

CHANGE OR DIE . . .

We Live in Paradise but We're NOT Happy...

The Local and Global Need for a Sustainable Approach . . .

The faculty, staff, and administration of University of Hawai'i-Maui Community College (UH-MCC) work and live on one of the most beautiful islands in the world. However, the challenges for our professionals and our college are the reflections of those faced by our students and community.

The cost of everything in paradise is higher than in most other parts of the country. Maui, Molokai and Lanai sit more than 2,600 miles from the West Coast and form one of the world's most isolated archipelagos. Our present U.S. Census-estimated tri-isle 141,320 resident population has almost doubled the 1980 figure of 70,991 residents. Our cost of homes, food, utilities, and gas is higher than other parts of the State. "The year to date ending June 30, 2007 average price for a home on Maui is \$970,349 which is down 3% from a year ago for the same time period ending June 30, 2006...and \$760,035 for a condo," according to the Realtor Association of Maui statistics (see Appendix 1 for additional Maui County census statistics).

Moreover, 90 percent of the fuel, 80 percent of the food, and most other products must be shipped to generally Honolulu first and then to Maui. Smaller barges then ship these items to Molokai and Lanai. Unemployment is at 3.2 % in our tri-isle service area of Maui, Molokai and Lanai. The workforce shortages in almost all sectors are due in large part to the lack of affordable housing that might house more workers as well as the gap between entry level wages and sustainable living wage (recent estimate at \$17.50/hr for minimum housing, food and other essentials) careers. The result of these stressful phenomena is that over 10,000 Hawai'i residents left the state last year for other more affordable alternatives around the country.

Over the last decade especially and even with an earlier robust economy, the challenges for residents grew more obvious and compelling. Our professional and institutional discontent led us to analyze our students', residents', and community's challenges. The movement away from traditional institutional and program responses accepted the facts that our islands and State, but Maui County especially, must face new realities. The recent national and State economic downturn (Governor announced a \$353 million shortfall in the state's revenues this year), the higher than average age of our workforce, and growing senior population additionally complicate addressing our new realities.

Lifting our heads out of warm, comfortable sands grew more urgent as the data reported appeared bleaker. Even in the 90s, our college colleagues and some residents observed some problematic developments...and began working in earnest.

Our Community's College: A Track-Record of Creative Responses to Our Tri-Isle Higher Education Needs and Opportunities

UH-MCC serves a tri-isle student community of about 3,000 students through a central Maui campus and five Education Centers in Hana, Kihei, and Lahaina on Maui, and on Molokai and Lanai. Since its establishment in 1964 and especially since the 80s, UH-MCC has created solutions to serve its students and community. Here are some of our highlights:

- Established the state's first and only TRIO funded Educational Opportunity Center in 1978; added and continued Upward Bound in 1989 and Special Student Support Services in 2001
- Constructed the first Student Housing (50 bed) project in cooperation with the County of Maui in 1980
- Created an agreement to acquire a Tri-Isle Cable TV Channel in 1983; still the only one operated by a UH institution 7 days a week and 24 hours a day
- Initiated a campus-wide Digital Equipment Company VAX Network with terminals distributed throughout the campus in 1983
- Started a Tri-Isle Interactive Instructional (microwave-based) TV Network in 1988
- Awarded first U.S. Department of Energy grant to Maui Community College Instruction in Sustainable Technologies (MIST) in 1995
- Established University Center offering bachelor's and master's degrees on campus and through distance education in 1996 with support from Maui County
- Awarded the first National Science Foundation Advanced Technology Education grant in Hawaii to establish the Electronics and Computer Engineering Technology Program in 1998
- Won the Statewide American Culinary Federation Competition, a 13 state Western Regional Competition, and came in fourth in the country in 2000
- Awarded NSF National Center of Excellence for High Performance Computing in 2002; since transferred to Wake Technical College
- Built the longest Hawaiian Rock Wall in 2003: 752 ft. long, 3 ft. at the base, 2 ft. at the top, and 3 ft. high, with student, faculty, and staff volunteers filling over 37 truckloads of lava rock...as a tribute to our sense of place in the Hawaiian Culture
- Presented \$10,000 Metlife Award as one of four top performing colleges among the Community Colleges Survey of Student Engagement in 2004
- Began offering MCC English and Math Classes on High School Campuses in 2005
- Approved to begin offering first Bachelor's of Applied Sciences courses in Applied Business and Information Technology in 2005
- Established the Maui Oral Health Center in 2005; served over 6,000 patients, graduated 54 dental assistants and serves as the clinic for proposed Dental Hygiene program
- Initiated English-Japanese Language Exchange Program using Skype over the Internet on laptops permitting Toyama University and Kure National University students to help MCC students learn Japanese and allow MCC students to assist Japanese students to learn English in 2006

