

**CRAFTING SCIENCE-BASED POLICY FOR
SUSTAINED ECOSYSTEM SERVICES:
*BALANCING PLACE, PEOPLE, AND PROFITS***

Franklin B. Schwing
NOAA Fisheries Service
Office of Science and Technology

PICES 2018 MEETING
OCTOBER 30, 2018
YOKOHAMA, JAPAN

OUTLINE

Integration of ecosystem services science into policy making

Review the evolution and current state of ocean policy in the US

- Lessons from previous policy formation and implementation
- Roles and opportunities for partners involved in effective implementation of US Federal policy

Connectivity:

The National Science Enterprise

- **Science** – an integral part of policy, deliberation, and decision making
- **Full Partnerships** – multi-jurisdictional, public-private, spectrum of stakeholders, academic and TEK
- **Research to Operations (R2O)** – end-to-end, with application to management, business & community decisions
- **Ecosystem-Based Approach** – all ecosystem components (including humans); disciplines; sectors

What is the role of Federal agencies & scientists?

Federal Agencies & Ecosystem Services

Government agencies, in concert with the broader scientific community, are responsible for:

- **assessing** the status of the delivery of ecosystem services in relation to designated objectives
- **advising** on appropriate management strategies

Ecosystem Services and Ecosystem-Based Management

EBM is an integrated management approach that drives ecosystem-level decisions to protect resilience and ensure health of the system

- Built on foundation of best science and information
- Supports the sustainable delivery of ecosystem services
- Balances
 - Intrinsic value of ecosystems and their components
 - Human need for ecosystem services
 - Responsibility to ensure their sustainability



4.10.1957

СПУТНИК-1



CTV

DAILY HERALD



No. 12902 (C)

Saturday, December 7, 1957

PRICE 25¢

America's Sputnik dies bleeping on the ground

OH, WHAT A FLOPNIK!

Satellite blows up before take-off

By GILBERT CARTER

AMERICA'S much-ballyhooed bid to launch a satellite to join Russia's two Sputniks in space ended yesterday with a huge billow of orange flame—on the ground.

The 100-lb. satellite, which will go down in history as the Flopnik—after bleeping a message of failure as its three-stage rocket blew up on the launching ramp.

It happened at Cape Canaveral, Florida, where America's satellite reputation lay at stake because of world-wide publicity given to this attempt to keep up with the Jovoniks.

Walt Disney's Cartoon



The satellite, with its Vanguard launching rockets, was produced in an all-out effort after President Eisenhower ordered a "crash program" to get some results, any results, to catch the Jovoniks.

Yesterday, America's top missile shelled in a bunker on the launching site. Thousands of tourists gathered on Florida's 50000 launch site at the Cape. Millions listened on the radio as commentators carried the message to air.

Paul Karman, a young propulsion engineer, proved the

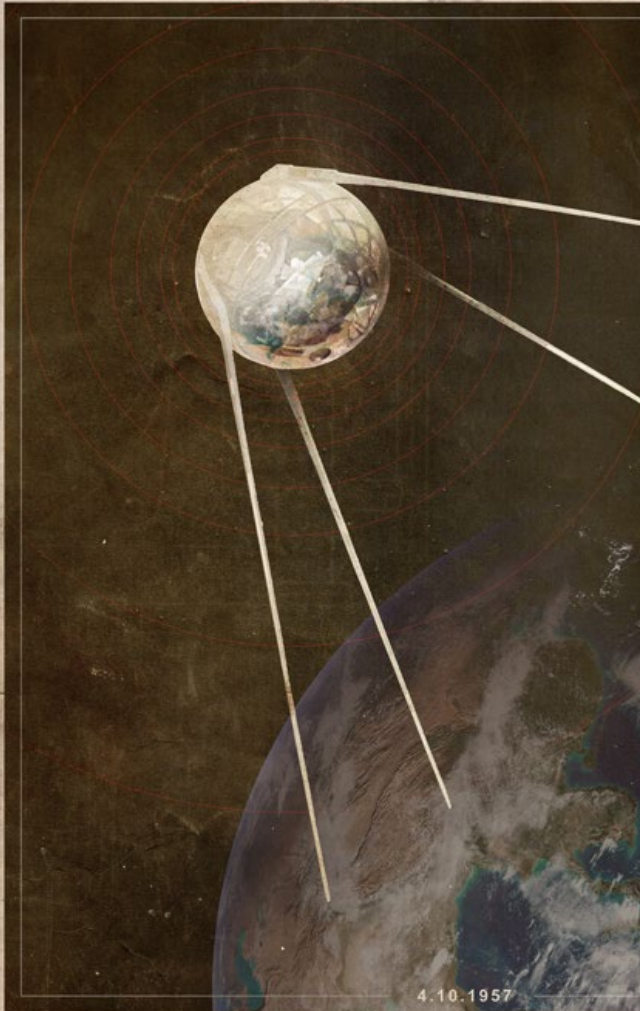
TEN SECONDS TO DISASTER



A MONSTER CLOUD OF FLAME: All that remains of America's bid to launch a satellite.

Warship races to

QUIT ORDER



CITY

U.S. News & World Report

25 CENTS

APRIL 24, 1961

BIG GROWTH AHEAD FOR U. S. BUSINESS?

*An Answer From ARTHUR BURNS,
Authority on Economic Trends*

The United States News & World Report Co. 1230 Avenue of the Americas, New York 20, N.Y. Telephone BR 5-6100



Russia's Spaceman,
Maj. Yuri Gagarin

RUSSIA'S TRIUMPH IN SPACE—

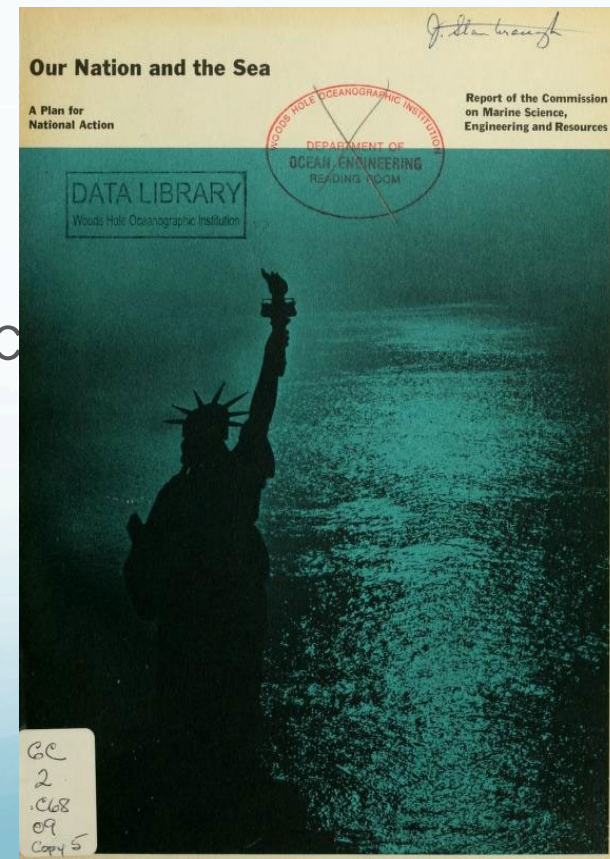
What Does It Mean?

NATIONAL ACADEMY OF SCIENCE COMMITTEE ON OCEANOGRAPHY (1957-69)

- Presidential “Stratton” Commission – “full and wise use” of marine environment
- *Oceanography 1960-1970* (1959) – status of US marine science and recommendations
- Broad mandate – included marine resources and management
- Marine environmental “development, utilization, and protection” ... “all current and contemplated activities”

NATIONAL ACADEMY OF SCIENCE COMMITTEE ON OCEANOGRAPHY (1957-69)

- *Our Nation and the Sea: A Plan for National Action* (1969)
- Led to creation of NOAA and EPA
- Coastal Zone Mgmt Act
- Marine Mammal Protection Act
- Fisheries Conservation and Mgmt Act
- National Marine Sanctuaries Act
- UNOLS
- IDOE

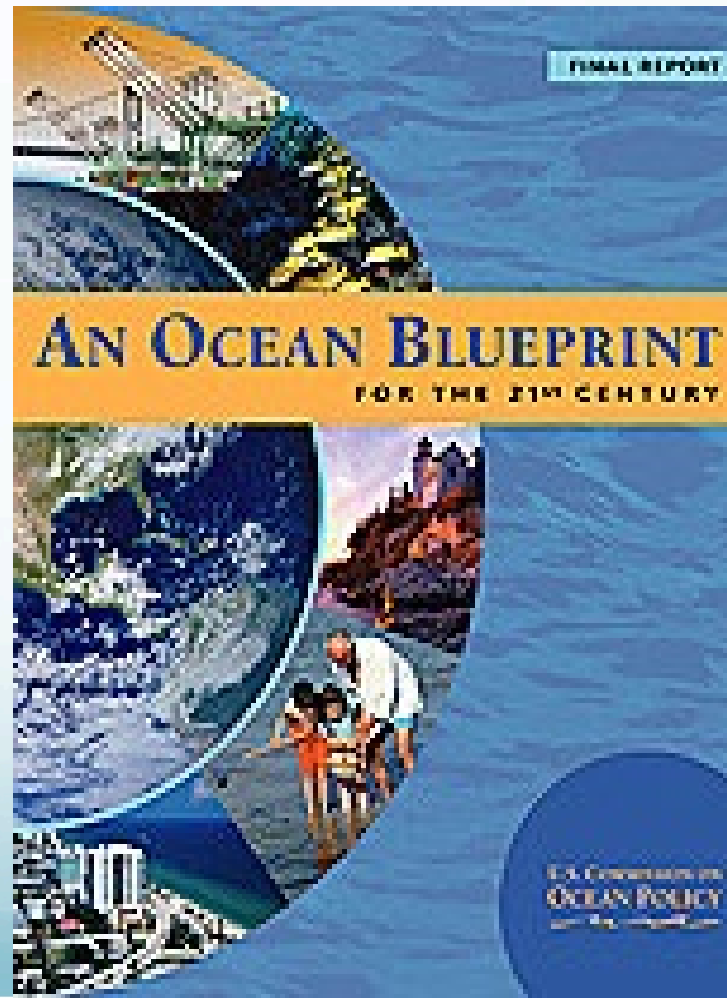


US COMMISSION ON OCEAN POLICY (2001-2004)

- “Watkins” Commission
- Created by Congressional Oceans Act of 2000
- Develop recommendations for national ocean policy
- Address Governance, Research, Stewardship, Investment
- Engaged with scientists, stakeholders, public, governments
- *An Ocean Blueprint for the 21st Century* (2004)

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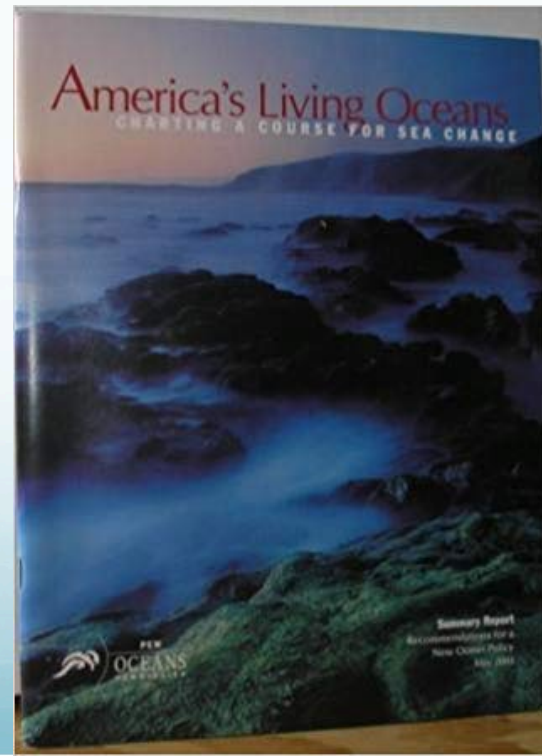


PEW OCEANS COMMISSION (2000-2005)

- Financed by Pew Charitable Trusts
- Themes - pollution, overfishing, invasive species, coastal development, general health of the oceans
- *America's Living Oceans: Charting a Course for Sea Change* (2003)

PEW OCEANS COMMISSION (2000-2005)

- *America's Living Oceans: Charting a Course for Sea Change* (2003)
 - Nation's seas are in trouble
 - Stronger Federal oversight needed to restore and preserve our oceans



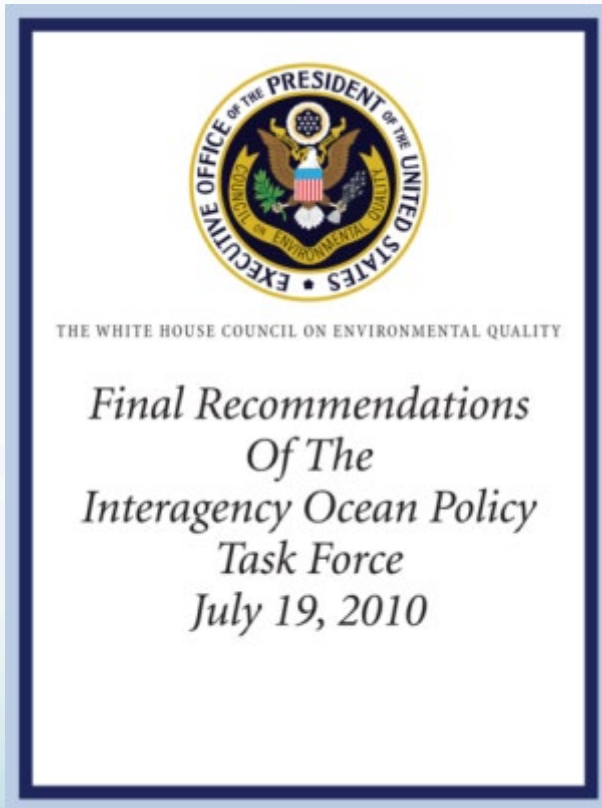
JOINT OCEAN COMMISSION INITIATIVE (JOCI, 2005-present)

- US Ocean and Pew Commissions combined (2005)
- Accelerate “meaningful ocean policy reform”
- Membership from academia, environmental, national security, industry
- Resource for ocean policy makers at national, regional, state, local levels
- Ocean policy reform, science, fisheries management, climate change, regional and international leadership

JOINT OCEAN COMMISSION INITIATIVE (JOICI, 2005-present)

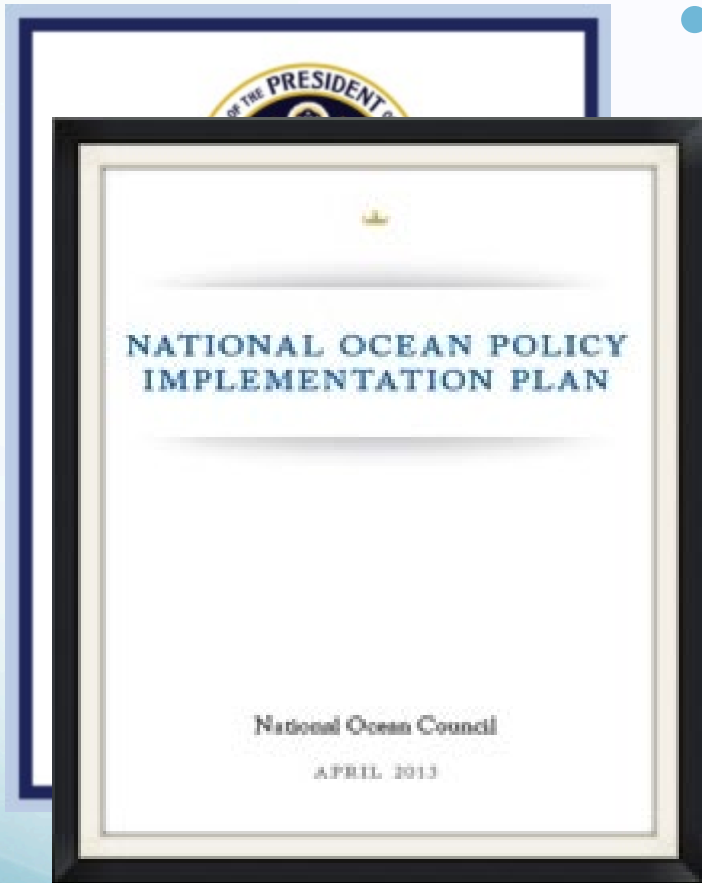
- *From Sea to Shining Sea: Priorities for Ocean Policy Reform* (2006) – most urgent priorities for Congressional action
- *One Coast, One Future: Securing the Health of West Coast Ecosystems and Economies* (2009) – integrated decision making for improved health of coastal ecosystem and economies
- *Changing Oceans, Changing World: Ocean Priorities for the Administration and Congress* (2009) – improve ocean policy, management, science; pressing climate, energy, economy challenges
- *Charting the Course: Securing the Future of America's Oceans* (2013) – resiliency of ocean economies, communities, and ecosystems; renewable energy; regional priorities, Arctic research and management
- *Ocean Action Agenda: Supporting Regional Ocean Economies and*

EO 13547 - National Ocean Policy (2010)



- First Comprehensive National Policy
- Coordinate 100+ laws, authorities
- National Ocean Council
- 27 Federal Agencies
- Regional governance structures
- Marine spatial planning framework

National Ocean Policy Implementation Plan (2013)



- Broad stakeholder input
- Science-based approach considering entire ecosystem
- Specific actions and outcomes to implement policy
- Ocean economy; Safety and security; Coastal and ocean resilience; Local choices; Science and information

NATIONAL OCEAN POLICY (2018)

- EO 13840 – *Ocean Policy to Advance the Economic, Security, and Environmental Interests of the US*
- Improve access to data and information; engagement with industry; S&T; stakeholders
- Regional ocean partnerships

Shifts focus away from ocean conservation, stewardship, and resilience (JOCI)

Creating Successful Policy

- Science foundation
- Broad view of what policy should cover
- Development and implementation take time
- Dedicated leadership
- Broad (Non-partisan) political support
- Public engagement and partnerships
- Use existing authorities, laws, regulations
- Regionally flexible and adaptable
- Balance economic, community, and ecological priorities

Keys to Progress

- Community-based partnerships
- Identify & focus on key services, real risks
- Promote sustainability and resilience
- Changing systems and drivers; cumulative impacts
- Train scientists, managers, policy makers
- Transition from single sector to adaptive EBM
- Integrate natural and social sciences

Summary

- Science is the base of good policy and decisions
- Effective policy development and implementation is long-term; it requires sustained leadership and support
- Communication and understanding between resource managers, scientists, and policy makers integral to successful ocean policy
- Ecosystem approaches enhance collaboration, leverage opportunities, and improve decision making
- Policy must seek trade-offs for ecosystem, community, and economic sustainability
- Working with partners and stakeholders is essential to effective and efficient policy implementation

A strong and sustainable ocean economy, a “blue economy” ... depends on healthy ecosystems, bountiful and sustainably managed fisheries, and resilient coastal communities.

JOCI (June 28, 2018)

EXTRA SLIDES

EBM DEFINED (FEDERAL IMPLEMENTATION)

EBM is an integrated approach to management

- Drives decisions at ecosystem level
- Protects ecosystem resilience and health
- Informed by natural and social science