

APPROACHES FOR EVALUATION OF NATIONAL SYSTEM OF MPAs

DAVID FLUHARTY

SCHOOL OF MARINE AFFAIRS

UNIVERSITY OF WASHINGTON

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ANNAPOLIS, MD

NEW APPROACH – OLD IDEA

Spencer Baird, the first Commissioner of the U.S. Commission of Fish and Fisheries advised:

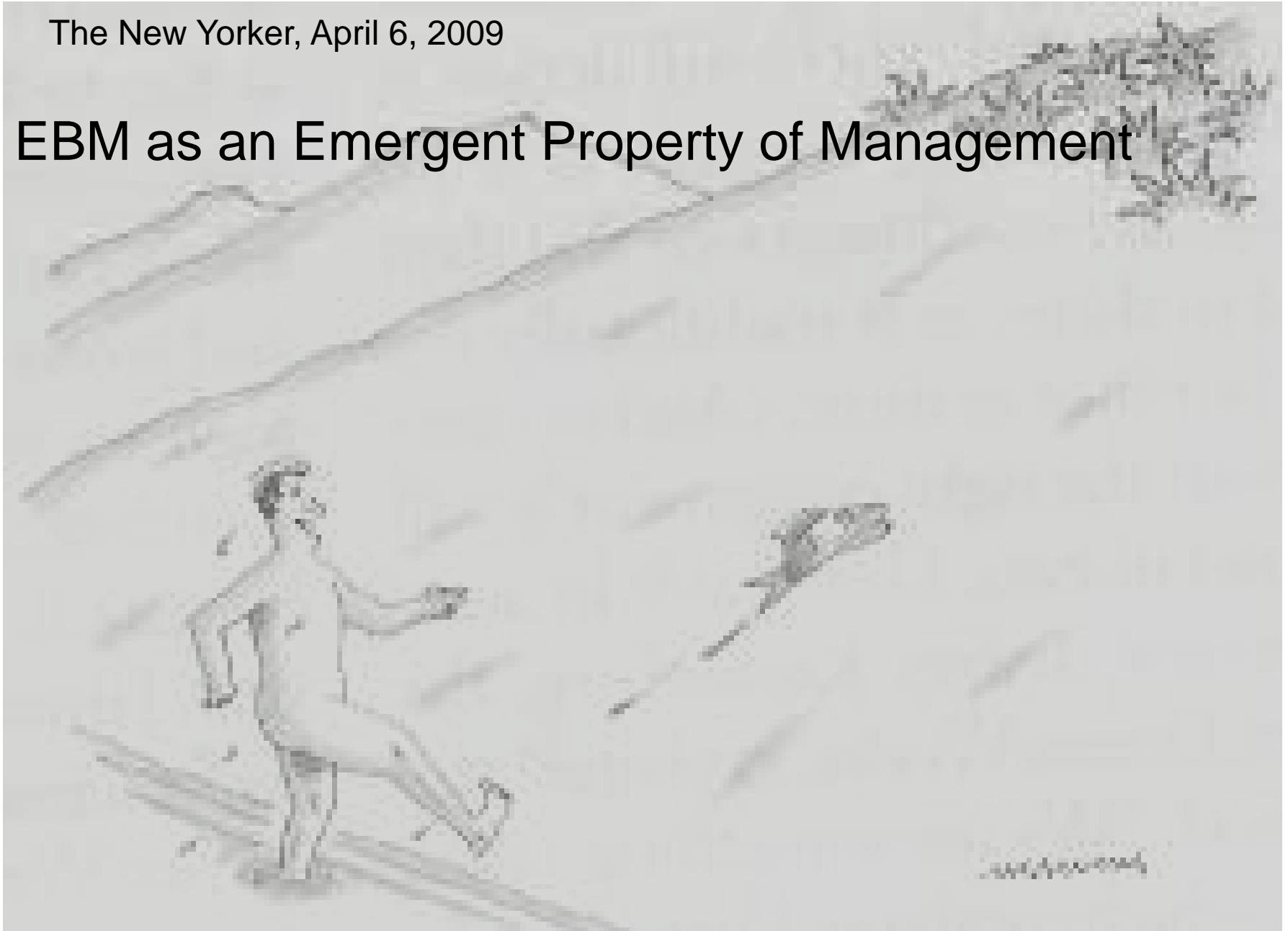
Studying only the fish, “.... would not be complete without a thorough knowledge of their associated in the sea, especially of such a s prey upon them or constitute their food...” U.S Fish Commission 1st Annual Report 1873.



