Our Nation

The Republic of Palau, located 550 miles east of the Philippines and 815 miles southwest of Guam, is the westernmost archipelago in Micronesia, stretching 500 miles from north to south. Palau consists of more than 550 small islands renowned for their beauty. The islands are blessed with diverse marine ecosystems including mangroves, seagrass beds, marine lakes, and the complete range of coral reef habitats. The biodiversity of these coral reefs is comparable to that of the famous Coral Triangle. Of just reef-building corals, 425 species and 75 genera exist in Palau. Palau also has one of the largest diversity of shallow water fish found anywhere in the world – 1387 species to date. Palau is leading the region and the world in coral conservation initiatives, with over 50% of its nearshore marine habitats under some form of protection. In 2005 Palau issued forth the challenge that became the Micronesia Challenge, and in 2009 Palau became the first nation in the world to declare its waters a Shark Sanctuary. Because of these conservation efforts, minimal destructive fishing practices, and lower levels of development and pollution than other islands in the region, Palau’s coral reefs provide a unique opportunity for coral reef research.

Our Mission

To be a self-sustaining center of excellence whose assets and facilities are directed toward scientific research, education, and training that enhance capacity building, promote marine conservation, and that are locally and internationally relevant.
MESSAGE FROM THE CHAIRMAN

“It was the best of times, it was the worst of times.” This quote aptly describes the past year for the Palau International Coral Reef Center. On January 18, 2011, we celebrated our ten-year anniversary and the contributions we have made to improving knowledge about Palau’s coral reefs. A few months later, however, came the devastating realization that we did not have the financial strength that we needed to sustain our operations into perpetuity.

As an international research center, our monetary situation made front-page headlines, and we had to confront our over-optimistic financial projections and make serious changes. We reassessed and realigned our leadership, made drastic reductions in staff, and streamlined our use of resources. We have brought certain aquarium power expenses down by 50%. At one time we only had enough money to stay open for three months; we are proud that now, only months later, we can operate indefinitely.

Our financial woes were both difficult, but also inspiring. After assessing the Center’s activities and our critical niche in science and society, we realized that our efforts are more important than ever. Our staff, who always knew this, even made difficult personal decisions to accept 15% across-the-board salary cuts in order to keep the center operating. We know that maintaining the trust of donors and partners is key to our success, and we will continue to work hard to balance our finances through efficient spending and effective fundraising.

The fact is that the Palau International Coral Reef Center has a vital role in Palau, the Pacific, and the globe. The use of marine resources is critical to Palau’s economy. Our reefs are linked to global processes such as climate change and fish migrations, and regional initiatives influence how our single nation and its resources are perceived and supported. Smart decisions are needed to balance competing uses for our limited marine resources, and smart decisions can only come from sound information. The Center specializes in collecting scientifically rigorous information and in communicating it to the audiences who need it most. Furthermore, with links that span from the local to the international, the Center has the ability to meet all needs.

I am excited to share with you the activities of the Center in the past year. You will learn about how our research is locally relevant and internationally recognized, and how the strength of the Center inspires international research and influences international outcomes. You will learn about how we make sure critical information gets into the hands of decision makers, and what our unique role is in Palau’s active conservation community. You will learn about the many resources that the Center has to offer. We also present an honest portrayal of our finances, and recognize the contributions of those who have helped us make it happen.

We at the Palau International Coral Reef Center thank you for your support in the past decade, and we look forward to working together to ensure that our spectacular reefs and abundant marine resources continue to support local and global needs.

Patrick U. Tellei, EdD
Chairman, Board of Directors
Palau International Coral Reef Center
**Locally relevant research**

PICRC’s research is designed to meet local needs and thus is immediately relevant to local planning and conservation processes. Just as Palauan communities have adopted an ecosystem perspective, PICRC’s research has expanded its focus from ridge to reef and beyond. PICRC has adopted a comprehensive approach by combining the natural and social sciences, ensuring that all aspects of conservation, from the physical to the personal, are thoroughly understood.

