

Communicating Economic Benefits Derived from Sea Grant Activities

Thursday, 10/13/2016

1:30pm

Room 3

Summary of Workshop:

Each year, Sea Grant highlights economic benefits - the jobs, businesses, dollars, and nonmarket value - that communities or businesses generate or save due to Sea Grant assistance. Sea Grant provides the information and training that informs business decisions, and in some cases firms create or sustain jobs, generate new revenue, or save money as a result. Moreover, Sea Grant activities can have positive effects on restoring, maintaining or improving environmental goods and ecosystem services, broadly defined as natural capital. Even if not valued by the market, these goods and services have economic value to humans.

Last year, the Gulf of Mexico Sea Grant programs released an analysis of some Sea Grant economic benefits in the region and provided recommendations for improving our communication of such benefits. This workshop is intended to generate discussion about defining economic benefits, improving the evaluation and reporting of economic benefits, and standardizing reporting across the Sea Grant Network.

Desired Outcomes:

- Attendees are able to distinguish between regional economic impact reporting and reporting of economic benefits
- Sea Grant attendees are able to report the economic benefits of their research, extension, and education investments in a more credible and standardized way.
- More credible economic benefits can be combined into a National story about how Sea Grant stimulates local economies, identifies savings, and enables livelihoods to be sustained.

Agenda

1:30pm	Welcome and Introduction of the Panel - Chris
1:35pm	Value of Economic Benefits to Communications - Susan Holmes, NSGO
1:40pm	Discuss Existing Guidance and Process - Chris Hayes, NSGO
1:50pm	Regional Economic Impact Analysis Example – Mona Behl, GA SG
1:55pm	Vignettes and Examples of Economic Benefits - Chuck Adams, FL SG
2:10pm	General Questions and Discussion - All

Existing Guidance for Reporting Economic Impacts/Benefits

Attribution

To report results of program activities through performance measures and metrics, Sea Grant's involvement should be one of leadership or provision of a service (planning, financial, personnel, or research accomplishments) that would likely be described by stakeholders and partners as essential for the project's ultimate success. When a program has a support or non-essential role in a project, the impacts or accomplishments of the project should be described in narrative form in the annual report but not reported in performance measures and metrics.

Context

Sea Grant programs focus efforts on the priorities identified by state and local stakeholders within a national framework. Thus, the national performance measures and metrics in this document may not reflect priorities of any particular program or state. Moreover, the performance indicators do not encompass all of Sea Grant's efforts, but instead indicate a subset of efforts in each national focus area. Program achievements – regardless of whether captured by the national performance measures – should be reported in narrative format as impacts and accomplishments to highlight the achievements of each Sea Grant program.

Economic (market and non-market; jobs and businesses created or sustained) impacts derived from Sea Grant activities.

Justification: This measure highlights ~~change in economic impact~~economic changes - the jobs, businesses, dollars, and non-market value - that communities or businesses generate or save due to Sea Grant assistance (i.e., providing information to help communities, industries or businesses expand, make better decisions or avoid mistakes). Sea Grant provides the information and training that informs business decisions, and in some cases firms create or sustain jobs as a result. Moreover, Sea Grant activities can have positive effects on restoring, maintaining or improving environmental goods and ecosystem services, broadly defined as natural capital. Even if not valued by the market, these goods and services have economic value to humans. Provide the source for the economic impact estimates when it is available.

NOTES: Economic ~~impacts~~benefits should not include employment or expenditures funded directly from the Sea Grant award (including match). **Leveraged funds** should be reported as such and not duplicated within this performance measure.

Definitions –

A **job created** is a new position created and filled as a result of Sea Grant activities. An existing position that is filled with a Sea Grant-trained applicant should not be reported in this measure. A **job sustained** is an existing, filled position that is sustained as a direct result of Sea Grant activities. A job cannot be reported as both created and sustained in the same year.

NOTES:

- All reported jobs should have wages associated as an associated economic impact. The economic impact of jobs created/sustained (i.e., wages) is governed by reporting from the

Existing Guidance for Reporting Economic Impacts/Benefits

employer (if available) or estimated by median wages by sector in a given state using BLS Employment Statistics (<http://www.bls.gov/oes/current/oessrcst.htm>).

- Jobs created or sustained as a result of required training (e.g., HACCP) offered by Sea Grant should be included. However, optional professional development or educational opportunities from Sea Grant that improved applicant credentials should not be counted as jobs created/sustained.
- Jobs created or sustained should be expressed as "full-time equivalent" (FTE), calculated as all hours worked divided by the total hours in a full-time schedule.

A **business created** is a new firm that was created as result of Sea Grant activities.

A **business sustained** is a previously existing firm that is sustained as a direct result of Sea Grant activities. A business cannot be reported as both created and sustained in the same year.

