

AMERICAN OCEAN SECURITY IN THE 21ST CENTURY

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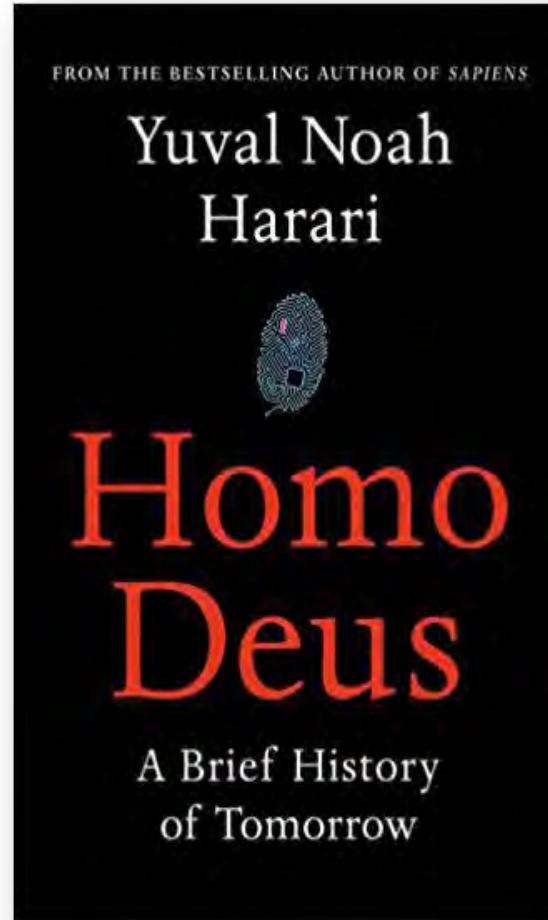
October 30, 2017



1.

