Hawaii Sea Grant Program 2011 NSGO Review

Jim Murray

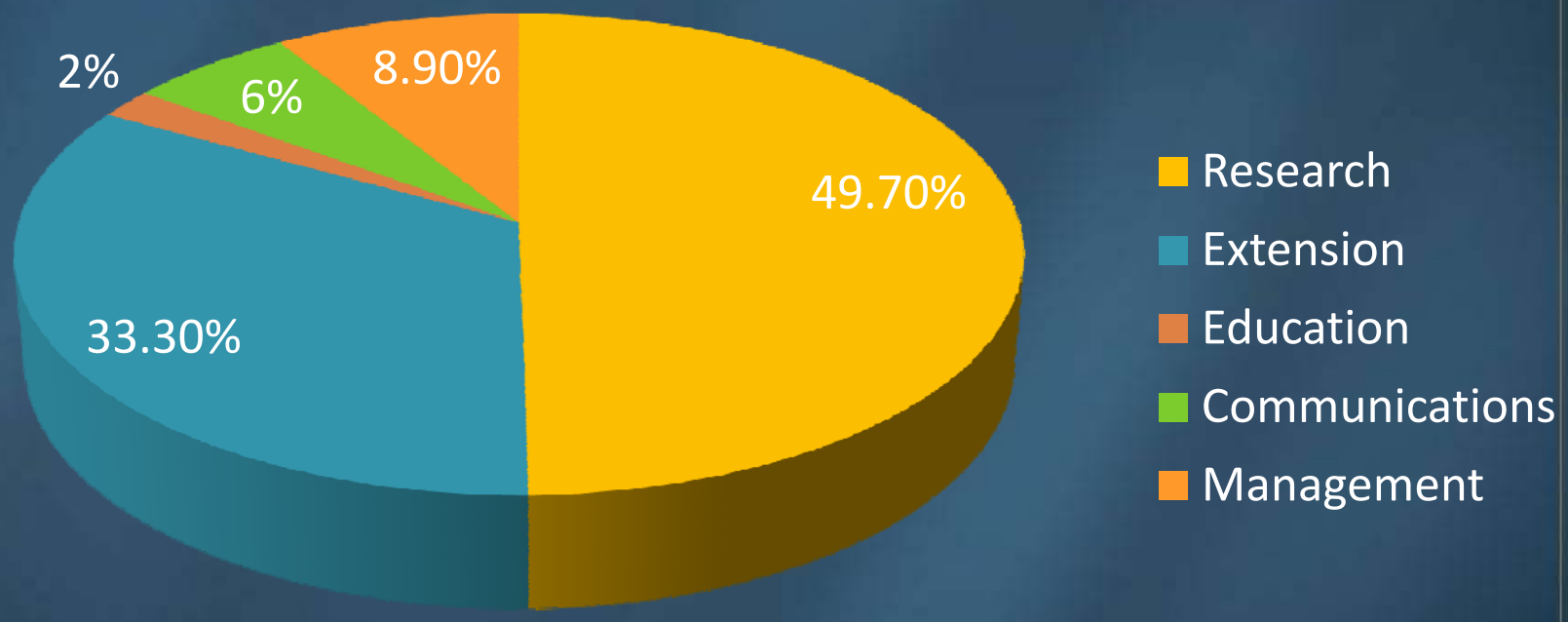
Program Management

- Management staff
- Total FTEs on staff (information in Annual report metrics)

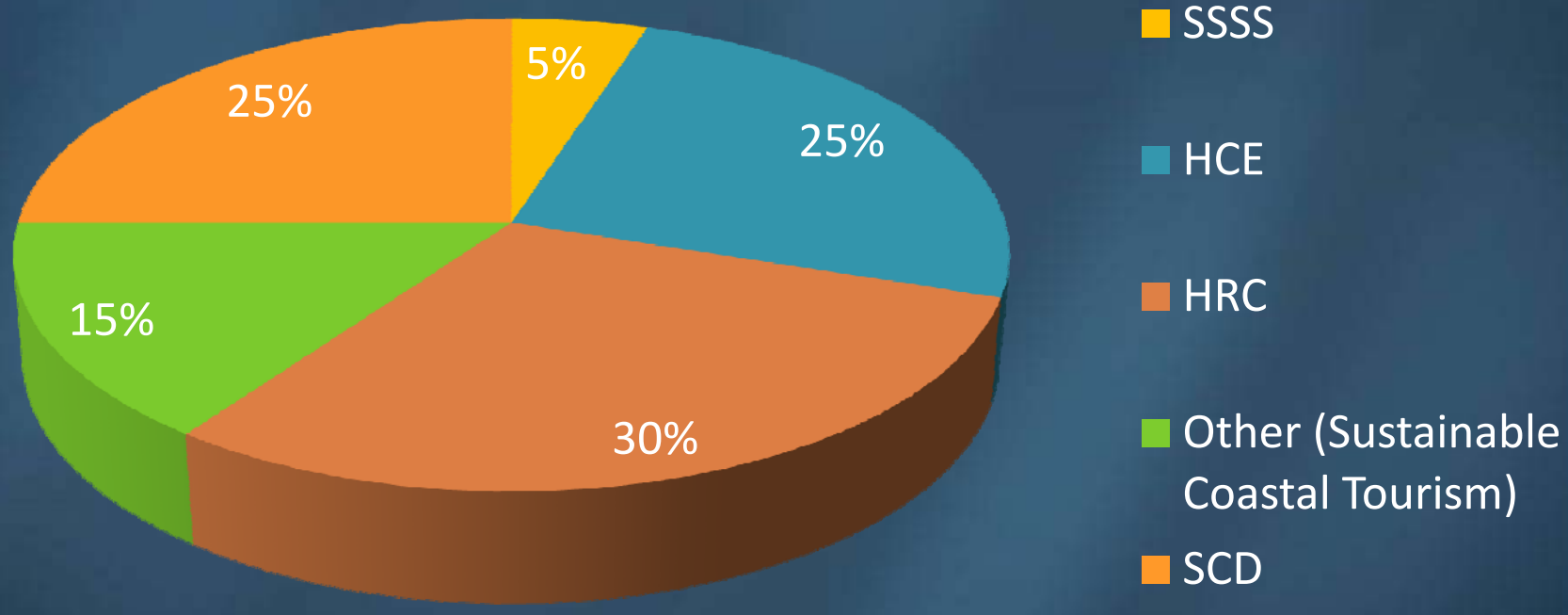
Functional Area	# of individuals	# of FTEs supported by SG	# of FTEs supported by match/leverage
Mgt/Admin	10	5.0	4.3
Comm.	4	2.5	1.0
Ext.	25	5.59	13.97
Education	21	7.5	5.5
Research	28	0	3.46

