



Oceans and Health: A Prescription for Future Monitoring & Research

Findings of the US Commission on
Ocean Policy and the Administration's
Ocean Action Plan

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The U.S. Commission on Ocean Policy



- 16-member, independent, bi-partisan group
- 26 scientific advisors
- 16 public meetings
- 18 regional site visits
- 450 witnesses
- extensive scientific and stakeholder review process



A federal study was released today, but it was quickly recaptured.

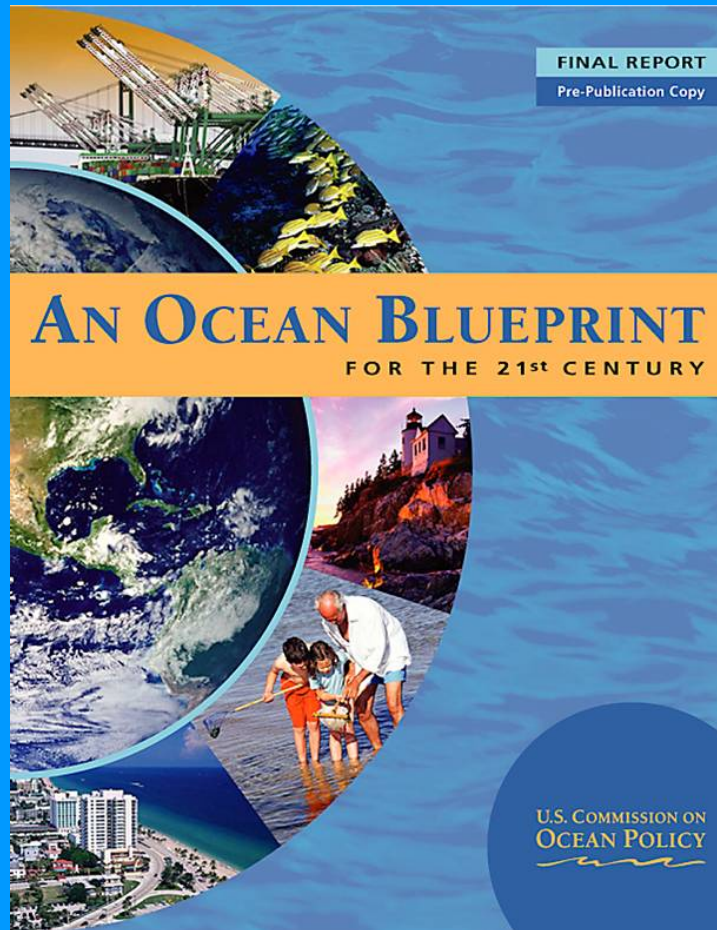


"A federal study was released today, but it was quickly recaptured."

(In Bulletin of the Atomic Scientists Jan/Feb 2005)



