

**NOAA Ocean Exploration Advisory Board
(OEAB)**

Blue Economy Subcommittee

Presentation to OEAB

Interim Report with Initial Recommendations

**27 May 2020
Virtual Meeting**

Background

- OEAB formed Blue Economy Subcommittee at request of NOAA Administrator (late 2019)
- Goal: recommend actionable steps which NOAA can take to contribute to doubling of nation's Blue Economy over the next decade
- First meeting: 5 – 6 February 2020
 - Developed charter
 - RDML Gallaudet requested Interim Report with Initial Recommendations by early June 2020

List of NOAA OEAB Blue Economy Subcommittee Members

- John Kreider, Kreider Consulting LLC, (Oceaneering, Ret), Subcommittee Chair
- Thomas Chance, (ASV Global, Ret), (C & C Technologies, Ret)
- RADM Matthew Klunder (USN, Ret), L3 Harris
- Rob Munier, Woods Hole Oceanographic Institution
- Michael Olsen, Equinor
- Dr. Ruth Perry, Shell Exploration & Production Company
- Millicent Pitts, Ocean Exchange
- Jerry Schubel, Aquarium of the Pacific
- Shally Shanker, AiiM Partners
- Mark Stevens, Microsoft
- VADM Scott Van Buskirk (USN, ret), Van Buskirk Associates, LLC
- Dave Whaley, Independent Fisheries and Ocean Consultant

Staff

- David McKinnie, NOAA, Designated Federal Officer
- Christa Rabenold, NOAA Office of Ocean Exploration Research, Staff Support

**ACCELERATING GROWTH OF U.S. BLUE ECONOMY
Initial Recommendations**



Image Source: The Ocean Economy in 2030, OECD

**An Interim Report
Blue Economy Subcommittee
Of
NOAA Ocean Exploration Advisory Board**

1 June 2020

Table of Contents

Interview 2030.....p. 2
Table of Contents..... p. 4
List of NOAA OEAB Blue Economy Subcommittee Members.....p. 5
Summary..... p. 6
Introduction..... p. 9
Recommendations..... p. 11

1. Focus on NOAA Culture and Organization to Enable Growth of the Blue Economy
2. Establish NOAA Blue Economy Special Advisor and Executive Committee
3. NOAA Ocean Exploration as a Focal Point for Economic Stimulus and Recovery
4. Promote and Leverage Partnerships with Private Sector
5. Convene Shareholders to Promote Blue Economy Growth by Mitigating Conflicts for Ocean Use
6. Develop and Publish Blue Economy Metrics
7. Establish and Execute a NOAA Strategic Engagement Plan to Increase Public Awareness of the Importance of the Ocean and the Blue Economy
8. Develop & Execute Overarching Strategy for Ocean Data
9. Partner with Economic Development Administration (EDA) for Improved Business Outreach
10. Increase Pilot and Demonstration Programs
11. Establish an ARPA-Ocean Program to Aggressively Foster Innovation & Commercialization
12. Create National Ocean Innovation Consortium to Accelerate Blue Economy Growth
13. Create an Ocean Innovation Initiative, including a Fund, for Blue Economy Start Up and Early Commercial Companies by Formation of a Public-Private Partnership
14. Increase Efforts to Enhance Coastal Resilience of Human and Natural Ecosystems
15. Ensure US Food Security through Modernized Wild Harvest and Increased Aquaculture Production
16. Support Next-Generation Services for Marine Transportation and Ports

References.....p. 39
Appendices.....p. 40

- A. NOAA Administrator Tasking of OEAB Blue Economy Subcommittee
- B. Charter of the Blue Economy Subcommittee
- C. Components of Blue Economy

Summary – Accelerating Growth of the U.S. Blue Economy

The Blue Economy is vital to our nation because: 1) health and resilience of our ocean are critical to our economy and our lives; and 2) a robust blue economy enhances our nation's leadership and competitiveness by strengthening our national, economic, and environmental security. **It is imperative that the U.S. government cannot stand by passively. It must engage now.**

In addition, the COVID-19 environment demands **innovative approaches and the ability to adapt, to not just re-create the past, but to create a new future** of a vibrant and sustainable ocean economy. **NOAA is in a key position to lead** the Administration's efforts to increase the economic impact of the Nation's ocean and coastal resources and be at the forefront of international discussions on the Blue Economy.¹ A collaborative and dynamic strategy for **partnerships** in ocean science and technology (S&T) – among government, private sector, academia, and philanthropy – is critical to coordinate, focus, and catalyze a national effort to achieve the goal of growing the Blue Economy.