NOTE: All businesses that are reported as created or sustained should include a report of the associated jobs created and sustained and the wages for those jobs using BLS Employment Statistics (<http://www.bls.gov/oes/current/oessrcst.htm>).

Market impacts: the amount of money that will be saved (e.g., through technological efficiencies) or generated (e.g., through sales) as a result of Sea Grant activities. **Multipliers** should not be used; this measure focuses on direct market impacts.

NOTE: This measure should not include economic impact from volunteer hours, directly-supported staff, or fellows, as those measures are collected through other performance measures/metrics.

Examples: Trade Adjustment Assistance, profits (savings or revenue generated) from technology transfer in fishing and aquaculture industries

Non-market impacts: Ecosystem service valuation methods have the potential to provide information that can be used to demonstrate the direct and indirect economic impacts of different nonmarket goods and services. The estimation of non-market economic impacts can assist managers with decision making, as well as increase the public's general understanding of the economic importance and value of habitats. A number of valuation techniques have been developed to estimate the economic value of non-market ecosystem services, including value transfer, household production functions, hedonic analysis, travel cost and contingent valuation methodologies. A toolkit is available on the Sea Grant Social Science Website: (<http://seagrants.noaa.gov/WhatWeDo/SocialScience/SocialScienceToolsandReports.aspx>).

NOTES: Social benefits (e.g., statistical lives saved) should be explained in impact statements, but not quantified here.

Examples: Flood and storm protection, provision of fresh water, tourism value of restored ecosystems.

Performance Measures - 2015 Economic Impacts Educational Examples

Economic Benefit	Economic Benefit	Businesses Created	Businesses Sustained	Jobs Created	Jobs Sustained	Patents
Examples for Discussion						
Seafood Hazard Analysis and Critical Control Points trainings taken through Sea Grant extension sustained 15 jobs, with a mean annual wage of \$48,290 per job (source: first-line supervisors of fisheries workers; www.bls.gov). These trainings provided skills necessary to execute the most efficient methods of seafood production while abiding by food safety standards.	724350				15	
Sea Grant held 4 HACCP workshops during the reporting cycle resulting in 43 people receiving certificates and jobs retained.	1461450				43	
Hazard Analysis Critical Control Point (HACCP) Seafood Safety Training that is required for any seafood operation to remain in business was delivered. In 2015, 40 people from 21 companies were trained over a period of three days.			21		12000	
In 2015-16, 90 processors and state and federal regulators from Maine to Texas were trained to apply HACCP principles to seafood processing. Up to 35 businesses and 55 jobs were retained, equating to an economic impact exceeding \$2.3 million. Seventeen senior aquaculture high school students also completed the standardized HACCP course as a School-to-Career training opportunity. (BLS 2015 by state/sector)	2348480		35		55	
Local business support. Sea Grant paid five different local graphic artists a total of \$27,288 to design, layout and create special media such as posters, exhibits, signage and other artwork for various program projects.	27288					
Artificial reef program supported by Sea Grant contributes \$226M in economic benefit and sustains 2,595 jobs, according to recent economic assessment.	226000000				2595	
New artificial reef deployments organized by the Sea Grant marine agent, are estimated to generate \$4.8M and support 100 businesses and 1,936 jobs.	4800000		100		1936	
Transfer of Technology Shrimper Fuel Savings: Fuel-efficient trawl gear introduced by Sea Grant to the shrimp trawling fleet saved fishermen \$3.5 million in fuel costs and had an additional \$5.6 million estimated labor income economic impact through jobs retained in 2015.	7920000				200	
Sea Grant Seafood Specialist joins to consult with over 50 companies on all phases of safe seafood production.	1000000		50			
Shrimp Vessel Owner	160000	1		2		
Seafood Direct Marketers Created	4000000	100	150	20	200	
H2B employees allowed	3240000				300	
Sea Grant Marine Advisory Program direct fishermen to resources to answer questions to start up operations. Over 300 harvesters are now registered as direct marketers or catch-sellers.	3000000				300	