USCOP Final Report

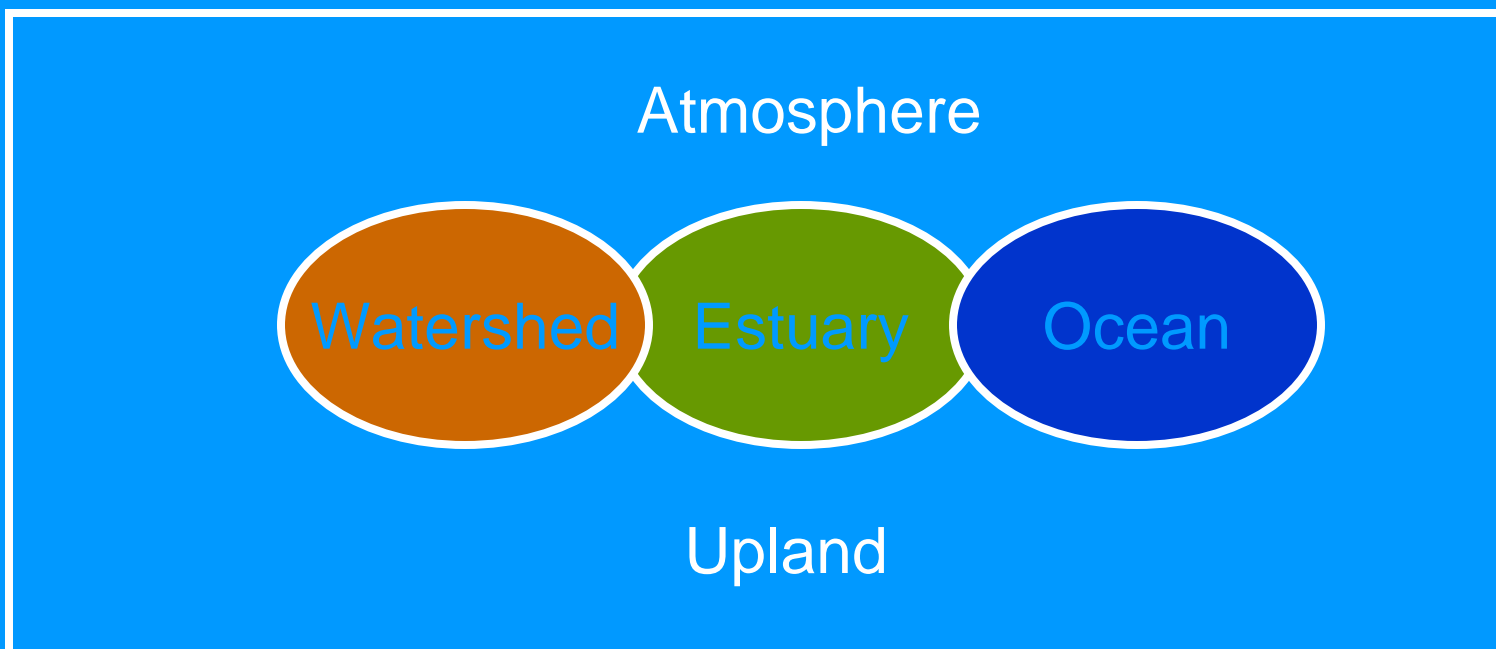


31 Chapters

212 recommendations

Topics for Today

- Oceans & Human Health
- Water quality/pollution
- Monitoring
- IOOS
- Ocean Action Plan
- Next steps – Your Input





Primary Drivers for Establishment of a National OHH Program



- **National Academy Reports:**
 - From Monsoons to Microbes: Understanding the Role of the Oceans in Human Health
 - Under the Weather: Climate, Ecology and Infectious Disease
 - Marine Biotechnology
 - Grand Environmental Challenges
- **U.S. Commission on Ocean Policy**
- **U.S. Ocean Action Plan**
- **Program Implementation by NSF & NIEHS**
- **Congressional Appropriations**
- **NOAA Strategic Plan**
- **Oceans and Human Health Act of 2004**



