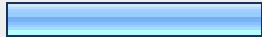

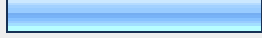







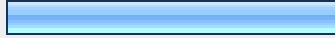

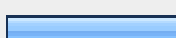


EBM Needs Assessment Survey

| 1. How are you and your organization currently involved in Ecosystem-Based Management? | | | Response Percent | Response Count |
|--|---|--|------------------|----------------|
| Considering EBM |  | | 27.8% | 15 |
| Planning EBM |  | | 25.9% | 14 |
| Implementing EBM |  | | 27.8% | 15 |
| No involvement |  | | 3.7% | 2 |
| Other |  | | 31.5% | 17 |
| Please specify: | | | | 31 |
| answered question | | | | 54 |
| skipped question | | | | 1 |

| 2. Where are your current or potential Ecosystem-Based Management activities focused? | | | Response Percent | Response Count |
|---|---|--|------------------|----------------|
| Maine |  | | 38.9% | 21 |
| Massachusetts |  | | 33.3% | 18 |
| New Brunswick |  | | 27.8% | 15 |
| New Hampshire |  | | 29.6% | 16 |
| Nova Scotia |  | | 27.8% | 15 |
| U.S. federal waters in or near the Gulf of Maine |  | | 35.2% | 19 |
| Canadian federal waters in or near the Gulf of Maine |  | | 24.1% | 13 |
| Other |  | | 18.5% | 10 |
| Please specify: | | | | 21 |
| answered question | | | | 54 |
| skipped question | | | | 1 |

| 3. What ecosystem or habitat types do your Ecosystem-Based Management activities focus on? | | | | | |
|--|--|--|--|--|----------------|
| | | | | | Response Count |
| | | | | | 49 |
| <i>answered question</i> | | | | | 49 |
| <i>skipped question</i> | | | | | 6 |

| 4. Which of the following obstacles have you encountered with respect to implementing Ecosystem-Based Management? | | | | | | |
|---|---------------|-------------------|------------------------|-------------------|-------------------|----------------|
| | Not a problem | | Something of a problem | | Severe problem | Response Count |
| Resistance to trying new management process | 7.1% (3) | 14.3% (6) | 40.5% (17) | 23.8% (10) | 14.3% (6) | 42 |
| Lack of understanding of EBM or clear objectives for project | 4.7% (2) | 4.7% (2) | 37.2% (16) | 34.9% (15) | 18.6% (8) | 43 |
| Lack of acceptance of EBM principles | 11.6% (5) | 30.2% (13) | 39.5% (17) | 16.3% (7) | 2.3% (1) | 43 |
| Different sectors or agencies resist working together | 2.4% (1) | 12.2% (5) | 31.7% (13) | 29.3% (12) | 24.4% (10) | 41 |
| Lack of established methods for implementing EBM | 0.0% (0) | 7.0% (3) | 11.6% (5) | 51.2% (22) | 30.2% (13) | 43 |
| Lack of understanding or information on ecosystem | 2.3% (1) | 15.9% (7) | 27.3% (12) | 29.5% (13) | 25.0% (11) | 44 |
| Lack of information about human uses of ecosystem | 2.3% (1) | 27.3% (12) | 34.1% (15) | 18.2% (8) | 18.2% (8) | 44 |
| Inability to organize, manage, or use data | 7.0% (3) | 23.3% (10) | 39.5% (17) | 18.6% (8) | 11.6% (5) | 43 |
| Lack of technical capacity to perform needed analyses | 11.4% (5) | 31.8% (14) | 18.2% (8) | 27.3% (12) | 11.4% (5) | 44 |
| Inability to interest or involve agencies or governments | 15.0% (6) | 20.0% (8) | 47.5% (19) | 12.5% (5) | 5.0% (2) | 40 |
| Inability to interest or involve stakeholders | 14.6% (6) | 31.7% (13) | 39.0% (16) | 12.2% (5) | 2.4% (1) | 41 |
| Lack of money, time, or people to do EBM | 2.1% (1) | 4.3% (2) | 19.1% (9) | 23.4% (11) | 51.1% (24) | 47 |
| <i>answered question</i> | | | | | | 47 |
| <i>skipped question</i> | | | | | | 8 |