21ST CENTURY TRENDS

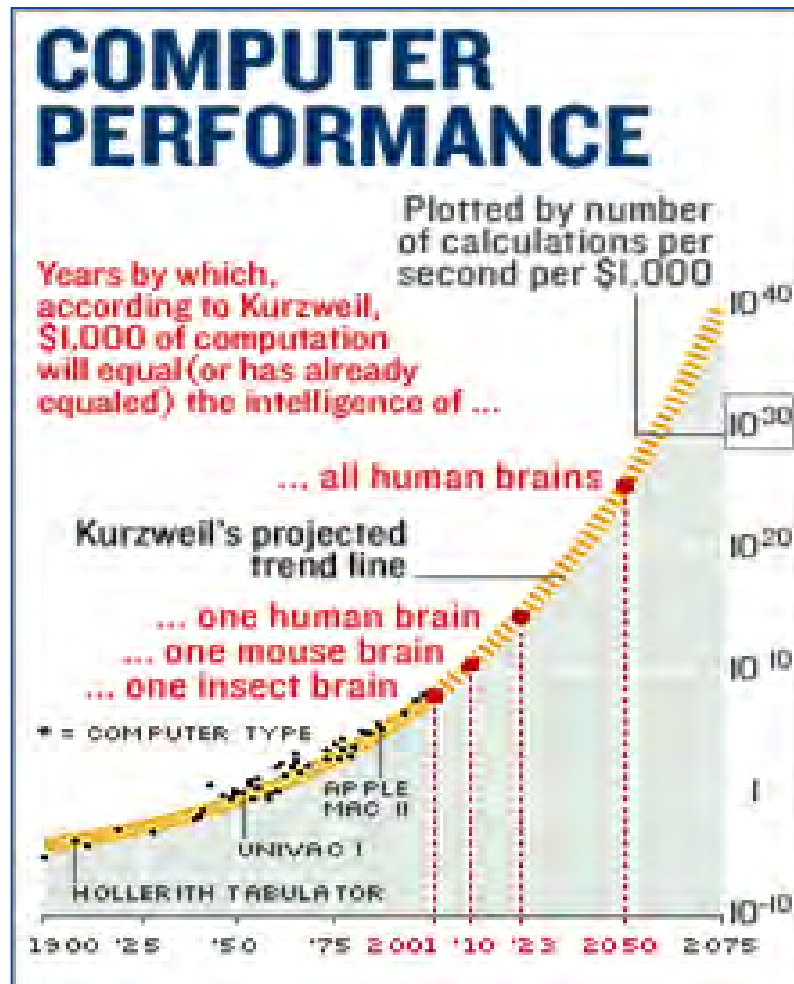
ACCELERATING TECHNOLOGICAL ADVANCEMENT



EXPONENTIAL INFORMATION GROWTH

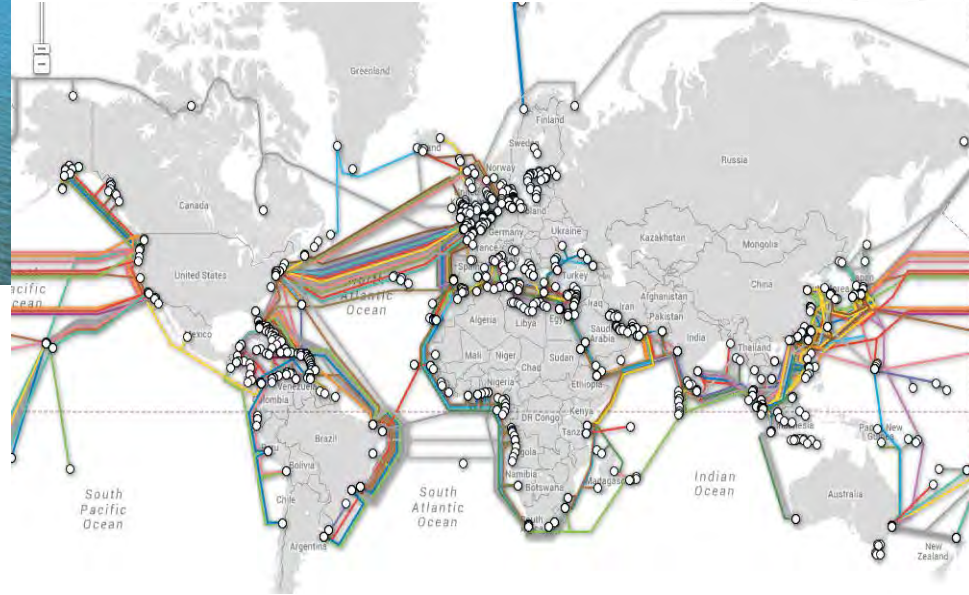
THE KURZWEIL CURVE

Moore's Law is just the beginning. The power of technology will keep growing exponentially, says Kurzweil. By 2050, you'll be able to buy a device with computational capacity of all mankind for the price of nice refrigerator today