Human Threats to Ocean Health



- NPS pollution, storm water runoff
- Coastal development, wetland loss



- Overfishing, ecosystem collapse

- Ballast water, invasive species





Impacts of Coastal Development on Ocean and Human Health



**increased
flooding**



**bacterial/viral
contamination of
seafood &
beaches**



**decreased
biodiversity and
natural habitat**



Ocean Threats to Human Health

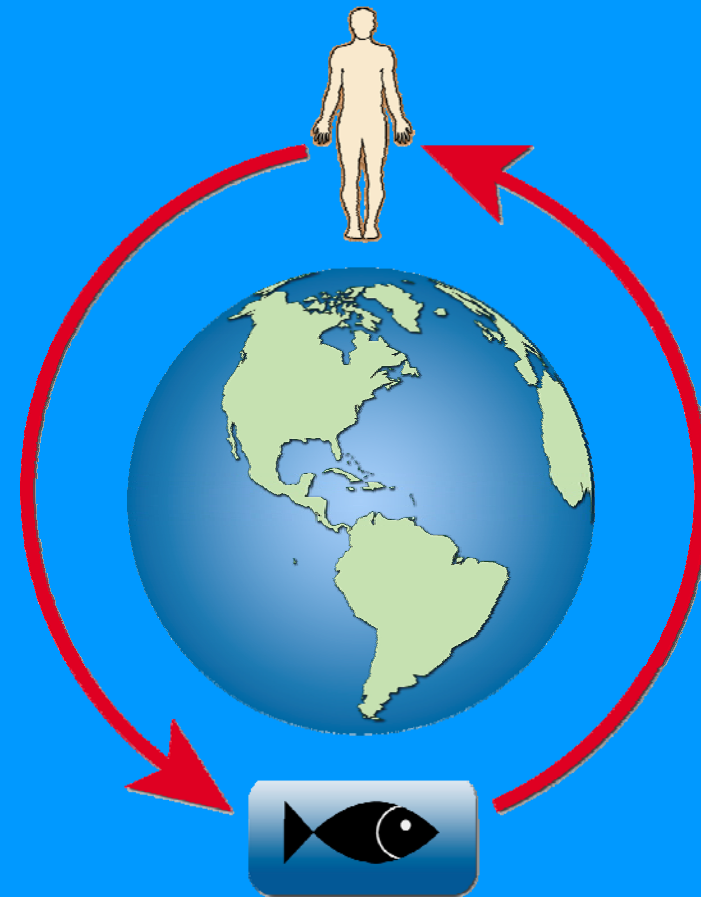




USCOP Recommendations for Oceans and Human Health



- Establish national OHH program
- Discover marine pharmaceuticals
- Develop methods for monitoring toxins, pathogens, & contaminants
- Protect people from contaminated seafood and coastal waters





Key OHH Questions



- Are our beaches safe for swimming?
- Is our seafood safe to eat?
- How can we use the ocean's resources to produce useful products including drugs to combat human disease?





USCOP Recommendations to Improve Water Quality



- Many of these recommendations begin: “EPA, working with states...” or “working with states and local governments...” and deal with both point and non-point sources





USCOP Recommendations to Improve Water Quality



- **14-1: Advanced nutrient removal**
- **14-2: Increased technical and financial assistance for use of septic systems**
- **14-3: Research on removal of animal wastes, pharmaceuticals and other contaminants from wastewater**
- **14.4: Upgrading wastewater and drinking water infrastructure.**



USCOP Recommendations to Improve Water Quality



- **14-5: Tradable credits for nutrients and sediments as pollution control tool**
- **14-6: Modernize and better enforce NPDES**
- **14-7: Align USDA conservation programs with other agencies to reduce NPS**
- **14-8: Establish reduction of NPS in coastal watersheds as national goal**
- **14.9: Enhance interagency cooperation in NPS**



USCOP Recommendations to Improve Water Quality



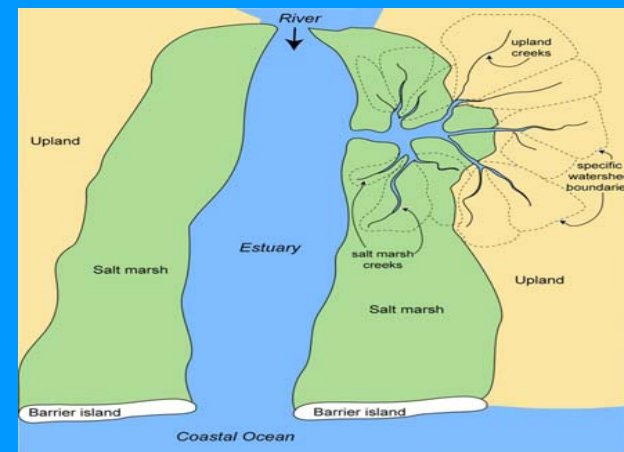
- **14-10: Enforceable NPS management measures**
- **14-11: Increase assistance and outreach for land-use decisions that protect coastal water quality**
- **14-12: Strengthen implementation of NPDES storm water programs**
- **14-13: Develop/implement national and regional strategies to reduce atmospheric deposition to water bodies**



USCOP Recommendations for A National Monitoring Network



- 15-1: Monitoring network to link existing efforts and include federally-funded backbone
- 15-2: Covers coastal and upland and links to IOOS.
- 15-3: Clear goals, core variables, sampling framework & local information needs