5. Which other sectors, institutions, agencies, or municipalities do you most interact with? In your opinion, what challenges do they face in taking a more coordinated, collaborative approach to coastal ocean management?

| | | Response Count |
|--|--------------------------|----------------|
| | | 46 |
| | <i>answered question</i> | 46 |
| | <i>skipped question</i> | 9 |

6. Briefly describe one or more real issue or situation in your day-to-day work that would benefit from application of Ecosystem-Based Management:

| | | Response Count |
|--|--------------------------|----------------|
| | | 37 |
| | <i>answered question</i> | 37 |
| | <i>skipped question</i> | 18 |

7. Do you feel that you know how to apply EBM to the issue(s) or situation(s) you described? Why or why not?

| | | Response Count |
|--|--------------------------|----------------|
| | | 35 |
| | <i>answered question</i> | 35 |
| | <i>skipped question</i> | 20 |

8. Describe the types of skills, knowledge, or methods that you and your colleagues need to practice Ecosystem-Based Management in your day-to-day work, but that you do not currently have.

| | | Response Count |
|--|--------------------------|----------------|
| | | 34 |
| | <i>answered question</i> | 34 |
| | <i>skipped question</i> | 21 |

9. How interested are you or your organization in developing capacity in the following areas to help plan for or implement Ecosystem-based Management?

| | No interest | | Moderate interest | | Strong interest | Response Count |
|---|---------------------------------|-----------|-------------------|------------|-------------------|----------------|
| Watershed management | 5.4% (2) | 5.4% (2) | 35.1% (13) | 10.8% (4) | 43.2% (16) | 37 |
| Land use planning | 10.8% (4) | 18.9% (7) | 21.6% (8) | 5.4% (2) | 43.2% (16) | 37 |
| Coastal access management | 5.4% (2) | 18.9% (7) | 32.4% (12) | 16.2% (6) | 27.0% (10) | 37 |
| Coastal habitats assessment and mitigation | 0.0% (0) | 5.0% (2) | 15.0% (6) | 25.0% (10) | 55.0% (22) | 40 |
| Marine zoning | 5.4% (2) | 21.6% (8) | 16.2% (6) | 18.9% (7) | 37.8% (14) | 37 |
| Marine protected area management | 2.6% (1) | 12.8% (5) | 12.8% (5) | 30.8% (12) | 41.0% (16) | 39 |
| Fisheries management | 2.6% (1) | 21.1% (8) | 26.3% (10) | 7.9% (3) | 42.1% (16) | 38 |
| Management of coastal and marine industries | 13.2% (5) | 7.9% (3) | 21.1% (8) | 21.1% (8) | 36.8% (14) | 38 |
| Biodiversity conservation | 2.5% (1) | 5.0% (2) | 25.0% (10) | 25.0% (10) | 42.5% (17) | 40 |
| Habitat restoration | 0.0% (0) | 7.5% (3) | 22.5% (9) | 22.5% (9) | 47.5% (19) | 40 |
| Stakeholder and/or community engagement | 0.0% (0) | 7.5% (3) | 17.5% (7) | 17.5% (7) | 57.5% (23) | 40 |
| | <i>answered question</i> | | | | | 40 |
| | <i>skipped question</i> | | | | | 15 |

10. How interested are you or your organization in developing capacity in the following areas to help plan for or implement Ecosystem-Based Management?