**A STRONG MPA FOUNDATION**

Just as Palau established its mark on the world by leading in marine protected areas (MPAs; with over 50% of nearshore areas under some form of customary or legislative protection), PICRC has made its mark by recommending and surveying MPAs and by assessing MPA effectiveness. PICRC’s research has helped state leaders determine what areas to protect, the boundaries of MPAs, and the most effective strategies to manage critical resources inside MPAs. PICRC has taken the lead in developing MPA monitoring and evaluation tools (both biological and socioeconomic) for the Palau Protected Areas Network (PAN) and for state and community protected area management plans. PICRC’s MPA-based research has always been driven by local requests.

**HELPING DECISION MAKERS MEET PRESSING ISSUES AS THEY ARISE**

PICRC’s research program is flexible and can accommodate pressing issues as they arise, so that critical information can be forwarded to decision makers in real time. For instance, when Kayangel planners wanted to know the potential impacts of oil drilling on their resources, PICRC adapted its hydrodynamic model to simulate the effects of an oil spill. When Ngarchelong planners wanted to know what reefs were resilient to climate change, PICRC researchers made recommendations about sites resistant to coral bleaching.

**ADAPTING TO CHANGE**

Climate change is a crucial concern to Pacific islands, and PICRC’s research department includes climate change questions across its many research projects. In this way PICRC is able to help decision makers adapt to potential change at the local and national levels. Monitoring of 80 sites across Palau identified the spatial extent and severity of bleaching after a 2010 seawater warming event and identified potential safe havens for coral. This information will help design a resilient Palau PAN by identifying and advocating for nationally important sites. PICRC’s mangrove forest research will also give decision makers information on activities with the least impact on mangrove functions and identify resilient forests.

“PICRC’s research findings helped us make decisions for our management plan. Their hydrodynamic model showed us what areas of our MPAs would be most influenced by sedimentation, and helped us determine if zones were necessary. Sea cucumber surveys gave us some idea if sustainable harvesting was possible.”

– Ongoloem Victor Masahiro, Chairman, Ngardmau Conservation Board
PICRC’s research findings and researchers are internationally respected. With a litany of peer-reviewed articles and numerous international collaborators, PICRC has made its mark on global coral reef science. PICRC’s scientific findings and processes are used outside of Palau. Further, as a research center with high levels of excellence, PICRC has the strength to influence international research priorities and brings the attentions of other world-class researchers to Palau and the Pacific.

**LOCAL FINDINGS WITH INTERNATIONAL IMPLICATIONS**

Findings from PICRC’s research in Palau influence decisions across the Pacific. For instance, a tool for evaluating marine protected areas (MPAs) is being used by the Micronesia Challenge to evaluate MPAs across the region. PICRC is also collaborating on research on the effects of fishing on herbivores that will have policy implications across Micronesia. PICRC’s researchers publish their findings in internationally-respected peer-review journals, and are regularly cited by others. In 2011, PICRC published articles in three top technical journals:


**PALAUAN INFLUENCE ON INTERNATIONAL RESEARCH PRIORITIES**

PICRC’s input influences international research priorities. For instance, after a group of Japanese researchers working under the auspices of the Sasakawa Peace Foundation met with PICRC researchers and partners, they moved their research priorities away from designing new marine protected areas towards determining methods to effectively conserve existing protected areas. PICRC has been asked to lead regional projects like development of a Micronesia Challenge database.

“PICRC is indeed the center of research activities of not only Palau, in particular, but also of Micronesia in general. The center has amazing facilities and the most field-competent team that I have ever met. Their wealth of experience, on projects ranging from terrestrial discharge to global temperature changes, culminates in a world class facility that is unsurpassed.”

– Professor Rob van Woesik, Florida Institute of Technology
LONG-TERM CORAL REEF MONITORING

PICRC has 22 permanent monitoring sites across Palau, which are surveyed annually for corals, edible invertebrate species, and high-value fish. Monitoring allows for detection of spatial and temporal changes on the reef and gives an overall assessment of reef health. The coral reef monitoring program has the flexibility to add sites, and in 2010 80 sites were surveyed to determine the extent of coral bleaching. These permanent sites will be resurveyed in 2012 to determine recovery. Long-term monitoring of permanent sites is crucial for detecting change and for evaluating management actions. Data from this project can also be used to better understand reef dynamics, including the likelihood of species establishment, competition between species, and variation between sites and species. Data from 10-year monitoring showed that Palau’s reefs have had a slow but steady recovery from coral bleaching events, and indicated which areas were more resilient than others.