A MARITIME MOORE'S LAW



RETURN TO GREAT POWER COMPETITION



SHIFTING RESOURCE PRIORITIES

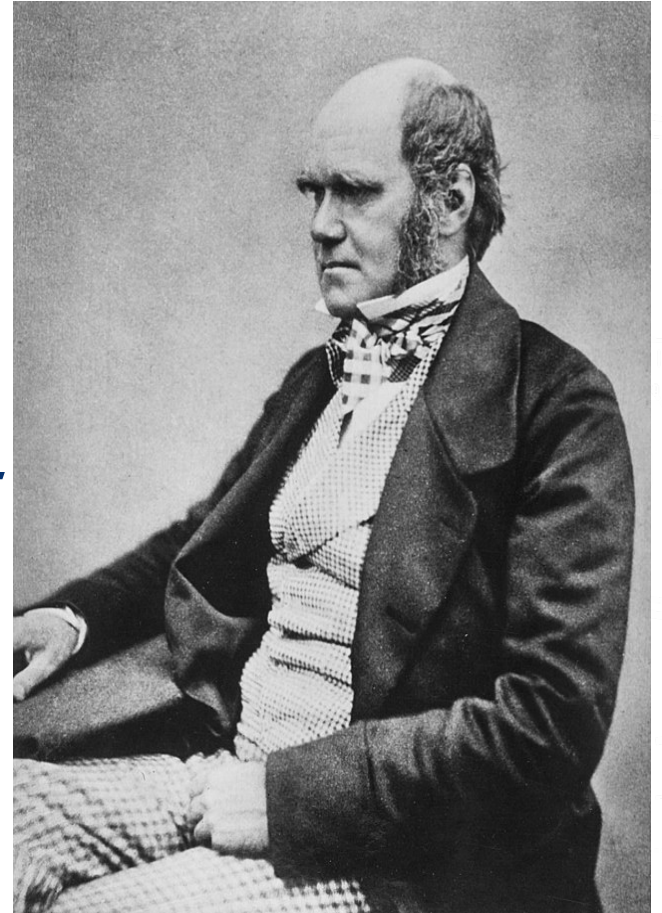




NONLINEAR CHANGE...



***“IT IS NOT THE STRONGEST OF
THE SPECIES THAT SURVIVE,
NOR THE MOST INTELLIGENT,
BUT THE ONE MOST RESPONSIVE
TO CHANGE.”***



2.

OCEAN SECURITY IMPERATIVES

NATIONAL SECURITY



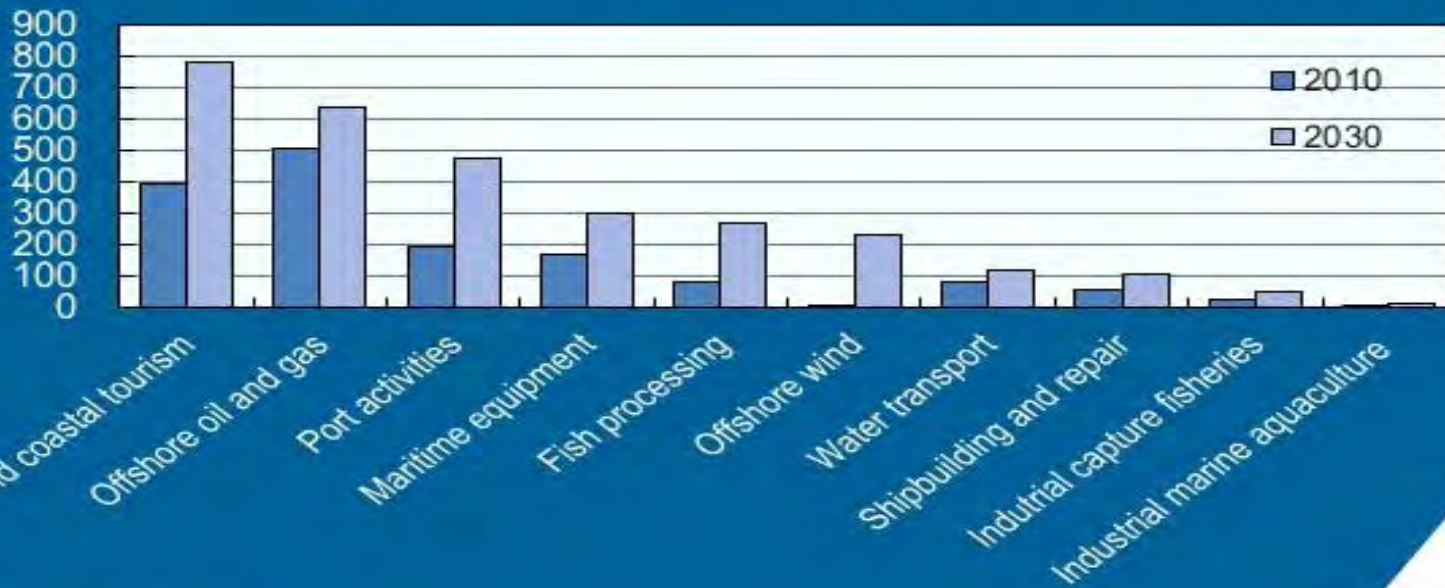
ECONOMIC SECURITY



The future of the Ocean Economy...
Total ocean industry value-added expected to double by 2030