- Hosted IXth Islands of the World Conference with 225 participants from 37 countries in 2006; supported in cooperation with the International Small Island Studies Association and the Global Islands Network
- Recognized as the most successful grant recipient among the seven UH Community Colleges; UH-MCC staff and faculty awarded over 186 grants at \$67,952,109 since July 1, 2000 to January 2008 (all were initiated and written at MCC but some funds also benefited other rural Hawaii community colleges)
- Started Audio Music Lab assisting students to master CDs presently sold at Border's with revenues returned to build the music program in 2006
- Began housing students in a privately funded 400 bed student housing facility in 2007
- Received a commitment for a 250kw windmill to be used as part of the campus energy solution and as a live demonstration for students in 2008
- Prepared a Request for Proposals to cover our 3 acre parking lot with photovoltaic panels in Spring '08
- Opened a \$9 million renovated Student Life Center in Spring '08

Historically, UH-MCC received the lowest per capita allocation of state higher education resources of any of the four counties in Hawaii. Although State operational funding has been modest until the last two years, the College has actively responded through federal, state, and county grants. Since July 1990, the College received over \$83,783,671 through over 331 grants (See Appendix 5). The ethos of self-help has become an integral part of our College's past and present.

Through various financial and capital improvement (construction) strategies, the college first focused on strengthening its infrastructure. Although state operational funds have been modest over the last twenty years, state support for facilities completed over \$80 million in instructional, telecommunications/distance education, culinary, and student services and student life facilities. The main campus occupies 78 acres in central Maui. Two key avenues with cultural and mythological significance begin from and end at the campus: Papa and Wakea Avenues. Just as a "sense of place" is an important concept in Hawaiian culture, Papa and Wakea are the Hawaiian gods who created the Hawaiian universe. UH-MCC, therefore bears great educational, social, economic, and "cultural" significance and responsibility as the only higher education institution in Maui County. It is this combination of recognizing needs, helping ourselves, inventing solutions, forming partnerships, and embracing responsibility that formed a critical mass of consciousness and conscience that led us to a comprehensive "sustainable living" epiphany.

From existing to surviving to flourishing through "slimming:" The Tipping Point

Our tri-isle community acknowledges that Maui, Hawaii, the country, and world are in a warmer, more fluid, more precarious place today. The economic, geographic, social and environmental conditions of our islands are likely similar to other colleges and communities in rural, isolated areas. While the geographic character, economic pressures, social impact, and environmental challenges may differ in different parts of the country, the trajectory for many rural colleges must be to design their paths to a sustainable future.

For UH-MCC, this challenge has been apparent for some time. Our current priorities focus on leveraging Maui County's comparative advantages of weather, terrestrial, tropical, marine, and astronomical assets; general biodiversity; cultural diversity; bandwidth and other telecommunications infrastructure; robust visitor and resort facilities; high level of private, public and nonprofit community collaboration; improving health care services; healthy cooperation among all educational levels and sectors; considerable recreational options; growing support for renewable energy and sustainability; and an emerging technology sector.

So while we're not happy, our UH-MCC service area has considerable assets. And we have been making progress, so we're guardedly optimistic.

Enter SLIM (Sustainable Living Institute of Maui)

Issue(s) or Challenge(s) Addressed

In September 2004, UH-MCC partnered with Maui Land & Pineapple Company, Inc. (ML&P) to invite world-renowned eco-efficiency expert, William McDonough to address the campus and community. His message to island communities: though we may live on terrestrially finite, often geographically isolated and resource poor, small islands, ours is not a world of limits, rather it is a world of abundance. According to McDonough, it is increasingly imperative that we rethink the way we do things. The college recognized these emerging trends and began forming local, national, and global partnerships to establish Maui as a demonstration and applied research site in all aspects of sustainability. This development coincided with the United Nations designation of 2005 to 2015 as the Decade of Education for Sustainable Development (UNDESD) calling for the promotion of education, public awareness, and training. The island's unique geographic location, geology, and ecology provide a year-round living laboratory and microcosm that can be used to both address local and global sustainability issues. The College's mission, goals, and actions are guided by the Native Hawaiian reverence for the *ahupua`a*: the traditional land management practice of sustaining and sharing diverse but finite resources for the benefit of all. The creation of the Sustainable Living Institute of Maui (www.sustainablemaui.org) was the college's response to addressing these challenges to sustainability.

