

Evaluation Approaches for COSEE

There have been two different efforts at Network evaluation over the lifespan of COSEE. The first focused on describing and characterizing the work and impact of the Network. The second utilized a *Return on Investment* framework.

Network
evaluation

The EWG was developed in 2007 to provide input and support for measuring the impact of the COSEE Network

EWG

Center evaluators have used multiple approaches to evaluation that have been tailored to the needs and resources of their Center. Many used mixed-methods and are in line with the philosophy behind Patton's "Utilization-focused" evaluation.

Center
evaluation

Center
evaluation

Center
evaluation

Evaluation
Research

COSEE Network
database

Cross-Center
evaluation

Continue Center
evaluations

Center Evaluators Begin Working Together



- Evaluators met at 2008 Network meeting
- Annual evaluators meeting 2008-2011
- EWG reformed to include evaluators
- Decadal review in 2012, then 2011
- Focus shifted from Center level evaluation to community of practice equally concerned with Network and Cross-Center impacts



CENTERS FOR OCEAN SCIENCES
EDUCATION EXCELLENCE

Evaluators Work Towards DR

- Starting in 2008, evaluators worked towards common definitions and survey instruments to collect consistent, reliable Cross-Center data
- EWG Chair sets agenda for EWG, evaluator liaison updates Center evaluators
- In 2009 EWG launches first scientist engagement survey and educator engagement surveys
- Scientist participation ↑ over time



COSEE Scientist Engagement Survey



COSEE Educator Engagement Survey

Scientist Engagement Survey Findings

- 2009 n=749 42% response 2010 n=872 46% response
- Many scientists have multi-year commitment to COSEE
- 70% ↑ in broader impacts involvement as result of COSEE
- COSEE viewed by scientists as helpful in
 - Broadening participation
 - Broadening dissemination
 - Advancing discovery
 - Benefits to society
 - Enhancing infrastructure



Educator Engagement Survey Findings

- 2009 n=1982 39% response
- Many educators have multi-year commitment to COSEE
- Educators have reached out to 889,020 learners
- Educators gained resources, network of colleagues, support from COSEE Centers
- Educators gained opportunities to work with scientists, ocean sciences knowledge and content
- Educators shared COSEE materials with educators or students



Evolution of Community of Practice

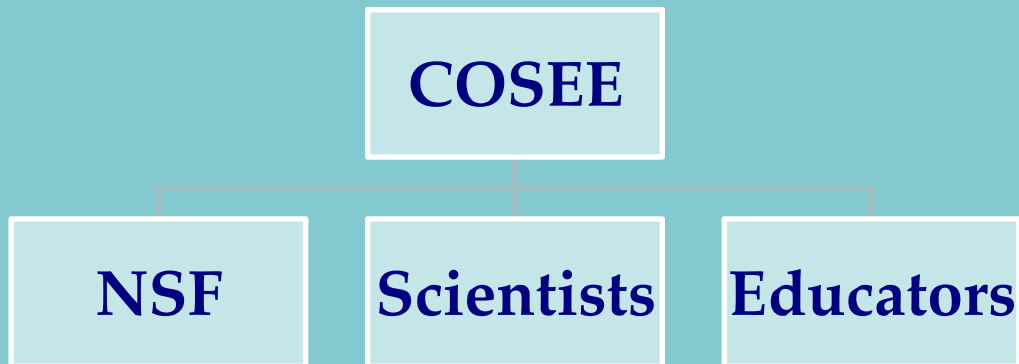
- Unique, future focused, generative
- Injected evaluation into traditional science strongholds such as Ocean Sciences Conference
- Formulated a Future plan
- Center, Cross-Center and Network evaluation to demonstrate impacts
- Surveys on scientist/ educator broader impacts
- Evidence highlighting Network accomplishments



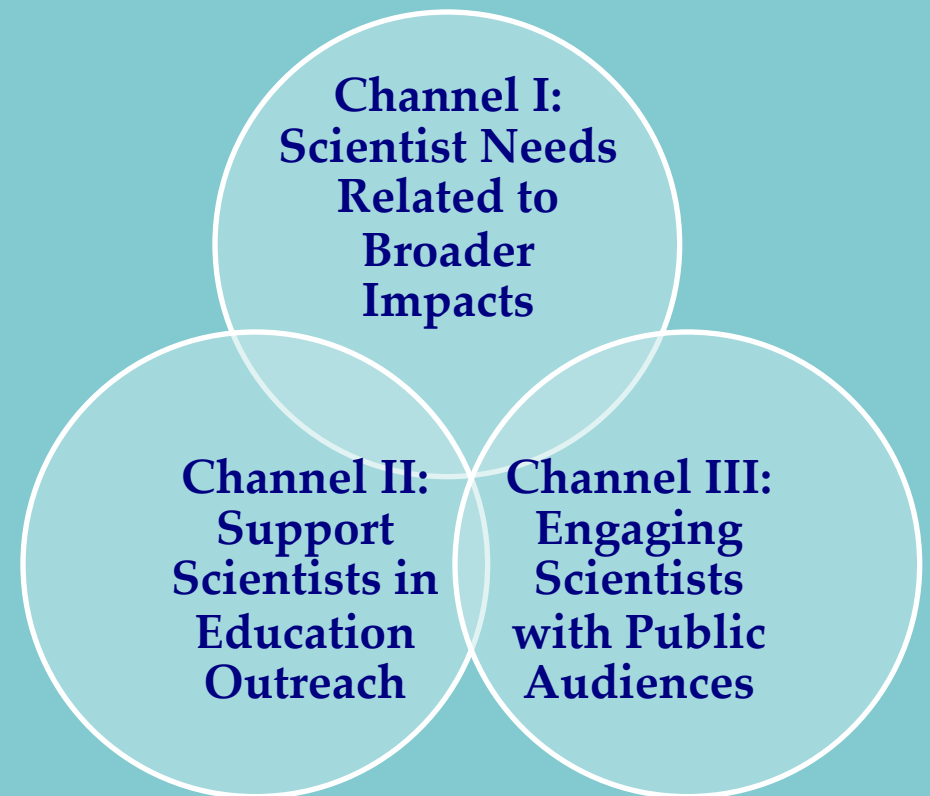
*Participating members of the COSEE Network, taken just after the session
COSEE Evaluations: What We've Learned and Implications for the Future*

Evidence of Success—Major Network Accomplishments

- COSEE provides services through three distribution channels to NSF, scientists, and educators



- Channel I: Scientist Needs Related to Broader Impacts
- Channel II: Support Scientists in Education Outreach
- Channel III: Engaging Scientists with Public Audiences



Future Vision of Evaluation within COSEE

- Refine and expand data collection and aggregation infrastructure through Network database
- Center evaluations for program fidelity/improvement
- Improve/expand Cross-Center Comparative Studies
- Evaluation research to determine efficacy and effectiveness