MARINE PROTECTED AREAS (MPA) STUDY

PICRC studies representative MPAs to determine the effectiveness of management activities. The study includes monthly monitoring of grouper spawning and aggregation sites at Ebiil Channel in Ngarchelong and Ngerumekaol Channel in Koror; quarterly measurements of seagrass growth and seagrass bed species in Airai, Ngchesar, Peleliu, and Koror; and a comparative assessment of the impacts of visitation (diving, snorkeling, and fishing) at Ngemelis in Koror. The MPA studies give resource managers and decision makers a solid basis for investing funds in management, or for making decisions about whether to open or close an MPA. Data showing declines in grouper aggregations show that increased enforcement and education is needed to better protect MPAs. Data on seagrass gives decision makers an early warning system before negative impacts (such as those from sedimentation) affect corals.
LAND USE AND SEDIMENTATION ON BABELDAOB

By tracking land uses, PICRC estimated sedimentation rates onto reefs in Ngardmau, Airai, Ngchesar, and Ngiwal. This provided quantitative estimates of the impacts of various land use decisions, and showed how the location and species makeup of reefs correlate with long-term impacts from sedimentation. This research has shown that the sedimentation rate from major activities such as road building and farming is far higher than can be naturally compensated for by Palau’s coral species. This landmark study provided Palauan decision makers with sobering news that rapid sedimentation was harming corals, and that sedimentation rates were clearly linked to development patterns. This study established terrestrial runoff and sedimentation as the biggest threat to coral reefs and fisheries around Babeldaob. Governments have responded by prioritizing land use planning and road paving.

HYDRODYNAMIC MODELING

In 2010 PICRC completed a fully-functioning hydrodynamic model of Palau’s entire island archipelago. The model simulates water currents during various conditions and seasons and allows for an assessment of larger-scale processes occurring around the island. The model is unique globally for having such detailed coverage of a complex reef system. The model can be used to make informed predications about how and where particles in the water (such as coral and fish larvae, sediment, or oil) will behave and spread. This model can be used to determine how various spots on the reef will respond to natural and anthropogenic influences.

MANGROVE RESILIENCE

This comparative study will assess intact mangrove forests versus impacted mangrove forests (e.g. mangroves altered by the construction of roads) along a forest gradient from the ocean to the land. This study will quantify key ecosystem services, such as fishery habitat, carbon sequestration, and sediment regulation; examine how human activities affect those ecosystem services; identify ecosystem services associated with resilience to sea level rise; and identify mangroves that may be more resilient to sea level rise. Due to a combination of natural pressures on the ocean side and human pressures on the land side, mangroves have been identified as one of Palau’s most at-risk habitats to sea level rise. This study will give decision makers better information about which mangroves are most in need of protection and which human activities have the greatest impact on mangrove health. Study plots will also form the basis for a long-term mangrove monitoring program.
SOCIOECONOMIC STUDIES

Complementing biological studies on MPA effectiveness are a series of socioeconomic studies gauging public perceptions and attitudes of MPAs and natural resources. These surveys gauge the effectiveness of management actions and set a baseline for later comparison. PICRC is also conducting a survey on the expectations and satisfaction levels of divers; their willingness to support high-end tourism; perceptions of carrying capacity; diver problems and suggestions; and patterns of divers in the Rock Islands. Although most MPAs have biological goals such as increases in fish, it may take decades for resources to increase and thus decades to adequately measure whether management techniques and tools are working to increase natural resources. Socioeconomic surveys provide medium-term measurements as proxies for long-term goals (such as perceived declines in poaching or increases in resources) and help determine whether adaptive management is needed. The diver survey will help inform the Rock Islands Southern Lagoon Management Plan.

DISTRIBUTION OF REEF FISH

This study will examine essential fish habitats (reefs and associated habitats such as channels or flats) and the fish that use them. The study will examine fish utilization patterns in and across these habitats; identify key parameters that influence these patterns; and identify critical species or sites that may require special management considerations. Despite growing attention and increasing management actions, there has been a global and local decline of reef fisheries. A better understanding of the preferences of fish for certain habitats, their patterns across habitats, and the larger processes that influence those patterns (including the role of human disturbances such as habitat degradation, overfishing, and unsustainable fishing practices) will provide information for enhancing or expanding MPAs or fishing laws.

