

EVI Working Session –Agenda
October 20, 2009, 9 am – 5 pm
Venture Development Center, UMASS Boston
MRAG Americas and MA Ocean Partnership
Moderator: Andy Rosenberg

Working Session Goals

- Make recommendations on the appropriate role(s) of EVI as a management or decision support tool in the context of other science, data, and decision support tool advancements.
- Develop recommendations on possible enhancements to the EVI methodology

Agenda Items

I. Presentations by EEA 9 – 10 am

1. **Introductions and Intent of Working Session** – *John Weber*
 - a. Science framework components of the ocean management plan
2. **EVI Methodology and its designated intent** - *Prassede Vella*
3. **Habitat mapping and classification** - *Dan Sampson*

II. Overview of Complementary Projects and Potential EVI enhancement options 10 am – 12 pm

4. **Similar and potentially complementary efforts underway (and completed) elsewhere**
 - a. Eastern Scotian Shelf Integrated Management Initiative - Ecologically and Biologically Significant Areas – *Bob O’Boyle*
 - b. Vulnerability (Risk) Analysis
 - i. Ranking and Mapping the Impact of Human Activities in Massachusetts Marine Ecosystems – *Ben Halpern*
 - ii. Ecological Risk Assessments and Habitat Productivity Susceptibility Analysis – *Jill Swasey*
 - c. Habitat Suitability Index (HSI) – *Waldo Wakefield*
 - d. Ecosystem Service Modeling - *Ben Halpern*
 - e. Other
 - i. Essential Fish Habitat
 - ii. TNC Northwest Atlantic Ecoregional assessment

Lunch – 12:30 – 1:15 pm

III. Discussion 1:15 – 5 pm

5. **Options for further development of EVI for management**
 - a. Additional data for consideration
 - i. Socio-economic Data
 - ii. DMF Trawl Survey
 - iii. Abiotic factors and UMass FVCOM model
 - b. Additional analyses for consideration
 - i. Productivity Susceptibility Analysis for habitats in MA waters
 - ii. Further development of HSI

6. **What is the appropriate role of the EVI in light of the other tools**
 - a. Habitat classification options for Massachusetts

- b. Future changes to consider (i.e. additional decision support tools, science, and data acquisition)

7. Recommendations

- a. Method or management tool that allows for continual integration of new data
- b. Potential role(s) of EVI as a decision-making tool
- c. Others?

Background Materials for Distribution

1) Development of EVI and related State Work

- a) Draft Ocean Management Plan Volume 2:
http://www.mass.gov/?pageID=eoeeterminal&L=3&LO=Home&L1=Ocean+%26+Coastal+Management&L2=Massachusetts+Ocean+Plan&sid=Eoeea&b=terminalcontent&f=eea_oceans_draft_mop&csid=Eoeea#v2
 - i) Development of an Ecological Valuation Index for the Massachusetts Ocean Management Plan [file name: **EVI v2.pdf**]
 - ii) Science Framework [file name: **Science Framework v2.pdf**]
- b) Derous, S., Verfaillie, E., Van Lancekr, V., Cortens, W., Steinen, E.W.M., Hostens, K., Mouleurt, I., Hillewaert, H. Mees, J., Deneust, K., Deckers, P., Cuvelier, D., Vincx, M., Degraer, S., 2007c. A biological valuation map for the Belgian part of the North Sea: BWZee Final Report. Research in the framework of the BELSPO programme “Global chance, ecosystems and biodiversity”–SPSD II, March 2007.) [file name: **Derous et al. 2007.pdf**]

2) MRAG Americas Options for EVI Enhancement

- a) Options for Enhancement of the Massachusetts Ecological Valuation Index - Prepared for The Massachusetts Ocean Partnership by MRAG Americas. July 28, 2009. [file name: **EVI Enhancement Options_MRAG.pdf**]
- i) Provides overview of PSA and Habitat Suitability Index

3) Vulnerability Analysis

- a) Ranking and Mapping the Impact of Human Activities in Massachusetts Marine Ecosystems - Summary of Phase I work by B. Halpern for MOP [file name: **Cumulative Impacts Package.pdf**]

4) Habitat Classification

- a) Selected studies on habitat classification in Massachusetts; available at <http://www.mass.gov/czm/seafloor/habitat.htm>
 - i) *Habitat Classification Feasibility Study for Coastal and Marine Environments in Massachusetts* - Lund, K. and A.R. Wilbur (2007). [file name: **MA_habitat_classification_study.pdf**]
 - ii) CZM Seafloor/ Water Column History and Work Plan. D. Sampson, 2009. [file name: **CZM_habitat_classification.pdf**]

5) Eastern Scotian Shelf Integrated Management Initiative - <http://www.mar.dfo-mpo.gc.ca/oceans/e/essim/essim-intro-e.html>

- a) DFO Canada. 2004. Identification of Ecologically and Biologically Significant Areas. Ecosystem Status Report 2004/006. [file name: **Ecol_Biol_Sig Areas_DFO 2004.pdf**]
- b) DFO Canada. 2005. Framework for the Classification and Characterization of Scotia-Fundy Benthic Habitats. CSAS Science Advisory Report 2005/071. [file name: **SF Benthic Habitats DFO 2005.pdf**]
- c) DFO Canada. 2007. Ecologically and Biologically Significant Areas (ESBA) in the Estuary and Gulf of St. Lawrence: Identification and Characterization. CSAS Science Advisory Report 2007/016. [file name: **ESBA St. Lawrence DFO 2007.pdf**]

Secondary Materials – if interested

- a) Hobday, A. J., A. Smith, H. Webb, R. Daley, S. Wayte, C. Bulman, J. Dowdney, A. Williams, M. Sporcic, J. Dambacher, M. Fuller, T. Walker. 2007. Ecological Risk Assessment for the Effects of Fishing: Methodology. Report R04/1072 for the Australian Fisheries Management Authority, Canberra. [[file name: ERAEF Methodology 27-07-07.pdf](#)]
- b) DFO Canada. 2008. Further Guidance on the Formulation, Prioritization and Use of Conservation Objectives in an Ecosystem Approach to Integrated Management of Human Activities in Aquatic Ecosystems. CSAS Science Advisory Report 2008/029. [[file name: SAR-AS2008_029_E.pdf](#)]