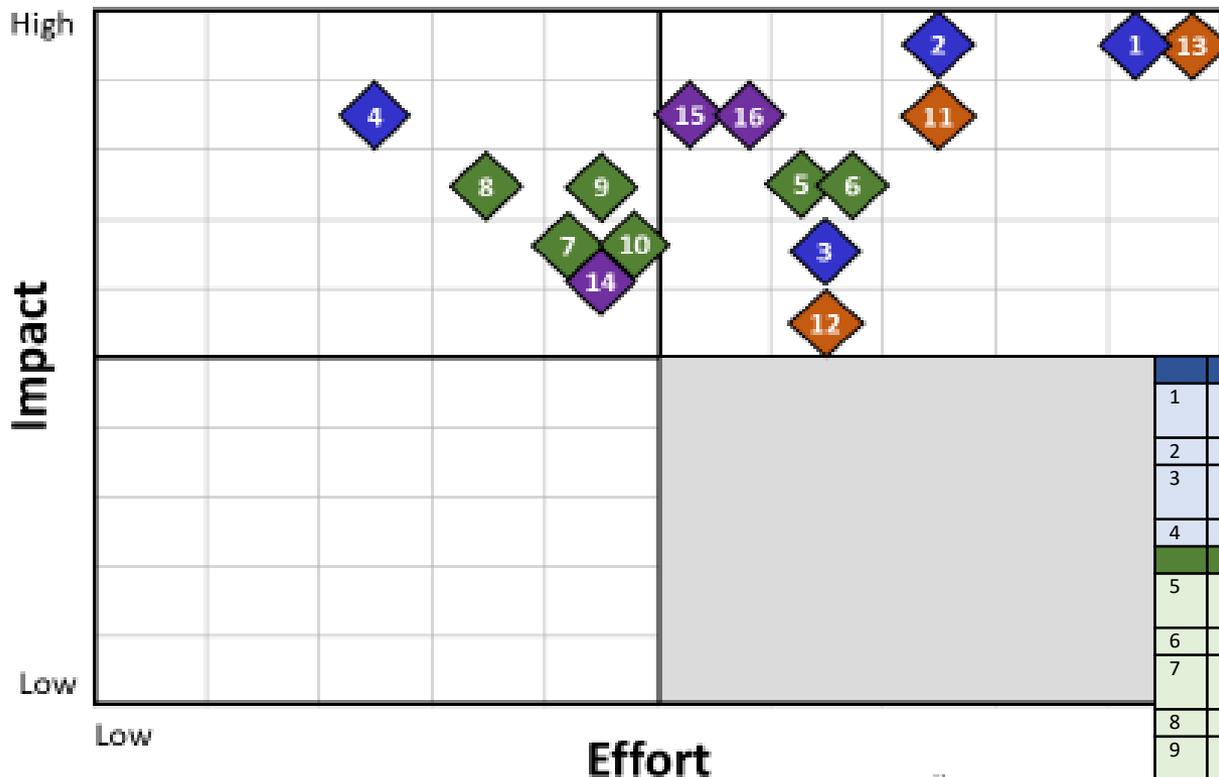
Initial Recommendations

#	Recommendation	Impact	Effort	Quick Wins	OE as Enabler
NOAA Actions					
1	Focus on NOAA Culture and Organization to Enable Growth of the Blue Economy	10	10	Yes	Yes
2	Establish NOAA Blue Economy Special Advisor and Executive Committee	10	8	Yes	Yes
3	NOAA Ocean Exploration as a Focal Point for Economic Stimulus and Recovery	7	7	Yes	Yes
4	Promote and Leverage Partnerships with Private Sector	9	3	Yes	Yes
NOAA Acting with Other Agencies					
5	Convene Shareholders to Promote Blue Economy Growth by Mitigating Conflicts for Ocean Use	8	7	Yes	Yes
6	Develop and Publish Blue Economy Metrics	8	7	Yes	Yes
7	Establish and Execute a NOAA Strategic Engagement Plan to Increase Public Awareness of the Importance of the Ocean and the Blue Economy	7	5	Yes	Yes
8	Develop & Execute Overarching Strategy for Ocean Data	8	4	Yes	Yes
9	Partner with Economic Development Administration (EDA) for Improved Business Outreach	8	5	Yes	Yes
10	Increase Pilot and Demonstration Programs	7	5	Yes	Yes
Innovation Initiatives					
11	Establish an ARPA-Ocean Program to Foster Innovation & Commercialization	9	8	Yes	Yes
12	Create National Ocean Innovation Consortium to Accelerate Blue Economy Growth	6	7	Yes	Yes
13	Create an Ocean Innovation Initiative	10	10	Yes	Yes
Sector Initiatives					
14	Increase Efforts to Enhance Coastal Resilience of Human and Natural Ecosystems	7	5	Yes	No
15	Ensure US food security through modernized wild harvest and increased aquaculture production	9	6	Yes	Yes
16	Support Next-Generation Services for Marine Transportation and Ports	9	6	Yes	Yes

Initial Recommendations of NOAA OEAB Blue Economy Subcommittee

Impact vs Effort Quad Chart

1 June 2020



NOAA Actions	
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NOAA Acting with Other Agencies	
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Sector Initiatives	
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- Key**
- Blue Diamond: NOAA Actions
 - Green Diamond: NOAA Acting with Other Agencies
 - Orange Diamond: Innovation Initiatives
 - Purple Diamond: Sector Initiatives

Example Recommendation

8. Develop and Execute an Overarching Strategy for Ocean Data

Value

