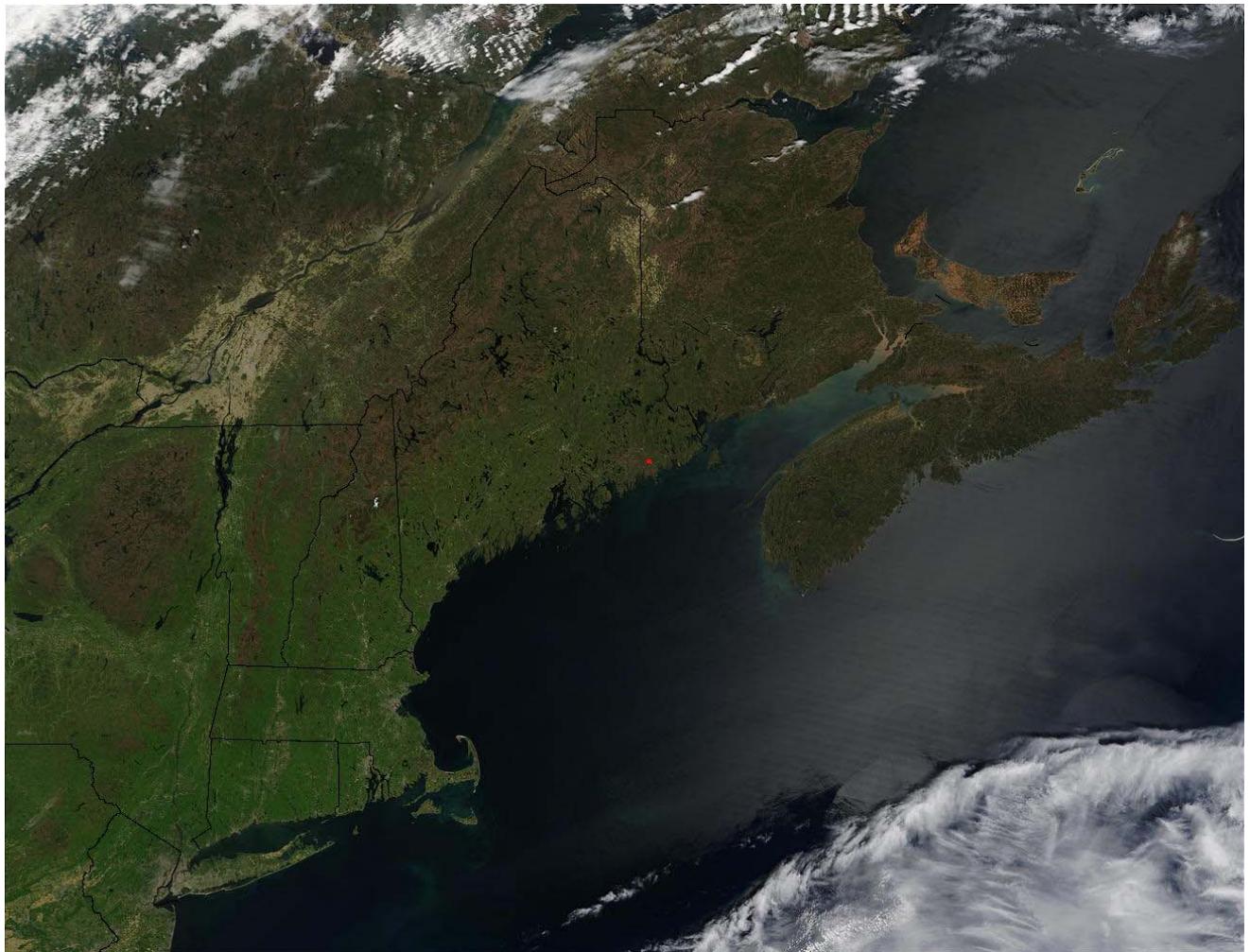


Atlantic Northeast Coastal Monitoring Summit

**Durham, New Hampshire
December 10-12, 2002**

Meeting Summary



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Atlantic Northeast Coastal Monitoring Summit

December 10-12, 2002

Workshop Summary Report

The *Atlantic Northeast Coastal Monitoring Summit*, sponsored by the U.S. Environmental Protection Agency (EPA), was held on December 10-12, 2002 at the New England Center on the campus of the University of New Hampshire, Durham, New Hampshire. The Summit was developed through a cooperative effort by EPA and a 17-member Steering Committee (see Appendix A for the invitation letter, list of Steering Committee members, and meeting agenda) and attended by over 100 invited participants (Appendix B). The workshop was aimed at developing a coordinated regional monitoring strategy for the Nova Scotia/New Brunswick to New York region. Attendees included representatives from EPA, Environment Canada, U.S. and Canadian academic organizations, various state and local agencies from the region, as well as a broad base of regional resource and environmental managers. Dr. Carlton Hunt, Battelle and Mr. Barry Burgan, EPA acted as facilitators for the meeting, assisted by Ms. Lynn McLeod and Ms. Melissa Manley, Battelle.

The purpose of the workshop was to:

- Develop an ecologically driven basis for coordinating selected monitoring programs in Atlantic Northeast coastal waters,
- Develop a framework for a regional monitoring network, and
- Identify new regional monitoring needs and corresponding research needs that respond to the region's pressing management needs.

Efforts were focused on a coordinated regional monitoring strategy and collecting information on current monitoring, regional concerns, and future focus areas (e.g., questions that should be answered through the coordinated effort). Three areas of coastal environmental monitoring — nutrient over enrichment; toxics/contamination; and habitat loss, degradation and restoration — were used as test cases in breakout sessions; however, both the discussions and the regional monitoring strategy covered more than these areas.

The Steering Committee developed several background papers, on monitoring and needs in the region, which were supplied to the attendees prior to the meeting through the conference website (www.atlantic-ne-monitoring.com). Although attendees were expected to read these papers, Steering Committee members presented overviews on some of the background information on the first day of the Summit (Appendix C). Mr. Barry Burgan began the meeting with opening remarks on the charge and expectations of the workshop.