| | No interest | | Moderate interest | | Strong interest | Response Count |
|--|--------------------------|------------|-------------------|------------|-------------------|----------------|
| Collecting ecosystem data | 0.0% (0) | 7.7% (3) | 25.6% (10) | 17.9% (7) | 48.7% (19) | 39 |
| Collecting information on human communities | 2.5% (1) | 25.0% (10) | 32.5% (13) | 15.0% (6) | 25.0% (10) | 40 |
| Managing data | 5.0% (2) | 12.5% (5) | 35.0% (14) | 30.0% (12) | 17.5% (7) | 40 |
| Understanding how the ecosystem functions | 0.0% (0) | 0.0% (0) | 30.0% (12) | 12.5% (5) | 57.5% (23) | 40 |
| Developing conceptual models of ecosystem processes or human communities | 0.0% (0) | 10.0% (4) | 30.0% (12) | 27.5% (11) | 32.5% (13) | 40 |
| Analyzing or modeling ecosystem processes | 5.0% (2) | 7.5% (3) | 30.0% (12) | 27.5% (11) | 30.0% (12) | 40 |
| Analyzing economic or social impacts of management actions | 5.0% (2) | 15.0% (6) | 30.0% (12) | 22.5% (9) | 27.5% (11) | 40 |
| Visualizing possible development and resource use scenarios | 0.0% (0) | 10.0% (4) | 22.5% (9) | 25.0% (10) | 42.5% (17) | 40 |
| Using decision support tools to help with specific types of decisions | 0.0% (0) | 15.0% (6) | 25.0% (10) | 27.5% (11) | 32.5% (13) | 40 |
| Conducting monitoring and assessment | 2.6% (1) | 7.7% (3) | 20.5% (8) | 25.6% (10) | 43.6% (17) | 39 |
| Engaging stakeholders in decision making | 0.0% (0) | 7.5% (3) | 17.5% (7) | 25.0% (10) | 50.0% (20) | 40 |
| Communicating management processes to stakeholders | 2.5% (1) | 7.5% (3) | 15.0% (6) | 25.0% (10) | 50.0% (20) | 40 |
| | answered question | | | | | 40 |
| | skipped question | | | | | 15 |

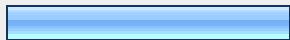
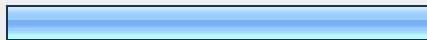
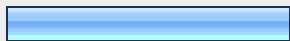
11. Are there other areas where you would be interested in developing additional capacity to help plan for or implement Ecosystem-Based Management?

| | Response Count |
|--|--------------------------|
| | 19 |
| | answered question |
| | 19 |
| | skipped question |
| | 36 |

12. How much do you need or want the following in order to implement Ecosystem-Based Management?

| | Strong need or want | Moderate need or want | Low need or want | No need or want | Rating Average | Response Count |
|---|---------------------------------|-----------------------|------------------|-----------------|----------------|----------------|
| Information about how the Gulf of Maine ecosystem functions | 60.0% (24) | 25.0% (10) | 12.5% (5) | 2.5% (1) | 1.58 | 40 |
| Spatially explicit information about human activities affecting the Gulf of Maine and its watershed | 67.5% (27) | 22.5% (9) | 10.0% (4) | 0.0% (0) | 1.43 | 40 |
| Case studies: past management situations in the Gulf of Maine region and how EBM could have been applied | 40.0% (16) | 47.5% (19) | 10.0% (4) | 2.5% (1) | 1.75 | 40 |
| Case studies: present-day management situations in the Gulf of Maine region and how EBM could be or has been applied | 67.5% (27) | 27.5% (11) | 5.0% (2) | 0.0% (0) | 1.38 | 40 |
| Consensus statement from scientific and management experts on regional priorities for ocean and coastal management in the Gulf of Maine | 57.5% (23) | 22.5% (9) | 20.0% (8) | 0.0% (0) | 1.63 | 40 |
| Descriptions of why particular management practices do or do not embody EBM | 37.5% (15) | 37.5% (15) | 22.5% (9) | 2.5% (1) | 1.90 | 40 |
| Technological tools for doing EBM | 52.5% (21) | 35.0% (14) | 10.0% (4) | 2.5% (1) | 1.63 | 40 |
| Forward-looking assessments of how the Gulf of Maine ecosystem is likely to change and implications for management | 70.0% (28) | 22.5% (9) | 7.5% (3) | 0.0% (0) | 1.38 | 40 |
| | <i>answered question</i> | | | | | 40 |
| | <i>skipped question</i> | | | | | 15 |