CAPACITY ENHANCEMENT PROJECT FOR CORAL REEF MONITORING (CEPCRM)

CEPCRM is a joint initiative between PICRC and the Japan International Cooperation Agency to improve monitoring, management, and conservation in Palau and Micronesia. The project assessed capacities, needs, and uses of monitoring data and filled capacity gaps with trainings on specific methods. An analysis of needs and capacity helped refine monitoring techniques and contributed to a minimum set of ecological and socioeconomic indicators for use in the Palau Protected Areas Network (PAN) and Micronesia Challenge. Surveys of stakeholder needs have identified additional monitoring parameters of use to decision makers.
Bridging science and action

“As we analyzed the data from our land use and sedimentation study in Babeldaob, we knew that the implications would be huge,” said Yimnang Golbuu, PICRC’s Chief Researcher. “Land uses, particularly development measured through a proxy of earthmoving permits, were contributing to sedimentation rates far beyond natural rates.”

The study also clearly showed that Babeldoab’s reefs were unable to cope with these high sedimentation rates, with mortality directly linked to proximity of sediment source. The study also identified coral species that were most at risk of mortality.

PICRC research and outreach staff knew this information was critically important to decision makers, and they joined forces to make sure the public understood the findings and their implications. “From our ten years of working with communities we know that the public responds to a variety of outreach platforms,” said Carol Emaurois, Head of Education and Communications, “so we knew we would need to use a variety of techniques to get this information out.”

PICRC’s communications strategy for these research findings involved special events, public lectures, a video, and written materials. The video was well-received because it interpreted the findings in ways that were meaningful to decision makers. “When I saw the PICRC video showing exactly how many dump trucks worth of dirt were being dumped into my waters because of land clearing, I was amazed,” said Ngardmau Governor Akiko Sugiyama. Governor Sugiyama was so influenced by the findings that she pushed the National Government to find assistance to pave Ngardmau’s deeply eroding roads and she fast-tracked a land use planning process in the state.

“We know that we have a responsibility to turn our research data into useful information that is understood and acted upon by Palau’s decision makers,” said Yimnang. As a research and education center, PICRC takes that responsibility seriously.
Information for those who need it most

Unlike many academic research institutions, PICRC doesn’t prioritize accolades or publications over the use of information. Instead, PICRC quietly makes sure that its research findings are communicated to the decision makers and practitioners who need it most, either directly or by working with partners. PICRC also targets youth and communities to make sure that the public has an up-to-date and solid foundation in Palau’s environment and biodiversity.

**INFLUENCING POLICIES AND DECISIONS**

When Palau’s National Congress wanted information on the impacts of flashlight fishing, they asked PICRC for data, and PICRC’s information was used in the draft law. PICRC’s sediment studies influenced the growth of the Babeldaob Watershed Alliance (BWA), with many state leaders joining the BWA after learning about the negative effects of land activities on water quality and marine resources. Based on PICRC’s findings that human-influenced sedimentation was contributing to unnatural rates of mangrove expansion, Airai adopted holistic planning and is now the first state in Palau to complete a Land Use Plan. PICRC recognizes the value of its findings, and will continue to align and expand its education and outreach programs to make sure that critical information makes it into the hands of decision makers in a timely and accessible manner.

**EQUIPPING PRACTITIONERS WITH EFFECTIVE TOOLS**

PICRC partners closely with environmental organizations in Palau and across Micronesia. This relationship gives PICRC an innate understanding of the needs of these organizations and a direct pathway for communicating new findings.

When the Palau Conservation Society and Ngchesar State planners were debating whether to keep Ngelukes MPA closed, PICRC was ready with evidence showing that the “spillover” effect had increased the amount of fish outside of the MPA and that Ngelukes was Palau’s only known site with a rare coral species, *Acropora pichoni*. PICRC helped planners identify sedimentation as the primary threat to Ngelukes, leading to the development of a separate Sediment Control Plan.

**BUILDING A CARING COMMUNITY**

PICRC targets both youth and adults through its education and outreach programs. Youth programs take advantage of Palau’s spectacular environment and PICRC’s unique aquarium resource. Adult education and outreach uses a variety of formats to reach Palau’s busy and varied audiences, with an emphasis on video, television, printed materials, interactive presentations, and community visits.
A glance at our outreach efforts for youth and adults

SCHOOL ENGAGEMENT
PICRC engages with K-12 students through school presentations, field trips, and aquarium tours.