A Need for Regional Management

Mr. Paul Stacey, Connecticut Department of Environmental Protection, presented the need for a regional monitoring strategy based on the complexity and scale of environmental issues that might need to be addressed. Because impacts from pollutant sources in the region extend across local, state, regional, and international borders and programs, local impacts may be caused by regional-scale processes and require regional monitoring approaches to be fully understood. Alternatively, comparative analyses can give valuable insight into local issues that occur regionally and would benefit from regional sharing of research and monitoring among jurisdictions. Finally, there is added value to regional, integrated assessments as a powerful analysis and communication tool. Mr. Stacey provided examples of how these

three justifications for using a regional approach have been used to fully evaluate the state of the ecosystem in the region.

Making the Case for a Regional Monitoring Network

Keynote speaker Dr. Stephen Weisberg, Executive Director of the Southern California Coastal Water Research Project (SCCWRP), discussed his perspective on planning, developing, and coordinating a regional monitoring program. He focused his discussion on three main issues:

- The benefits of coordinated monitoring,
- The challenges of such an effort, and
- The catalysts that get programs beyond the challenges.

The benefits of coordinated monitoring include:

- Assessment of condition
- Methods of standardization
- Regional assessment tools
- Information management
- Dialogue

The goal of any coordinated regional monitoring program is to assess the overall condition of the area. Once properly characterized, managers can then make informed decisions regarding actions to take within the area. One way to ensure that the assessment of the area is correct is by ensuring that the data being compiled is accurate. SCCWRP has met this challenge through performing intercalibration exercises and in some instances, standardization of methods. Dr. Weisberg used interlaboratory calibration data to compare accuracy before and after standardized methods were developed. Prior to standardizing methods, the data ranged 20-fold between the lowest and highest values, while data after standardization was more uniform.

Regional assessment tools developed by SCCWRP assisted them in showing managers how their contaminated areas compared to other areas in the region. Cumulative frequency graphs of contaminants allowed area managers to see if their area was among the least or most contaminated in the program. Managers with the most contaminated areas were then motivated to implement actions to bring the contaminant levels down to a more acceptable level. It also gave managers information on what contaminants to focus on (*i.e.*, focus sampling efforts on fecal coliform contamination if it was high and focus less on metals if they were low).

An important benefit of the SCCWRP program has been the establishment of dialogue amongst agencies and scientists. For each type of monitoring, several meetings were planned to bring the involved parties together. Initially, this was problematic, but with proper planning and because SCCWRP was a neutral facilitator, businesses, environmental groups, scientists, and regulators saw the value of combining resources to solve problems rather than working alone. Dr. Weisberg noted that they felt they got better results from the legislature with a united approach and a common message. In addition, many scientists have been able to benefit from the interactions by improving methods they developed based on input from others in the group.

Dr. Weisberg noted that time availability for meetings and planning, organizations' flexibility to change, costs of inter-calibration, and loss of autonomy were initial challenges that every program will need to address. He stressed that in particular the costs of standardizing methods can initially be larger than implementation costs, but inclusion of groups like ACT can help.

During his presentation, Dr. Weisberg noted the following four items as catalysts to a coordinated monitoring program:

- A common question – must truly need each other
- Available resources – seed money and resource exchange
- Perception of likely success – it will happen without you
- A neutral party – trust is essential

In summary, Dr. Weisberg noted that coordinating monitoring efforts are worth the effort, but there are many obstacles that will need to be overcome first. He felt that if you make sure you have agreement on the benefits of the program then the obstacles will fall by the wayside. Some of Dr. Weisberg's slides are presented in Appendix C.

Lessons Learned

Ms. Lynn McLeod, Battelle, summarized findings from interviews with several successfully coordinated monitoring groups located throughout the U.S. In general, the outcome of the interviews was closely aligned with those outlined in *Managing Troubled Waters: The Role of Marine Environmental Monitoring by the National Research Council*. Ms. McLeod's presentation is included in Appendix C.

A Framework for a Regional Monitoring Network

Mr. David Keeley, Maine State Planning Office, presented information on the suggested form and function a coordinated regional monitoring program for this area should take, based on the opinions of the Summit Steering Committee. This presentation was an introduction to the form and function matrix that would be discussed in the breakout sessions the following day. A copy of Mr. Keeley's slides is included in Appendix C.

An Overview of Current Monitoring Programs

At the request of the Steering Committee, Ms. Christy Finlayson, the Gulf of Maine Council Monitoring Coordinator, explained her inventory of monitoring programs in the North American North Atlantic region. Ms. Finlayson described the kind of information she is attempting to collect including: who is performing the monitoring and what is driving the monitoring. The document, which is scheduled for completion in June of 2003, will contain programs being conducted by a variety of sources (state, educational, and non-profit institutions) covering the region.

When the inventory is complete it will include details on the theme, complexity, scope and scale, purpose, duration, and policy and program drivers for each monitoring program. Eventually this effort is expected to lead into a more integrated monitoring system where programs can request information from one another and search through sample data. Main points that were brought up during the discussion that followed Ms. Finlayson's presentation considered what process would be taken to standardize data and how historical data would be included. Updating the database was another important aspect of the discussion.

The first day ended with a poster session in which people displayed information on monitoring programs throughout the northeast region.

Breakout Groups

The second day opened with Dr. Carlton Hunt giving a brief overview of the previous day's presentations. Mr. Barry Burgan and Dr. Peter Wells, Environment Canada then gave presentations on the initiatives the United States and Canada are taking to coordinate monitoring efforts (Appendix D).