Process, timeline, participants, and resources required: A 7 x 24 Opportunity

While the UH-MCC had been inching towards self-help, leveraging our resources and partners, and exploring potential revenues from appropriate programs (where faculty leadership saw opportunities), the galvanizing initiative was still on the horizon. By 2005, Allied Health, Culinary Arts, Automotive Technology and Music faculty leadership were actively exploring strategies to sustain and even expand their programs through generating program revenues while actively attending to student learning outcomes.

SINK OR SLIM . . .

In 2005, the creation of the Sustainable Living Institute of Maui (SLIM) marked a turning point for UH-MCC in how the College began to address sustainability-related challenges at the institutional and community levels.

SLIM's Purpose and Activities:

The Sustainable Living Institute of Maui (SLIM) is a center with a primary focus on non-credit based community outreach and development activities, as well as complementing UH-MCC credit-based activities. These activities include the development and dissemination of knowledge and the provision of services to the County of Maui community in various areas of sustainability, particularly renewable energy and sustainable agriculture. Community outreach and workforce development efforts target K-12 and college-level students, teachers and faculty, and community members at-large.

SLIM primarily directs its resources to five focal areas:

1. Curriculum and practicum development for an Associate's and Bachelor's Degree in Applied Sustainable Sciences;
2. Adult continuous education (empowering individuals to develop sustainable solutions to personal, business, and community challenges);
3. Employee enhancement (sustainability skills development and knowledge acquisition for practicing professionals);
4. Scholar & Intern Program ("green" workforce development through the acquisition of professional experience and job placement; sustainability focused research undertaken by SLIM supported scholars);
5. K-12 leadership and outreach (sustainability oriented teacher training and knowledge development, identification of sustainability oriented career pathways, K-12 sustainability curriculum development).

SLIM also collaborates with UH-MCC academic and research-based programs. This includes the Agriculture and Natural Resources Program, the Sustainable Construction Technology Program, the Maui Culinary Academy and its Culinary Arts Program, the emerging Sustainable Sciences Program, and the UH-Sea Grant Program to develop a wide-spectrum of education, research, and training initiatives in areas such as sustainable agriculture, renewable energy, sustainable water resource management, ecological waste management, sustainable economic development, and other emerging fields. A major focus of SLIM is to empower individuals through targeted training to address challenges and priorities, as identified by the Maui Nui (County) community, by providing them with the design and management skills needed to engineer appropriate and innovative solutions. Thus, SLIM is designed to serve as a center for recruiting, educating, developing, and supporting new leaders who will integrate a holistic and sustainable approach to planning and demonstrating sustainable community development.

The establishment of the Sustainable Living Institute of Maui (SLIM) was initially supported by grants from the Cole Foundation and Case Family Foundation to serve as a center for the gathering of information, generation of new knowledge, and the development, application and validation of appropriate technologies. These seed grants support projects to develop agricultural entrepreneurs and promote interns in agriculture and other sustainable technology disciplines, including alternative and renewable energy. SLIM will continue to develop partnerships with private and public sector entities so as to leverage resources and further the development of a "green" workforce. SLIM will dedicate resources to developing, applying,

demonstrating, and validating appropriate technologies to address the challenges associated with development occurring in an island environment of finite resources. The institute will develop metrics and indicators to assess and monitor progress in addressing these challenges. SLIM will identify and disseminate best practices for replication in other communities and institutions from around the world.

In summary, the Sustainable Living Institute of Maui is intended to first inform Maui Nui's needs and opportunities in sustainability and to second inform other islands around the world as well as other isolated geographies that could be characterized as island-like. Third, and most importantly, the institute is established and designed to lead in sustainability by demonstrating its capacity to contribute appropriate and effective solutions.

SLIM's Financial Strategy and Resources:

The growing need for developing a green workforce, demonstrating and disseminating appropriate sustainable technologies, and providing education and awareness in sustainable living will continue to attract financial support to fund SLIM's activities from a variety of sources. As the institute moves forward with its educational and outreach agenda, it will continue to actively seek grants and donations from foundations and private individuals. Under the leadership of its Executive Director, SLIM will continue to pursue competitive funding opportunities and grant development from a variety of sources including federal, state, county, private, commercial and charitable organizations to support SLIM and other sustainability initiatives. Additional funding for SLIM's operational costs and initiatives will come from sustainability themed conferences, fairs, events, and workshops planned and implemented by the institute.

