Communicating science and assessment to increase the visibility and utility of NOAA research

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Wednesday, February 15th
NOAA Silver Spring Office
SSMC 4, Room 13153
Overview of talk

• Introduction and relevance – Bill Dennison
  – What is IAN?
  – Synthesis, visualization, and context
  – Partners

• Annual cycle, science communication, and training – Caroline Wicks
  – Chesapeake Bay annual cycle
  – Science communication products
  – Science communication training

• Local and global impacts – Heath Kelsey
  – Global partners
  – Local partners
  – NOAA partners

• Questions/Discussions - Group

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What is the Integration and Application Network?

- IAN is a dedicated group of scientists intent on solving, not just studying environmental problems.
- The vision of IAN is to inspire, manage, and produce timely syntheses and assessments on key environmental issues.

Cambridge

Oxford

Annapolis
Who is IAN?

- Today
  - Bill Dennison, Vice President for Science Applications
  - Heath Kelsey, IAN Program Manager
  - Caroline Wicks, EcoCheck Project Manager
IAN aims to make a global impact
Synthesis leading to environmental outcomes
You can teach anything to anybody as long as you provide...

**Synthesis**

Synthesized data

**Visualization**

Illustrate key points

**Context**

So what?
Why do environmental report cards work?

- Peer pressure is a powerful human motivator.
- Educational report cards are a common experience.
- Report cards synthesize large amounts of data.
Environmental report cards identify ecological tipping points.
Environmental report cards can be a tool within a broader environmental campaign.
Partnering with federal agencies

• National Park Service’s National Resource Condition Assessment
  – Habitat framework used by NPS
  – Data from NPS
  – Data analysis by NPS and IAN
  – Science communication by IAN
• Review by NPS

• Work with individual parks, 27

Approach: Habitat classification
Partnering with big NGOs

- Conservation International’s Marine Managed Areas Program
  - Data from CI
  - Data analysis by CI
  - Science communication by IAN
- Review by NPS
- Work with individual scientists and managers as well as project lead

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Annual cycle

- Ecological forecast – May/June
- Summer Review – October
- Annual report card – March/April
Annual cycle: Report card

- Broad-level assessments of a region or system
- Communicate complex information
- Based on real data: transparent and defensible
- Provide accountability
- Engage communities
Newsletters

- NOAA
  - Menhaden
  - EBFM
  - Oyster EIS

- Chesapeake Bay Program
- US Geological Survey

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Science Communication Training

• 1 to 3-day courses
• 20 participants
• Hands-on
• Immersive
• Draft product
Leveraging report cards locally and globally

- Chesapeake Bay Report Card has inspired and informed other assessments
- Local watershed groups
- Globally iconic systems
Citizen science

- Mid-Atlantic Tributary Assessment Coalition
  - Fosters collaboration
  - Improve data quality
  - Standardize methods
  - Guidelines for report cards

- Tidal and non-tidal sampling and analysis protocols
Great Barrier Reef Report Card

- Evolution of report cards to include pressure and response indicators
Gulf of Mexico Report Card

- DPSSIR framework
- Multinational effort

Example component: Birds

Report card prototype

Example component: Seagrass ecosystems

Gulf of Mexico seagrass ecosystem

Seagrass meadows are a dominant habitat in shallow waters throughout the Gulf of Mexico and are vital to its health. The importance of seagrass meadows is highlighted in a recent report by the National Oceanic and Atmospheric Administration. Seagrass meadows provide important services, including carbon sequestration, coastal protection, and habitat for a diverse array of marine species. McCormick et al. (2020) highlight the importance of seagrass meadows for the Gulf of Mexico ecosystem, emphasizing their role in supporting biodiversity and maintaining healthy marine ecosystems.

Seagrass meadows are threatened by factors such as habitat loss, pollution, and climate change. The Gulf of Mexico seagrass ecosystem is especially vulnerable to these threats due to its unique ecological dynamics. McCormick et al. emphasize the importance of protecting and restoring seagrass meadows to ensure the long-term health of the Gulf of Mexico ecosystem.

The report highlights efforts to monitor and manage seagrass meadows, including the implementation of a monitoring network and the development of conservation strategies. McCormick et al. recommend continued investment in research and management efforts to support the health of the Gulf of Mexico seagrass ecosystem.

Seagrass meadows play a critical role in maintaining the health of the Gulf of Mexico ecosystem. McCormick et al. (2020) argue that protecting and restoring seagrass meadows is essential to ensuring the long-term health of the Gulf of Mexico and the diverse marine species that depend on them.
Pacific opportunities

- Secretariat for Pacific Regional Environment Program (SPREP)
- Framework for regional marine assessments
- Linkages with Marine Protected Areas
Current work with NOAA

- Chesapeake Bay Report Card
- NCCOS website
- Publicize key positive NOAA messages
Questions?

Thanks to our partners

- NOAA
- NPS
- Conservation International
- Harte Institute
- Queensland Government
- Chesapeake Bay Trust

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