NOAA FISHERIES Webinar Series

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Quantitative Ecology and Socioeconomics Training (QUEST) Program

Webinar Details:

Date: **Thursday, April 6, 2017**

Time: **2:00-3:00 pm Eastern Time**

Space is limited. Reserve your seat at:

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Topic: **Dynamic ocean management: A tool for optimizing ecological and economic sustainability**

Presenter: **Elliott Hazen**
Research Ecologist
NOAA Fisheries, Southwest Fisheries Science Center

Abstract: Highly migratory species are inherently difficult to manage as they cross human-designated jurisdictional boundaries in the open seas. Top predators face multiple threats such as ship-strike risk and incidental catch (bycatch) in fisheries. Given many top predators migrate seasonally across ocean basins, targeted management approaches require an understanding of how distribution and abundance varies with the oceanic environment. Here I discuss two recently developed tools, WhaleWatch and EcoCast. WhaleWatch is designed to assess blue whale density on a monthly basis to help reduce the risk of ship strikes. EcoCast is designed for maximizing target catch while minimizing bycatch. In regard to EcoCast, we focused our analysis on the California Drift Gillnet fishery which targets swordfish, thresher shark, and mako shark, but also can incidentally catch a number of species including sea lions, sea turtles, and blue sharks. We looked at EcoCast output for two years, 2012 and 2015, an average year and an El Niño year respectively, to examine how predicted patterns in catch and bycatch change. Both of our studies provide a framework for how dynamic approaches can be applied to other migratory species for which telemetry, fisheries catch, or survey data are available, and emphasizes the utility in integrating multiple data types for marine conservation and management.

Biography: Elliott Hazen is a Research Ecologist with NOAA's Southwest Fisheries Science Center's Environmental Research Division and an adjunct professor in the Department of Ecology and Evolutionary Biology at UC Santa Cruz. Elliott's research includes foraging ecology of rorqual whales (Humpback whales in Antarctica and the Gulf of Maine, Blue whales in the Southern California Bight), spatial ecology of top predators in the Pacific Ocean, climate change effects on marine top predators and their ecosystems, and use of species-environment relationships to create fine scale spatial management tools to maximize ecological and economic sustainability. Elliott also contributes to the California Current Integrated Ecosystem Assessment, co-leading the risk component. Prior to joining NOAA Fisheries, Elliott was a research associate at UC Santa Cruz and a NRC postdoctoral fellow before that. He received his Bachelor of Science from Duke University in Biology in 2000, a Masters of Science in 2003 from the University of Washington in Fisheries, and a PhD in 2008 from Duke University in the field of Ecology.

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Webinar System Requirements:
PC: Windows® 8, 7, Vista, XP or 2003 Server **Mac**: Mac OS® X 10.6 or newer