13. Do you or your organization use any specialized software or models for your Ecosystem-Based Management work?
 Examples include Marxan, CommunityViz, Ecopath with Ecosim, Atlantis, N-SPECT, ISAT, CVAT, C-Plan, NatureServe Vista, Oceanmap, etc.

| | | Response Percent | Response Count |
|--------------------------|--|------------------|----------------|
| Yes |  | 30.0% | 12 |
| No |  | 45.0% | 18 |
| I'm not sure |  | 30.0% | 12 |
| <i>answered question</i> | | | 40 |
| <i>skipped question</i> | | | 15 |

14. If yes, please list the specialized software, models, or other technology tools that you use.

| | | Response Count |
|--------------------------|--|----------------|
| | | 13 |
| <i>answered question</i> | | 13 |
| <i>skipped question</i> | | 42 |

15. Are there specific processes for which you need tools but have not been able to find appropriate ones?

| | | Response Count |
|--------------------------|--|----------------|
| | | 12 |
| <i>answered question</i> | | 12 |
| <i>skipped question</i> | | 43 |

16. Are there tools that you know of that you would like to see us develop training for?

| | | Response Count |
|--------------------------|--|----------------|
| | | 9 |
| <i>answered question</i> | | 9 |
| <i>skipped question</i> | | 46 |

17. Are you coordinating with other organizations, agencies, institutions, or municipalities in the region and if so, what are the barriers to better coordination and interaction?

| | | Response Count |
|--------------------------|--|----------------|
| | | 25 |
| <i>answered question</i> | | 25 |
| <i>skipped question</i> | | 30 |

18. How strongly do you need or want the following:

| | Strong need or want | Moderate need or want | Low need or want | No need or want | Rating Average | Response Count |
|---|---------------------|-----------------------|------------------|-----------------|----------------|----------------|
| Training in specific technological tools to do EBM | 26.3% (10) | 44.7% (17) | 23.7% (9) | 5.3% (2) | 2.08 | 38 |
| Training to understand the conceptual framework of EBM and general approaches for putting EBM into practice | 39.5% (15) | 34.2% (13) | 21.1% (8) | 5.3% (2) | 1.92 | 38 |
| Training to better understand the ecosystem context in which management occurs and that management decisions affect | 36.8% (14) | 36.8% (14) | 23.7% (9) | 2.6% (1) | 1.92 | 38 |
| <i>answered question</i> | | | | | | 38 |
| <i>skipped question</i> | | | | | | 17 |


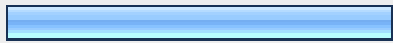
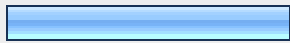
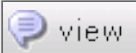
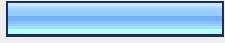
19. Would you be interested in attending Ecosystem-Based Management training through the following venues?

| | Not interested | | Moderately interested | | Very interested | Response Count |
|--|--------------------------|-------------------|-----------------------|-------------------|-------------------|----------------|
| Workshops at professional conferences | 7.7% (3) | 7.7% (3) | 35.9% (14) | 38.5% (15) | 10.3% (4) | 39 |
| Workshops in your community or region | 7.9% (3) | 5.3% (2) | 26.3% (10) | 23.7% (9) | 36.8% (14) | 38 |
| Workshops at your job site | 21.1% (8) | 5.3% (2) | 26.3% (10) | 23.7% (9) | 23.7% (9) | 38 |
| Workshops at a centralized training facility | 5.3% (2) | 21.1% (8) | 23.7% (9) | 31.6% (12) | 18.4% (7) | 38 |
| Web-based trainings | 20.5% (8) | 10.3% (4) | 20.5% (8) | 30.8% (12) | 17.9% (7) | 39 |
| Courses at a university | 18.4% (7) | 34.2% (13) | 28.9% (11) | 10.5% (4) | 7.9% (3) | 38 |
| | <i>answered question</i> | | | | | 39 |
| | <i>skipped question</i> | | | | | 16 |

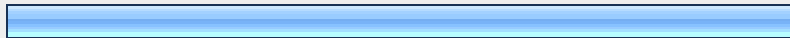

20. If there are any other venues where you would be interested in receiving Ecosystem-Based Management Training, please describe them.