SUMMER MARINE SCIENCE
PICRC partnered with the Palau Community College to develop an interdisciplinary, hands-on curriculum with 40 hours of coral reef training for students in grades 6 to 8. Classroom, field, and aquarium-based activities use an inquiry-based approach and to reef basics.

RECYCLE TO PROTECT OUR OCEAN
Students in grades 6 to 8 build awareness of the impacts of human activities on coral reefs. Students meet for one week to learn about ways to reduce waste and recycle.

ARTS AND CRAFTS WEEK
Arts and Crafts Week offers an art-based platform for children aged 6 to 10 to learn about and discuss marine animals and their needs. Participants are encouraged to share their artistic creations with adults at home and at the Center.

CHRISTMAS HOLIDAY SLEEPOVER
Children aged 10 to 13 enjoy the aquarium after dark during this festive December event. Students observe aquarium life and activities during the day and night and are treated to behind-the-scenes tours of aquarium operations.

ARTS & TIDES CALENDAR
PICRC holds an annual contest to select artwork, always on a pertinent theme, for the Arts & Tides Calendar. The popular contest is open to all grades and attracts hundreds of entries. Judges come from various sectors of the community and the calendar is supported through local donations.

CAREER AWARENESS
PICRC provides internships and work opportunities for youth to work in research, education, or business. In 2010 and 2011 28 students participated in PICRC career activities.

TEACHER TRAINING
PICRC works with the Ministry of Education to design one-time teacher training workshops that meet specific needs. Teachers learn how to use the aquarium as a resource.

COMMUNITY VISITS
PICRC tries to visit each state for a general community visit yearly. During visits, PICRC communicates its most recent research findings to the general public and seeks input into pressing issues and questions in need of examination.

LECTURE SERIES
Local and visiting researchers give regular lectures on current research. The series is open to the general public and resource managers and allows for direct interaction between the public and internationally-recognized researchers.
A niche among partners

PICRC fully engages in Palau’s conservation community and partners closely with diverse government, semi-government, and nongovernment organizations. PICRC also leads efforts to align diverse agencies that work on conservation issues in Palau and across the region. For partners advocating conservation activities based on sound scientific information, PICRC fills a critical niche by providing existing and new information and data on which to base decisions.

RESPONSIVE RESEARCH THAT MEETS PARTNER NEEDS

Few conservation partners in Palau are equipped to conduct scientifically stringent research, but all partners require sound information. Thus, PICRC fills a critical and unique niche by providing data and information to partners working on the ground. From helping identify locations for mooring buoys to placing turbidity flow meters to measure the impacts of a boardwalk, PICRC adapts its activities to meet the needs of partners.

CONSERVATION CONSORTIUM

With a culture and economy dependent on its natural resources, the environment sector is a busy one in Palau. Although there are numerous formal mechanisms for cross-agency collaboration and partnership (such as national committees), in 2010 PICRC saw the need for better collaboration in an informal manner. Thus, PICRC led the formation of the Conservation Consortium, a loose grouping of individuals working in conservation in Palau. At meetings, partners share experiences, learn about ongoing work, and identify areas of collaboration and joint agreement. PICRC sponsors and calls meetings.

BUILDING CAPACITY AMONG PARTNERS

PICRC’s philosophy is that scientific capacity must be increased and shared with partners. PICRC prioritizes training of resource managers in numerous fields, and is working hard to ensure that conservation and state partners have the ability and knowledge to gather and apply rigorous information in the field.

“PICRC is a cornerstone in our conservation community. PICRC provides services to partners that extend beyond simply provision of information—they validate ongoing efforts and provide a common platform that streamlines future partner activities.”

– Umiich Sengebau
Deputy Director, The Nature Conservancy Micronesia Program
A diverse collection of collaborators

PICRC researchers don’t work alone, but rather collaborate with researchers from three continents and Oceania on a full spectrum of biological and socioeconomic topics. PICRC and collaborating researchers work jointly to design and implement research projects and to interpret and communicate findings.

AN INTERNATIONAL ATTRACTION

Researchers wanting to work in the Pacific turn to PICRC for collaboration and hosting, bringing international attention and expertise to local problems. PICRC has established itself as a strong and supportive research center that can handle complex projects with multiple collaborators.