Overview of industry-specific value-added in 2010 and 2030

USD billion



Source: OECD (2016) *The Ocean Economy to 2030*

HOMELAND SECURITY





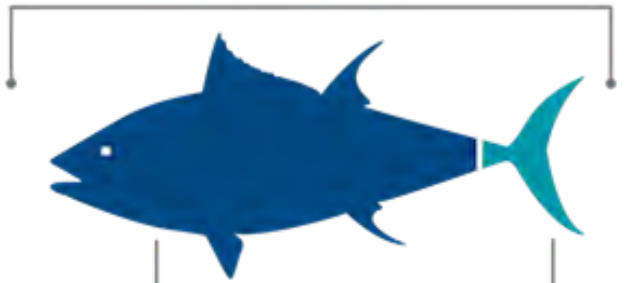
NATURAL RESOURCE SECURITY



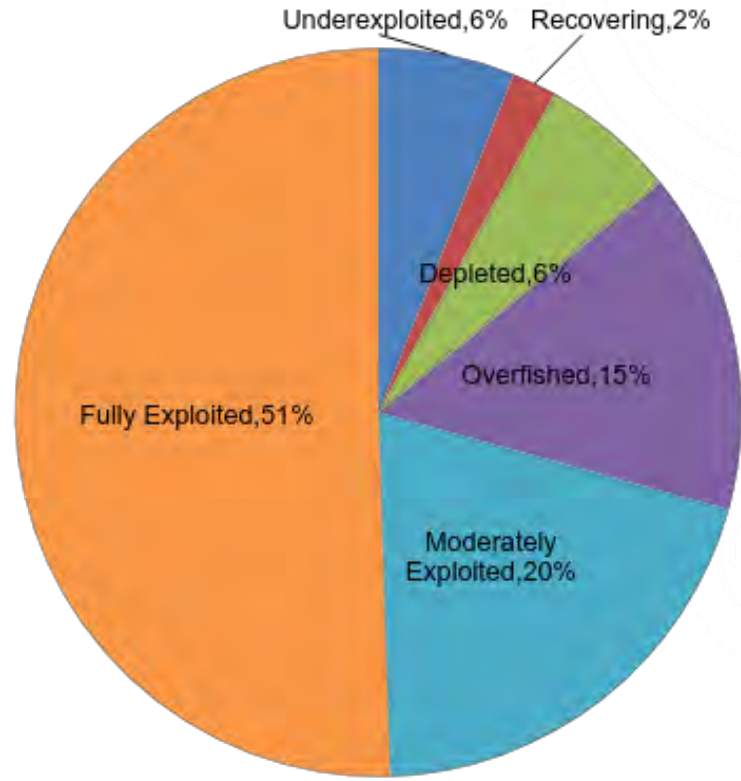
OVERFISHING: 316 stocks with known status:



OVERFISHED: 235 stocks with known status:

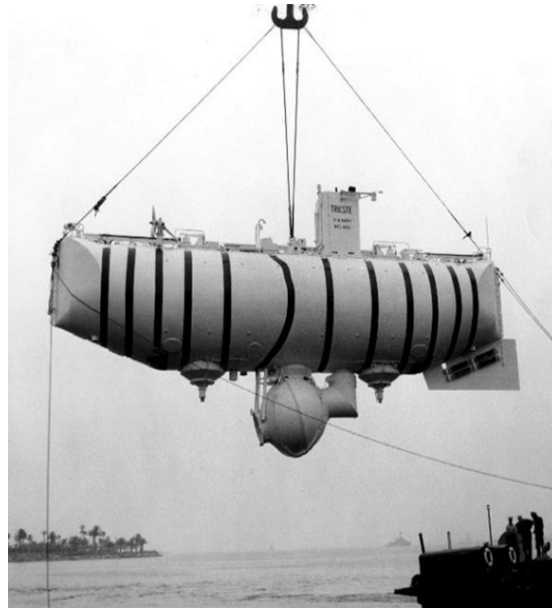


MARINE FISHERIES





CYBER SECURITY



Maritime Cyber Security: Shoal Water Ahead?

Walsh, Don

July 2015

U.S. Naval Institute Proceedings; Jul 2015, Vol. 141 Issue 7, p88

Conference Proceeding

Article

READ THE ARTICLE
COURTESY OF YOUR

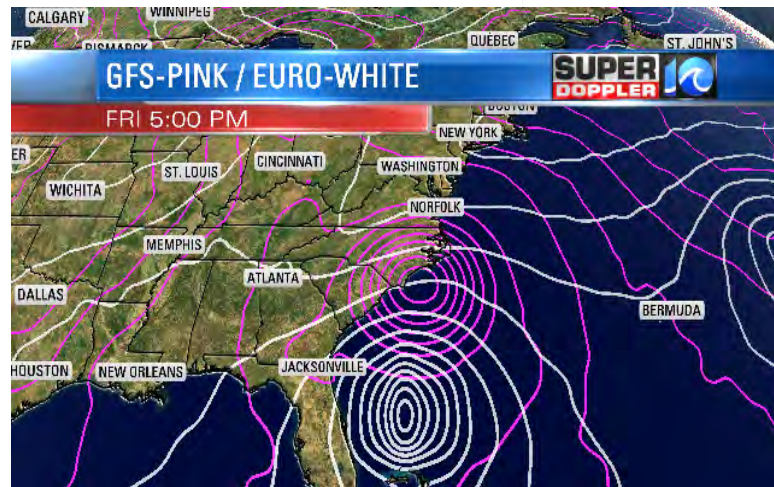
The article focuses on cyber security of transportation system of maritime shipping. Topics discussed include increasing use of automation in the system to reduce cost and increase efficiency, automated communication systems for coordinating shore activities, dependence of automation systems on global positioning system (GPS), damage to maritime industry due to cyber threats, and the automatic identification system (AIS) for ship-tracking.

3.

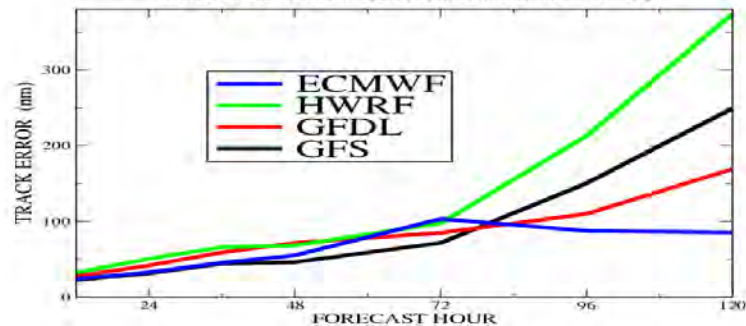
*NOAA PRIORITIES FOR
2017-2022*



#1. LEAD THE WORLD IN EARTH SYSTEM OBSERVATION & WEATHER PREDICTION



HURRICANE Sandy (Track error)
 Number of cases : (28, 26, 24, 22, 18, 14, 10)





#2. MINIMIZE IMPACTS FROM SEVERE WX

U.S. 2017 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the 15 billion-dollar weather and climate disasters that have impacted the United States January through September of 2017, a record pace.



#3. INCREASE THE SUSTAINABLE ECONOMIC CONTRIBUTIONS OF OUR FISHERIES & OCEANS



4.

