3	765	32.5	9	153
<b>Ununio River</b>	571	100.4	672	3.7	4	134
<b>Magawa Area</b>	131	88.3	220	0	44	44
<b>TOTALS hectares</b>	<b>4949</b>	<b>547</b>	<b>5496</b>	<b>274</b>	<b>106</b>	<b>1099</b>

The approach is already being scaled-up in four additional districts under the leadership of the Department of Aquaculture in the Ministry of Agriculture, Livestock and Fisheries. Also see below for public-private partnership in the trawler fishery.



**Figure 2. Mkuranga Mariculture Zoning Map**

### **Lessons from Implementing Mariculture Zoning in Mkuranga**

- This initiative began as a very small complementary action that was focused on using a very participatory process to bring order to the procedures for and siting of small mariculture ponds. With some additional technical work and several more months of effort, a model ordinance emerged that has proven to be useful to not only Mkuranga

District, but other districts where small scale mariculture needs to be handled more effectively by village and district leaders.

- The mangrove forest maps generated in 1990 are of sufficient quality and policy import to serve as a base for local planning and decision-making, along with other geographic information and electronic mapping of existing ponds and sites with potential for good production with a low environmental impact. It also provides one of the first examples of site-specific use allocations in the coastal zone of a district, and the format and approach can be applied for other spatial planning needs in rural coastal districts.

## **Improve Marine Zone Management within SANAPA**

### **IR 2. SANAPA Marine Zone and HIV/AIDS Mainstreaming Expected Results**

- 23) SANAPA has designed a strategy for managing the marine component of the park, including an initial characterization and baseline of the ecosystem
- 24) SANAPA staff capable of and participating in reef monitoring in the marine zone of SANAPA
- 25) Tree nurseries and woodlots established as a long-term intervention to decrease fuel-wood cutting in SANAPA
- 26) The pressure on forest resources decreases in the landscape within and surrounding the Saadani National Park through the construction of 400 fuel-efficient wood-burning stoves, leading to a saving of 600 tons of fuel-wood annually, coupled with the establishment of woodlots holding a total of 64,000 seedlings
- 27) Local conservation plans (e.g. district action plans, collaborative fisheries management plans and the Saadani General Management Plan) integrate HIV/AIDS and gender

### ***23) SANAPA has designed a strategy for managing the marine component of the park, including an initial characterization and baseline of the ecosystem***

SANAPA is unique in that it includes terrestrial and marine areas. To date, SANAPA has only managed the terrestrial area, but since the National Park was gazetted in the end of 2005, the expectation was that SANAPA would begin managing the marine zone sometime during the life-of-Project. SUCCESS sought to assist the Park management by working with them and the coastal communities to conduct an environmental baseline of the marine area of the Park (e.g. fish abundance and coral cover). The baseline was to provide a basis for more detailed management plans of SANAPA's marine zone. While leveraged funding from ReCoMaP for this activity was anticipated, the joint proposal with the World Conservation Union for Nature (IUCN) was declined and since SANAPA was moving slower than expected with the general management plan, this activity was dropped. However, SUCCESS did participate in a technical review committee that provided input to the development of the park's general management plan.

***24) SANAPA staff capable of and participating in reef monitoring in the Marine Zone of SANAPA***

TCMP SUCCESS consulted with SANAPA staff on how to work in the Park and invited SANAPA staff to participate in the training on community-based monitoring of fish abundance and other key indicators. This improved SANAPA's capacity to conduct community-based marine monitoring.

***25) Tree nurseries and woodlots established as a long-term intervention to decrease fuel-wood cutting in SANAPA***

To mitigate the impacts of HIV/AIDS on biodiversity conservation, SUCCESS addressed the issue of over-harvesting of wood, exacerbated by HIV/AIDS. Coupled with the recent expansion of the Saadani National Park—which accelerates wood scarcity—HIV/AIDS makes life more difficult for poor vulnerable groups. HIV/AIDS draws down precious time and resources of already vulnerable families and drives some to use non-potable water and to poach wood and other resources in the Park.



**Tree plots with seedlings planted under WADA and maintained by SUCCESS**

***26) The pressure on forest resources decrease in the landscape within and surrounding the Saadani National Park, through the construction of 160 fuel-efficient wood-burning stoves, leading to a saving of 240 tons of fuel-wood annually, coupled with the establishment of woodlots holding a total of 57,000 seedlings***

The SUCCESS Project established no more than 2,000 seedlings in the Mkwaja village—a mere fraction of the 64,000 seedlings originally planned. Part of the reason was the limited or non-existent interest by the SANAPA villages in tree planting. Another reason was that the WADA project assumed the tree-planting objective, under which TCMP planted over 55,000 tree seedlings in the Wami/Ruvu and Pangani water basins. After the WADA project ended, SUCCESS continued to monitor and follow up with these wood-lots and by the time the Project ended the trees were thriving, despite the recent drought.

Over the life-of-Project, households in six villages surrounding SANAPA adopted 160 fuel-efficient stoves. This resulted in a 67% reduction in the amount of fuel wood used by 240 tons annually (1.5 tons/stove) or from 3 bundles per day per household to 1 bundle per day. The fuel-efficient stoves realized a benefit-cost ratio greater than 10:1. Each stove cost US \$57 and the total value of household savings per annum was US \$584 (2 bundles @ TSH 1,000 X 365 days). Despite the obvious benefits of using energy saving stoves, only the households in Mkwaja village and among SANAPA staff are they widely accepted. As a result, the Project did not reach its original target of 400 stoves, and a total saving of 600 tons of fuel wood annually. After visiting relatives in Mkwaja village, some Zanzibaris did express interest and invited one of the artisans to Zanzibar to construct fuel efficient stoves on the island. Other villages did not see the need for the stoves as the supply of fuel wood remained abundant and easily available. In the case of another village, it lacked the clay soil needed to construct the stoves. On the other hand, the Tanzania Traditional Energy Development and Environment Organization (TaTEDO) adopted a stove design for local bakery businesses that proved highly popular among these businesses as it reduced fuel costs of the business operation significantly.



### **Bakers pose with fuel efficient baking stoves and baked goods**

Working with TaTEDO, SUCCESS also promoted fuel efficient baking stoves and regular household stoves in Matipwili, Saadani, Mkalamo, Mkwaja and Ushongo and Kwakibuyu. Six village groups in Pangani were trained and have received six fuel efficient baking stoves. As part of receiving the stoves, the groups agreed to raise 50% of the cost of the stove to use as a revolving fund to run and expand the adoption of fuel efficient stoves within the villages. Monitoring of the fuel efficient baking stoves indicated that the demand for bread is growing and the bread making groups earn between 50,000 to 200,000 TSH per month from bread sales.