Following these presentations the participants were divided into five breakout groups (see Appendix E for lists of members within each breakout session). Two sessions were held on nutrient over enrichment and habitat loss, degradation and restoration; and one session was held on toxic contaminants. Each breakout group was given background information and a series of questions to answer during four separate subsessions held throughout the day. The four subsessions addressed:

- 1: Building the monitoring network
- 2: Focusing on the Management Issues
- 3: Organizing the Network
- 4: Identifying Priority Unfulfilled Monitoring Needs and Research

Each group was given the same set of questions to answer in their topic area (questions are listed in the agenda in Appendix A). In addition, they were each given two tables with suggestions on the Function and Form of the coordinated monitoring strategy and topic specific supporting tables to discuss (Appendix E).

Reporting the Results of the Breakout Groups

On the last day of the Summit, each Breakout Group facilitator reported, in a panel format, the results of their discussions in each Breakout Group. For this report, we have included written summaries of the discussion from the three topic areas in Appendix F. Information collected from the two groups under each topic was synthesized by the facilitators into one summary for each topic area.

General Conclusions

Synthesis of the findings from all of the Breakout Groups showed that Summit participants recommended that the coordinated regional monitoring strawman be set up with the following form and functions:

Form:

- **Structure** – Steering Committee or board that includes state/provincial agencies, environmental groups, dischargers, researchers, and the public.
- **Type of organization** – regional public/private nonprofit or charitable organization that incorporates existing mandates.
- **Geography** – Nova Scotia/New Brunswick to Long Island Sound. Additional information from other areas may be needed to support some parameters (i.e., atmospheric deposition).
- **Governance/decision-making** – where appropriate voluntary compliance, consensus, legislative mandates (existing and new).
- **Operating budget** – start with seed funding; then, after positive results have been shown, plan on incremental growth. If funding becomes available move towards major initiatives.
- **Funding sources** – new grants and contracts (e.g. government, foundations). Larger monitoring groups involved would use some of their resources toward involvement in the program in return for additional information on areas of concern.
- **Partners** – government, NGOs, businesses, academics, regional organizations.
- **Staffing** – focused full-time regional coordinator growing to additional staff.

Function:

- **Scale** – depends on the final questions being asked.
- **Scope/reach** – government, volunteer and academic programs and more as appropriate to answer the questions.

- **Program design and implementation/methods** – coordinate programs to meet regional needs; apply performance-based standardized protocols as appropriate.
- **Data management** – start with web links to databases with spatial references and metadata. As program moves along, standardized formats for data and policies for making data available and reported should be developed.
- **Data synthesis and communication** – integrated multifactor regional assessments with links to management, public, and NGO needs; educational and marketing materials; and smaller scale assessments or larger trends and assessments by selected issues.
- **Links to research** –identifies priorities linked to monitoring; active proponent of regional research; identifies new issues and problems.
- **Services provided** –regional multivariate

Discussions within each breakout session also resulted in information from participants on ideas for moving forward with various aspects of the process. These ideas have been summarized using the “Ten Steps to Strengthening the Role of Monitoring in Environmental Management” noted in *Managing Troubled Waters*.

- 1. Clear guidance is necessary on how data are to be used and what types of decisions are to be made.**

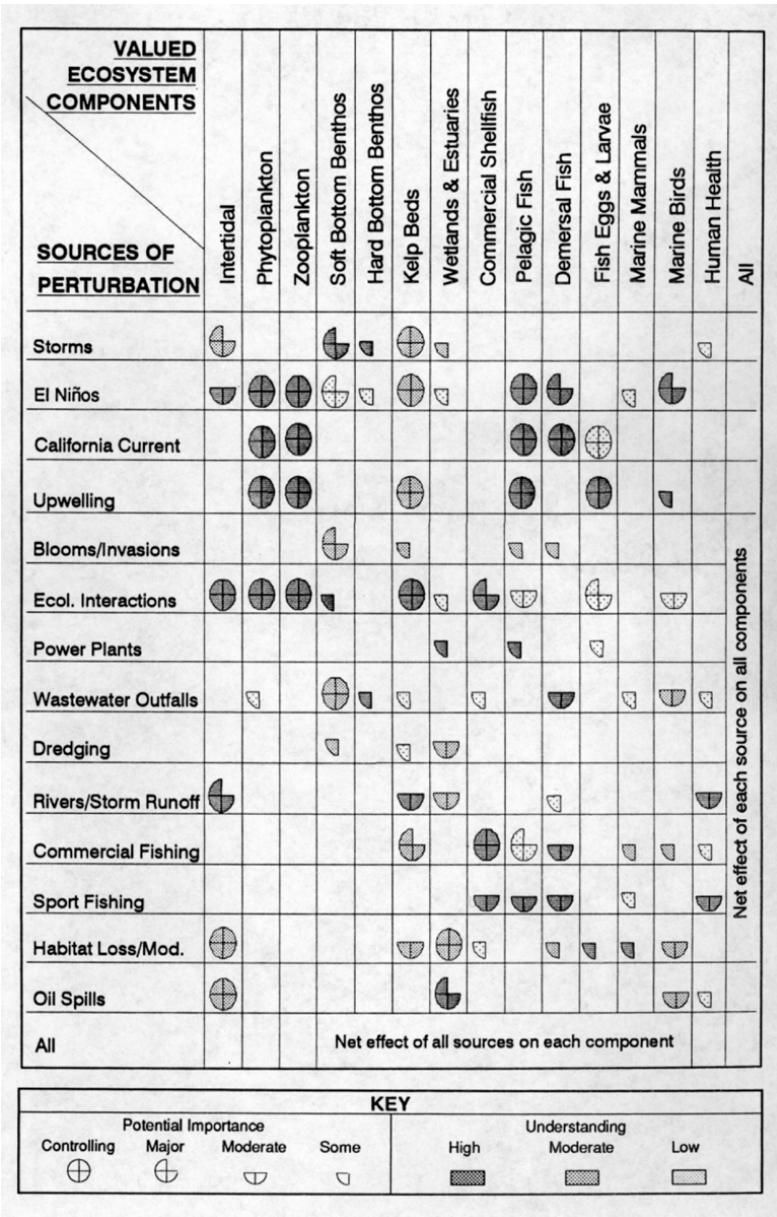
Generally, most groups felt that the region of Nova Scotia/New Brunswick to Long Island Sound was appropriate. In some instances (e.g., atmospheric deposition), data from outside the region may be needed, but in those instances alliances with other groups may be able to be formed to exchange data.