CRITICAL OCEAN SECURITY ENABLERS



PARTNERSHIPS

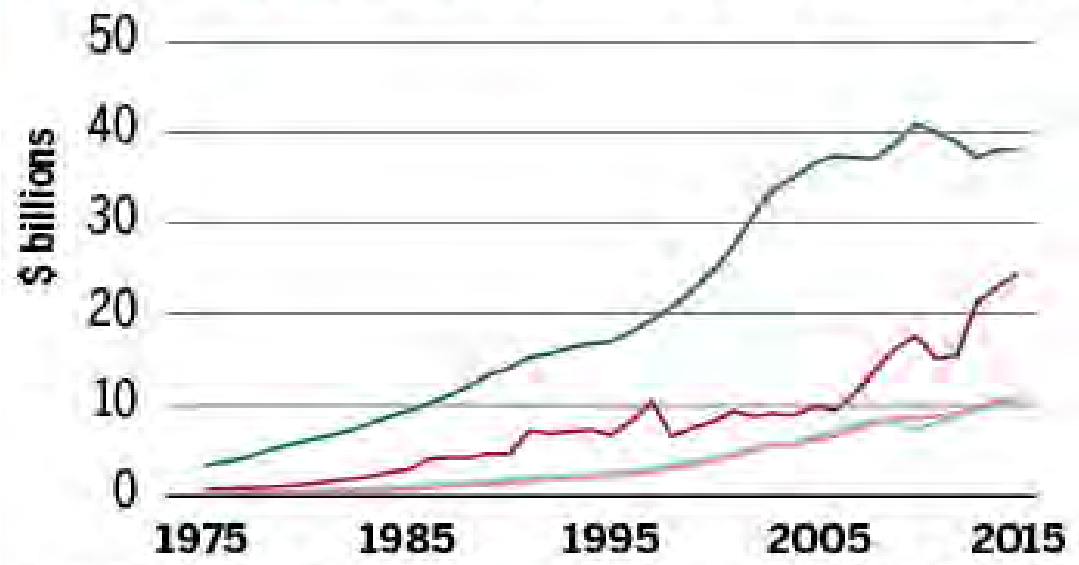


A basic shift

Federal agencies provided less than half of U.S. basic science funding in 2015, a result of stagnant budgets and rising investment by industry, universities, and philanthropies.