The Evening Star. March 20. 1941

The New Yorker, April 6, 2009

EBM as an Emergent Property of Management

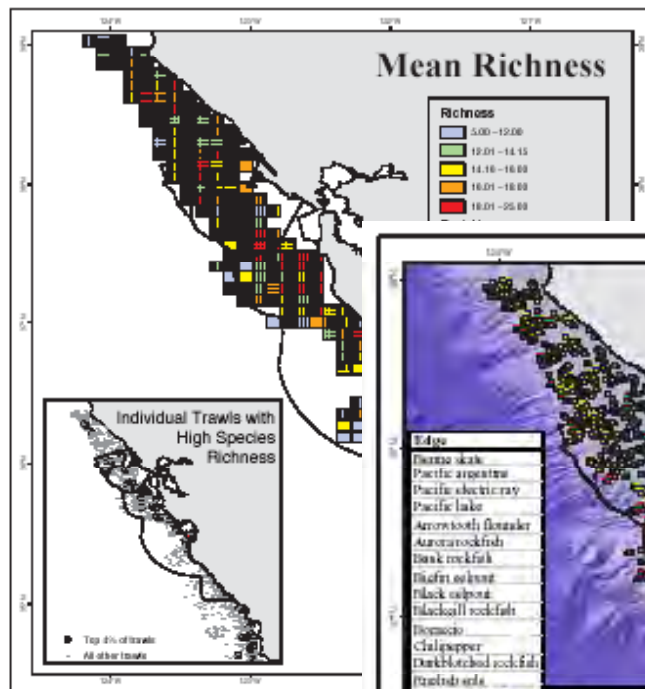
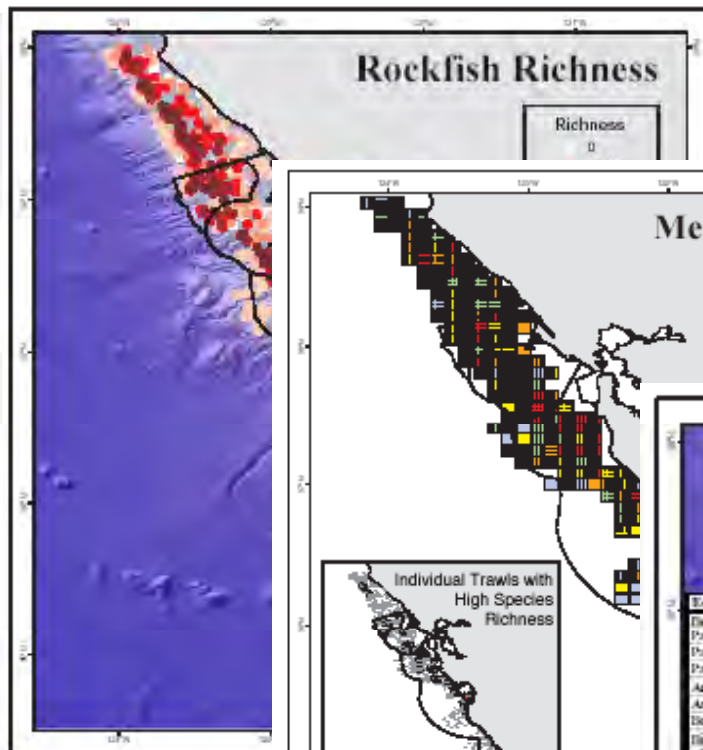
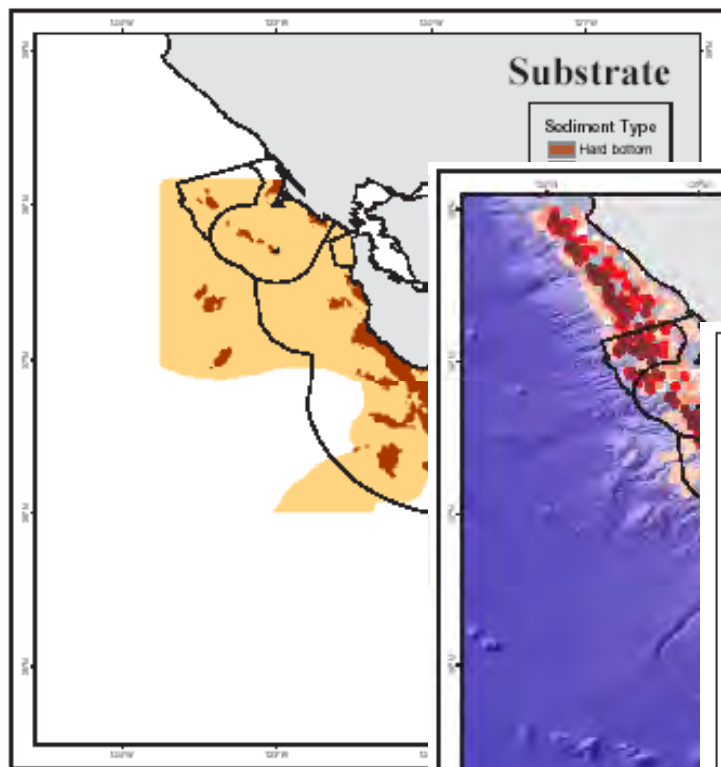


**WE KNOW MORE ABOUT THE ECOSYSTEM
THAN WE APPLY IN MANAGEMENT**

BUILDING BLOCKS FOR EBFM

- **STOCK ASSESSMENTS**
- **ESSENTIAL FISH HABITAT**
- **AREA/GEAR REGULATIONS**
- **PROTECTIONS FOR PREY SPECIES**
- **MEASURES FOR ENDANGERED SPECIES RECOVERY**
- **REBUILDING PLANS FOR OVERFISHED SPECIES**
- **ETC.**

1. MPAs IN LARGER EBM CONTEXT



2. WHAT TO CONSIDER FOR NETWORKS VS. SINGLE MPA?

3. MPA IN CONTEXT OF OTHER MANAGEMENT MEASURES?







Figure 2.2 Map of MMS planning area off Washington. Shading indicates deferred and highlighted areas and state waters (data from MMS 1987c).

Alien Landing

After a gardener discovers a plague of exotic invasive plants overrunning his yard, he decides to take matters into his own hands.

By Howard Youth



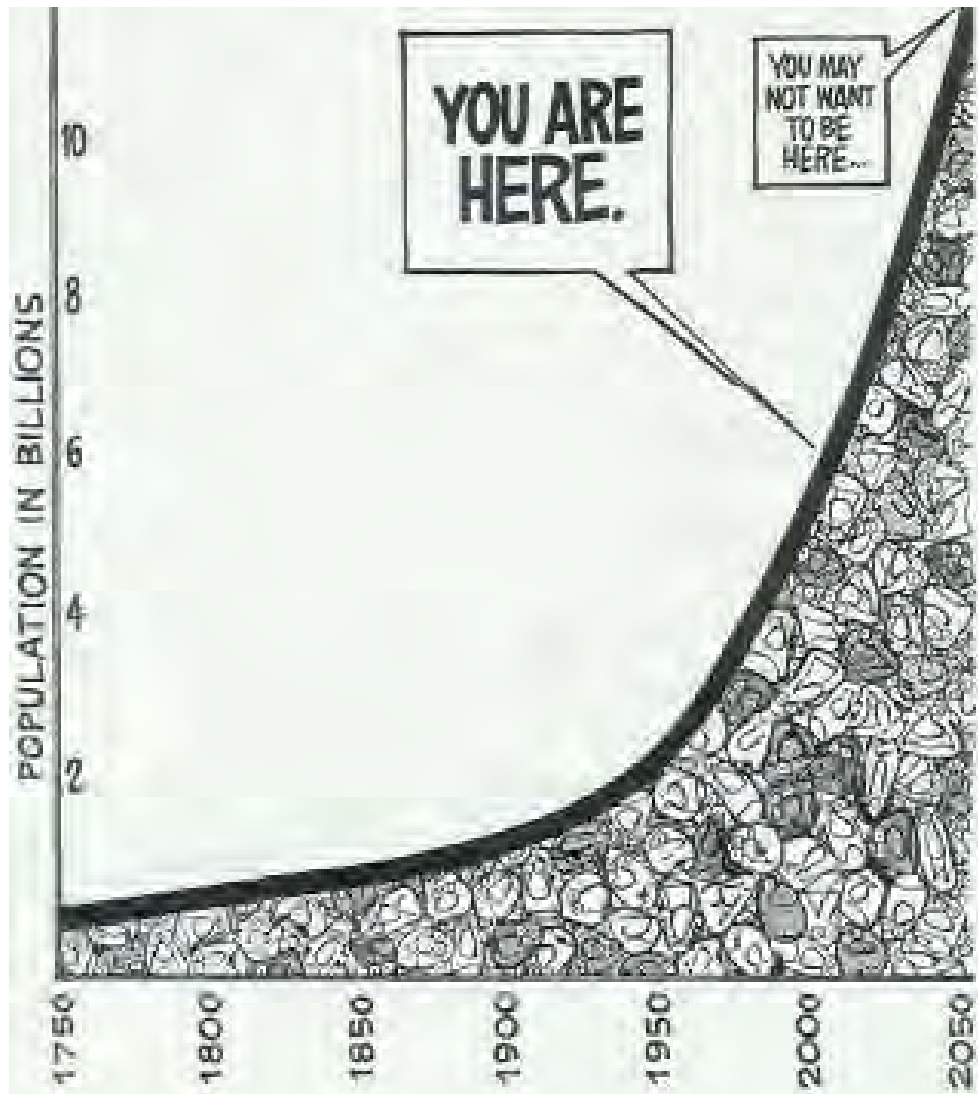
Japanese honeysuckle



Phragmites



Yellow starthistle



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POPULATION CONNECTION

www.popconnect.org

4. HOW TO EVALUATE SOCIO-ECONOMIC TRADE OFFS?

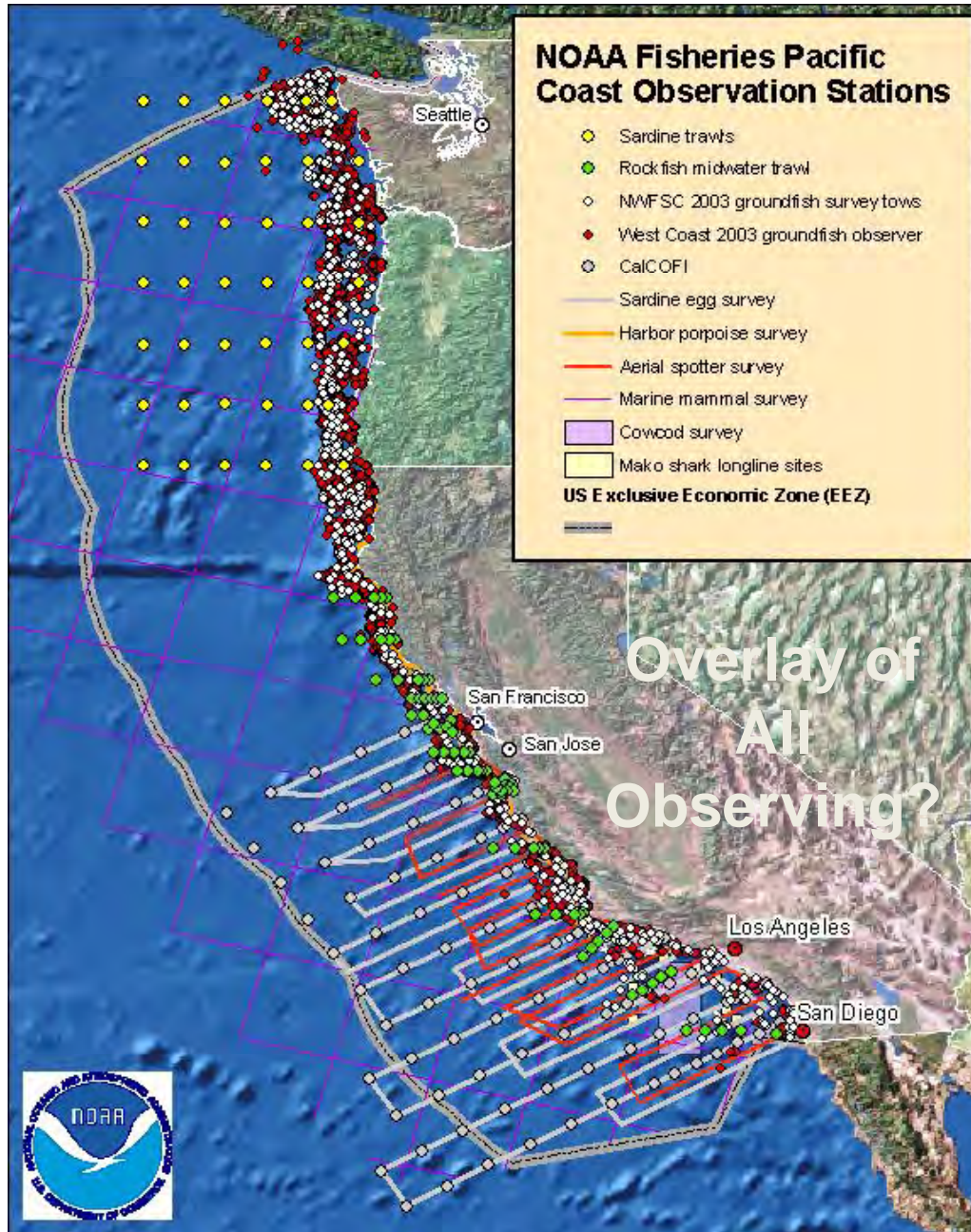
5. CAN CONDITION EVALUATION REPORTS BE USED FOR NATIONAL SYSTEM EVALUATION?