One item that needs to be determined while the strategy is being developed is: what domain will the coordination efforts work towards (e.g., assessment, characterization, management, or process)? Should the questions be focused at assessing, characterizing, or managing resources or determining the processes that work throughout the region. This, and the spatial and temporal scales, may vary depending on the questions being answered.

Before determining the specific questions to be answered by the coordinated monitoring, the group will need to identify the priority and problem areas based on regional perspectives and interpretations. A determination will then need to be made regarding the amount of quality information on the subject. The ability to compare data on a regional basis should be the major focus of these questions with the assessment of status and determination of early warnings of problems being the goal of the monitoring. Appropriate source identification methods, technology and information transfer should also be assessed.

Below is a suggested format for identifying priorities:¹

¹ From Bernstein, B.B., B.E. Thompson and R.W. Smith. 1991. A combined science and management framework for developing regional monitoring objectives. Presented at the National Estuary Program Science Symposium, Sarasota, and FL. 25-27 February 1991.



Categorize the potential for affecting a system

- High, moderate, low, unknown
- Controlling, major, moderate, some

Evaluate information reliability

- High, moderate, low

Identify areas requiring the most attention

Develop specific goals statements

2. The goals established should be achievable scientifically, technologically, logically, and financially.

All groups agreed that once the priority issues have been determined monitoring questions need to be clearly defined in detail. A couple of the breakout groups went as far as to say that the group should focus initially on a narrowly defined issue to get started, then expand the goals once successes and the importance of the efforts have been shown.

The way in which the questions are developed can take on several different approaches. One of the Habitat Breakout Groups noted two ways to monitor the status and trends of various habitats throughout the regions. The first approach is to ask key questions and apply the questions to comparable habitats, limiting the number of habitats being monitored. The second approach identified key assaults upon habitats (e.g. sea water level rise) and then identified the impacts of these assaults on a variety of habitats. Either approach to developing questions is appropriate. The group will need to determine which approach will be more appropriate to follow, depending on the objective.

One example of a question was: What are the biological (ecological) effects of [a specific] contaminant (e.g., dioxin) throughout the region? This question can then be linked to other monitoring areas through questions like:

- What are the cumulative effects to important species within the region?
- Is the contamination new or recycled from another area (e.g., downstream movement of contaminated sediments)?, and
- What is the recovery potential of the area?

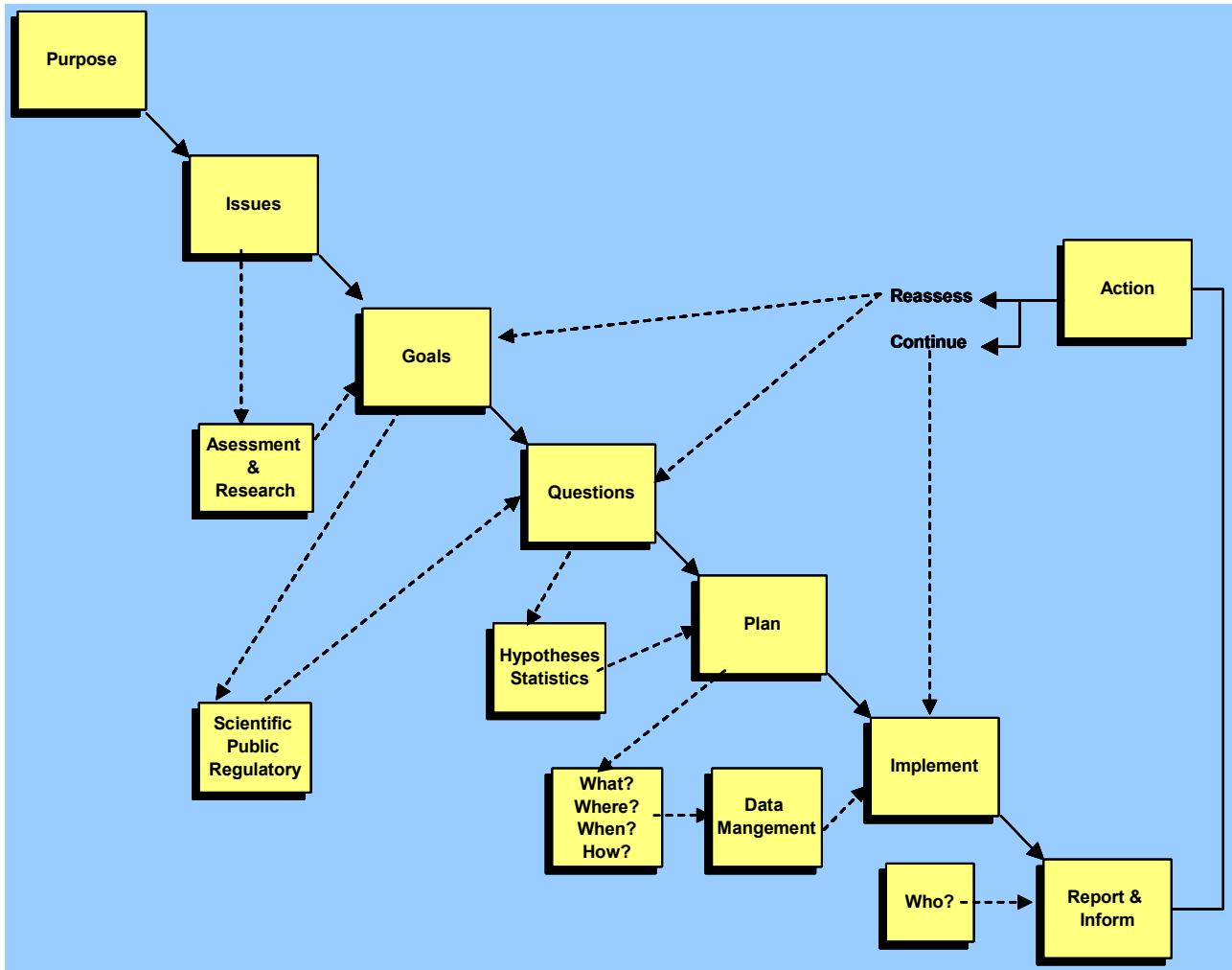
Based on the questions, a group of indicators will be chosen to answer those questions. It was suggested by one participant presently working on collecting and synthesizing data on over 50 indicators, that the number of questions and key indicators initially be limited to 10-15. Otherwise, it might be too hard to compile and manage the data. Every indicator chosen will need to have baseline data collected, good region wide projections at local and regional scale responses developed, and monitoring maintained for more than just a couple of years. Thus, by initially limiting the number of indicators, the program will more likely be able to complete the tasks and reach goals.