■ Federal ■ Corporate ■ University ■ Philanthropy



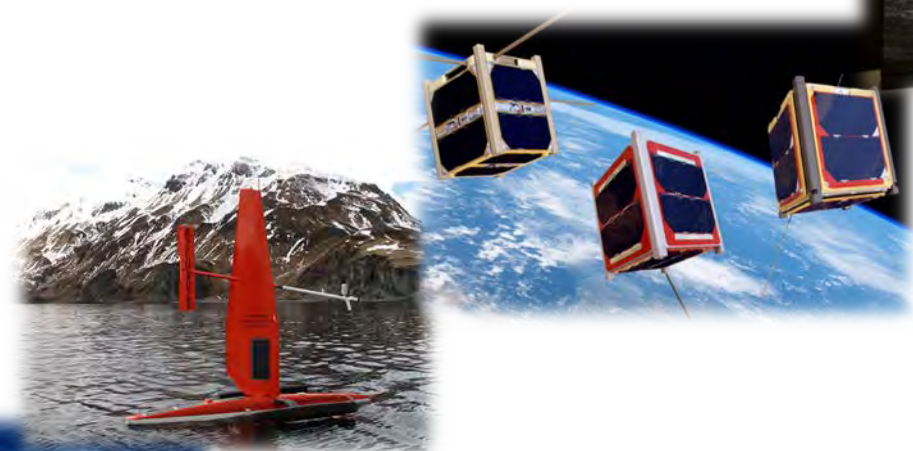
Graphic: D. Malakoff/Science

Data: National Science Foundation



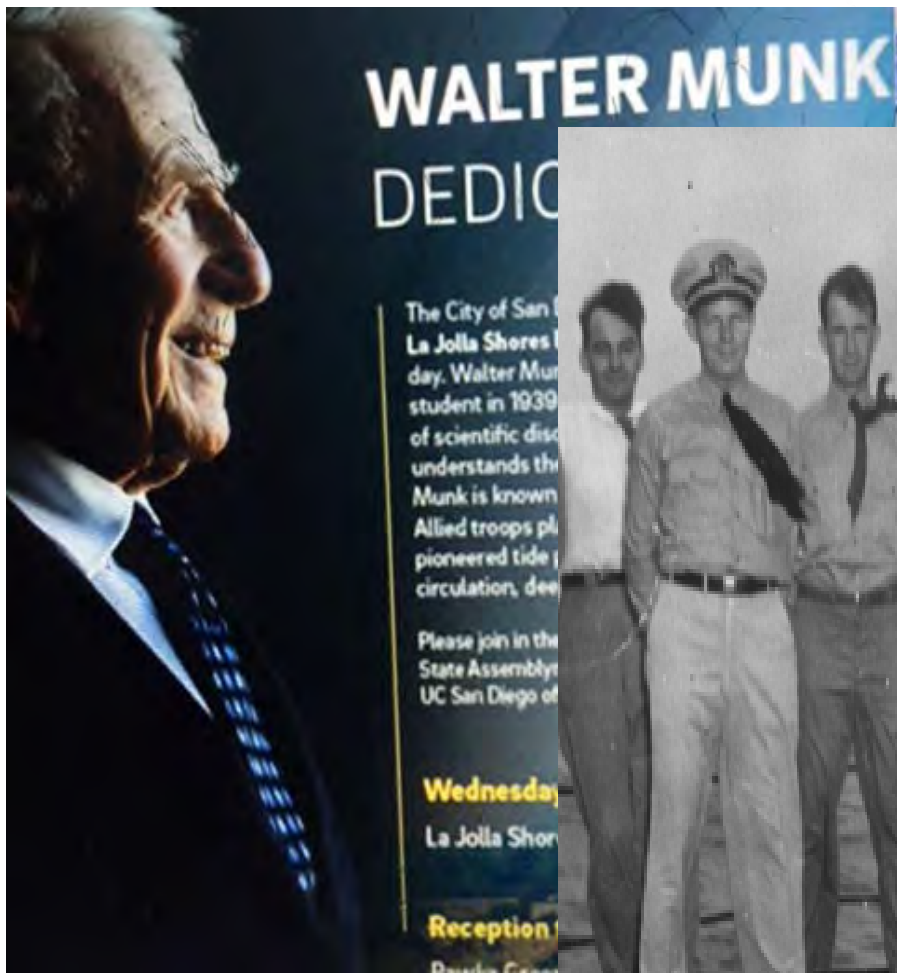


INNOVATION





PEOPLE



WHAT OCEAN SECURITY DOESN'T LOOK LIKE...