SLIM also has the ability to leverage the interest from a \$1 million endowment (\$50k interest) from Dorvin and Betty Leis for the creation of a Maui CC Sustainability Fund. Cost savings on Maui CC's energy bill resulting from SLIM sustainable energy initiatives will also be leveraged to further SLIM activities. The Hawai'i State Legislature has also approved \$107,918 in funding for two full-time tenure track faculty positions at UH-MCC. SLIM will leverage these and other resources to promote, facilitate, and implement the SLIM agenda. These funding sources will sustain SLIM's future as a viable and vital institute of Maui CC and the University of Hawai'i System. The development of SLIM has provided support for several other UH-MCC sustainability initiatives.

SLIM's Organization and Administrative Structure:

SLIM operates under the Office of the Chancellor at UH-MCC and is guided by a steering committee, an advisory board, and an executive director (ED). The SLIM steering committee is a recommending body to the Chancellor that guides and reviews the actions of the SLIM ED and advises on the overall direction and development of SLIM initiatives and policies. This committee is comprised of members from higher education institutions, private corporations, and community organizations. A select but diverse spectrum of local, statewide, and international community members will continue to guide SLIM's development by serving as steering committee members. A SLIM Advisory Board will also be established to advise and assist the SLIM ED regarding the implementation of SLIM initiatives developed in consultation with the

SLIM steering committee and the Chancellor. The SLIM advisory board will have rotating membership and be comprised of UH-MCC faculty, students, and staff, as well as local community members.

SLIM Workforce Impacts:

In addition to all of the collaborative results achieved in working with the Culinary Arts program, SLIM's presence and concepts on campus have reinforced and stimulated initiatives that advance sustainability's triple bottom line: economic, environmental, and social outcomes. In providing program-related services, several programs enhanced program self-sufficiency, workforce development, and low-income student and resident access to living wage careers.

Some examples:

- Rural Development and Rural Job Training Initiatives (See section below and Appendix 2). The foundation and continuing orientation of these projects are grounded in sustainability. Over 21,000 individuals have been prepared along multiple career pathways in all of rural Hawaii.
- IXth Islands of the World Conference: held in August 2006, a Maui Declaration was adopted by the conferees; some excerpts that continue to influence the character of Maui's workforce include:
 - Support the concept of Maui Nui (Maui, Moloka'i, Lana'i, and Kaho'olawe) as a Living Laboratory including the public, private and corporately supported Sustainable Living Institute of Maui (SLIM) to develop benchmarks and applications to enhance small island sustainability
 - Endorse the unique and potent roles that schools, colleges and universities can play in advancing sustainability through education and demonstrating the efficacy of threshold research with island-based co-responsible partners
 - Demonstrate the values identified and adopted by small island communities in the ecological, economic, and socially equitable choices made
 - Integrate education into public-private leadership and co-responsibility initiatives when shaping a sustainability agenda for all small islands

The Maui Declaration (see appendix 3) and others that it builds on from Kinmen and Mauritius Islands before, suggest the impact of an emerging workforce that may meet common needs shared by islands and other isolated communities in the nation and the world.

- Dental Assisting: graduated over 24 students in the last two years who have entered jobs at \$28.05/hour (median hourly wage in 2004); since 2003, over 6,000 low-income patients were served with Medicaid reimbursements supporting program expenses.
- SLIM funds a Luau in August, 2005 to bring together private sector employers, academics, community leaders, Maui County officials, and other prominent community

members from Maui and beyond to identify and discuss community needs SLIM could play an integral role in helping to address.

- In 2007, SLIM provides \$2,500 in travel funds and conference attendance fees for UH-MCC faculty working for the UH-MCC based Hawaii Energy Test Lab and in the Sustainable Construction Technology Program to attend two renewable energy themed conferences. This provides the faculty members an opportunity to present their research at the conferences and to acquire some of the latest knowledge in their respective fields.

The SLIM Scholar & Intern (S&I) program

The Scholar & Intern (S&I) program provides hands-on learning, in-field lessons, field trips and discussion about entrepreneurship in agriculture.

- SLIM is currently providing logistical support for two UH-MCC interns thru an emerging partnership with Hnu Photonics (a solar technologies company based on Maui). This partnership is intended to provide a growing number of internship and job placement opportunities for UH-MCC students into the future. Similar partnerships are also underway with Maui Electric Company (Maui's electric utility company). SLIM plans to continue to establish such partnerships with a growing number of public and private sector entities in the renewable energy and sustainable agriculture sectors, as well as in other emerging sustainability-related fields.
- SLIM scholars:
 - Kyung-Nan Koh, Ph.D. candidate of cultural anthropology at the University of Pennsylvania (corporate social responsibility efforts at Maui Land & Pineapple Company, Inc.)
 - Jeremy Kwock, University of Southern California MBA student serving as fellow at UH-Hilo Pacific Aquaculture and Coastal Resource Center
- Earth University-SLIM interns (ML&P_Kapalua Farms):
 - 3 students (2004-2005)
 - 5 students (2005-2006)
 - 5 students (2006-2007)
 - 3 students (2007-2008)
- UH-MCC SLIM Intern supported to travel to Earth University (2004-2005)
- Maui-based high school interns (ML&P's Kapalua Farms and Hali'imaile Community Garden): refining a model for Maui-based undergraduate and high-school students involved in sustainable agriculture and/or technologies to move into agricultural-based entrepreneurship by providing them with a chance to work alongside SLIM scholars.
- SLIM high school interns and high-school intern recruitment strategy:

In 2006, SLIM funded Maui Land & Pineapple Company, Inc.'s (ML&P) Hāli`imaile Community Garden Potluck event to identify high school students interested in pursuing careers with an agricultural focus.

As a result, Maui Ag Partners (MAP) of ML&P incorporated five Lahainaluna and five King Kekaulike High School students into operations for five weeks in the summer of 2006. In addition to field work such as planting orchard trees in the organic farm, interns participated in field based lessons on several topics including composting, soil science, and entrepreneurship. Through SLIM funding, MAP was therefore able to *double* the number of high school students involved in sustainable agriculture internships in 2006.

- 3 students (2004-2005)
 - 5 students (2005-2006) Kamehameha School (5) for a 40-hour unpaid internship
 - 10 students (2006-2007) Lahainaluna (5) and King Kekaulike High Schools (5)
- UH-Mānoa Intern (2005-2006)
Joshua Irvine, UH-Mānoa College of Tropical Agriculture and Human Resources
MAP held an Up Country five-week internship at Hali`imaile Community Garden (HCG). Five students worked with our UH intern to establish the garden for future use by the community.

UH-MCC as a beta-testing site for emerging sustainable technologies:

SLIM is actively involved in continuing to develop UH-MCC as a beta-testing site for the application and demonstration of innovative sustainable technologies, including:

- Photovoltaic (Solar) technologies
- Wind technologies
- Sustainable agriculture technologies (e.g. composting, biofuel processing, etc.)

This provides MCC students, faculty, and staff with hands-on, visual learning experience, equipping them with skills to meet market demands for a high-tech workforce. This also positions UH-MCC as a demonstration site and model for the greater community at large.

Curriculum development of sustainability-related academic programs

SLIM is actively engaged in consultation with a variety of credit and non-credit based academic programs at UH-MCC (Sustainable Construction Technology, Agriculture & Natural Resources, Culinary Arts, etc.) to assist faculty and staff in incorporating sustainability into academic curriculum.

Culinary Arts: A Sustainable Program Example

Maui Culinary Academy “Going Green through Growing Green Workforce”

Mission and Vision of the Program

The Culinary Arts Program of Maui Community College envisions itself as a world class culinary arts training center for the state of Hawai'i. The “Maui Culinary Academy” seeks to draw and train students from Maui, across the State, and the rest of the country and world. Our

new 17 million dollar facility provides instruction leading towards three-degree options including an AAS in Culinary Arts, AAS in Baking, and an AAS in Restaurant Supervision. The “credit program” relies on a hands-on approach to student learning through the direct operation of the many food outlets and restaurants in the present training facility called Pa’ina.

The Pa’ina facility serves as a total work based learning center, where students learn and model the best practices of the food service industry. Students gain hands-on training and prepare for the real world by operating a full-service restaurant and six fast casual food outlets. The programs “outreach-training” activities have been revitalized, through creative partnership and funding under the Rural Development Program, delivering successful high school outreach training programs on Lanai and Molokai in the form of “Culinary Arts Boot Camps”. Students in these remote locations gained the opportunity to enhance skills related to culinary arts, explore secondary educational opportunities at Maui Community College and investigate career choices in the culinary profession. Short-term, non-credit instruction is also offered to meet the educational needs of various segments of the community’s residents, either permanent or temporary.

The program works with restaurant industry leaders to develop, design and implement specialized certificate-training programs tailored to enhance desired skill sets needed of current workforce. The program will continue to provide, refine, and expand professional development classes to restaurant industry employees through its “Visiting Distinguished Chef Program”. Additionally, the Maui Culinary Academy will be a research and training center for the development, sales and marketing of innovative ideas and food products of and for farmers and other entrepreneurs. The program’s Research and Development Program offers unlimited opportunity in the worlds of recipe development for new and value-added food products. Students in this area of study receive employment skills in food manufacturing, processing control, marketing, sales and business management. Sales of the MCA product line extend throughout the Hawaiian Islands and increasingly around the country. Finally, the program will explore and determine the feasibility of establishing a Summer Sushi Academy.

