

CHAPTER 1

INTRODUCTION



1. INTRODUCTION

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1.1 WHAT IS AN INTEGRATED ASSESSMENT?

An integrated assessment (IA) brings together policy makers, scientists, and key stakeholders to address a common issue of concern through collaboration and a formal analysis process. An IA is an approach to synthesizing and delivering relevant, independent scientific input to decision making through a comprehensive analysis of existing natural and social scientific information in the context of a policy or management question (Michigan Sea Grant [MSG], 2005a). The goal of an IA is to link existing natural and social scientific knowledge about a problem with policy options in order to help decision makers evaluate possible actions.

Integrated assessment is formally defined as an interdisciplinary process of combining, interpreting and communicating knowledge from diverse scientific disciplines, in such a way that the whole set of cause-effect interactions of a problem can be evaluated from a synoptic perspective with two characteristics: (1) it should have added value compared to single disciplinary assessment; and (2) it should provide useful information to decision makers (Rotmans & Dowlatabadi, 1997).

Integrated assessments are useful for ensuring that both economic and environmental interests are represented in management decisions by including representatives of both the natural and social sciences. Additionally, by not recommending one specific option, policy makers can select the best option of many. Independent peer review of scientific information also adds credibility to the process. This process has been used to evaluate long-term and complex issues such as global climate change and hypoxia.

1.2 INTEGRATED ASSESSMENT EXAMPLES

The U.S. National Assessment of the Potential Consequences of Climate Variability and Change, conducted from 1997 to 2000, was based on IA methodology. The goal of the assessment was to analyze and evaluate what was known about the potential consequences of climate variability and change for the United States in the context of other pressures on the public, the environment, and the nation's resources. The assessment was mandated by the *Global Change Research Act of 1990* (P.L. 101-606) and was directed by the Committee on Environment and Natural Resources (CENR) in the National Science and Technology Council (NSTC) of the US Federal government. The process involved a broad spectrum of stakeholders from state, local, tribal, and Federal governments, business, labor, academia, non-profit organizations, and the general public. Analysis of climate variability and change was based on existing scientific literature. These analyses were linked to coping strategies to be implemented by planners, managers, and other decision makers at the local, state, and federal levels. The assessment process was founded on the principles of scientific excellence and openness and was designed to be comprehensive, integrative, and iterative. It culminated in a report delivered to the President and Congress,

documenting climate issues of regional and national importance and climate change implications for the nation over the next 25 and 100 years (National Assessment Synthesis Team, 2001).

Similarly, an integrated assessment process was used to evaluate the causes and consequences of the dead zone in the Northern Gulf of Mexico in accordance with the *Harmful Algal Bloom and Hypoxia Research and Control Act of 1998* (P.L. 105-383). This IA was also directed by the CENR and was conducted from 1998 through 2000. The assessment was led by the National Oceanic and Atmospheric Administration (NOAA) and included teams of academic, federal, and state scientists, engineers, and economists that analyzed existing data and documented the state of knowledge of the causes and effects of hypoxia in the Gulf of Mexico. Six interrelated, peer-reviewed reports were produced that examine various natural and social scientific aspects of the hypoxia issue (Committee on Environment and Natural Resources, 2000). The IA drew from the results in these reports and provided the basis for the development of an action plan that identifies management strategies for reducing, mitigating, and controlling the hypoxic zone (Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, 2001). The final *Integrated Assessment of Hypoxia in the Northern Gulf of Mexico* was released in 2000 and the *Action Plan* was released in 2001.

1.3 NORTHEAST MICHIGAN INTEGRATED ASSESSMENT

Michigan Sea Grant (MSG), part of the NOAA-National Sea Grant network of 30 university-based programs, uses the IA process to fulfill its mission to enhance sustainable use of the Great Lakes and Michigan's coastal resources. Michigan Sea Grant initiated a pilot IA project in 2005 that began MSG's new research program focusing on improving environmental decision-making through IA.