Performance Measures - 2015 Economic Impacts Educational Examples

Economic Benefit	Economic Benefit	Businesses Created	Businesses Sustained	Jobs Created	Jobs Sustained	Patents
Seafood Processing Leadership Institute training fosters promotion for seafood processing quality control workers.	606696				17	
Sea Grant's 2008 Knauss Marine Policy Fellow learned skills that allowed him to implement marine fisheries policy, move into new management positions with the National Marine Fisheries Service..	86307				1	
Sea Grant funded research on biomimetic sensors directly led to a \$65 million dollar grant from the National Research Foundation of Singapore. This grant will support 12 faculty for 5 years. The grant will foster development of new ocean sensors.	65000000				12	
Sea Grant works with municipalities and private marinas to identify opportunities through the Boating Infrastructure Grant (BIG) Program.	13267376			53	76	
Sea Grant-trained docents provided over \$95,000 worth of services to three marine education centers in 2015, enabling the centers to provide high quality marine science programs to a wide range of visitors, programs that the centers wouldn't be able to provide without this assistance.	95000					
Worked with individual interested in commercial shellfishing; individual was subsequently hired by major shellfish company (Briarpatch Enterprises) (BLS 2015 by state/sector)	30520			1		
Use of mechanical harvesting technology is approved for use under state law helping to sustain state's \$20M clam aquaculture industry. This allows growers to accommodate alternative harvest strategies for new species.	20000000					
Continued ability to harvest horseshoe crabs at current level. Combined value of fisherman's jobs and payroll value of bleeding facility (based on CRDA and county records)	4720000	0	4	0	150	0
Clear Examples						
Hydro Restoration Project - Feagin. Hydrologic Restoration projects are shared with the Gulf of Mexico region. One of these projects contributed to the PM and has been divided by the 4 GoM programs. The project by Feagin restored the connection to 5 miles of tidal network and 770 acres of habitat and 112 linear feet of living shoreline protection was installed. Detailed calculations are available on request from the PI. The economic benefit of the restoration is likely within the range of \$1,486,310 - \$2,473,106 per year. The jobs sustained for this benefit are for a 1 job at a bait shop and 2 at a kayak/jetski rental company. Taking the more conservative number and dividing the data among the region: $\$1486310/4 = \371578 and 0.75 known businesses and jobs sustained.	371578		1		1	

Performance Measures - 2015 Economic Impacts Educational Examples

Economic Benefit	Economic Benefit	Businesses Created	Businesses Sustained	Jobs Created	Jobs Sustained	Patents
Training Nisqually and Lummi tribal fishermen in fish handling techniques to enhance the value of their salmon catch - 37 fishermen with average catch of 2200 lbs. receive payment of \$.65/lb more than average dock price for \$53,000 increase value of total catch. A/ACE-1	1183350				37	
The Tybee Island Sea Level Rise Adaptation Plan directly impacted the economy of Tybee Island by helping to improve the City's rating under FEMA's Community Rating System (CRS). During the planning process, Tybee Island went from a class 7 to 5 in CRS, enabling savings in flood insurance of \$3 million for property owners on the island.	3000000					
As a result of Virginia Sea Grant extension staff at Virginia Tech, seafood processors indicated an enhancement in marketability following trainings and recommendations. These have resulted in the prevention of regulatory action or enhance the profitability of processors by expanding their product marketability. "Without the services from this extension service my company would fail the product protocols established for several major grocery chains" was indicated by a seafood processor. VASG Project # A/718523.	77400		1		3	
Oyster Remote Setting Training has continued to successfully grow in Maryland and significantly expand oyster aquaculture and restoration production. This program began in 2011 with 12 growers participating and by 2015 had grown to 40 growers. In 2015, 328 million seed oysters were distributed with an average setting success of 40%. Conservatively, oyster seed have a market value of \$0.015 yielding an economic value of \$4,920,000 in spat on shell provided at no cost to aquaculture growers.	4920000		40			
Michigan Sea Grant facilitates the certification and re-certification of Clean Marina facilities. MSG staff serve on the Michigan Clean Marina Foundation Board and Operations Committee. Some certified Clean Marina facilities have received an annual insurance discount of up to \$1,500. 11 certifications were awarded in 2015, resulting in a combined \$16,500 insurance savings.	16500		11			
Texas Pack Effluent Treatment (Cameron Co.): Texas Sea Grant helped Texas Pack reduce their effluent load for the City of Port Isabel water treatment facility. The treatment ensures efficient use of the treated effluent for irrigation of once non-productive dry land, resulting in a lush wetland habitat and reducing costs associated with the previous technology. The adopted technology saved Texas Pack approximately \$100,000 in 2015.	100000					
Miller Ferry's estimated economic benefit derived from visitors to Ohio Sea Grant's Aquatic Visitor Center (2015 visitors = 20,527). We recognize that the Aquatic Visitor center is likely only one of approximately 6 venues that ferry passengers might visit while on the island. Therefore, rather than claim the economic benefit of a full roundtrip ticket (\$14) we claim one sixth of each fare ($1/6 * \$14 = \2.33). The aquatic Visitor Center had 20,527 guest in 2015 ($\$2.33 * 20,527 = \$47,828$).	47828	0	0	0	0	0

Performance Measures - 2015 Economic Impacts Educational Examples

MODIFIED FOR EXAMPLE PURPOSES