3. The monitoring program should be integrated into the decision-making system, with decision points and feedback loops clearly established before the data are collected.

To ensure that an integrated decision-making system is developed, several participants suggested that groups that are already developed and working (e.g., Gulf of Maine [GOM] Council with financial support for the program coming from elsewhere, Long Island Sound Study [LISS]) be used to get the coordinated monitoring program started rather than starting from scratch. It was felt that these groups could assist in moving the group forward at a quicker pace. Once the common needs for the strategy were defined, the large monitoring programs not involved with the group could then be approached to join.

It was suggested that once the appropriate questions and indicators have been determined, and information developed on who is presently collecting data on the indicators, the group try to identify what data are being collected correctly, what data collection process needs help, and where data gaps may exist. These needs can be determined through an intercalibration exercise.

Then, if needed, the program can move towards standardized methods. Everyone agreed that it is easier to compare data if they are collected in a consistent way. The other important aspect that the group will need to include is a monitoring feedback loop. Below is an example of how the feedback loop might take place.



4. Where authority and control reside should be made explicit. Fiscal controls should be compatible with program controls and objectives.

In most instances, it was agreed that it will be difficult to get ongoing monitoring programs (*i.e.*, GOMOOS, MWRA, LISS, Massachusetts Bay NEP) to change their focus and financially support a new effort. To make this a success, the group will need to secure “buy-in” from federal (*i.e.*, EPA, Environment Canada, NOAA, and NMFS) and state agency leaders. It was felt that the development of memorandums of understanding (MOUs) would need to be made to ensure that programs do not back out of the group. It was also suggested that MOUs specify the agreement to standardize data collection and analysis methods (where needed).

5. Channels of communication among agencies and other participating individuals and groups should be identified and efforts made to ensure that the channels are interconnected and functional.

Again, the group suggested that this aspect could best be addressed through the use of various groups that are already working rather than having new groups created (e.g., GOM's Gulfwatch program, GoMOOS, LISS, MWRA, National Coastal Assessment, Mercury Deposition Network). To assist with communication, an implementation plan, program inventory, program description including objectives, and monitoring and data management protocols should be developed to ensure that everyone involved understands how the group will proceed. Then on a predetermined basis, indicator reports and status of the environment reports should be written to communicate the findings of the group.

6. The monitoring program should integrate the regulatory, data, and management needs and responsibilities of the local, state, regional, and federal agencies to optimize the use of available resources.

Although other programs, like SCCWRP, integrate regulatory and management needs and responsibilities into their programs the consensus of the group was that this regional strategy should not go beyond coordinating, collecting, and disseminating monitoring data. Several participants emphasized that regulators will have difficulties with a regional monitoring program carrying the data into interpretation and management planning. Instead, a coordinated monitoring group could first provide data that regulators would find useful in assessing water quality and management needs. If the regional strategy provides useful advice and creates a valuable forum for discussion on how each jurisdiction can better manage their waters, or make recommendations for comprehensive management that cannot be handled at the state/province level, regulators should be more open to participation.

For this strategy to work, the participants felt that the major monitoring groups needed to be involved in this process. These included: EPA's National Coastal Assessment, the Gulf of Maine Ocean Observing System, Gulfwatch, Plum Island Sound LTER, Massachusetts Water Resources Authority, National Estuary Programs, National Estuarine Research Reserve Sanctuaries, NPS, aquaculture monitoring programs, and industry (e.g., nuclear power plants, Pfizer). Without the large monitoring programs, the group will not have the critical mass needed to move forward. This is not to say that other smaller programs or new programs are not needed, because they might be. However, due to the lack of funding in most areas, data will need to be extracted from existing programs, and then augmented where needed.

7. Viable mechanisms should be established to involve the public and the scientific community as program participants early and often.

The following suggestions were made to involve both the public and scientific communities in program participation:

- Develop a Technical Advisory Staff to assist the Steering Committee.
- Establish a library/resource center for methods and intercalibration results that scientists involved with the program would have access to.
- Establish a Hotline for reporting critical events (e.g., sudden unexplained changes) and a Website for forum interactions between scientists from different areas of the region or between scientists and the public.

- Develop products based on good science but be public friendly.
- 8. The monitoring program should include built-in mechanisms to ensure that its conclusions are communicated to decision makers and the public in terms that they can understand and act upon.**

Most participants felt that it is very important to communicate the findings of the program to managers and the public to show value in the efforts made. To support managers in making decisions the groups noted that the following items would be of assistance:

- Develop periodic assessments and maps.
- Develop data integration and interpretation tools.
- Produce products that have integrated assessments that can draw conclusions and relate changes to stressors.
- Provide a vehicle for workshops, seminars, and other opportunities to share knowledge.
- Provide reports on the socioeconomics of impacts and actions/inactions.