The assessment process used by MSG follows a series of five steps. After working with stakeholders to identify a policy or management question to be addressed by the IA, a value-independent description of the status and trends of environmental, social, and economic conditions related to the question is documented. Second, the causes and consequences of the environmental, social, and economic conditions are described using model simulations, statistical analyses, or other tools. Next, after a stakeholder process identifies desired future states, forecasts of conditions under various policy options are provided to identify potential scenarios that achieve those future states. Fourth, guidance for implementing each option is given, often through cost-effectiveness or cost-benefit analysis. Finally, an assessment of the level of certainty associated with the information produced is provided (MSG, 2005a).

The first IA led by MSG was conducted for the three-county region of Presque Isle, Alpena, and Alcona Counties in Northeast Michigan. The local focus and comparatively small scale of the Northeast Michigan Integrated Assessment (NEMIA) make this process unique compared to previous IAs that address environmental issues at the global or national scale.

This coastal area in Northeast Michigan along Lake Huron includes rich natural and cultural resources. Historically, the region has depended on its natural resources and accessibility to the Great Lakes for economic development, including lumbering in the nineteenth century and mining, manufacturing, and some agriculture in the twentieth century. However, lost jobs in

mining and manufacturing, an Air Force base closure, and a decline in the agricultural sector have resulted in high unemployment in the area over the past few decades. According to the 2000 census, population increases in the region over the past ten years have been modest as the number of residents ages 45-54 increased while the number of residents ages 20-34 decreased (Northeast Michigan Council of Governments, 2007).

As a result of these changes in the region, community leaders have turned to tourism to boost the economy by promoting the natural and cultural resources unique to the area, especially those associated with the coast. Tourists who visit the rugged beauty of the Lake Huron coastline may enjoy the inland forests and wetland habitats, shoreline ecosystems, and the numerous lighthouses and shipwrecks that dot the coast. In fact, the Thunder Bay National Marine Sanctuary, the only such sanctuary in the Great Lakes, is located just off the coast of Alpena, in the center of the study area. Additionally, there are several state-owned public lands in the area which have remained undeveloped. The coast provides natural resources-related recreation such as fishing, birding, boating, swimming, camping, hiking, and kayaking.

Despite the great potential for economic development, the communities located here wish to proceed cautiously to avoid overdevelopment and destruction of the area's unique resources. There are also several barriers to growth in the region which are addressed in the IA. First, access to the region is limited to the US-23 corridor, a highway that originates in southeast Michigan and runs north-south along Lake Huron in the study area. Improving access to the region is necessary for continued tourism development. Secondly, tourism has traditionally focused on hunting and fishing but health issues in the deer herd and salmon fishery have depleted this base. More diverse, low impact uses of the area such as birding, kayaking, and maritime heritage interests could be developed. Third, tourism opportunities have traditionally been marketed independently without regional planning, coordination, or integration. Finally, the resources of the region represent not only a growth opportunity but also a quality of life for local citizens (Northeast Michigan Integrated Assessment [NEMIA], 2005). Again, a balance must be found between these two interests.

Therefore, the key policy question in this IA is:

How can coastal access be designed, in a regional context for sustainable tourism that stimulates economic development while maintaining the integrity of natural and cultural resources and quality of life?

1.4 NEMIA PROCESS

1.4.1 Background

The NEMIA project was initiated in the summer of 2005 when MSG met with various local and state-wide partners to discuss the possibility of conducting an IA in Northeast Michigan. These initial discussions included representatives from Michigan State University Extension (MSUE), the Northeast Michigan Council of Governments (NEMCOG), Thunder Bay National Marine Sanctuary (Marine Sanctuary), and the Michigan Department of Natural Resources (MDNR). Representatives discussed what the central theme and focus of the IA might include, who should

be involved in the process, where funding could be obtained, and the most appropriate scale at which to address the suggested themes.