USCOP Significant Finding:



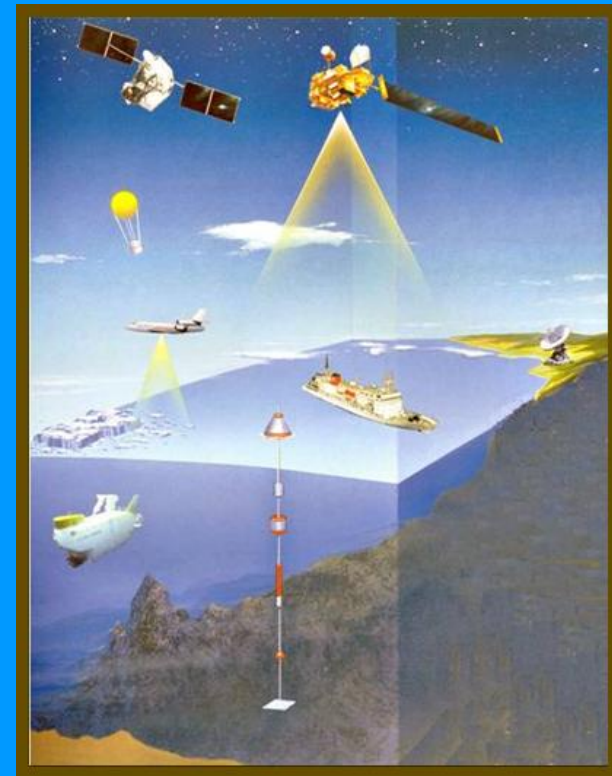
“Coastal and ocean observations provide critical information for protecting human lives and property from marine hazards, enhancing national and homeland security, predicting global climate change, improving ocean health, and providing for the protection, sustainable use, and enjoyment of ocean resources.”



USCOP Conclusion



“... implementation of a sustained national Integrated Ocean Observing System (IOOS) is overdue and should begin immediately.”





USCOP Recommendations for Integrated Ocean Observing



- **26-1: Make development/implementation of IOOS key federal activity and accomplish in partnership with federal, state, territorial, tribal and local governments, NGOs, industry & academia**
- **26-4: Proactively seek input from coastal and ocean stakeholders to develop support and consensus on operational requirements**



USCOP Recommendations for Integrated Ocean Observing



- 26-5: Develop set of core variables to be collected by all IOOS components
- 26-10: OceanUS and NOAA should work with states, local governments and others to ensure that IOOS products are useful to a broad user community
- 26-12: Coordinate IOOS with other existing and planned terrestrial, watershed, atmospheric and biological observation and information collection systems



The Bush Administration's Response to the USCOP's Final Report



**“US Ocean Action Plan”
Dec. 17, 2004**

**President Bush Creates
Committee on Ocean Policy
By Executive Order**





OAP: OHH, HABs, Hypoxia



- References the OHH Act of 2004 and states: “The Administration will develop a strategic research plan for oceans and human health.”
- References the HABHRCA of 2004 and states: “The Administration will reconvene the Interagency Task Force ...to coordinate research and actions on harmful algal blooms and hypoxia” and notes that NOAA will address FW HAB threats in areas such as the Great Lakes.



OAP: Support Regional Partnership in the Gulf of Mexico



- 5 GOM states
- Emphasis on public health
 - Water quality for shellfish beds
 - Water quality for beaches
 - Regional ocean observing system for real-time alerts for beach and shellfish-bed closings



OAP: Build GEO Network, Including Integrated Ocean Observation



- Integrate US ocean observing efforts into the Global Earth Observing System of Systems
- Lead development of international capacity building effort
- Monitor and share data on ocean currents in GOM through MMS





OAP: Create a National Water Quality Monitoring Network



- **Advisory Committee on Water Information, through the National Water Quality Monitoring Council, provides recommendations for creation of a coordinated, comprehensive national water quality monitoring network.**
- **Emphasis on major management questions to be addressed and foundation elements of a network, especially the Federally funded backbone.**