- Size of program (large)

Program Budget towards each Functional Area



Program Budget towards each Focus Area



Significant Program Changes
(since Jan. 2010)

- Sea Grant Director's term as President of SGA ended in December, 2010.
- Establishment of the Center for Sustainable Aquaculture.
- Establishment of the NOAA Coastal Storms Program.
- Established partnership between Center for Marine Science Education and NOAA Pacific Services Center to develop high school marine science curriculum.
- Recruitment of 13 new faculty and staff.
- Cooperative Agreement with two Japan universities.
- Cooperative Agreement with NOAA National Marine Sanctuary Program.
- Invitation to participate in the NOAA Pacific Regional Collaboration Team.
- Establishment of the Kyo-Ya Fellowships Program.
- Retirement of Peter Rappa.

Program Requested Changes to 2010-2013 Program Plan

- None

State Program Performance Measures

- HCE - # of ecosystems whose function and/or productivity are improved (restored to a greater level) as a result of SG activities (6).
- SCD – # of coastal communities engaged in activities or making informed development decisions that address the sustainability of economic or environmental resources (6).
- SCT - # of tourism organizations state-wide working directly with UHSG to address sustainability issues through research and outreach (6).
- HRCC - # of communities who adopt/implement hazard resiliency practices to prepare for and respond to/minimize coastal hazardous events (25).

Contribution to National Performance Measures and Metrics

- Sea Grant sustainability/energy efficiency projects reduced UH Manoa energy bill by $1.5M
- Community hazard resiliency improved (e.g., changes in zoning ordinances) = Yes in 3 counties and Honolulu
- Economic benefits derived from Sea Grant activities – Actual = $7,670,116
- Leveraged Funds
  - managed by SG = $4,843,628
  - influenced by SG = $5,137,213
- Volunteer Hours = 14,570

Program Impacts

- **UH Sea Grant researcher and graduate student trainee developed a two-dimensional tsunami model which simulates tsunami inundation in coastal areas.**

- **This project updates Hawaii's existing tsunami inundation maps for O'ahu and Hawaii islands, which were released in 2010; Maps for Maui are currently being finalized.**

- **This model has been adopted and implemented for tsunami inundation mapping in the US Gulf Coast states, Puerto Rico, American Samoa, Indonesia and Chile**
  - Supports HCE goal: "Number of tools, technologies, and information services that are used by NOAA partners/customers to improve ecosystem-based management."

Program Impacts

- **Dr. Adam Asquith, as science advisor to Apollo Kauai, reviewed renewable energy projects and interacted with private companies and the local county government**
- **Result - Kauai switched its plans from a coal to ethanol burning plant, the first large-scale renewable energy project on the island**
- **The biomass gasification facility will generate 10% of the island's electrical needs**
  - Supports CCE goals "By 2013, Sea Grant's Center for Smart Building and Community Design will have engaged communities in every county of the State of Hawaii and assisted them in visioning, resource inventories, analysis of development policies, or education aimed at promoting sustainable coastal development."

Program Impacts

- **Technical assistance to UHM administrators on campus planning activities**
  - **Engaged experts Lawrence Berkeley NL to advise facilities managers on energy efficiency**
  - **Work with university to contract with architecture firms to design future buildings for the UHM campus**
- **University panel has already changed the direction of plans for three current building projects**
  - **University architect students involved**
- Addresses SP outcome: "Coastal community designs that improve energy efficiency and reduce carbon emissions appropriate to insular pacific communities can be implemented."

2009 Research Accomplishments

- Coastal Inundation at Island Shorelines
  - Modeled combination of factors (swell vs. infragravity, band wave energy, tidal height, sea level, winds, etc.) leads to overtopping and inundation
- Shoreline change data developed from this project are included in revisions to Kauai and Maui County setback laws
- Impact: Improved setback laws

2009 Research Accomplishments

- Research addressed local and scientific explanations of indigenous Marshallese navigation
  - Hawaii Sea Grant collaborated with a community group in Majuro that has documented and revived indigenous canoe building and sailing to understand the physical oceanographic basis for the indigenous seamarks and their local explanation, perception, and use at sea
- Impact – work appears at Sant Ocean Hall kiosk and is shared with museums around U. S. and Mexico