The public, on the other hand, is more interested in knowing things like “What is the status of the environment (encompasses a variety of spatial scales and ecological compartments); is it improving or not? What are the scales of influence? What are the trends? What are the responses throughout the system? Are the responses local or regional? By what amount? How sensitive are various biogeographic areas? Are management strategies working? Reports directed at these answers must also be considered for publication.

- 9. Monitoring programs should include mechanisms for periodic review and easy alteration or redirection of efforts when monitoring results or new information from other sources justifies a change.**

It was agreed that an assessment of the program should be done on a 5-year basis to ensure that the program is completing its overall goals. This assessment would best be conducted by an outside firm. In addition to the 5-year reassessment, a yearly or biyearly internal assessment could be made through the monitoring feedback loop (see answer to question 3 above) and external peer-reviews could be sought on products generated by the program.

- 10. The management action to be taken in response to both the expected results and unexpected but possible outcomes should be identified in advance.**

Monitoring provides measures of environmental condition and changes in that condition. Managers can use these results to check the outcomes of their decisions. An adaptive management or learning process results, which leads to constantly improving, better informed, smarter decision making. An interactive approach to management based upon accumulated experience on the effectiveness of the initial management approach can become an added benefit. Documentation of environmental condition could take the form of easily understood “state-of-the-environment” reports. These reports might be geographically based or issue based or both.

The consensus of the group was that this regional strategy should not go beyond coordinating, collecting, and disseminating monitoring data. Data interpretation and management planning should be left to the regulators already managing the areas, but the coordinated monitoring group could first provide data that regulators would find useful in assessing water quality and

management needs. If the regional strategy provides useful advice and creates a valuable forum for discussion on how each jurisdiction can better manage their waters, or make recommendations for comprehensive management that cannot be handled at the state/province level, regulators should be more open to participation.

In addition to the 10 steps above, marketing the coordinated monitoring effort to program managers was stressed as an important step in the coordinated regional monitoring strategy process:

Marketing the Coordinated Monitoring Effort

Several participants felt that the coordinated monitoring strategy would not be successful without proper marketing of the ideas and goals. It was felt that to get involvement in the process, compelling issues to join would need to be properly communicated. Packaging the purposes and values of the network is key to getting partners and funding to support the network. It was suggested that a “market strategy” be prepared with compelling arguments on how regional monitoring will help those making management decisions. Then someone should go out and actually market the strategy to policy makers, managers, and the public.

In support of this, a fact sheet will be developed to assist people in educating their management on the goals of the coordinated monitoring strategy.

Next Steps to Implement

To ensure that the process of developing a coordinated monitoring strategy continues, a Steering Committee/Planning Group will be maintained to coordinate the next steps towards developing the strategy and coordinating efforts. Below is a listing of next steps and a suggested timeframe for completion.

0-6 months

- Report/Proceedings including recommendations from summit (purposes, approach, questions to answer)
- Steering Committee/Monitoring Council (Including terms of reference)
- Begin workplan for implementation:
 - Short>intermediate>and long-term products (demonstrations)
- Coalition building with partners (in-kind)
- Fact sheet-summarizing purpose/need and webpage (maps)
- Committee to prepare future Indicators Workshop

6-9 months

- Establish Fiscal Agent
- Short-term products (e.g., GIS monitoring inventory)
 - Critical to assess user needs and focus monitoring priorities
- Presentation of plan to GOM Council and other partners

9-12 months

- Staffing
- Seed money generation
- Intermediate products- Draft indicators report (NCA spin off with Peter Wells input)

12-18 months

- Workshop/Conference on Indicators and orientation of partners

18 months- 2 years

- Long-term product-State of the Environment Report-including what we have and don't have (Approach)
- Dedicated funding
- Increase Staffing

APPENDIX A

Invitation Letter and Agenda

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Atlantic Northeast Coastal Monitoring Summit

December 10-12, 2002
New England Center
Durham, NH

Greetings!

The Atlantic Northeast Coastal Monitoring Summit Steering Committee invites you to participate in workshop a to develop a framework and strategy for a Regional Monitoring Network for the northeast coastal region of the United States (including coastal Atlantic from New York to Maine)

and Canada (Gulf of Maine). Participation is by invitation only so your involvement in this meeting is important to its success. The workshop, sponsored by the US Environmental Protection Agency - Oceans and Coastal Protection Division, is being held at the New England Center located on the campus of the University of New Hampshire, Durham, NH. Registration for the meeting is from 11:00 am to 1:00 pm on Tuesday, December 10 with the workshop beginning promptly at 1pm. We plan to conclude on Thursday, December 12 no later than noon.

We will discuss information on the benefits of regional monitoring including a keynote presentation by Dr. Stephen Weisberg, Executive Director of the Southern California Coastal Water Research Project, a joint powers agency focusing on marine environmental research. He will give his perspective on planning, developing, and coordinating a regional monitoring program. Presentations and discussion of current monitoring efforts and future needs will be an important part of the workshop and provide information to update the straw regional monitoring strategy and framework developed by the workshop steering committee. The format of the workshop is informal and includes plenary presentations, posters, and breakout groups. This effort is an **extremely** important working\planning initiative for identifying ways to improve present and future coordination among international/federal, state and other jurisdictional monitoring efforts throughout the region. In addition, it will provide the EPA, regional entities, and state monitoring programs with important input regarding their coastal monitoring, assessment and ecological indicators development. Please come prepared to discuss items on the agenda including any proposed enhancements, changes, or modifications to the straw regional framework you would like to propose. Several important documents and instructions regarding the workshop are attached.