5. TRANSITION/ PERSONNEL UPDATE





Mr. Barry Myers

Nominee for Under Secretary for Oceans and Atmosphere and NOAA Administrator



Dr. Neil Jacobs

Nominee for Assistant Secretary for Environmental Observation and Prediction



Ms. Julie Roberts

Director of NOAA Communications



NOAA Corps Admiral Michael Silah

Director of NOAA Corps and Office of Marine and Aviation Operations

6. OPERATIONS UPDATE

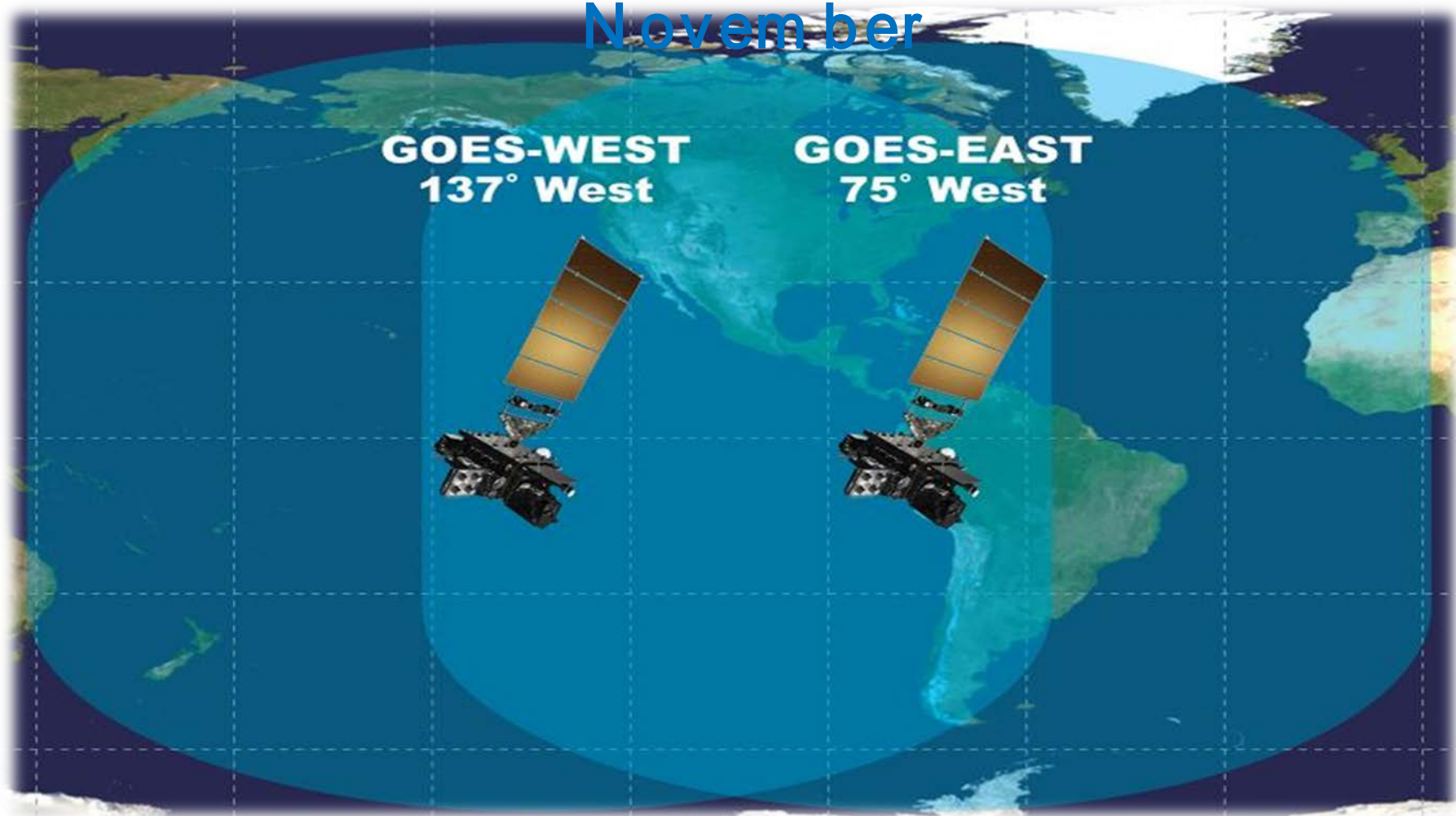
Hurricanes



JPSS-1 Launch in November



GOES-16 Set to Become GOES-EAST in November



50th Anniversary for NOAA Ship Oregon II



7. ORGANIZATIONAL UPDATE

DOC Awards Ceremony



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Thank You!

