

Development of Ecosystem Indicators for Multiple Management and Research Needs

November 15, 2006

Wells National Estuarine Research Reserve, Wells, Maine

Workshop Abstract

RARGOM, the Regional Association for Research on the Gulf of Maine, will convene a workshop focusing on the science, development and application of ecosystem-related regional indices. This session builds on the 2004 Northeast Coastal Indicators Workshop and other related forums to examine the state of the art, define multiple management needs, and facilitate methods of comparison for indices representing a variety of Gulf of Maine habitats. The workshop will touch upon the chemical, physical, biological, geological and socio/economic factors that affect the ecosystem, and contrast how indices reflect specific measures versus overall ecosystem health. Participants will be encouraged to identify the distribution and condition of regional habitats for assessment, protection and restoration, consider methods to combine various data types, and comment on the level of detail and specificity required to achieve index development goals.

Workshop Agenda

	Start	Time	Speaker	Institution	Title
Coffee	8:30 AM	0:15			
Welcome	8:45 AM	0:15			
Talk	9:00 AM	0:30	Ray Konisky	GoMC	Web-Based Framework for Integrating Ecosystem Indicators in the Gulf of Maine
Talk	9:30 AM	0:30	Steve Jones	UNH	Gulfwatch Contaminants Indicators
Talk	10:00 AM	0:30	Steve Hale	EPA	A benthic index for the nearshore Gulf of Maine
Coffee	10:30 AM	0:15			
Talk	10:45 AM	0:30	Paul Rago	NMFS	Fisheries Indicators from fishery dependant and independent data streams
Talk	11:15 AM	0:30	Hilary Neckles	USGS	Scalable Indicators for Aquatic Habitats
Talk	11:45 AM	0:30	Jason Link	NMFS	Ecological Indicators: Lessons Learned from the NEUS Fisheries System
Lunch	12:15 PM	1:00			
Talk	1:15 PM	0:30	Andy Thomas	U of Maine	Remote sensing ecosystem indicators
Talk	1:45 PM	0:30	Cameron Wake	UNH	Cross Border Indicators of Climate Change over the Past Century: Northeastern United States and Eastern Canada
Talk	2:15 PM	0:30	Ken Sherman (K Friedland)	NMFS	Large Marine Ecosystem models of indicator assessment
Coffee	2:45 PM	0:15			
Talk	3:00 PM	0:30	Marilyn ten Brink	EPA	Use of stressor - response indicators in managing estuarine water quality
Talk	3:30 PM	0:30	Michele Dionne	WNERR	ASSETS: Assessment of Estuarine Trophic Status
Talk	4:00 PM	0:30	Betsy Nicholson	NOAA	Landscape Scale Ecosystem Indicators: Tools from the NOAA Coastal Services Center

Workshop Attendees

There were a total of 80 participants at the workshop, with representation from the three US states and the two Canadian provinces in the Gulf of Maine. Institutional representation included 8 colleges/universities, 8 US/Canadian federal agencies, 6 non-government conservation organizations, 5 state agencies, 3 private sector firms, and 1 local town administration office.

Last Name	First Name	Institution
Adamowicz	Susan	US FWS
Auster	Peter	UCONN
Barker	Seth	MeDMR
Brawley	John	Battelle
Buchsbaum	Robert	MA Audubon
Callaghan	Todd	MA CZM
Claesson	Stefan	UNH
Coon	John	UNH
Cooper	Andrew	UNH
Courmane	Jamie	UNH
Cournane	Jamie	UNH
Couture	Darcie	DMR
Cowan	Diane	The Lobster Conservancy
Dalton	Cayce	WNERR
Deese	Heather	University of Maine
DeLauer	Verna	UNH
Diaz	Lina Saavedra	UNH
Dionne	Michele	Wells NERR
Elskus	Adria	USGS & University of Maine
Frashure	Kim	University of Mass/Boston
Friedland	Kevin	NMFS
Gallant	Rachel	Northeast Consortium/UNH
Galloway	Walt	USEPA/Atlantic Ecology
Garber	Jonathan	US EPA
Gauvin	Nadine	NGO
Gould	Diane	USEPA
Hale	Stephen	US EPA
Haskell	Brad	Town of BarHarbor
Haya	Kats	Fisheries and Oceans
Hayes	Pete	WNERR
Heinig	Christopher	MER Assessment Corp
Hellyer	Greg	USEPA
Hellyer	Greg	USEPA
Incze	Lewis	Univ. of Southern Maine
Johnson	Beverly	Bates College
Jones	Steve	UNH
Keeley	David	GOM Council
Killerlain Morrison	Kate	MA CZM
Klein	Emily	UNH
Konisky	Ray	GOM Council
krahforst	christian	Mass. Bays NEP