A WIDE PERSPECTIVE

Local communities in Palau benefit from PICRC’s broad exposure and attention. Research collaborations help PICRC researchers expand the scope of their research projects to include new questions based on cutting edge science. PICRC seeks a broad diversity of inputs into its research projects, so that the outputs can be comprehensive and useful for Palau’s decision makers and communities.

CURRENT COLLABORATORS

**United States**
- Dr. Anne Cohen
- Dr. Alan Friedlander
- Dr. Richard MacKenzie
- Dr. Don McCorkle
- Dr. Gustav Paulay
- Dr. Robert Richmond
- Dr. Rod Salm
- Dr. Robert Steneck
- Dr. Robert van Woesik
- Dr. Supin Wongbusarrakum

**Woods Hole Oceanographic Institute**
- University of Hawaii
- US Forest Service
- Woods Hole Oceanographic Institute
- University of Florida
- University of Hawaii
- The Nature Conservancy
- University of Maine
- Florida Institute of Technology
- The Nature Conservancy

**Oceania**
- Dr. Peter Houk
- Dr. Laurie Raymundo
- Pacific Marine Resource Institute
- University of Guam

**Australia**
- Dr. Sonia Bejerano
- Dr. Katharina Fabricius
- University of Queensland
- Australia Institute of Marine Science
- Southern Cross University
- University of Queensland
- James Cook University

**Asia**
- Dr. Keita Furukawa
- National Institute for Land and Infrastructure Management
- University of Tokyo
- Tokyo Institute of Technology
- Akajima Marine Science Laboratory
- Tokyo University of Marine Science and Technology
- University of the Ryukyus

- Dr. Hajime Kayanne
- Dr. Kazuo Nadaoka
- Dr. Mokoto Omori
- Dr. Hideo Ohba
- Dr. Makoto Tsuchiya
Sharing a wealth of information

PICRC serves as a storehouse for information, always available to the public and partners. With a physical and digital library, extensive list of scientific publications, storage facilities for samples and specimens, and the home of the regional Micronesia Challenge Database, PICRC is an important resource for researchers and practitioners alike.

LIBRARY RESOURCES

PICRC acts as a central information repository for coral reef monitoring in the region, collecting studies and information from numerous regional monitoring efforts. Collections are available on paper and digitally. Some of the library’s more unique holdings include translated copies of research papers from the Tropical Biological Station that was established in Palau in the 1930s.

MICRONESIA CHALLENGE DATABASE

Together with the Palau Automated Land and Resource Information System (PALARIS), PICRC was asked to lead the development of a central database for coral reef monitoring data collected under the rubric of the Micronesia Challenge. The database will store data from the regional monitoring program (also developed by PICRC) and allow for measurements of management effectiveness and cross-regional analyses.

TRAININGS

PICRC offers numerous formal and informal learning opportunities, and has developed a number of training workshops that it offers to diverse audiences. In 2010 and 2011, PICRC offered seven formal training workshops, most targeting state conservation practitioners, on topics including: socioeconomic surveys and data collection, socioeconomic data analysis, fish count training, SCUBA training, coral reef monitoring, GPS/GIS software, and sedimentation. PICRC participated in partner-led training workshops as well, including a PIMPAC-sponsored workshop on Conservation Law Enforcement and a TNC and NOAA-sponsored Reef Resiliency Training Workshop.
PICRC is home to the Palau Aquarium, the only aquarium in Micronesia. It provides a unique resource for those people wanting to experience Palau’s splendid marine environment without getting wet. “The aquarium is the centerpiece of our education efforts,” said Carol Emaurois. “It is a place where youth and adults can experience marine life, learn about Palau’s biodiversity, and be inspired to stewardship.”

The aquarium includes only habitats and species found in Palau. Starting with a broad view of Palau’s geological formation, habitat displays include mangroves, seagrass beds, inner and outer reefs, and deep sea habitats. “The winding trail through the aquarium literally and figuratively ties all of Palau’s habitats to each other...,” said Yimnang Golbuu, “...it’s an important lesson.” In addition to the usual suspects (fish, sea turtles, invertebrates) the aquarium is home to some of Palau’s most unique species. Palau’s famous stingless jellyfish float in a column of color, and the aquarium is the most accessible place in Palau to see the endemic nautilus. For many in Palau, the aquarium is the only place where they will see and learn about these unique creatures.