The overarching goal of MSG's IA program is to improve environmental decision-making. Additionally, as identified in the MSG 2005-2010 strategic plan, one of the statewide areas of work is sustainable coastal communities, focusing on addressing such issues as economic sustainability for coastal businesses, recreational access to the waterfront, coastal infrastructure safety and security, land use impacts on coastal systems, and preserving the historic and traditional uses of waterfronts (MSG, 2005b). This goal, in addition to the contribution of the Northeast Michigan coast to historical natural resource extraction, current cultural and natural resource-related tourism, and local quality of life, implied that an appropriate theme for the NEMIA would be a focus on coastal access and specifically, sustainable use of this resource to enhance local communities and economies.

Additionally, access to state-owned properties in the area, including Thompson's Harbor State Park, Rockport State Park, and Negwegon State Park has been debated over the years by state natural resource management agencies and local community leaders. The responsibility of the MDNR is to protect natural resources such as threatened species and rare habitats within the parks. Community leaders on the other hand, consider access to the parks integral to generating tourism and economic growth in the region. However, decisions by the management agencies have prevented park development to ensure resource protection. The debate over use of the parks resulted in mistrust between the MDNR and local community leaders.

However, as a result of the NEMIA process, the MDNR Parks and Recreation Department began a process for developing management plans for all three of these properties. Considering the history and importance of the park access issue, the timing of the MDNR process was important for the NEMIA discussions. Similarly, the Marine Sanctuary's 5-year Management Plan Review, which focused on maritime heritage assets within the sanctuary boundaries, was also occurring parallel to the NEMIA process. The potential for shared resources between all three of these processes was an important consideration.

Furthermore, although a variety of initiatives targeting coastal access had been developed in the past, efforts were not coordinated amongst participating regional organizations. Therefore, a key purpose of the NEMIA was to synthesize and build upon existing coastal access initiatives for the long-term. Existing research and initiatives in Northeast Michigan include the following:

- US-23 Heritage Route Initiative
- Thunder Bay Maritime Festival
- Huron Greenways study
- Great Lakes Lighthouse Festival
- Sweetwater Trails
- Salmon Tournaments
- Maritime Heritage Tourism Destination Initiative
- Birding Tours
- Lake Huron Circle Tour
- Lighthouse Tours

Although the theme of Northeast Michigan coastal access and sustainable development could address the coastal area from Saginaw Bay to the Mackinac Bridge, the scope of the project was narrowed to encompass the three-county region of Alpena, Alcona, and Presque Isle counties. These counties are in the middle of the coastal region and any work completed here could be valuable for nearby coastal communities as well. After settling on a proposed theme and scope for the NEMIA, the secretariat team, composed of representatives from MSG, MSUE, and NEMCOG, drafted a preliminary stakeholder list targeting local, regional, and state officials from an array of organizations.

1.4.2 Process Details

Two scoping meetings were held in September of 2005 and February of 2006 to introduce stakeholders to the IA concept, discuss the utility of an IA for Northeast Michigan, broaden stakeholder representation, and draft a policy question that would guide the IA. At the time of this writing, four subsequent meetings were held from 2006-2007. These meetings were used to introduce participants to and promote dialogue among the research teams identified by MSG to conduct various components of the overall assessment, to present analyses of the status, trends, causes and consequences of socioeconomic, environmental, and cultural conditions, and to outline a preferred vision for the region as well as policy options for achieving the vision.

Efforts were made to ensure that the most complete representation of stakeholder interests was included in the process. After the secretariat team identified a preliminary stakeholder list, these participants were asked to identify additional community leaders and decision-makers that would drive the process. In total, 32 organizations were represented by 58 individuals at some point during the process, with participation fluctuating over the course of the meetings. Individuals from nine organizations attended at least four of the six meetings held thus far. A majority (68%) of the participants attended one or two meetings.

