

## REFLEXIVITY OF THE OCEAN AND THE HUMAN

Peter Tuddenham  
The College of Exploration

This session will explore how reflexivity and theories of communication and control offer approaches to help different groups develop shared language and actions concerning the relationship of the ocean and humans.

Ocean scientists tend to focus on one of the following fields: Ocean Physics (i.e. ocean structure, circulation, tides and internal waves), Ocean Chemistry, Biological Oceanography, Air-Sea Interactions, Ocean Models (i.e., physical, chemical, biological and biochemical, coastal and shelf edge processes), and Paleoceanography. Each field has its own language and sub-discipline scientific and academic career paths. Most K-12 schools do not teach about the ocean. Did you learn about the ocean in school? Up to now the topic of the ocean is not necessarily included in science education or other topics, including geography. There are some policy makers from coastal areas of the USA who are concerned about ocean policy.

Most adults are not literate about the ocean. Being ocean literate means understanding the ocean's influence on you and your influence on the ocean. There are seven essential principles. 1. The Earth has one big ocean with many features. 2. The ocean and life in the ocean shape the features of the Earth. 3. The ocean is a major influence on weather and climate. 4. The ocean made Earth habitable. 5. The ocean supports a great diversity of life and ecosystems. 6. The ocean and humans are inextricably interconnected. 7. The ocean is largely unexplored.

Since 2002 small groups of scientists, educators and policy makers have worked together to help advance the idea of ocean literacy in the USA and recently globally.

**Peter Tuddenham** is a co-founder of the College of Exploration <http://www.coexploration.org> an online not-for-profit educational organization. Since 1992 over 16,000 learners from around the world have attended workshops and courses online on ocean science, earth science, space science, educational pedagogy and leadership and related topics. His background is in large system management and change and the importance of an integrated, interactive role of technology, networks, communication processes and learning strategies. In business he headed a Strategic Issues Management Department for Arizona Public Services, a nuclear power utility, and before that was Corporate Communications Systems Manager for the Coors Brewing Company in Golden, Colorado. Mr. Tuddenham worked in compensation and benefits and professional recruitment for Coors and before that the US Department of Defense. He has served as guest faculty for executive development at the US Army War College in Carlisle, Pennsylvania, as Adjunct Professor in Distance Learning at George Mason University and the University of Maryland University College. He has studied systems design at Saybrook University in San Francisco and the Open University in England, has a BS in Business from Regis University in Denver. He served in the British Army and was commissioned as an officer in the British Army Corps of Royal Engineers from the Royal Military Academy Sandhurst. His website is <http://www.linkedin.com/in/petertuddenham>.