Workforce Development in the Culinary Arts

In Fall 2007, MCA enrolled 155 students and awarded 197 Certificates of Competence and Achievement. Historically, the program graduates about 37% of its majors. New graduates from our program find employment at a 90% level, not only here on Maui, but across the nation. Program graduates work in leading restaurants in Napa Valley, Las Vegas, Colorado, Oregon and Washington. Graduates are now successful entrepreneurs and highly acclaimed chefs.

Noteworthy graduates include:

Jon Mizukami, French Laundry in Napa Valley, CA
James MacDonald Owner/Chef Pacifico, I’o and O’o Farms, Kula, HI
Matt Onishi, Mavro’s, Honolulu, HI
Larry Yamada Owner/Chef of “Da Sushi Bar, Kahului, HI
Brandon Shim Owner/Chef Pauwela Café, Haiku, HI
Nicole Koga Owner/Partner S&J Bakery, Wailuku, HI
Jake Belmonte Sous Chef Fairmont Kea Lani Hotel, Wailea, HI
Bob Cambra Executive Chef The Waterfront Restaurant, Maaleaea, HI

Clarence Villanueva Sous Chef Four Seasons Las Vegas
Kalani Garcia Assistant Pastry Chef Four Seasons Las Vegas
Jeremy Choo Assistant Pastry Chef Ritz Carlton Las Vegas

A major benchmark for students navigating through our culinary program is the successful completion of their FSER 293V, 3-credit, 225 hours, field experience requirement. This course provides on-site, industry-based, experiences for approximately 15 students per semester. It also provides students with direct exposure to other professionals and expands their ideas about career options in the industry. One of the benefits to the Program is that it allows the Program to monitor relevancy and effectiveness of its curriculum towards meeting the needs of the student, industry and the community at large. The experience reminds industry of the advantages they reap when hiring qualified, educated personnel and the importance of partnering in education. The programs FSER 293V Field Experience instructor serves as a resource to students looking for employment, job placement, and referrals and as a help to employers looking for students to fill work opportunities within their businesses. Over 90% of these students stay employed in the jobs they acquired during their 293v Field Experience course requirement. Employer satisfaction and evaluation ratings indicate that 95% of FSER 293v students meet or exceed entry-level industry expectations in job readiness, basic culinary skills and knowledge and professionalism.

Maui Culinary Academy: Sustainable Strategies

Economic Accountability

As a continually evolving vocational program, the Maui Culinary Academy (MCA) Program goals are being driven with the expectation for sustainability, teamwork and accountability on all levels of instruction and operations. The following goals are being embraced, set and achieved with regard for strengthening MCA's Pa'ina facility as a sustainable economic resource:

- Develop tangible marketing strategies to capitalize MCA program branding.
- Utilize Pa'ina food outlets as Revenue Centers
- Standardize kitchen labs for consistency and consolidation of resources.
- Create entrepreneurial spirit in students. Work to minimize, control and more closely monitor laboratory expenses while assuring that students are able to practice and master cooking and baking competencies using reasonable amounts of food and supplies.
- Implement MCA Standard Operation Procedures Manual
- Establish Fiscal Operating Standards
- Establish a self-generated MCA Annual Report.
- Continue to utilize R&D food product line to promote MCA branding.
- Expand Community sponsored events and Partnerships
- Develop on-going fundraising activities

Leveraging Community Partnerships

The Culinary Program has unlimited opportunities to partner with community groups in multiple formats. Tours, demonstrations/luncheons are provided to seniors, family organizations, rotary clubs, youth agencies, job corps, etc. Catering, on a limited basis, is provided to community groups, which serves to expose our program to the greater community. Support of community activities creates and develops a sense of respect for these organizations in our students while

allowing for practical training in food preparation and catering skills. Students volunteer at numerous restaurant and hospitably industry organized Food and Wine events on Maui. Community associations coordinate many of these events. Support of these activities by our students, faculty and program create a sense of good will and endear our program to the industry we serve.

The programs long term established partnerships within the community and the food service and hospitality industry garner much need financial support to our program in scholarship awards and Foundation donations. The Program faculty is very heavily involved with the community and regularly participates in activities related to the following:

- Maui County Fair Association; Maui Cancer Society; Maui Farm Bureau; Maui Arts and Cultural Center; Maui Heart Association; the Salvation Army; Maui University Extension Homemakers Council; Maui Filipino Group; the Maui University of Hawai'i Alumni Association; ACF-Maui Chefs and Cooks Association; the County of Maui, the Maui Agriculture Foundation, the Chaine des Rotisseurs, and others.

