



“A Future for Fisheries?” Setting of a Field-based Class for Evaluation of Aquaculture and Fisheries Sustainability

Stephen Macko and Matthew O’Connell

University of Virginia, Department of Environmental Sciences, Charlottesville, United States (sam8f@virginia.edu)

For the first time in 2015, aquaculture yields approximately equaled global wild capture fisheries. Are either of these levels of production sustainable? This course explored the limitations of both sources of fishery landings and included legal limitations, environmental concerns and technological problems and adaptations. It made use of visits to aquaculture facilities, government laboratories like NOAA, as well as large fish distribution centers like J.J. McDowell’s Seafood (Jessup, MD), and included presentations by experts on legalities including the Law of the Sea. In addition, short day-long trips to “ocean-related” locations were also used to supplement the experience and included speakers involved with aquaculture. Central Virginia is a fortunate location for such a class, with close access for travel to the Chesapeake Bay and numerous field stations, museums with ocean-based exhibits (the Smithsonian and National Zoo) that address both extant and extinct Earth history, as well as national/state aquaria in Baltimore and Virginia Beach. Furthermore, visits to local seafood markets at local grocery stores, or larger city markets in Washington, Baltimore and Virginia Beach, enhance the exposure to productivity in the ocean, and viability of the fisheries sustainability. Sustainability awareness is increasingly a subject in educational settings. Marine science classes are perfect settings of establishing sustainability awareness owing to declining populations of organisms and perceived collapse in fisheries worldwide. Students in oceanography classes often request more direct exposure to actual ocean situations or field trips. This new approach to such a course supplement addresses the requests by utilizing local resources and short field trips for a limited number of students to locations in which Ocean experiences are available, and are often supported through education and outreach components. The vision of the class was a mixture of classroom time, readings, along with paper and laboratories. The course could then address not only the particulars of the marine science, but also aspects of sustainability with discussions on ethics, including keeping animals in captivity or overfishing of particular species and the special difficulties that arise from captive or culturing ocean populations. In addition, the class was encouraged to post web-based journals of experiences in order to share opinions of observations in each of the settings, including the evaluation of the foods they were consuming during the class.