| | Response Count |
|--|--------------------------|
| | 9 |
| | <i>answered question</i> |
| | 9 |
| | <i>skipped question</i> |
| | 46 |

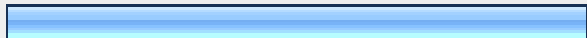

21. How much time could you spend at an Ecosystem-Based Management training?

| | | Response Percent | Response Count |
|--|--|------------------|----------------|
| Half a day |  | 5.1% | 2 |
| One day |  | 41.0% | 16 |
| 2-3 days |  | 30.8% | 12 |
|  Other (please specify) |  | 23.1% | 9 |
| | <i>answered question</i> | | 39 |
| | <i>skipped question</i> | | 16 |

22. Are you able to travel within your country (U.S. or Canada) to receive training?

| | | Response Percent | Response Count |
|--------------------------|--|------------------|----------------|
| Yes |  | 84.2% | 32 |
| No |  | 15.8% | 6 |
| <i>answered question</i> | | | 38 |
| <i>skipped question</i> | | | 17 |

23. Are you able to travel internationally between U.S. and Canada to receive training?

| | | Response Percent | Response Count |
|--------------------------|--|------------------|----------------|
| Yes |  | 62.2% | 23 |
| No |  | 37.8% | 14 |
| <i>answered question</i> | | | 37 |
| <i>skipped question</i> | | | 18 |

24. Might your organization be interested in sponsoring an EBM training workshop tailored to regional/ local issues? What issues should it focus on? What resources could you provide (such as logistics support, funding, communication with participants)?

| | | Response Count |
|--------------------------|--|----------------|
| | | 33 |
| <i>answered question</i> | | 33 |
| <i>skipped question</i> | | 22 |


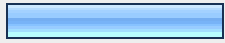
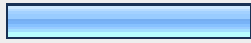
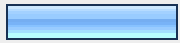
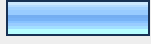




25. What organizations or venues currently provide professional development training to you or other people from your organization?

| | | Response Count |
|--------------------------|--|----------------|
| | | 25 |
| <i>answered question</i> | | 25 |
| <i>skipped question</i> | | 30 |

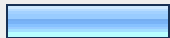


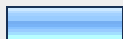




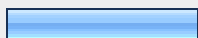
| 26. What professional meetings or conferences do you or people from your organization routinely attend? | | Response Count |
|---|--------------------------|----------------|
| | | 29 |
| | <i>answered question</i> | 29 |
| | <i>skipped question</i> | 26 |

| 27. How interested are you or others from your organization in the following types of training/ support? | | | | | | |
|--|----------------|-----------|-----------------------|-------------------|--------------------------|----------------|
| | Not interested | | Moderately interested | | Very interested | Response Count |
| Half-day overview of EBM tools held at a professional conference | 8.3% (3) | 8.3% (3) | 55.6% (20) | 13.9% (5) | 13.9% (5) | 36 |
| Half-day overview of EBM tools held in your local community | 14.3% (5) | 5.7% (2) | 37.1% (13) | 17.1% (6) | 25.7% (9) | 35 |
| One-day workshop on a few EBM tools relevant to your work held at a professional conference | 5.6% (2) | 16.7% (6) | 27.8% (10) | 36.1% (13) | 13.9% (5) | 36 |
| One-day workshop on a few EBM tools relevant to your work held in your local community | 13.9% (5) | 2.8% (1) | 25.0% (9) | 22.2% (8) | 36.1% (13) | 36 |
| Multiple-day workshop on tools relevant to your work held in your local community | 17.1% (6) | 14.3% (5) | 22.9% (8) | 28.6% (10) | 17.1% (6) | 35 |
| Multiple-day workshop on tools relevant to your work held at a centralized training facility | 10.8% (4) | 16.2% (6) | 43.2% (16) | 18.9% (7) | 10.8% (4) | 37 |
| Web-based training modules on tools relevant to your work | 13.5% (5) | 16.2% (6) | 24.3% (9) | 29.7% (11) | 16.2% (6) | 37 |
| On-going technical support for using EBM tools | 8.1% (3) | 13.5% (5) | 35.1% (13) | 21.6% (8) | 21.6% (8) | 37 |
| | | | | | <i>answered question</i> | 37 |
| | | | | | <i>skipped question</i> | 18 |