A survey conducted on the quantity of energy consumed by different community members using fuel efficient and traditional stoves both at household and business level (food vending) had the following results:

**Table 5. Energy consumed by households and *mama lishe* by stove type**

Village	Average daily household wood use (Traditional) in kg.	Average daily household wood use (Fuel efficient) in kg.	Average daily wood use Traditional Mama/Baba lishe in kg.	Average daily wood use Fuel efficient Mama/Baba lishe in kg
Saadani	12.5	3.0	15.1	12.0
Matipwili	09.6	4.0	06.4	1.25
Mkwaja	12.05	7.0	0.0	10.0
Sange	9.7	7.1	19.0	6.0
Ushongo	7.34	1.25	11.0	0.5
Mkalamo	11.00	5.4	14.0	0.0
Average daily wood use	10.44	5.00	11.00	5.00

***27) Local conservation plans (e.g. district action plans, collaborative fisheries management plans and the Saadani General Management Plan) integrate HIV/AIDS and gender***

One premise of SUCCESS was that natural resource managers should start building upon the linkages that exist between HIV/AIDS, rural poverty, gender, and natural resources management to develop multi-sectoral policies and programs. Through the work of SUCCESS and its local partner, UZIKWASA, HIV/AIDS has increasingly been treated as a multi-sectoral issue in Pangani and was integrated as a key issue in the revised district ICM action plan.

In year four, the intent was to build capacity among the Saadani National Park staff to promote HIV/AIDS prevention in their workplace and mainstream HIV/AIDS, gender, and population issues into their work. This included assisting them in starting the development of an HIV/AIDS workplace policy. However, after discussions with the Chief Park Warden, this was not considered a priority for the SANAPA management. Instead, we invited SANAPA to participate in trainings on leadership and on linkages between population, health, and environment.

**Lessons from mitigating the impacts of HIV/AIDS on biodiversity conservation**

- Because SANAPA is a newly established park and the general management plan is still under development, it was more difficult than expected to assist them with implementing the marine zone, requiring us to adjust our expectations and focus on capacity building rather than on providing technical assistance.
- Fuel efficient technologies and establishment of woodlots only worked in villages where the perceived need for these technologies was high (i.e. Mkwaja village). In future projects, it will be important to conduct more thorough needs assessments before investing in these sorts of activities.
- The Pangani District became a champion for integrating health and environment, as demonstrated by their actions to integrate HIV/AIDS and sanitation into their revised district ICM action plan. This was in contrast to efforts with SANAPA.

### **Result 3. Increased and equitable benefits from expanded opportunities for sustainable, natural resource-based micro-enterprises**

#### **IR 3. Benefits from Sustainable Micro-Enterprise Expected Results**

- 28) At least 500 individuals involved in sustainable natural resources-based enterprises in mariculture (e.g. seaweed farming, milkfish farming and pearl-oyster culture), small-scale tourism, paprika farming, and beekeeping. The enterprises are operating successfully, and generating employment and economic benefits for men and women in poor rural households.
- 29) Of the sustainable natural resource-based enterprises, at least 50% benefit women and 25% specifically target HIV/AIDS-vulnerable households in the Saadani National Park landscape-seascape area.
- 30) Microcredit schemes to support natural resource-based enterprises by rural poor households are established and operate with low default levels.
- 31) Women and marginalized groups are empowered through diversified livelihoods from natural resources-based enterprises.
- 32) Spatial and regulatory tools are being applied for appropriate siting and operation of fish ponds and seaweed farms, with minimization of the ecological footprint of operations.
- 33) Extension capabilities are strengthened in the three targeted districts in the areas of mariculture, tourism and beekeeping with special attention to the capacity at all levels (government, NGOs, farmers) to understand the dynamics and techniques that enable low-impact, high-benefit enterprises to be developed and sustained.

***28) Six hundred eighty eight individuals involved in sustainable natural resource-based enterprises in mariculture small-scale tourism, paprika farming, and beekeeping. The enterprises are operating successfully, and generating employment and economic benefits for men and women in poor rural households.***

Experience shows that including livelihoods development as part of an ICM project increases a community's interest, support and trust of efforts to manage and conserve coastal and marine ecosystems. Many rural communities depend upon the goods and services provided by their coastal ecosystem. While these communities thus need to protect and improve environmental quality, they also need to improve their own quality of life in areas that include income, food security, and equity. To address these issues, the SUCCESS Project promoted low-impact microenterprise growth in areas such as aquaculture and beekeeping.

Over the four and a half years, the Project assisted 494 enterprises, involving 688 individuals (56% women) in 15 villages in the Pangani, Bagamoyo and Mkuranga districts on the mainland and on the Fumba Peninsula of Unguja Island, Zanzibar. Typical livelihood activities in these coastal communities include small holder farming, subsistence forestry, coastal fisheries and gleaning on reef-flats, seaweed farming, and small-scale trading.

### Story from the Field: Beekeeping Impacts

As we braced a rough road to visit the nearby farms that were a distance from Mkalamo township, I expected to meet the usual unhealthy people who are fighting the poverty strains. To the contrary, we passed a few good looking homes on rather big maize farms, before we arrive at our destination, the farm and residence of Mr. Hamis Omar. Seeing the TCMP car, Mr. Omar quickly approached the car with a smile. After the usual greetings and explaining the reason of our visit, Mr. Omar provided us with a tour of his many beehives, which he termed 'his lifeline treasure'— assuring him and his family a better living.

"In total, I now have over 80 beehives, including the locally made and the modern ones we received from TCMP. After the training in Honey Product Value Added, we realized and have proved that beekeeping provides us with a great opportunity to combat poverty. I am now constructing another house using the money I earned from the sales of my honey and beeswax. I expect to finish the house once we have another rainy season and the trees bloom in flowers."

The farmer there is a readily available market for his products. "In addition to exporting our honey to various places including Dar es Salaam, here we sell honey to the Mang'ati pastoralists either through exchange of cows or cash. I now have four cows that I received in exchange for my honey." More remarkable, was Mr. Omar's new house, which is receiving its finishing touches. Located in the Mkalamo township, it will be rented out, creating another source of income for this ambitious farmer.



**Display of better processed and packaged honey and beeswax candles**

Some common coastal issues shared by all these communities include natural resource degradation, dwindling incomes, and lack of income options. Among these, however, a lack of options for diversifying one's income is the priority issue. Discussions with community members and extension officers led to selection of a range of livelihood activities, including beekeeping, milkfish farming, tour guiding, paprika farming, beekeeping, half-pearl farming, and shellcraft jewelry making. The type of support provided varied by livelihood—e.g., for some existing enterprises such as beekeeping and tour guiding, what was needed was technical support only. In contrast, other, new-to-the-area enterprises such as bread-making and milkfish farming needed a mix of micro-loans, grants, and technical support. In all these cases, SUCCESS worked with the entrepreneurs to move them up the value chain, by improving product quality (by using modern

processing equipment and packaging techniques (beekeeping), fuel-efficient ovens (bakeries), and better designs (jewelry) and assisting with packaging and marketing.

The success rates among the micro-enterprises supported varied—i.e., paprika and milkfish farming were relative failures, although according to reports from Pangani and Mkuranga, farming was taken up successfully by individuals who were not directly supported by TCMP. This may indicate that the Project had indirect beneficial impacts by introducing new, appropriate technologies. Other enterprises, such as beekeeping, jewelry-making, and bakeries have been more successful. A 2007 survey of SUCCESS enterprise beneficiaries identified beneficiary median revenue as US \$198 per year, or 17 % of median income. The surveys were conducted during a point in time where some beneficiaries had yet to realize any revenue from the enterprises, and a follow-up survey would likely have seen larger revenues.

### **Lessons from expanding opportunities for sustainable, natural resource-based micro-enterprises**

- Helping households earn a more regular and diversified income and gain access to microcredit helps reduce vulnerability and improves livelihood security. This is particularly important for households living at or below poverty levels such as those living in coastal Tanzania.
- Linking livelihoods to resource management schemes, such as combining no-take zones, with sustainable aquaculture and jewelry-making or beekeeping with mangrove management provides positive feedback loops, where successful enterprises have incentives to promote conservation.
- One factor in whether or not a livelihood activity generates revenue is the type of support provided to that activity. The most successful enterprises were those to which SUCCESS provided entrepreneurship and marketing training. Less successful were several of the natural resource-based livelihoods to which SUCCESS provided support solely to the production aspects of those livelihood enterprises.
- It is easier to achieve success when enhancing existing livelihoods. Introducing new livelihoods and products is difficult. Local capabilities and markets for new products are uncharted. A new livelihood being piloted also needs to go through at least one if not several production cycles before it can demonstrate feasibility and for some activities, such as agriculture or aquaculture, the production cycle can be relatively long. This makes it difficult to maintain interest of not only potential new enterprise adopters, but of donors, who might want to see positive results within a year or two.
- Family or individually owned enterprises have higher success rates than do group enterprises. However, in some cases of conservation enterprise development, it is necessary to work with groups to achieve ecosystem scale biodiversity results.
- Decisions made by coastal households about livelihoods are complicated and dynamic. Understanding the assets and capacity of the intended beneficiaries—including their business mindset and entrepreneurial culture—is critical. If the goal of livelihood development is successful income generation, then it is important to identify and work with those in the community who already have strong ‘business’ aspirations.

***29) Of the sustainable natural resource-based enterprises, 56% benefit women and 31% specifically target HIV/AIDS vulnerable households in the Saadani National Park landscape-seascape area***

Many Tanzanians are affected by HIV/AIDS (either they themselves are ill with the infection or they are the individual responsible for caring for other household members ill with HIV/AIDS). The economic and social impact on women is especially devastating. When SUCCESS TCMP began working on livelihoods linked to HIV/AIDS during the PEACE project, the intent was to tailor the interventions to target households affected by HIV. Quickly there was realization that identifying HIV/AIDS-affected households is almost impossible—largely owing to the stigma attached to those with the disease. Those who know their status are unwilling to share it. As a result, the decision was made to simply target women and other vulnerable groups such as fishermen. By involving 213 women (31% of total entrepreneurs supported by SUCCESS and 56% of Pangani entrepreneurs) in enterprise development around the Saadani National Park we increased the probability that HIV/AIDS affected households would benefit. Introducing less labor-intensive livelihoods can improve the quality of life for women and other vulnerable groups by raising their income and free up time to tend to sick household members.

***30) Microcredit schemes to support natural resource-based enterprises by rural poor households are established and operate with low default levels***

The SUCCESS Project began by providing microenterprise loans through FINCA, an existing and well established microenterprise loan service provider that lent almost exclusively to women. In the loan service provider model, members receive assistance in establishing savings accounts, and training in entrepreneurship. The provider manages loan collection. The model relies on solidarity group lending—i.e., where a small group of members offer a collective guarantee of loan repayment within their group, a form of social capital. It turned out that the program provided by FINCA was unsuitable for the types of enterprises supported by the Project—interest rates were too high and members had to repay the loans too quickly to be practical for natural-resources dependent enterprises. TCMP-SUCCESS provided seed capital for the FINCA loans, which had high repayment rates—i.e., well above 90%. From an overall development objective, the FINCA-supported activities were generally considered successful. However, the majority of the beneficiaries were not TCMP-SUCCESS intended beneficiaries—i.e, they were not natural resources dependent households. Rather, the majority of beneficiaries were women-headed small enterprises in Bagamoyo town. .

As a result of the difficulties encountered, we ended the FINCA program and established in its place community-based Savings and Cooperative Credit Organizations (SACCOs). A SACCO is a type of village bank created and managed by the community. Lessons from other projects in Tanzania and elsewhere have shown that forming a SACCO for the sole purpose of distributing loan capital immediately after the SACCO is formed often leads to low repayments rates and eventual failure. Beneficiaries will still perceive a “loan” provided in this manner as a handout and do not take ownership and responsibility for repayment. Instead, SUCCESS TCMP set individual incentive criteria for each SACCO.

Members needed collectively to meet a targeted savings level before any loan capital was provided and then after a first series of loans was let, additional loans were made based on maintaining a high repayment rate (90% or better) and increased rates of savings. Performance and availability of additional money to loan was based on the results of quarterly monitoring. SUCCESS TCMP asked the SACCOs to give priority for loans to HIV/AIDS vulnerable groups, including women and migratory fishers. No analysis was made, however, of the extent to which this policy was or was not applied.

### Story from the Field: SACCOs Change Lifestyles in Mkalamo

Mkaramo residences need to be congratulated for promoting community-led savings and credit organizations (SACCOs)—promoted by the Tanzania government to fight poverty. Many individuals in Mkalamo have used loans obtained from the Muungano SACCO to improve their lives and livelihoods.

According to Maria Laurent, a leader of the Muungano SACCOs in Mkalamo, a group of women known as the Tumaini Group borrowed funds for purchasing an energy saving stove made especially for baking bread. The group members, now motivated by their success in their bread business, are no longer dependant on their husbands. Rather, they are able to contribute, sometimes even more than their husbands, to running and managing their homes and families.

“The SACCO has liberated us. Without the SACCOs, we would still be living the same terrible life. But now, *Alahamdululal* ( God be praised, in Swahili), our contribution through bread-making has enabled us to live a much better life. My income through selling bread is helping me to contribute to my children’s education and feed my family better. My husband will tell you that he feels relieved now that our income has rapidly risen,” says Rukia Seifu the treasurer of the women’s group. Rukia’s house is being used to prepare breads and cakes. Rukia’s husband’s broad smile and his confident looks was evidence that their life styles has improved.

The benefits of the SACCO were also demonstrated by Chacha Marema, a Berbeig pastoralist who says he has been able to borrow money from the Muungano SACCO to boost his cow trading. “As a member of the SACCO, I borrowed 600,000 Tanzania Shillings (TSh) and invested it in buying and trading cattle for sale. I made a good profit. Next, I borrowed 800,000 TSh and more recently another 1,200,000 TSh. With more buying and selling, I expect to make an even bigger profit”. When asked to give his views on the SACCOs, Mr. Marema laughed and said: “I think joining SACCO was a brilliant idea. It has made my life easier and makes my future brighter.”



**Mr. Chacha Marema and his cows bought with a SACCO loan**

Three SACCO groups were successfully established and nationally certified in Pangani and Mkuranga, providing savings and credit benefits to 182 members (49% women). Each

SACCO has its own bylaws and a management and administrative structure composed entirely of members from the community. By the end of the Project, 118 loans had been made, with high rates of repayment (greater than 90%). The SACCOs will continue to function and provide continuing benefits to the community long into the future.

**Table 6. Membership and capital accumulated by SUCCESS SACCOs**

	<b>Muongano Mkalamo, Pangani</b>	<b>Songambele KwaKibuyu , Pangani</b>	<b>Umoja Kisiju Pwani, Mkuranga</b>
No of. members	58	93	31
Capital contributed by members	Tsh. 11,199,950/=	Tsh. 10,782,940/=	Tsh. 3,571,789
Capital awarded by SUCCESS	Tsh. 2,000,000	Tsh. 2,000,000	Tsh. 2,000,000
Total Capital	Tsh. 13,199,950/=	Tsh. 12,782,940/=	Tsh. 5,571,789/=

### **Lessons from Implementing Community Based Microcredit**

- Community-led savings and loan schemes build capacity and empowerment. Members themselves set rules that are appropriate for accessing credit, setting repayment schedules, and setting required savings rates.
- When members invest their own money in a community SACCO, they are motivated to manage the SACCO well and take responsibility for repayment of loans. The SACCO is not perceived as a handout.
- Community-led savings and loan schemes create social ties and coordination between residents and local government contributing to social and political empowerment.
- Joining cooperative groups, such as the SACCOs is a way for women to access an important economic and social support system to improve their earnings, diversify their incomes, and become more educated about savings, credit and enterprise management.

#### ***31) Women and marginalized groups are empowered through diversified livelihoods from natural resource based enterprises***

Greater community empowerment to manage natural resources and perceptions of livelihood security are potential non-economic benefits of Project activities. To empower those who are disadvantaged means developing confidence and changing attitudes and behaviors that allow individuals and groups to alter the power differentials in their community, in effect creating new spaces of control (Nelson and Wright 1995). In a 2007 survey of livelihood beneficiaries, SUCCESS TCMP assessed the level of empowerment by asking beneficiary respondents Likert-scale questions on their agreement or disagreement with statements that claimed that involvement in livelihood activities helped create stronger social ties with other community members (social empowerment); that livelihood activities promoted better coordination between residents and local government (political empowerment); or that livelihood activities helped them(the respondents) improve their business skills (psychological empowerment, by improving people’s self-esteem). They were asked to rank statements on a scale from one to five, with one being

strongly disagree, five being strongly agree, and three being neutral. The table below shows the percentage distribution of responses.

**Table 7. Non-economic livelihood impacts**

Livelihood activities helped to:	Rank				
	1	2	3	4	5
Create stronger social ties		7%	20%	53%	19%
Improve coordination with local government	1%	9%	15%	53%	22%
Develop my business skills	5%	17%	21%	42%	14%

These results suggest that livelihood activities contributed to non-economic benefits. Individuals seem to have higher self esteem in terms of business skills and perceive there is improved community cohesion. The former indicates a perception of tangible benefit from the Project and the latter can be an important asset for developing community consensus and compliance with resource management rules. Respondents also felt that the livelihood activities helped create better coordination between residents and local government, which is another important asset for resource management.

In focus group discussions, it became evident that the enterprise development and microcredit scheme had a particularly positive impact on women. The Project provided a large number of women with two opportunities they rarely have—access to capital and the chance to improve their income. When women have an independent source of income, they gain a degree of independence from having to rely exclusively on their fathers or husbands for support. Although encouraging, these qualitative findings were neither confirmed nor disproved by the survey data.

***32) Spatial and regulatory tools are being applied for appropriate siting and operation of fish ponds and seaweed farms, with minimization of the ecological footprint of operations***

A zoning plan for mariculture areas (present and future) in Mkuranga was developed in collaboration with coastal villagers, scientists, and the Mangrove Management Project. See result 23.

***33) Extension capabilities are strengthened in the three targeted districts in the areas of mariculture, tourism and beekeeping with special attention to the capacity at all levels (government, NGOs, farmers) to understand the dynamics and techniques that enable low-impact, high-benefit enterprises to be developed and sustained***

Bagamoyo is experiencing tremendous economic growth, especially in the tourism sector with the expansion of new hotels and the excellent access to Dar es Salaam by highway. However, very little of this economic opportunity is reaching fishing households. There is very little growth in ecotourism. Rather, most of the tourism market is focused on conferences and meetings for local institutions. In addition, there is a small but growing market in cultural tourism focused on foreign tourists interested in the history of Bagamoyo and its historic architectural characteristics.

In the last two years of SUCCESS, a dialogue was started with the private sector hotel operators on the potential for promoting and developing a marine/coastal ecotourism segment of the market. The nearby adjacent reefs could serve as destinations for snorkeling and glass bottom boat tours. Nearby lagoons could be used for kayaking and serve as the starting point for boat tours to Saadani National Park. The Collaborative Fisheries Management group, the hotel industry, and other tourism stakeholders enthusiastically supported these ideas. Part of our goal—which has been shared with the private sector—was to explore ways to make additional economic opportunities available to fishing households and to generate fees (charged to

tourists visiting local reefs) to support collaborative resource (fisheries) management. An Ecotourism Forum and a Task Force were created to develop an ecotourism strategy for the area. This led to development of a Bagamoyo District ecotourism plan, a profile of ecotourism assets and opportunities in Bagamoyo District, and detailed business plans of ecotourism in Bagamoyo town and Mlingotini village. The ecotourism work also piloted a user-fee system, described under the collaborative fisheries management section.

#### Key Documents

- [Profile of Current Coastal Tourism in Bagamoyo District, Tanzania and Opportunities for Development of Ecotourism \(2009\)](#)
- Bagamoyo Ecotourism Plan (2009)
- Mlingotini Village Ecotourism Business Plan (2009)
- Bagamoyo Town Ecotourism Business Plan (2009)

#### Lessons from Planning for Coastal Tourism in Bagamoyo

- The ecotourism workshops and meetings of the Ecotourism Forum and Task Force were successful in creating a common vision, objectives and values for ecotourism development, which did not previously exist
- The history, culture and environmental assets of Bagamoyo Town and its surrounding villages make this area a strong candidate for increased ecotourism activities and revenue generation. However, there is a strong tendency to ignore the cost side of the equation. The excellent list of activities formulated by the Ecotourism Forum and Task Force requires a high level of investment of time and money—investments that experience has shown are beyond the means of local government and ecotourism stakeholders.
- Without government or donor resources, the costs of ecotourism activities need to be borne by entrepreneurs, who as well should derive the benefits or revenues. Small donor projects such as SUCCESS can have their greatest impact by assisting individuals who are willing to invest their own resources in ecotourism. For example, the ecotourism business plan of Mlingotini identified a specific ecotourism entrepreneur and specific ways to improve and grow ecotourism in a way that generated benefits for both the community and the entrepreneur.

## **Result 4. Gender equity and HIV/AIDS preventive behaviors cultivated through communicating HIV/AIDS, environment, and equity messages**

### **IR 4. Gender Equity and HIV/AIDS Behavior Change Expected Results**

- 34) 54,000 persons reached through theater for development and other community outreach that promote HIV/AIDS prevention, environmental protection, and gender equity
- 35) 250 VMAC and WMAC members and selected village facilitators have the capacity to facilitate community participatory planning processes for HIV/AIDS and are overseeing the implementation of village and ward HIV/AIDS action plans
- 36) The capacity of VMACs, WMACs, and other local stakeholders to better address the needs related to HIV and AIDS is strengthened in the six pilot villages as well as neighboring villages in Pangani and Bagamoyo
- 37) Six project villages are implementing community participatory HIV/AIDS action plans that are in line with the overall national planning approach: Obstacles and Opportunities to Development (O&OD)
- 38) 12 condom outlets established in six villages
- 39) Assessments of behavior change conducted in six pilot villages to measure the impacts of the project activities
- 40) Lessons learned from integrating population, health, and environment synthesized and shared locally and in the East Africa region
- 41) At least fifty percent of all beneficiaries and participants in planning and training are women

Promoting gender equity and providing education around HIV and its potential impacts on the environment were critical elements of SUCCESS. The PEACE project had shown that individuals with AIDS or those who care for other family members sick with AIDS have less time for productive labor and are more likely to break natural resource management rules—e.g., illegally cutting wood in the Saadani National Park. During the first two years of SUCCESS, a number of activities were initiated to mitigate the impacts of HIV/AIDS on biodiversity conservation. This included theatre for development, training of village and ward leaders, transfer of intergenerational knowledge about sound environmental management, and lesson sharing and dissemination.

In FY 08, SUCCESS expanded its efforts to promote HIV/AIDS prevention through funding from PEPFAR. UZIKWASA, a local NGO partner, implemented the communications and capacity building activities. This included conducting Theater for Development shows that deliver messages that not only talk about preventing HIV/AIDS but that covers issues of gender and biodiversity conservation as well. In tandem, SUCCESS focused on supporting VMACS and WMACS and strengthening their capacity to oversee and coordinate local responses to the HIV/AIDS epidemic.

***34) Over 44,000 persons reached through Theater for Development and other community outreach that promotes HIV/AIDS prevention, environmental protection, and gender equity***

The main focus of the activity was to assist communities in the SUCCESS Program area surrounding Saadani National Park to address their HIV/AIDS-specific problems, using Theatre for Development—a participatory communication methodology—as one tool. In conjunction with the health education, the theater shows were designed to encourage discussion on the state of the environment today vs. in the past, and on destructive practices and what villages could do to limit poaching and encourage environmental protection. This work was part of a UZIKWASA district-wide behavior change communications campaign that included interactive community radio, radio drama, film, Theater for Development (TFD) and print media. SUCCESS contributed to the theater component, which reached all 33 villages in the Pangani District. The communications campaign is a joint initiative between Private Sector Initiative (PSI), UZIKWASA and SUCCESS with co-funding from Church Development Service (Evangelischer Entwicklungsdienst/EED Germany), USAID, and the French Embassy.

A survey conducted by SUCCESS in June 2009, found that 81% of the villagers interviewed in Pangani had seen at least one TFD show. The results showed that TFD performances were highly appreciated by Pangani communities because they addressed issues directly relevant to them. The active involvement of the audience in the play stimulates people to reflect on a specific problem and propose their own solutions. By the end of the Project, the TFD performances had reached over 44,000 individuals (53% women) and generated lively participant discussions about such issues as how parents can guide their adolescent children to avoid using sex to pay for favors (such as trading sex for a bus ride or the entrance fee to a video session).



**Scenes from a TFD performance**

***35) Two hundred sixty nine (269) VMAC and WMAC members and selected village facilitators were trained and have the capacity to facilitate community participatory planning processes for HIV/AIDS and are overseeing the implementation of village and ward HIV/AIDS action plans***

In Tanzania, like other developing countries, taking a multi-sectoral approach is a key to controlling HIV and AIDS. This means including all sectors, public, private, voluntary and faith-based institutions, and most importantly, local communities. The National Multi-sectoral Strategic Framework on HIV and AIDS (2003-2007), emphasizes a community-based response to HIV and AIDS, which means fully involving communities in the planning, implementation, monitoring and evaluation of their own HIV and AIDS-control activities. In 2003, structures for the coordination of local responses to HIV/AIDS were formed from the council level down to the village level.

**Key Document:**

[UZIKWASA Training Guide For Village and Ward Multi-sectoral HIV/AIDS Committees \(2007\)](#)

While Council Multi-sectoral AIDS Committees (CMACs) were strengthened nationwide through an extensive training program, lower level multi-sectoral AIDS committees in the wards (WMACs) and villages (VMACs) are yet to be trained to understand the pandemic as well as their roles and responsibilities. A major challenge therefore is the need for these committees to coordinate their local responses to HIV and AIDS. Here, partners, such as UZIKWASA, from the civil society sector play an important supporting role.

UZIKWASA has developed a training guide, which is primarily based on the TACAIDS training modules for Council Multi-sectoral AIDS Committees. These modules were modified and shortened in order to suit the particular training needs of lower level multi-sectoral AIDS Committees. This training guide was published by the SUCCESS Project and used when training for members of six VMACs and other local stakeholders to strengthen their ability to work more effectively in HIV/AIDS control.

***36) The capacity of VMACs, WMACs, and other local stakeholders to better address the needs related to HIV and AIDS, is strengthened in the six pilot villages as well as neighboring villages in Pangani and Bagamoyo***

UZIKWASA has also developed a tool for community participatory HIV/AIDS planning using the TFD methodology. This tool was used to facilitate the planning process in six project villages (Sange, Mkwaja, Mkalamo, Mbulizaga, Mikocheni and Buyuni). The focus was to support communities and multi-sectoral AIDS committees in developing and implementing their own HIV/AIDS action plans. Since the UZIKWASA HIV/AIDS planning tool is in line with the overall national planning approach, “Obstacles and Opportunities to Development (O&OD),” it is possible to incorporate the village HIV/AIDS action plans into the overall comprehensive district development plans.

***37) Six project villages are implementing community participatory HIV/AIDS action plans that are in line with the overall national planning approach: Obstacles and Opportunities to Development (O&OD)***

As a result of the capacity building and participatory planning activities, six villages are now implementing multi-sectoral HIV/AIDS action plans. Some positive outcomes of planning and implementing these plans have already been seen in the villages:

- In April, 2009, the Mkalamo VMAC finalized a plan to start raising funds to care for the village's Orphans and Vulnerable Children (OVCs) and widows in need. The Mkalamo VMAC will launch the plan through a fundraiser, with the district commissioner, district community development officer (DCDO) and CMAC invited. This remarkable initiative is part of the Mkalamo VMAC action plan, supported by UZIKWASA and TCMP SUCCESS. The initiative comes from the communities themselves and it shows a growing enthusiasm among villagers for the implementation of community-owned HIV and AIDS control activities.
- In Sange, the village government started a "Sungusungu" initiative—agreed upon during a TFD performance when the audience and VMAC discussed how to control drinking. After the TFD performance, the VMAC discussed the matter with the village government council and they collectively decided to start "Ulinzi Jamii Shirikishi", which means monitoring the opening and closing of local bars in the village. Further, the VMAC identified all OVCs in need and together with the village government council arranged to have the village government pay the school expenses for seven new secondary students who were OVCs.
- Mkalamo village made excellent use of the Voluntary HIV/AIDS counseling and Testing (VCT) services made available there. Couples from twenty-five families underwent voluntary testing—a direct result of the VMAC and the action plan supported by UZIKWASA. In addition, the number of individuals who went for voluntary counseling and testing (VCT) for HIV increased. For example in January 2009 in Mkalamo village, 86 people went for VCT compared to just 48 people in November 2008.
- In Mkwaja, OVCs have been rescued from petty business—an environment that places them at high risk for HIV. VMAC members together with village government made a bylaw prohibiting children from conducting petty businesses in the village. If caught, the child's parent is taken to a primary court and, if necessary, to a district court for further action.
- Reports of incidences of sexual violence in villages have increased. For example, in Mkwaja from January to March 2009, eight women reported being sexually abused. In contrast, from January to December 2008, only one case was reported. This points to an increased openness about these issues and will likely put pressure on VMACs to improve follow-up on cases of reported violence.
- The VMACs trained by UZIKWASA are taking their roles seriously. Three VMACs even reported using their own resources to conduct trainings to subvillage multi-sectoral AIDS committees. The theater performances are also a way to get village and

ward leaders to visit subvillages. In Mkalamo, the Ward Executive Officer visited the two subvillages during the theater performances—the first visit in five years!

### **38) Sixty-two condom outlets established in six villages**

Condoms are in high demand in the villages surrounding Saadani National Park, but before SUCCESS, the SANAPA villages did not have access to regular condom supplies. PEPFAR funding was used to develop sixty two outlets at the grassroots level. The outlets include recreational facilities (bars and guest houses), small shops, and community groups such as theatre groups and multi-sectoral AIDS committees. The keeping and use of records such as on VCT and on condom distribution improved in most villages. The table below shows Mkalamo records until January 2009.

**Table 8. Condom outlets and sales in the Mkalamo Village**

<b>Condom distribution in Mkalamo</b>						
<b>SN</b>	<b>Date</b>	<b>Kind of outlet</b>				<b>Total</b>
		<b>Shop</b>	<b>Health facility (including pharmacies)</b>	<b>Individual distributor</b>	<b>Recreation facility (bars and guesthouses)</b>	
1	30-08-2008	880	299	164	267	<b>1,610</b>
2	01-10-2008	530	302	144	214	<b>1,190</b>
3	30-11-2008	430	1,217	105	173	<b>1,925</b>
4	31-12-2008	720	2,615	158	134	<b>3,627</b>
5	01-02-2009	1,228	1,684	186	197	<b>3,295</b>
	<b>Total</b>	<b>3,788</b>	<b>6,117</b>	<b>757</b>	<b>985</b>	<b>11,647</b>

### **39) Assessments of behavior change conducted in six pilot villages to measure the impacts of the project activities**

A behavior monitoring survey (BMS) was conducted in the six villages where UZIKWASA implemented TFD and activities to strengthen the VMAC. The survey found that 38% (124 out of 324 respondents) thought that the UZIKWASA activities had made a difference in their community. The table below lists the impacts that respondents had seen in their communities.

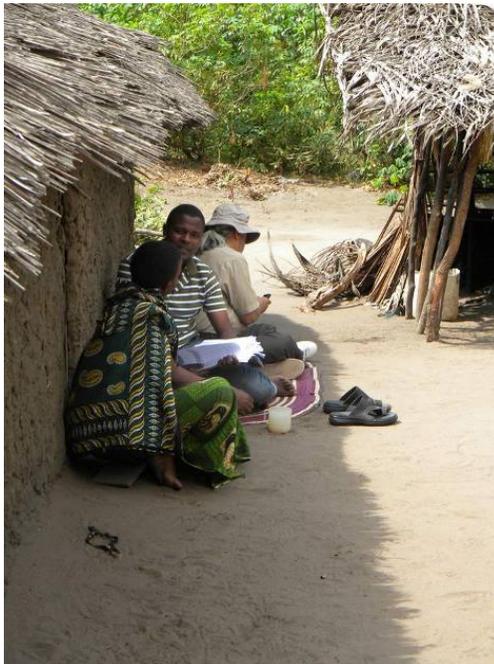
**Table 9. Survey responses related to impacts of UZIKWASA activities**

<b>Question</b>	<b>% of respondents agreeing with statement</b>
1. VMAC more active than before	52%
2. people are using condoms more	82%
3. there are fewer rapes	60%
4. people know where to get condoms	85%
5. people are drinking more responsibly	21%
6. people have fewer sex partners	52%
7. there are fewer early marriages	64%
8. there are fewer temporary marriages	56%
9. there is less trading of sex for fish	46%
10. people feel better about the community	64%
11. people feel more trusting of the VMACs	60%

Question	% of respondents agreeing with statement
12. people are working more	55%
13. there is less stigma associated with HIV/AIDS	44%

In follow-up focus group discussions, villagers elaborated upon some of these impacts:

- The common practice of marrying-off young girls to older men for financial gains has become increasingly stigmatized and parents are now conscious that they will face social pressure if their daughters drop out of school just to get married.
- Short-term marriages between visiting fishermen and local girls are nowadays often rejected by parents and the practice is said to be less common in coastal project villages.
- People are more open to requesting protective health devices such as condoms after discussions with audiences on safer sex practices. Dispensaries are distributing more condoms and more individuals are being tested for HIV. *The June 2009 survey found that 41% of the respondents had been tested for HIV/AIDS—23% had been tested within the last six months.*



**BMS interview in Sange village**

- Communities in SUCCESS TCMP Project villages have started to request the village government to provide space for selling fish in the village center, rather than on the beaches where these sales are currently being transacted and where social control is difficult. The goal is to avoid the current practice of fishermen demanding sex from female food vendors who need to buy their fish in order to run their business.

The survey also found that 50% of women and 57% of men in the six villages surrounding SANAPA use condoms with casual partners. This is slightly higher than reported in the 2008 Tanzania HIV/AIDS Commission (TACAIDS) report, which found that among women who reported having had higher-risk intercourse in the past 12 months, 43% used a condom at the last incidence of higher-risk sex. For men, the comparable figure was 53%.

#### ***40) Lessons learned from integrating population, health, and environment synthesized and shared locally and in the East Africa region***

The lessons learned from integrating population, health, and environment (PHE) activities were synthesized and shared locally at various workshops as well as at an international PHE conference held in Ethiopia in 2007. The SUCCESS approach to PHE was also presented at a PHE conference in the Philippines, at the Coastal Zone 09 conference in Boston, and at other smaller workshops and training courses.

***41) At least fifty percent of all beneficiaries and participants in planning and training are women***

As shown by the table below, SUCCESS met or exceeded all its gender targets.

**Table 10. Gender indicators, targets, and results**

Indicator	LOP target	Cumulative results
Percent women trained in integrated conservation and development	30%	47%
Percent of women participating in coastal resources and conservation planning initiatives	30%	34%
Percent women with full time jobs in excess of two weeks	55%	56%
Percent women reached through community outreach that promotes HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	50%	57%
Percent women trained to promote HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	30%	28%

**Lessons from communicating HIV/AIDS, environment, and equity messages**

- Integrating health and environment creates value-added benefits for both sectors. Through SUCCESS, the health sector was able to reach underserved and remote communities not usually reached by large-scale HIV/AIDS projects. At the same time, from the conservation perspective, we were able to attack root causes of destructive environmental behavior.
- Interactive communications methods, such as theater for development, reduce stigma and empower local communities to push their leaders to address issues of concern such as early marriages, sexual violence, drinking, and the care of orphans and vulnerable children.
- Building village capacity to conduct multi-sectoral action planning further enabled the villages to implement activities, often with their own funding, to respond to the HIV/AIDS crisis.
- The enterprise support provided by SUCCESS gave many women an independent source of income, providing a degree of independence from reliance on their fathers or husbands.

## **Summary of Challenges**

### ***Establishment of ICMU***

At the outset of SUCCESS TCMP, it was expected that NEMC would formally establish an integrated coastal management unit with dedicated staff and budget to implement the NICEMS. This did not happen. However, the ICMU has been informally established within NEMC and its staff is implementing the Strategy with funding from MACEMP.

### ***A moratorium on trawl fishing in marine waters***

As a result of this moratorium, vessels stopped trawling and the majority left Tanzania to fish in other national waters in East Africa. The moratorium, combined with the high cost of implementing modified, more sustainable trawl gears, and the departure of the trawl vessels that were to be used in TED trials led to the suspension of activities in this area.

### ***Promoting paprika and milkfish farming in Tanzania***

It was extremely difficult to sustain interest in this activity among the entrepreneurs, who interestingly enough were very enthusiastic at the outset. Why did the paprika farmers let the fields dry out? Why didn't they transplant the seedlings on time? It seems they were simply not willing to commit the time and labor needed to grow the paprika. Some said that the villagers are too dependent on the maize crop for supporting their households. Investing time and money in the paprika farming only diverted it from the time and money they had to invest in the maize crop and they considered this as too risky. Others said the participants lacked entrepreneurial spirit and are satisfied with what they already have. The reality is that without vast amounts of extension support (basically doing the job for them), both the paprika farming and milkfish enterprises failed. While most often new livelihoods require more assistance in start-up, including capital investment, technical assistance, production techniques, and marketing and sales—at some point participants must have the incentive to claim the enterprises as their own. Not seeing a solution to overcoming these problems, the team phased out the paprika and milkfish farming in FY 08.

### ***VIP latrine construction and hand washing stations***

The quality of the latrines and washing stations was problematic. In most locations the VIP latrines cost substantially more than originally estimated. This was partly due to simple underestimates of the costs from the start. However, there were other reasons as well. In some cases the site conditions were difficult. For example, in Dumila Juu and sites in Zanzibar it was very costly to acquire quality construction materials. To address this, THESA's terms of reference was revised to compensate. For example, there was a scale-back of other activities deemed as not essential to the success of the projects under construction—activities such as the EMS follow-up and supplementary training to villages that were not presently engaged in projects. The team also worked directly with locals to finish the primary school facility in Mvomero District with assistance from the Wami-Ruvu Basin Water Office. This proved to be a successful strategy.

## Concluding Remarks

The SUCCESS TCMP Project set out to conserve coastal and marine biodiversity while improving the well being of coastal communities through the implementation of Tanzania's NICEMS and other related ICM policies and strategies. As outlined in this report, the Project accomplished almost all of its expected results over the four years and three months that it was in operation. The SUCCESS TCMP Project marked a significant change from previous TCMP projects as its focus was "on-the-ground" implementation rather than coastal management policy development. This trend will continue in the new Pwani Project, which will build upon the rich experience and capabilities developed by TCMP and SUCCESS in the Bagamoyo-Pangani and Menai Bay areas. Adopting the Nature-Wealth-Power paradigm, Pwani aims to sustain the flow of environmental goods and services; reverse the trend of environmental destruction of critical coastal habitats; and improve the well being of coastal residents in the Bagamoyo-Pangani and Menai Bay Seascapes.

Key principles and observations to transfer from the SUCCESS TCMP to Pwani Project:

- Meaningful co-management requires secure access to and allocation of fisheries/natural resources.
- A systematic knowledge of the economic and social dynamics of the place is essential to selecting priority actions that recognize the inter-relationships between people and the environment.
- It is critical to move from an approach of external enforcement to one of self-management and to emphasize government's role in creating the enabling conditions for this to happen.
- Fostering positive, self-reinforcing linkages across government, the private sector, and civil society organizations is essential to successful integration and long term sustainability.
- It is important to make use of local science capacity—e.g., build on local research and work with local scientists.
- Strengthening the capacity of local partners, researchers, and local teams of experts may require more time in the short term, but helps build important local in-country capacity in the long term.
- Build upon and strengthen existing management plans, projects, policies, and institutions rather than write new laws and promote unfamiliar concepts and programs.
- Models that successfully balance community-based conservation with wealth creation (e.g., combining pearl farming and/or jewelry-making with marine conservation) can be replicated.
- Using forward-looking planning (e.g. land use planning, climate change vulnerability assessment) to lessen the impacts of future threats to natural and human ecosystems is less costly than repairing and restoring environments after-the-fact.

- Understand how markets function and employ value chain analysis to find effective ways to strengthen vertical integration and value added across producers, processors, and marketers.
- Adopt an integrated approach and cross-cutting and community-based actions to address underlying threats to environmental change such as climate change, poverty, population growth, and HIV/AIDS.
- Resist the impulse or pressure to generate intense but short lived results—conservation, wealth creation and resilience building is a long-term process.
- Develop strategies for harmonizing sectoral policy frameworks, integrating cross-cutting themes (e.g., HIV/AIDS) and ensure they can be implemented locally.

## Appendix 1. Project Results Framework and Comparison of Targets vs. Results

Table 11 shows the SUCCESS TANZANIA Results Framework organized by the Project goal, four intermediate results (IRs) and their sub IRs. It also shows the indicators related to each sub-IR, how the indicators relate to USAID Tanzania's indicators, and how often monitoring will take place for each indicator.

**Table 11. TCMP SUCCESS results framework**

<i>Goals and Intermediate Results</i>	<i>Intermediate Results and Sub-Intermediate Results</i>	<i>Indicator</i>	<i>USAID Indicator</i>	<i>Frequency of monitoring</i>
<i>Project GOAL Coastal and marine biodiversity conserved while improving the wellbeing of coastal residents through implementation of the Tanzania ICEMS and related ICM policies and strategies</i>	<i>Sub IR 0.1 Biophysical Conditions Improved at the Site Level</i>	1. Bio-diversity of CB-no-take-zones (fish abundance and live coral cover)	13.2.2	Biannually
	<i>Sub IR 0.2 Increased monetary value generated from new or improved enterprises</i>	2. Monetary value generated from sustainable natural resources or conservation initiatives (USD or equivalent)	13.3.1	biannually
<i>IR1. National ICM Policies and Strategies and in Particular the Tanzania ICMS, are Applied to Decentralized Governance in Tanzania</i>	<i>Sub IR 1.1 National policies, strategies, and guidelines implemented</i>	3. Number of sustainable natural resource management and conservation policies, strategies, and guidelines implemented	13.1.1 and 13.2.1	quarterly
		4. Human resources trained in integrated conservation and development	13.1.1	quarterly
		5. Institutional structures to support conservation policies strengthened.	13.1.2	annually
	<i>Sub IR 1.2 Funding allocated by NEMC and the Districts for implementation</i>	6. Leveraged funding and financing	None	quarterly
<i>IR 2. Seascape-landscape Scale Conservation is Practiced in Targeted Areas Through Local Level Governance</i>	<i>Sub IR 2.1 Equitable participation achieved</i>	7. Number of persons participating in coastal resources and conservation planning initiatives	None	quarterly
	<i>Sub IR 2.2 Governance of Coastal Resources Improved at the Site Level</i>	8. Number of hectares with improved natural resource management, including biologically significant areas, watersheds, forest areas, and sustainable agricultural lands	13.0.1	quarterly
		9. Number of local plans revised, developed, and implemented	13.3.1	quarterly

<i>Goals and Intermediate Results</i>	<i>Intermediate Results and Sub-Intermediate Results</i>	<i>Indicator</i>	<i>USAID Indicator</i>	<i>Frequency of monitoring</i>
		Number of people trained in strategic information management with USG assistance (NEW)	Wat/San indicator	quarterly
		Number of host country institutions with improved management information systems as a result of USG assistance (NEW)	Wat/San indicator	quarterly
		Number of people in target areas with access to improved sanitation facilities (NEW)	Wat/San indicator	quarterly
<i>IR 3. Increased and Equitable Benefits from Expanded Opportunities for Sustainable Natural Resource-based Micro Enterprises</i>	Sub IR 3.1 New or improved sustainable enterprises developed for a broad number of coastal residents.	10. No of new or improved enterprises developed	None	quarterly
		11. No of consultative visits to enterprise clients by extension agents	None	quarterly
	Sub IR 3.2 A large number of stakeholders benefiting from sustainable enterprises	12. Number of full time jobs in excess of two weeks created	None	quarterly
<i>IR 4. Gender Equity and HIV/AIDS Preventive Behaviors Cultivated through Communicating HIV/AIDS, environment, and equity messages</i>	Sub IR 4.1 Gender equity mainstreamed	Percent women with increased income (ind. 2)	None	Biannually
		Percent women trained in integrated conservation and development (ind. 4)	13.1.1	quarterly
		Percent of women participating in coastal resources and conservation planning initiatives (ind. 7)	None	quarterly
		Percent women with full time jobs in excess of two weeks (ind. 12)	None	quarterly
	IR 4.2 HIV/AIDS information and education provided	13. Number of targeted condom service outlets	PEPFAR 2.1	quarterly
		14. Number of individuals reached through community outreach that promotes HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	PEPFAR 2.2	quarterly

<i>Goals and Intermediate Results</i>	<i>Intermediate Results and Sub-Intermediate Results</i>	<i>Indicator</i>	<i>USAID Indicator</i>	<i>Frequency of monitoring</i>
		15. Number of individuals trained to promote HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	PEPFAR 2.3	quarterly
		16. Number of local organizations provided with technical assistance for HIV-related policy development	PEPFAR 12.1	quarterly

**Table 12. Life of Project targets vs. actual results**

Indicator	LOP target	Cumulative results
1. Bio-diversity of CB-no-take-zones (fish abundance and live coral cover)	Improving	26,734
2. Monetary value generated from sustainable natural resources or conservation initiatives (USD or equivalent)	No target	US\$ 20,6971
3. Number of sustainable natural resource management and conservation policies, strategies, and guidelines implemented	3	3
4. Human resources trained in integrated conservation and development	694	1,166
5. Institutional structures to support conservation policies strengthened.	3	10
6. Leveraged funding and financing	No target	161,532
7. Number of persons participating in coastal resources and conservation planning initiatives	2,424	2,506
8. Number of hectares with improved natural resource management, including biologically significant areas, watersheds, forest areas, and sustainable agricultural lands	61,000	180,117
9. Number of local plans revised, developed, and implemented	5	5
10. No of new or improved enterprises developed	358	494
11. No of consultative visits to enterprise clients by extension agents	136	223
12. Number of full time jobs in excess of two weeks created	249	688
13. Number of targeted condom service outlets	16	62
14. Number of individuals reached through community outreach that promotes HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	54,000	44,359
15. Number of individuals trained to promote HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	151	293
16. Number of local organizations provided with technical assistance for HIV-related policy development	6	6
17. Number of host country institutions with improved management information systems as a result of USG assistance	1	1
18. Number of adults and school children in target areas with access to improved sanitation facilities as a result of program assistance	7000	8,552
Percent women trained in integrated conservation and development (ind. 4)	30%	47%
Percent of women participating in coastal resources and conservation planning initiatives (ind. 7)	30%	34%

Indicator	LOP target	Cumulative results
Percent women with full time jobs in excess of two weeks (ind. 12)	55%	56%
Percent women reached through community outreach that promotes HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	50%	57%
Percent women trained to promote HIV/AIDS prevention through other behavior change beyond abstinence and/or being faithful	30%	28%

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