MSG assembled five assessment teams to conduct the analyses of area socioeconomic, environmental, and cultural conditions as well as conduct two additional studies concerned with regional planning and zoning and sustainability. As per IA methodology, all analyses were based on existing data; no new data were collected. The teams were represented by individuals from the following organizations:

- *Socioeconomic assessment*: National Marine Sanctuary Program of the National Oceanic and Atmospheric Administration
- *Ecological assessment*: Master's students from the University of Michigan, School of Natural Resources and Environment
- *Cultural assessment*: Michigan Department of History, Arts, and Libraries, the Marine Sanctuary, and students from Alpena Community College
- *Planning and Zoning assessment*: Doctoral students from the University of Michigan, College of Architecture and Urban Planning
- *Sustainable Design Assessment Team (SDAT)*: American Institute of Architects (AIA)

The purpose of each assessment was as follows:

- *Socioeconomic assessment*: Use demographic, economic, recreation, and travel data to create Geographic Information System (GIS) layers, a traffic flow model, and a tourism

economic input model that estimates total visitor spending in the area and associated economic effects.

- *Ecological assessment:* Use GIS layers to highlight the ecologically valuable lands throughout the region to illustrate how policy options can take advantage of natural features while also preserving and protecting their ecological function and value.
- *Cultural assessment:* Use data from existing documents, databases, and initiatives to compile and classify a list of coastal cultural assets of the region, both on coastal lands and in Lake Huron waters.
- *Planning and Zoning assessment:* Conduct content analyses of local comprehensive plans and zoning ordinances, followed by interviews of local elected officials and decision-makers to help evaluate the extent to which plans and codes are designed to effectively manage growth and advance community goals.
- *SDAT Report:* Provide planning and design tools and support to the NEMIA workgroup during the regional visioning process and during the drafting of policy options and strategies for implementation. The SDAT program brings multidisciplinary teams of professionals together with community decision-makers and stakeholders to help them develop a vision and framework for a sustainable future. The program focuses on the importance of developing sustainable communities through design (American Institute of Architects, 2006).

All meetings were held at the Marine Sanctuary's Great Lakes Maritime Heritage Center in Alpena, which is located in the center of the three-county region. Consideration was given for meeting dates that avoided vacation and hunting seasons during which many participants were unavailable. Meetings generally ranged from two to four hours in length, with refreshment breaks to encourage informal discussion. All meetings were facilitated by a representative from MSG or MSUE. Each meeting began with a welcome and introductions led by NEMCOG, a well-known and trusted organization within the region.

Throughout the process, the secretariat team and the technical assessment teams remained distinct from the participant group in terms of decision-making. The secretariat team coordinated meeting logistics and developed draft documents for review by the workgroup, but did not participate in the decision-making process. In addition to the meetings, the secretariat team communicated with participants through email updates and a project website. Feedback on posted draft documents was encouraged. Fact sheets about NEMIA were available on the website for participants to download and distribute to their constituents. Communication with the larger public was made through local newspaper articles outlining the project and its progress.

1.4.3 Meeting Specifics

NEMCOG invited individuals on the preliminary stakeholder list to a scoping meeting in September of 2005. Meeting attendees included 14 representatives from NEMCOG, MSG, the Marine Sanctuary, MSUE county directors and tourism and economic development team members, MDNR Fisheries and Parks and Recreation, Michigan Sunrise Side Tourism Association, Alpena Area Convention and Visitors Bureau, Presque Isle and Alpena Counties, and Alcona County Economic Development Corporation (NEMIA, 2005).

September 23, 2005

Meeting Objectives:

- Review Great Lakes and natural resource assets of Northeast Michigan
- Review the status of existing coastal access tourism and economic development initiatives
- Discuss IA as a tool for sustainable natural resource planning
- Revise the policy question proposed by the secretariat team that would guide the IA

Meeting Outcomes:

- Agreed that the IA process would be a valuable tool as the region considers its future
- Identified additional stakeholders who could contribute to the process
- Revised policy question: How can coastal access and connectivity be designed for sustainable tourism and economic development?
- MSG charged with developing a draft work plan that included identification of individuals responsible for conducting the various components of the assessment

A second scoping meeting was held in February of 2006 at the Sanctuary with the goal of exposing a broader group of stakeholders to the proposed NEMIA project. Individuals representing 29 different organizations were invited to the meeting. A total of 27 stakeholders from 19 organizations attended.