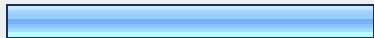
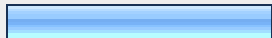


28. What type of organization do you work for?

| | | Response Percent | Response Count |
|---|---|---------------------------------|----------------|
| Local Government |  | 2.6% | 1 |
| State/ Regional Government |  | 23.7% | 9 |
| Federal Government |  | 26.3% | 10 |
| Academic Institution |  | 18.4% | 7 |
| Non-Profit/ Non-governmental Organization (NGO) |  | 15.8% | 6 |
| Industry | | 0.0% | 0 |
| Consultant |  | 2.6% | 1 |
| Community-Based Group |  | 2.6% | 1 |
| Museum/ Aquarium |  | 5.3% | 2 |
| Other (Please specify below) |  | 2.6% | 1 |
| | | Other (please specify) | 5 |
| | | <i>answered question</i> | 38 |
| | | <i>skipped question</i> | 17 |

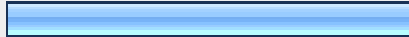
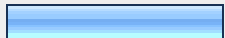




29. Which of the following best describes your role in your organization or Ecosystem-Based Management project?

| | | Response Percent | Response Count |
|--|---|--------------------------|----------------|
| Coastal Zone Management |  | 18.0% | 7 |
| Watershed Management |  | 10.3% | 4 |
| City/ County Planning | | 0.0% | 0 |
| Academic or Government Research |  | 20.5% | 8 |
| Protected Area Management | | 0.0% | 0 |
| Fisheries Management |  | 12.8% | 5 |
| Water Quality Management | | 0.0% | 0 |
| Habitat Management |  | 2.6% | 1 |
| Biodiversity Conservation |  | 7.7% | 3 |
| Industry Planning/ Management | | 0.0% | 0 |
| Education/ Outreach |  | 5.1% | 2 |
| Concerned Citizen |  | 2.6% | 1 |
| Other (please specify below) |  | 20.5% | 8 |
| | | Other (please specify) | 13 |
| | | answered question | 39 |
| | | skipped question | 16 |

30. What is your technical background?

| | | Response Percent | Response Count |
|---|--|------------------|----------------|
| Basic computer skills only |  | 39.5% | 15 |
| Some experience using GIS or other specialized software tools for data processing and analysis |  | 29.0% | 11 |
| Extensive experience using GIS or other specialized software tools for data processing and analysis |  | 7.9% | 3 |
| Other (please specify) |  | 23.7% | 9 |
| | Other (please specify) | | 11 |
| | answered question | | 38 |
| | skipped question | | 17 |

31. Which of the following best describes your current interest in Ecosystem-Based Management tools?

| | | Response Percent | Response Count |
|--|--|------------------|----------------|
| I would like to gain a basic understanding of tool capabilities and their potential value for addressing institutional problems |  | 43.6% | 17 |
| I would like to gain sufficient knowledge to manage technical staff applying the tools |  | 23.1% | 9 |
| I would like to become an expert tool user |  | 7.7% | 3 |
| I would like to be able to train others to use the tools |  | 2.6% | 1 |
|  Other (please specify) |  | 23.1% | 9 |
| | answered question | | 39 |
| | skipped question | | 16 |

32. Is there any other information you would like to share with us?

| | | Response Count |
|--|--------------------------|----------------|
| | | 10 |
| | <i>answered question</i> | 10 |
| | <i>skipped question</i> | 45 |

33. We plan to conduct follow-up phone interviews with a broad range of EBM practitioners. Would you be willing to be interviewed by phone? If so, please provide your contact information.

| | | Response Count |
|--|--------------------------|----------------|
| | | 25 |
| | <i>answered question</i> | 25 |
| | <i>skipped question</i> | 30 |