A visit to the Palau Aquarium is part of all local children’s schooling. “For many it is their first introduction to Palau’s marine biodiversity,” said Carol. In 2010 1084 grade-school students visited the aquarium (up from 443 in 2008 and 688 in 2009). This represented 27% of Palau’s schoolchildren and highlights the aquarium’s growing value to the education system. There are reduced entrance rates for Palauans and residents.

Although a valuable learning resource and source of inspiration for all visitors, the Palau Aquarium is not self-sufficient. In 2011 PICRC determined that the aquarium was costing the center more than it was generating in revenues. In 2010, the aquarium attracted 15,575 tourists, or 18% of the market share of visitors to Palau. In 2011 the Center took drastic measures to reduce costs in the aquarium, cutting energy usage for water chilling by 50%. “We will aggressively pursue innovative ways to increase the number of visitors patronizing the aquarium,” said Lolita Gibbons-Decherong, Board Treasurer, “so that this important resource can continue serving Palau’s communities.”
Financial statements

FY2011 REVENUES

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND EQUITY

Years ending September 30, 2011, 2010, and 2009

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<th>FY2010 (US$)</th>
<th>FY2009 (US$)</th>
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<td>Insurance</td>
<td>3,834</td>
<td>15,073</td>
<td>17,967</td>
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<tr>
<td>Communications</td>
<td>25,536</td>
<td>14,435</td>
<td>11,429</td>
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<td>Anniversary</td>
<td>1,914</td>
<td>7,987</td>
<td>10,649</td>
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<tr>
<td>Repairs and maintenance</td>
<td>9,452</td>
<td>6,942</td>
<td>4,400</td>
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<tr>
<td>Sales and marketing</td>
<td>30</td>
<td>2,240</td>
<td>9,664</td>
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<tr>
<td>Other</td>
<td>38,449</td>
<td>15,505</td>
<td>19,092</td>
</tr>
<tr>
<td>Total Operating expenses</td>
<td>833,023</td>
<td>1,235,767</td>
<td>1,248,792</td>
</tr>
<tr>
<td>Operating loss</td>
<td>(681,093)</td>
<td>(781,546)</td>
<td></td>
</tr>
<tr>
<td>NONOPERATING REVENUES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriations</td>
<td>387,000</td>
<td>382,500</td>
<td>425,000</td>
</tr>
<tr>
<td>Interest income</td>
<td>105</td>
<td>1,166</td>
<td>1,215</td>
</tr>
<tr>
<td>Total Nonoperating revenues</td>
<td>387,105</td>
<td>383,666</td>
<td>426,215</td>
</tr>
<tr>
<td>Capital contributions</td>
<td></td>
<td></td>
<td>169,558</td>
</tr>
<tr>
<td>Net assets at end of year</td>
<td>69,000</td>
<td>2,213,304</td>
<td>2,341,173</td>
</tr>
</tbody>
</table>

*2009 and 2010 Statements are audited, 2011 Statements and Reports are unaudited.
### BALANCE SHEET

Years ending September 30, 2011, 2010, and 2009

<table>
<thead>
<tr>
<th></th>
<th>FY2011*</th>
<th>FY2010</th>
<th>FY2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>272,300</td>
<td>141,051</td>
<td>163,480</td>
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<td>Accounts Receivable</td>
<td>26,295</td>
<td>43,414</td>
<td>73,917</td>
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<td>Inventories</td>
<td>89,961</td>
<td>102,213</td>
<td>92,344</td>
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<td>Prepaid Expenses</td>
<td>20,992</td>
<td>10,032</td>
<td>9,032</td>
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<tr>
<td>Other</td>
<td>398,019</td>
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<tr>
<td>Total Current Assets</td>
<td>807,567</td>
<td>296,710</td>
<td>338,773</td>
</tr>
<tr>
<td>Property, Plant and equipment, net</td>
<td>2,300,310</td>
<td>2,300,311</td>
<td>232,148</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td>3,107,877</td>
<td>2,597,021</td>
<td>2,680,921</td>
</tr>
<tr>
<td><strong>LIABILITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current liabilities:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>175,491</td>
<td>164,635</td>
<td>84,891</td>
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<tr>
<td>Deferred Revenue</td>
<td>190,310</td>
<td>144,761</td>
<td>182,973</td>
</tr>
<tr>
<td>Accrued Liabilities</td>
<td>77,561</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>385,765</td>
<td>74,321</td>
<td>71,884</td>
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<tr>
<td>Total Liabilities:</td>
<td>829,127</td>
<td>383,717</td>
<td>339,748</td>
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<tr>
<td><strong>NET ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Net Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Assets</td>
<td>2,209,750</td>
<td>2,300,311</td>
<td>2,342,148</td>
</tr>
<tr>
<td>Current YTD Net Income</td>
<td>69,000</td>
<td>(87,007)</td>
<td>(975)</td>
</tr>
<tr>
<td>Total Net Assets</td>
<td>2,278,750</td>
<td>2,213,304</td>
<td>2,341,173</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES AND NET ASSETS</strong></td>
<td>3,107,877</td>
<td>2,597,021</td>
<td>2,680,921</td>
</tr>
</tbody>
</table>

*2009 and 2010 Statements are audited, 2011 Statements and Reports are unaudited.

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### DONORS

#### 2010 AND 2011 GRANT CONTRIBUTORS

- Embassy of the Kingdom of the Netherlands
- JICA
- Micronesian Conservation Trust
- NOAA Coastal Oceans Program
- NOAA Coral Reef Conservation Program
- The David and Lucile Packard Foundation
- The Nature Conservancy
- UNESCO Participation Program
- US Department of Interior Office of Insular Affairs

#### 2010 AND 2011 ARTS & TIDES CALENDAR CONTRIBUTORS

- Belau Medical Clinic (BMC)
- Blue Bay Petroleum, Inc.
- Carp Corporation
- Emaimelei Restaurant
- Embassy of China (Taiwan)
- IMPAC
- Kumangai Bakery
- National Development Bank of Palau
- Neco Plaza Corporation
- Okayama University
- Palau Pacific Resort (PPR)
- Palau Royal Resort (PRR)
- R.I.T.C (Belau Tour Company)
- Splash Dive Center
- Sun’s Flowers Shop
- Surangel & Sons Company
- UNESCO
- Western Caroline Trading Company
Let there be a strong running sea

- Uchelianged, Palau's supreme god of heaven

The Palau International Coral Reef Center began operations on January 18, 2001 through an initiative under the Common Agenda of Japan and the United States, as part of the International Coral Reef Initiative and supported by Palauan National Law. The Center is a semi-government autonomous institution with non-profit status under applicable laws in Palau.

Built on an 8,250 square meter pier surrounded by rock islands, the Center houses a modern research facility, visitor center, and administration complex. The Research Department is housed in a two-story building of approximately 640 square meters. The first floor includes a dry lab, wet lab, specimen room, three in-house researcher offices, a student-training laboratory, weather stations, and shower rooms. The second floor houses the library, meeting room, three apartments for visiting scientists, restrooms, laundry room, and lounge area with basic kitchen. The outside area consists of a covered patio with running seawater tables, holding tanks, and an outside shower. Treated fresh water from the city supply is provided to the building. The local power is rated 110v.

Four boats, ranging in size from 17 feet to 33 feet in length, provide center staff and visiting researchers with access to study sites.

The Palau Aquarium is a modern aquarium facility housing outdoor exhibits and indoor galleries showcasing Palau’s unique environmental habitats and species.

The Center also provides a venue for meetings and houses a state-of-the-art Conference Room. An Education and Communications Department supports all personnel, departments, and projects. The Administrative Department is responsible for all financial and administrative functions. The Engineering Department maintains facilities and grounds (including boats) and ensures Center security.

Run by Palauan administrators and scientists with strong ties to Palau’s communities, the Center encourages partnerships with international and local researchers and educators.

While the Center receives grants to aid its research, it remains dependent on an annual allocation from the Palau government to operate. To achieve its mission of becoming a self-sustaining center of excellence, an Endowment Fund was created. Donations to the Endowment Fund are welcome and appreciated. You can also support the Center by visiting the Palau Aquarium, sponsoring activities, or by Adopting-A-Tank, which means helping cover the cost of feeding the sea life. Please help the Center continue its noble mission and join the team.
Our reefs, Our lives