- Based on OCNMS Condition Report
- Planning Document
- Contributes to Performance Evaluation

6. Implementation at scales/ limited resources

- How can we ensure that the national system evaluation is implementable at the site, regional and national level with limited additional resources for monitoring and evaluation?

Integrated Ocean Observing System (IOOS) critical to EAM



Scalable Ecosystem Observation & Research

- **Combination of observations at fixed locations (e.g., NMSs NERRS sites, local interests) and ecosystem-wide observation**
- **The whole must be more than the Sum of the parts (avoid discontinuities in sampling density or type at political boundaries)**
- **Priorities for observing are:**
 - Coordinating sampling,
 - DMAC,
 - Products

7. HOW TO FACTOR IN CLIMATE CHANGE?

- Baseline to monitor change
- Place “in space” to watch flow N?S?
- Adapt MPA network to climate change
- Relationship to resilience

Loren Eisely, The Immense Journey

“If there is magic on this planet, it is contained in water... Its substance reaches everywhere; it touches the past and prepares the future; it moves under the poles and wanders thinly in the heights of air. It can assume forms of exquisite perfection in a snowflake, or strip the living to a single shining bone cast upon the sea.”

8. Implementable WITHOUT additional resources?

- DON'T KID YOURSELVES – AIN'T GONNA HAPPEN WITHOUT ADDITIONAL RESOURCES OR REALLOCATION TO THIS PURPOSE AS OPPOSED TO ALL OTHER MANAGEMENT ACTIONS.**
- QUESTION ABOUT NATIONAL -- DON'T TRY TO GO ABOVE REGIONAL AND QUESTION EVEN THAT.**
- HOW MUCH IS EVALUATION WORTH WHEN THE SYSTEM IS NOT DESIGNED?**

MPA FAC QUESTIONS

- What factors should be considered in evaluating networks and systems of MPAs compared to individual MPAs?
- How can and should MPAs be evaluated within the broader context of an ecosystem approach to management?
- How can and should MPAs be evaluated taking into consideration other management measures?

MPA FAC QUESTIONS

- What socio-economic evaluation measures are appropriate for a system of MPAs? How should issues such as sustainable production, public access and potentially conflicting uses be addressed?
- What are the pros and cons of the National Marine Sanctuaries Condition Reports as a model for national system evaluation? What types of modifications would be recommended?

MPA FAC QUESTIONS

- How can we ensure that the national system evaluation is implementable at the site, regional and national level with limited additional resources for monitoring and evaluation?
- How should we factor in climate change in our performance targets and our assessments of national system performance?