February 9, 2006

Meeting Objectives:

- Review Northeast Michigan Great Lakes coastal access needs and opportunities related to tourism and economic development (IA concept and policy question)
- Describe IA plan and process (i.e., future meetings)
- Introduce new assessment team partners and related progress/resources/opportunities
- Identify potential Task Force members that would offer feedback and advice to the assessment teams, provide communication between the assessment teams and the larger stakeholder group, and receive the final IA report

Meeting Outcomes:

- Revised policy question: How can coastal access be designed, in a regional context, for sustainable tourism that stimulates economic development while maintaining the integrity of natural and cultural resources, and quality of life?
- Received support from the AIA Center for Communities by Design SDAT to help the workgroup develop a future vision for the region and identify issues to be addressed in order to achieve a sustainable future; Northeast Michigan was one of eight communities nationally to receive this award
- Determined not to select a smaller Task Force from the larger stakeholder group due to the high level of interest in the process by all participants and the potential community connections and expertise that each could offer

The NEMIA process was formally initiated in June of 2006 with a kick-off meeting that began dialogue between the technical assessment teams and the workgroup participants. The meeting ran for six hours and lunch was provided. All five assessment teams gave presentations explaining the contributions they could make to the final IA product and requested feedback from the participants as to which issues should be addressed by the analyses and which existing data sources were applicable. Consistent with the previous meeting, 27 stakeholders representing 18 organizations attended.

June 8, 2006

Meeting Objectives:

- Introduce new assessment team partners and review NEMIA concept and policy question
- Establish NEMIA project expectations
- Initiate dialogue with assessment team partners

Meeting Outcomes:

- Assessment teams charged with developing preliminary analyses of existing data for the subsequent meeting

Following the kick-off meeting, a series of three meetings was conducted to present analyses conducted by the assessment teams, receive feedback on these assessments, and to prioritize policy options drafted in response to the assessments. Additionally, the AIA SDAT team visited Northeast Michigan for three days in early August to meet with local government officials in the three counties and fly over the region to familiarize themselves with the area.

August 24, 2006

Meeting Objectives:

- Present preliminary analyses conducted by the socioeconomic, ecological, cultural, and planning and zoning assessment teams
- Identify most important issues to be addressed in subsequent analyses

Meeting Outcomes:

- Assessment teams charged with refining analyses based on participant comments

The SDAT scheduled a meeting in early October of 2006 to present their preliminary analyses. Before presenting to the workgroup, the team spent a day meeting with the NEMIA technical teams and with regional, state, and federal partners in order to become acquainted with the analyses conducted at that point for NEMIA as well as other area initiatives. Additionally, the SDAT traveled to each of the three counties for public discussions with community leaders and stakeholders in each county regarding the NEMIA topic.

The team spent one day analyzing the information they had received and presented their recommendations to the workgroup on October 5. Lower stakeholder attendance (14 individuals) at the October meeting compared to attendance at the previous meeting (23 individuals) was most likely due to participation in SDAT public discussions earlier in the week.

The SDAT presentation was used to launch discussion regarding the development of policy options.

October 5, 2006

Meeting Objectives:

- Present preliminary analyses and recommendations by the AIA SDAT
- Define key terms in the policy question to aid in developing a vision for the region

Meeting Outcomes:

- SDAT team charged with delivering a final written report of their analyses to the workgroup
- Key terms defined by workgroup: coastal access, regional context, sustainable tourism, economic development, integrity of natural and cultural resources, and quality of life
- Secretariat team charged with classifying the key term definitions into policy theme areas and drafting policy options for each theme

The secretariat team postponed additional workgroup meetings until January of 2007. In the interim, secretariat team members drafted a policy option document that reflected workgroup comments expressed at NEMIA meetings and distributed this document to participants for review and comment through December of 2006. Policy theme areas and policy options were finalized and prioritized by attendees at the January meeting using Turning Point® technology. Twenty-five stakeholders participated in this exercise.