In all activities, faculty work along with their students and other professionals, to improve our community. These associations have provided us much visibility and have helped to earn for our Program, from our community, much pride and respect, another major strength.

Most of these activities are undertaken in partnership with members of our Culinary Arts Advisory Committee, composed of highly committed members of our industry and community, who add another source of strength and support to our Program. Several large contributions have been made to our Program and the MCC Foundation as a result of our work in the community. This year, we have received contributions in excess of \$100,000 from:

- The A&B Company, the Betty and Dorvin Leis family, Morrad FoodService, Bill Seehaefer, the Maui Agriculture Foundation, Bev Gannon, the Maui Rotary, the Kauai Rotary Club of Kapaa, Saags Food, Barbara Mosle, Kent and Patty Steward, Atlas Insurance, VIP FoodService, the Maui No Ka Oi Magazine and the Maui Hotel and Lodging Association.

Environmental and Ecological Sustainability: Maui Culinary Academy “Going Green”

Maui Culinary Academy is recognized for exemplary efforts in ecology and environmental awareness in its food service operations. The Academy has created an innovative environmental approach to its instructional and operational responsibilities that has improved the environmental standards and conditions of the college campus and serves as a model of sustainability to the community as a whole. “Going Green” is a commitment to building a ‘sustainable culture’ in every facet of our program—from farm to table. We want to weave a respect for sustainability across the entire spectrum of our approach to food purchasing and preparation and graduate individuals who will lead similar initiatives in their prospective places of employment. Our goal is to serve as a catalyst for change, to help motivate and encourage even greater efforts toward environmentally conscious sustainability on our campus and our island. Environmental and Ecological Sustainability initiatives include:

- Shifted from environmentally unfriendly items to sustainable, recyclable products.
- Utilizing local farmers produce and products in our menu offerings

- Eliminating the use of trans-fats throughout our recipe development and food preparation
- Providing Food Research & Development services to local Agri-Business to create new and value added food products
- Initiating the use of recyclable and reusable bags on campus
- Entirely eliminating poly propylene containers and plastic bags in our Pa'ina culinary arts facility
- Supporting and utilizing small and large-scale hydroponics farming and garden grown fresh produce.
- Offering "water by request" in our Class Act Restaurant
Utilizing reusable melamine plates and stainless steel flatware in the Pa'ina Food Court
- Providing kitchen green waste to local farmers
- Recycling of all glass, plastic and cardboard food and beverage containers
- Conversion to and utilization of biodegradable containers and beverage cups
- Capturing cooking oils and fats for collection by local Biodiesel producers
- Implementation of a composting program where students learn and practice separating compostable matter in our kitchens labs.
- Utilizing Biodegradable corn bags in all garbage and compost bins.
- Discontinue use of plastic tasting spoons and cups in all kitchen labs
- Introduction of a sustainability curriculum in the food purchasing and controls class.
- The culinary program maintains a highly visible herb garden on campus and hydroponics gardens in kitchen labs that are designed for educational purposes and recipe development.
- The culinary program has established faculty and student membership and participation on a campus-wide "Green Committee".

Sustainable & Innovative Programming

Maui Culinary Academy Research and Development Center

Project Summary:

The mission of the Maui Culinary Academy Research and Development Center (MCARD) at Maui Community College is to provide education and on the job training resources in Food Product Research, Development and Manufacturing to help students, entrepreneurs and local agribusiness achieve greater employment opportunities, business growth and financial success. Over the past four years since our center's inception, we have successfully launched nine student and chef innovated food products to market including a Raspberry Wine Jelly, Roasted Pineapple Jam, Mochachino Scone Mix, Thai Basil Sea Salt, 100% Maui Coffee, Mango and Vanilla Macadamia Nut Sugars, a Sugar Free Oat Cake and a Maui Coffee Spice Rub. All our products are manufactured on site by our student staff. While participating in our program our students receive a variety of training, education, and skills in food product research and development, food manufacturing, process management, food product marketing and sales, entrepreneurship and business management.

Revenues from our retail products are returned directly to our program to support the on-going education of our students, future curriculum development and the long term sustainability of our program as a self managing, profit generating entity. We continue to serve as a community-based resource in food product research and development to a variety of local farmers as one of the few

innovations kitchen on Maui. Our core competency is helping local farmers convert surplus and culls into value added retail food products through our consultation services. Maui Culinary Academy Research and Development Center's long-term goal is to become the first two-year institution in the state of Hawaii to provide a degree in Culinology and Food Science. Partnership with the emerging non-profit Maui Food Technology Center will provide internship and long-term employment opportunities for our students and be an integral part of this plan.

Project Impact:

- \$117,000 in total gross revenue generated from R&D activities.
- Our retail food product and consultation service revenues increased threefold in 2007 with estimated revenue constituting 30% of gross revenue or \$21,000.
- Recipe development and labeling for our ninth food product a Maui Coffee Spice Rub was completed in December of 2006 and released into the market place in February of 2007.
- Continued to support educational and job training opportunities for Native Hawaiian and other underrepresented populations in Food Science, Research and Development, and Food Product Manufacturing.
 - Twenty-eight students trained and employed in our facilities through the course of the project. At least 80% represented the target groups of our grant.
 - 90% of R&D students have successfully obtained employment in the food industry including bakeshops, restaurant and hotel cooks, chocolate and ice cream manufacturing, food product entrepreneurship and interns at the emerging Maui Food Technology Center.
 - Diabetic student who assisted in the formulated our sugar-free pastry line employed by local restaurateur.
 - R&D program recognized as one of twenty nine food manufacturing businesses state wide to merit Hawaii Seal of Quality status.
- Partnered with local food producers and various non-profit organizations to support the sustainability and growth of Hawaii based agribusiness.
 - Core Sponsor of Aloha Friday Farmer's Market
 - Partnered with Maui Pineapple Company, Tedeschi Vineyards/Maui's Winery, and HC&S, to develop recipes highlighting local ingredients at community events
 - Developed and implemented value added food products for a variety of producers including Yee's Orchard, Hana Farms, Scott's Country Cookie, Maui Lavender, Oils of Aloha, Sandwich Island Distillers and Surfing Goat Dairy
 - Member of Made in Maui Coalition, Board of Directors and Steering Committee of Maui Food Technology Center,
 - Founding member of Hawaii Seal of Quality Program.
- Developed a formal advertising campaign, increased market awareness and sales through participation at Made in Hawaii, Made In Maui, Ulupalukua Thing, Kapulua Food and Wine Festival, Kapulua Lifest, Aloha Friday Farmer's, Hawaii Hospitality Trade Show

and Taste of Lahaina Event. Sales contributed five new wholesale clients and approximately 25% of our total product revenue

- Expanded e-commerce capabilities through development of MCARD web page and on-line purchasing. Visit us @ www.mauiculinary.com

UH-MCC Examples of Institutional Sustainability

Reducing Our Oil Barrel Demand

In addition to the Renewable Energy solutions inspired by SLIM, the College has also taken a number of steps to maintain its facilities and technologies at a high level. Given our proximity to the ocean, corrosion from the constant salt breeze is a continuing issue. See Appendix 4 to see some recent initiatives regarding our Energy Management.

Example of Sustainability through Federal Grants: The Rural Development Project (RDP) and Rural Job Training Initiative (RJTI)

The RDP and RJTI grants represent an historical and continuing commitment to pilot and demonstrate projects that will make a sustained difference in various sectors of our rural island economies and community college institutions. The goal of these two grants is to create a sustained impact resulting from the federal investment. Not all of the projects have realized their sustainability objectives. However, the impact around rural Hawaii is reflected in the RDP & RJTI Summary of Programs (See Appendix 2).

Sustainability Plan for Future Activities: Sustaining our Progress

In the near term, the SLIM and the college plan a number of additional complementary initiatives that will build upon our past and recent results. The highlights include:

- Completing the planning and design for a 37,000 sq. ft. science facility this Spring; and forwarding a request to the legislature for the construction funds in 2008
- Collaborating with the County of Maui in advancing UH-MCC as a demonstration and beta-site for renewable technologies; Mayor and County Energy Commissioner have identified “sustainability and renewable energy” as their top priority for the next budget session
- Creating a Sustainable Sciences upper division curriculum and bachelor’s of applied science to meet the growing needs for workforce leadership in renewable energy, waste, water and natural resources management
- Publishing a Request for Proposals to cover our 3 acre parking lot with photovoltaic panels
- Initiating an Environmental Assessment process to meet Maui County requirements to construct a 250kw windmill to reduce our reliance on oil and provide a working model for students

- Moving towards creating a matrix of best practices for island and other isolated communities faced with similar sustainability challenges

Ultimately, UH-MCC sees our response as one of continuing to improve and refine our efforts to recover, restore and sustain our precious natural island assets.

Until we make a difference, we won't be satisfied.

Submitted by: SLIM and the Faculty and Staff of UH-MCC.