NOAA's mission to understand and predict changes in climate, weather, oceans and coasts is predicated on quality data collection and the associated curation of that data to help conserve and manage coastal and marine ecosystems and resources. Sharing that knowledge and information with others via NOAA's extensive data services and products provides critical support to achieve overall Blue Economy objectives. Dissemination of critical data demonstrated by COVID-19 highlights the importance of timely, usable, and accurate data gathering, in which climate and weather play major roles. It is recommended that NOAA prioritize the collection and sharing of data from its current programs with a focus on data federation and data enrichment initiatives.

Scope of Effort

- Increase the available datasets through data.gov through consolidation of legacy data and the directive for data towards data.gov
- Identify data coverage gaps and foster market initiatives to fill those gaps (coordinated w/ Pilot Programs/Demonstrations/Exercises) when data are critical to Blue Economy development
- Provide incentives for technology enhancement programs leveraging AI and cloud to accelerate data use cases
- Direct private and public 'available data' / 'missing data' campaigns to help increase utilization and prioritize additional data gathering efforts

Quick Win Opportunities

- Edge analytics technology push to improve maritime and weather data
- Marketing campaign for the available data sets and access methods (includes value propositions towards the use of the data)
- Annual campaign and technology initiatives prioritized by mission verticals (weather, oceans, coasts, etc.) with an emphasis on Blue Economy wins

Role of Ocean Exploration as Enabler

- Ocean Exploration will use the identified data gaps (geographic and historical frequency) of ocean and climate data to improve EEZ ocean mapping, maritime logistics, and data processing/dissemination
- NOAA has a goal of mapping the remaining sub-sea territory by 2030 so increasing the use of the CRADA agreements can help advance the achievement of this goal

Critical Barriers

- Slow adoption of cloud technologies

Impact: 8	Effort: 4	Quick Win Opportunities: Yes	Ocean Exploration Components: Yes
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