January 23, 2007

Meeting Objectives:

- Prioritize policy options based on importance and achievability
- Discuss results of Turning Point® exercise

Meeting Outcomes:

- Secretariat team charged with determining which of the policy options would be further analyzed for forecasting and implementation considerations
- Assessment teams charged with developing forecasts and guidance for the selected policy options

May 10, 2007

Meeting Objectives:

- Present assessment team's policy option forecasts and secretariat's preliminary implementation guidance
- Discuss implementation guidance

Meeting Outcomes:

- Assessment teams charged with writing final reports
- Secretariat team charged with developing final report draft, incorporating assessment team reports and incorporating workgroup input on implementation guidance

As per IA methodology, after this draft is peer-reviewed it will be available for public comment. These comments will be provided in an appendix to the peer-reviewed document as additional information for the workgroup to consider as it transitions into an implementation phase. In anticipation of the public comment period, a newspaper series describing the process and results will be released and public open houses in each of the three counties will be conducted.

1.5 NEMIA POLICY THEME AREAS AND POTENTIAL ACTIONS

The primary objective of the NEMIA is to use the analyses conducted by the assessment teams to draft and evaluate policy options related to sustainable tourism and economic development that can be implemented by the appropriate decision-makers in the region. These policy options were referred to in the NEMIA process as “potential actions”. In preparation for generating effective potential actions, the NEMIA participants used the ecological, socioeconomic, cultural and land-use status and trends assessments, as well as the SDAT evaluation to define key terms in the guiding question. At the October 2006 meeting, the following terms, drawn from the guiding policy question, were defined and reviewed by all members of the workgroup: coastal access, regional context, sustainable tourism, economic development, integrity of natural and cultural resources, and quality of life.

Subsequently, the secretariat team qualitatively prioritized and classified these definitions into policy theme areas. The team used workgroup meeting summaries and related documents, produced through other Northeast Michigan area initiatives that have influenced the NEMIA process, to record the number of times the definitions of the terms in the guiding policy question appeared in the targeted documents. The following documents were used:

- NEMIA Meeting Summaries from September 23, 2005, February 9, 2006, June 8, 2006, and August 24, 2006;
- *Huron Greenways: A System of Land and Water Trails* – Northeast Michigan Council of Governments, 1999;
- *US-23 Sunrise Side Coastal Highway Management Plan* – Northeast Michigan Council of Governments, 2003;
- *Sustainable Development Assessment Team: Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis* – American Institute of Architects, October 5, 2006; and
- *Sustainable Development Assessment Team (SDAT) Report: Envisioning a Future for Northeast Michigan* – American Institute of Architects, October 5, 2006

The definitions that appeared most frequently and were therefore of greatest interest to the NEMIA workgroup were further grouped into overarching policy theme areas. The following five themes resulted:

- Government Coordination and Communication,
- Growing an Entrepreneurial Community and Attracting Business Interests,
- Incorporation of Modern Technologies,
- Natural, Cultural, and Maritime Heritage Resources Tourism, and
- Preserving Sense of Place and Community Character.

Potential actions that could be undertaken by various regional entities to achieve the vision of sustainable tourism and economic development were then drafted for each policy theme area. These actions reflect workgroup comments and concerns expressed at the NEMIA meetings. The actions in bold on the following pages were considered most important and achievable by workgroup members.

1.5.1 Theme 1: Government Coordination and Communication

Improved coordination efforts among various units of government are needed to efficiently and effectively carry out regional and local initiatives. Such coordination brings together the best resources, prevents duplication of efforts, and provides buy-in from various levels of government.

Potential Actions:

- Enhance vertical governmental partnerships (e.g., township to county to state to federal) regionally by coordinating local advisory councils in order to share resources
- Enhance horizontal governmental partnerships regionally by developing a regional Master Plan
- