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ROCKEFELLER UNIVERSITY, PROGRAM FOR THE HUMAN ENVIRONMENT
MARINE RESEARCH AND POLICY INITIATIVE
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Topic: Ocean Exploration Policy

Background:

Ocean Exploration is defined in several different ways depending on the organization conducting the operations. In short, it is observing (viewing/imaging), measuring, and/or collecting samples in the ocean in places not previously visited or characterized. Although more than 50% of U.S. territory lies beneath the sea, only 5% has been explored, leaving a potential treasure trove of information unknown. Exploration programs do exist, but are deficient:

- The National Oceanic and Atmospheric Administration (NOAA) operates a \$25M/year program (out of a \$5.5B total budget) that, due to vessel and technology constraints, focuses mostly on imaging and bathymetric measurements. Although the images are shared with scientists and students, the “telepresence” technology and data collected are not representative of modern-day capabilities. NOAA investment in the program has been hesitant, but Congressional support remains high due in part to the program’s news-worthy successes.
- Other government programs, including the Navy’s operational oceanography and research projects, NSF hypothesis-based research investments, and USGS/BOEM/DOI geological operations, make unexpected ocean discoveries incidental to their mission-focused at-sea projects. However, because these discoveries are not part of the designated mission, they are not characterized or publicized in any meaningful way.
- Several non-profit organizations and wealthy individuals fund dedicated ocean exploration campaigns but there is little cross-venture planning, goal identification or data sharing among these private efforts or with the aforementioned government programs.

Interest in ocean exploration has been on the rise. In 2000, the White House established a U.S. Ocean Exploration Program. In 2009, Congress codified this program into law (sans the \$75M funding), made NOAA the lead federal agency and encouraged other agencies to participate in NOAA’s efforts. In 2012/13, RU’s Professor Jesse Ausubel and VADM Paul Gaffney led a Decadal Review of the program and made several recommendations for its strengthening.

Discussion:

A strengthened US Ocean Exploration program has the potential to inspire public engagement with science and technology, to shed light on mineral, energy and food resources and conservation needs, and to catalyze technical innovations useful in many domains, including national security.

MURU Roles and Actions:

Professor Ausubel and VADM Gaffney are vested in the national program and will advocate for increasing the program’s size, focusing its efforts, facilitating greater cross-agency and public-private partnerships, and disseminating new technologies to make more US oceanographic ships capable of exploration. This can strengthen the foundation for continuing the national program, especially when the two currently-dedicated ships become obsolete.