OAP: Coastal and Watershed Management



- NOAA, EPA and other agencies to initiate community workshops to assist States, Tribes and local governments in addressing NPS and land use issues in watersheds that significantly impact coastal resources.
- Establish HAB forecasting system for GOM and train local officials in use of the information



OAP: Coastal and Watershed Management



- EPA sets new bacteria standards for beaches for states and territories bordering Great Lakes or ocean waters that had not adopted standards according to Beach Act of 2000.
- Enhance EPA's Storm Water Management Program





So, where are we with regard to OHH & IOOS & monitoring?





On the Federal Side



- **Interagency OHH R&D program established and moving**
- **National emphasis on NPS pollution**
- **Commitment for national monitoring network**
- **Commitment to IOOS & GEOS: linking ocean, coastal, watershed, terrestrial, and atmospheric observations, including information on biological phenomena**



But We Need More Effective Two-Way Communication



SHOE



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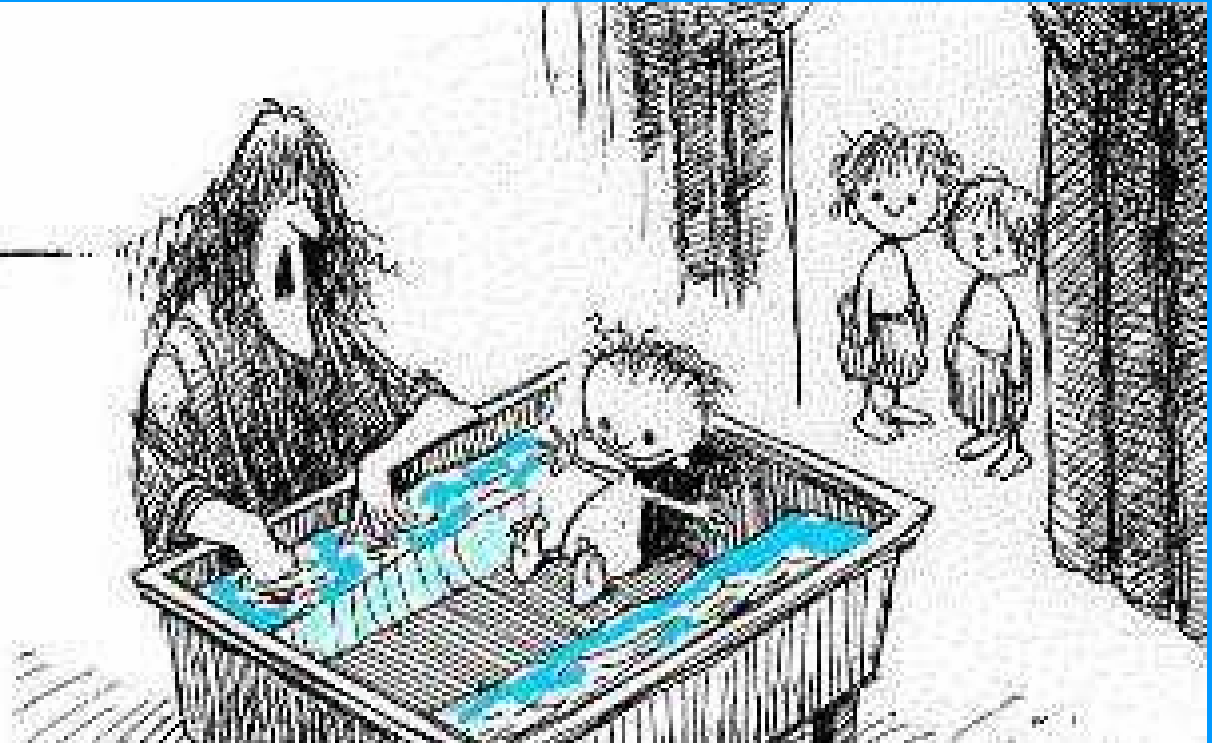




Don't Expect Miracles

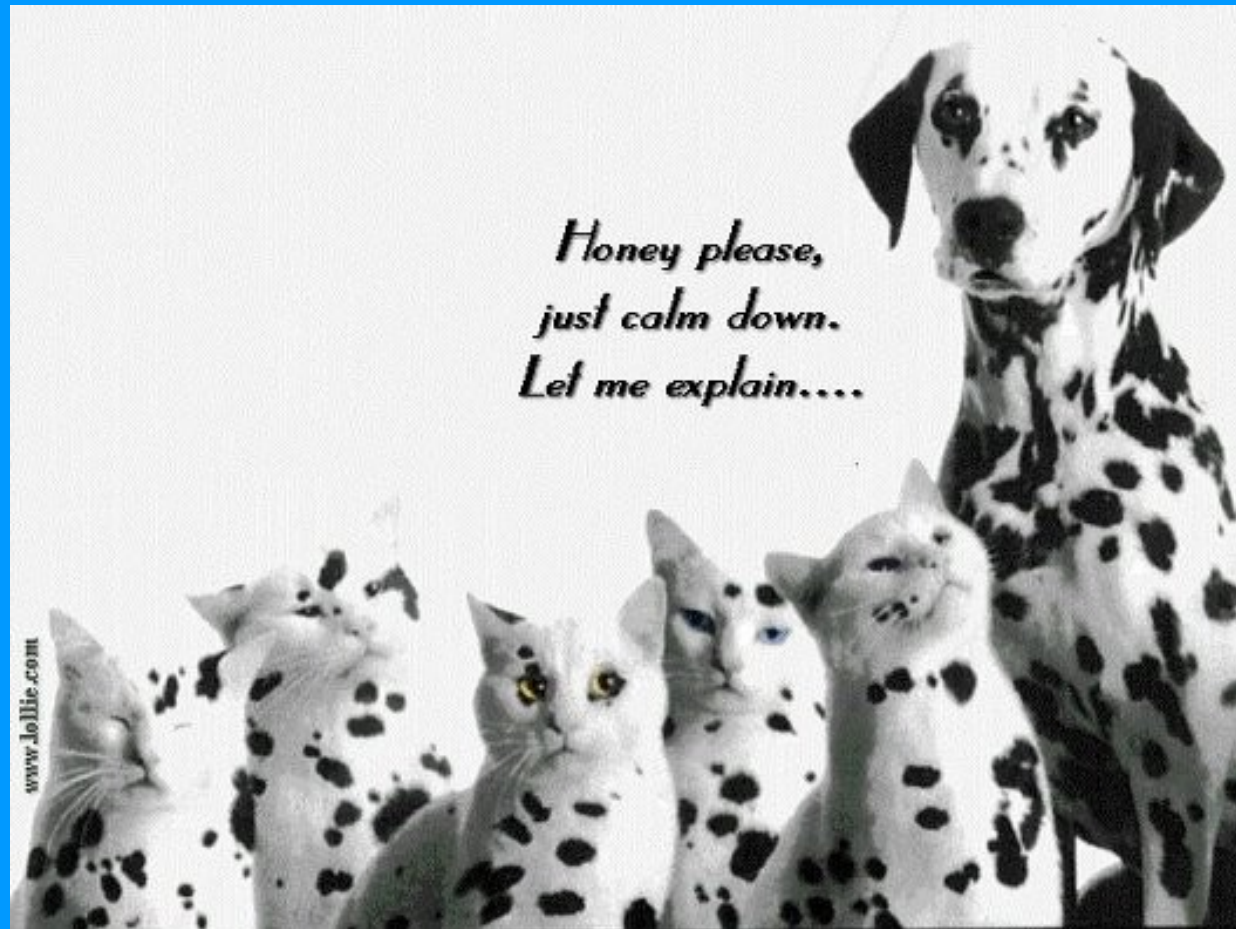


MOSES !!!
Cut it
out
and take
your bath!





And There May Be Some Surprises Along The Way!





But There Is A Real Desire For And Commitment To Partnerships





Getting Your Input Is What This “Coastal Café” Is All About