Agenda and Workshop Materials

Attached please find a copy of the workshop agenda. Updated workshop information will be available on the Atlantic Northeast Coastal Monitoring Summit website [www.atlantic-ne-monitoring.net] for your review prior to the meeting. You can register via the website beginning on October 7, 2002. **The deadline for registration is November 15, 2002.****Poster Session Instructions**

We encourage participants to develop and present posters on the following topics: Hydrography/Profiling, Fish/Crustaceans/Shellfish Community, Water Column Chemistry, Habitat/SAV, Plankton/Zooplankton, Emerging Issues, and Sediments/Benthos. The poster presentations are intended to help inform participants of current monitoring activities, provide information on the location and scale of active programs, show where present monitoring links to the ecological basis of the coordinated monitoring being developed, and provide opportunities of participants to network with each other. Poster presentations should be designed to support the workshop discussions and expected outcomes by presenting information that addresses the following: Purpose and goal(s) of the monitoring program including any regulatory mandates, Agencies/entities funding the program and parties conducting the monitoring, Questions being addressed, and the type, location and frequency of measurements. Presentation of monitoring data and results should be at a summary level and limited to information that will support discussions on the strategy and framework.

Hotel Reservations

A block of rooms has been reserved at the New England Center for those needing to stay overnight. The rate reserved under this room block is \$89.00 per night plus tax. Hotel reservations must be made through Battelle by November 15, 2002. **Payment for hotel accommodations is the responsibility of each individual attendee upon arrival.** Cancellations must be made before November 26, 2002 or the attendee will be responsible for full payment of the evenings reserved. **Please indicate on your registration form the nights you will need accommodations.**

Limited funds are available for travel support to those state, local, and academic individuals that would not otherwise be able to attend. Since these funds are limited, we would like to reserve them for individuals with insurmountable travel obstacles. Please inform Barry Burgan at (burgan.barry@epa.gov) if you need travel support to ensure that you can attend the workshop.

Workshop Registration Information

Space for this meeting is limited therefore, **it is crucial that you register or decline by November 15th.** If you have any questions regarding registration or logistical information please contact:

Melissa Manley
Battelle
397 Washington Street
Duxbury, MA 02332
781-952-5365
manleym@battelle.org

On behalf of the Steering Committee we appreciate your timely response and look forward to a very productive exchange of information at the workshop!

Steering Committee Members:

Barry Burgan – U.S. EPA

Marilyn ten Brink – U.S. Geological Survey

Chris Deacutis - Narragansett Bay Estuarine Research Reserve and National Estuary Program

Lee Doggett - Maine Department of Environmental Protection

David Dow – NOAA/ NMFS

Michelle Dionne - Wells National Estuarine Research Reserve

Diane Gould – U.S. EPA Region 1

Steve Jones – University of New Hampshire\Gulf of Maine Program

David Keeley - Maine State Planning Board

Christian Krahforst - Massachusetts Coastal Zone Management

Gary Matlock - NOAA

Terry McTigue - NOAA

Gerald Pesch – U.S. EPA Narragansett Bay Laboratory

Andrea Rex – Massachusetts Water Resources Authority

Keith Robinson - U.S. Geological Survey

Jan Smith - Massachusetts Bays Program

Paul Stacy – Connecticut Department of Environmental Protection

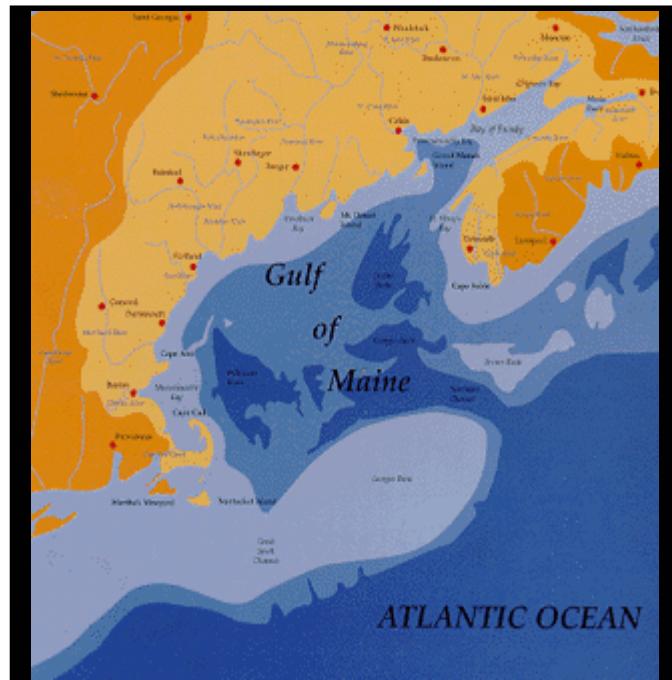
Atlantic Northeast Coastal Monitoring Summit

December 10-12, 2002

New England Center
Durham, NH

Summit Outcomes – this “working summit” will:

- Develop an ecologically driven basis for coordinating selected monitoring programs in Atlantic Northeast coastal waters
- Develop a framework for a regional monitoring network; and
- Identify new regional monitoring needs and corresponding research needs that respond to the region’s pressing management needs.



Day 1: Tuesday, December 10, 2002

11:00 – 1:00 Registration

**1:00 – 1:35 Workshop Welcome, Introductions, and Charge to Workshop
Barry Burgan, EPA**

This will be a 15-minute presentation on the vision and goals of the summit with a 20-minute question and answer session following the presentation. This will allow people time to clearly understand what needs to occur over the next couple of days.

1:35 - 2:00 A Need for Regional Management

Paul Stacey, Connecticut Department of Environmental Protection

This will be a 10-minute presentation on the pressing regional management issues that show us the need to consider developing a regional monitoring network. This will be followed by a 15-minute question and answer period for clarifying comments.

2:00 – 3:00 Making the Case for a Monitoring “Network”

Dr. Stephen Weisberg, Southern California Coastal Water Research Project

Keynote Speaker: Dr. Stephen Weisberg is the Executive Director of the Southern California Coastal Water Research Project. SCCWRP is a joint powers agency focusing on marine environmental research. Its mission is to gather the necessary scientific information so that its member agencies can effectively, and cost-efficiently, protect the Southern California marine environment. One of SCCWRP's areas of research emphasis is development of integrated, coordinated regional monitoring about the condition of the Southern California Bight. He will give his perspective on planning, developing, and coordinating a regional monitoring plan.

3:00 – 3:15	Lessons Learned Lynn McLeod\Carlton Hunt, Battelle
Applicable lessons from other programs will be reviewed and followed by 20 minutes of Q&A.	
3:15 – 3:30	Break
3:30 – 4:00	A Framework for a <i>Regional Monitoring Network</i> David Keeley, Maine State Planning Office A summary of the function and form of a regional monitoring network with an introduction to the potential initial habitat, nutrients and contaminants thrusts.
4:00 – 5:00	What is our base – an overview of current monitoring programs Christy Finlayson, Gulf of Maine Council Monitoring Coordinator The session will provide an overview of the monitoring inventory that describes Federal, state, and local programs and categorizes them by parameters monitored. Discussion will focus on the environmental questions/drivers the monitoring seeks to address and will provide a question and answer period to clarify information presented and identify programs omitted.
5:00 – 6:30	Poster Session (Cash bar & food) Posters on monitoring efforts throughout the region, organized along the following topics, will be on display for the duration of the workshop. <ul style="list-style-type: none"> Hydrography/profiling Water column chemistry Plankton/zooplankton Sediments/benthos Fish/crustaceans/shellfish community Habitat/SAV Emerging issues Other

Day 2: Wednesday, December 11, 2002

07:30 – 8:00	Coffee
8:00 – 8:30	Overview Carlton Hunt, Battelle This session will provide an overview of how the breakout sessions will unfold and answer questions that may have arisen during the preceding day. In addition, Barry Burgan, EPA and Peter Wells, Environment Canada will give brief overviews of efforts throughout the United States and Canada to coordinate monitoring efforts.
8:30 – 10:00	<u>Work Group Session #1 -- Building the Monitoring Network</u> Six breakout sessions using the themes of habitat (2 sessions), nutrients (2 sessions), and toxics/contaminants (2 sessions) and the corresponding straw-man proposals will form the basis of sessions. Facilitated discussions will focus the following questions: <ul style="list-style-type: none"> ▪ Is the “form and function” matrix clear (its purpose and content)? Are the text explanations provided for each shaded box adequate/appropriate? ▪ Does the workgroup concur with the options selected (e.g., shaded boxes)? Can the group reach consensus on the best “set” of boxes to describe the network? ▪ Does the group understand the rationale, endgame & conceptual costs and benefits of a network?

Breakout Group Facilitators/Recorder	
Habitat	
Group 1 Facilitator: Judy Pederson, MIT Sea Grant Recorder: Jan Smith, Massachusetts Bay National Estuary Program	Group 2 Facilitator: David Keeley, Maine State Planning Recorder: To Be Determined
Nutrients	
Group 1 Facilitator: Carlton Hunt, Battelle Recorder: Chris Deacutis, Narragansett Bay National Estuary Program	Group 2 Facilitator: Rich Langan, CINEMAR/CICEET Recorder: Christian Krahforst, Massachusetts Office of Coastal Zone Management
Toxics	
Group 1 Facilitator: Barry Burgan, EPA Recorder: Christy Finlayson, Gulf of Maine	Group 2 Facilitator Sean Brilliant, St. John ACAP Recorder: Gerry Pesch, EPA

10:00 – 10:30 Break

10:30 – 12:00 Work Group Session #2 – Focusing on the Management Issue

The same 6 breakout sessions will meet and discuss the following questions:

- What is missing from the monitoring variables list? (Priority monitoring variables are highlighted in blue.) What modifications does the group suggest?
- What significant current monitoring programs are missing from the chart? Which of the current monitoring programs are key to the success of the network?
- What variables must be included to effectively address the management issue?

Same Facilitators and Recorders as Work Group #1

12:00 – 1:00 Buffet Lunch

1:00—3:30 Work Group Session #3 – Organizing the Network

The same 6 breakout sessions will meet and discuss the following questions:

- What monitoring needs are not currently being met? What supporting research (within the theme area) is needed to provide managers with the tools to make informed decisions?
- What are some funding mechanisms and sources to initiate the network
- What does the group suggest are next steps over the coming 12-months

Same Facilitators and Recorders as Work Group #1

3:30 to 4:00 Break

4:00 – 5:00 Work Group Session #4 – Identifying Priority Unfulfilled Monitoring Needs & Research

The same 6 breakout sessions will meet and discuss the following questions:

- What new monitoring is required to address other regional issues?
- What research is needed to support monitoring?

5:00 to 6:30 **Evening Reception**
Hosted by the Alliance for Coastal Technology and the Cooperative Institute for Coastal and Estuarine Environmental Technology

7:00 to 8:30 **Optional Evening Session**
The summit is focusing on the region's three priority management issues by developing three straw-man proposals. There may be other issues that some participants may want to discuss. This optional evening session will provide a time for that discussion.

Day 3: Thursday, December 12, 2002

07:30 – 8:00 **Coffee**

8:00 – 10:00 **Plenary Session**
David Keeley, Maine State Planning Office; Diane Gould, EPA
This will be an integrated presentation of the results of the three breakout groups that identifies crosscutting needs, core principles, and raises questions for further discussion.

10:00 – 10:15 **Break**

10:15 – 11:15 **Organizing to Implement**
Barry Burgan, EPA; Carlton Hunt, Battelle
What has to happen next in order to implement the program?

11:15 **Closing remarks**

12:00 **Summit adjourns**

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APPENDIX B

List of Attendees

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December 10-12, 2002
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