



COSEE Goes International: COSEE CHINA

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GOALS

To exchange information focused on ocean science education in the United States and China and to explore the possibility of establishing a Center for Ocean Science Education Excellence in China.

RATIONALE

The United States and China face some of the same fundamental challenges in educating their public about the importance of the oceans in their everyday lives, the role of the ocean in climate change, and the value of supporting ocean science research. The general populations of the United States and China are not "Ocean Literate", do not see how their lives are affected by the ocean, and are not educated about the ocean in school. By expanding the COSEE network from 13 Centers in the US to establish COSEE-China, the ocean education and research communities in both the United States and China will benefit.

INTRODUCTION

The COSEE network is driven by its goals of developing effective broader impacts of ocean science and integrating cutting-edge ocean research into educational programs and activities. This workshop was a first step at sharing best practices between two significant countries in a field (science education) that has not traditionally shared all its learning through peer-reviewed literature. Innovative and effective educational programs should result quickly from this collaboration.

The workshop resulted in new learning about educational practice in both the US and China that impacted the educational practice of the individual participants and their personal networks. The workshop provided the building blocks for new collaborations in research and education between participants and their networks.

COSEE China Planning Workshop



- ITINERARY**
- Sunday-Great Wall Tour
 - Monday-Beijing workshop
COSEE intros, vision, banquet
 - Tuesday-Beijing workshop
Chinese Univ intros, strategic planning
Social evening
 - Wednesday-Imperial Palace
Transit to Xiamen, dinner
 - Thursday-Xiamen University
Keji HS, Undergraduate class, campus tour
 - Friday-Transit to Qingdao
Tour of Ocean University of China, discussion & Banquet
 - Saturday-Ocean Polar World



MISSION: Scientists and educators working together to advance ocean discovery and make known the vital role of the ocean in our lives

PURPOSE:

- Share and exchange information and resources
- Promote public awareness about the ocean
- Attract and recruit high quality ocean scientists at the undergraduate level and high school & elementary levels
- Secure funding to support the effort

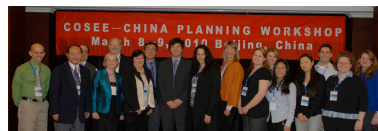
VISION:

- A single COSEE-China, a vibrant, national network of ocean scientists and educators influencing the entire country
- A common web presence linked to US COSEE network
- International collaboration with US (and maybe other countries) sharing best practices to increase public awareness about the ocean and increase pipeline of high quality graduate students

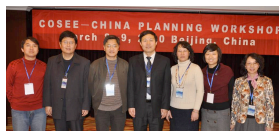
Advantages: Culture of the ocean, many undergraduate students, existing US COSEE Network. University-affiliated high schools and middle schools.

Barriers: Large class sizes, teaching to the test, no history of working in K12 schools. Matching graduate students with jobs.

Participants



- 15 Representatives from 8 COSEE Centers
- Graduate students, post-docs, scientists, educators, COSEE PIs, NSF representatives
- 10 had never been to China



- Seven (7) leading universities with ocean science programs
- Ocean University of China
- Xiamen University
- Tongji University
- Peking University
- Nanjing University
- Zhejiang University
- China University of Geosciences
- NSF of China
- State Oceanic Administration



Impacts

Impacts on COSEE China

- 12 University partnership (added: Ocean Univ of Shanghai, Ocean Univ of Guangdong, Ocean Univ of Dalian, Hong Kong)
- SOA supported initiation of COSEE-China
- Network website established

Impacts on US COSEE

- Increased understanding of ocean education in China
- Personal connections with Chinese colleagues
- Realization of "One World, One Ocean"

"It was a wonderful professional and personal experience, and I look forward to learning how I can contribute to the continued success of the project."

"The trip was a more powerful experience than I anticipated- China was very different than my expectations- much more modern and very capitalistic."

BUILT ON STRONG COLLABORATIONS

- Ocean Science Literacy
- Chen and Dai at WHOI
- Chen's student works with Dai for 1 year
- Dai's student completes degree in Chen's lab
- Wang and Chen visit China, 2006
- Talked to Bill Chang
- Chen attends Biogeochemistry conference in 2008
- NSF International Planning Workshop proposal funded 2009 (Chen, Wang, Dai, Gao, Cao)



Ongoing Collaborations

- Ocean Science Literacy Translation
- Teacher Professional Development
- Funding?
- COSEE Network
- Visits by Min Liu, Vera Shi, Bob Chen, Arthur Eisenkraft