Larsen	Peter	Bigelow Laboratory
Leavenworth	Bill	UNH
Leo	Wendy	MWRA
Leyden	Kathleen	Maine State Planning Office
Lines	Gary	EC
Link	Jason	NOAA NMFS
Magness	Kate	UNH
Marzin	Catherine	UNH
Matassa	Keith	University of New England
McBride	Matt	WNERR
Mechling	Jesse	NOAA
Mercer	Linda	ME DMR
Miller	Jeremy	WNERR
Mooney-Seus	Marjorie (Maggie)	Fort Hill Associates
Morgan	Pam	University of New England
Neckles	Hilary	USGS
Nicholson	Betsy	NOAA Coastal Services Center
Osio	Chato	UNH
Perrin	Steve	Town of BarHarbor
Rago	Paul	NOAA
rutter	lynn	UNH
Ryan	Scott	Acadia University
Salsbury	Joe	UNH
Singh	Rabindra	DFO
Singh	Rabindra	DFO
Smith	Geoffrey	The Nature Conservancy
Smith	Tin	WNERR
Stone	Elizabeth	University of New England
Strobel	Charles	USEPA
Taylor	Rachael Franks	The Nature Conservancy
ten Brink	Marilyn	EPA Atlantic Ecology Div
Thomas	Andy	Umaine
Trueblood	Dwight	NOAA
Turcotte	Julie	NGO
Wake	Cameron	UNH
Wallace	Gordon	UMass Boston
Wells	Peter	Dalhousie/Acadia University
Zollett	Erika	UNH

Workshop Evaluation

A total number of 38 participants completed the workshop evaluation form (48% of attendees). The following sections quantify responses to the ten questions on the form, and provide a general summarization of open-ended written comments provided by participants. In addition, attendees identified specific areas of interest for future committee development with the Gulf of Maine Ecosystem Indicators Partnership (ESIP).

1. Has your knowledge or understanding of indicator development increased as a result of this workshop?

Yes: 35 No:1 Don't Know: 1

2. Do you intend to apply the knowledge and/or skills gained today in your work with regional indicators?

Yes: 31 No: 0 Don't Know: 7

3. Before/after rating of ability to access indicator resources (people, info, technology, tools)

Increased: 19 Stayed the Same: 19

4. Before/after rating of skills related to regional indicator development?

Increased: 14 Stayed the Same: 24

5. As a result of this workshop did you establish new or strengthen existing collaborations that will be useful in managing and protecting the Gulf of Maine?

Yes: 26 No: 6 Don't Know: 4

6. As a result of this workshop did you gain any new perspectives on regional indicators for the Gulf of Maine?

Yes: 27 No: 3 Don't Know: 7

7. How satisfied were you with the content coverage of this workshop?

Average: 3.9 1 (Unsatisfied) - 5 (Very Satisfied)

8. How satisfied were you with the format of the workshop?

Average: 3.8 1 (Unsatisfied) - 5 (Very Satisfied)

9. How satisfied were you with the speakers for this workshop?

Average: 4.1 1 (Unsatisfied) - 5 (Very Satisfied)

10. How satisfied were you with the networking opportunities?

Average: 3.4 1 (Unsatisfied) - 5 (Very Satisfied)

11. Written Comments

A total of 23 respondents wrote comments in the open-ended section of the form. Comments were tabulated into four common areas of response:

- 12 thought that the workshop would have been better with more time for discussion
- 7 thought that the workshop was very successful and useful as presented
- 6 wanted specific applications of indicators to management/decision makers
- 2 wanted to hear more from social scientists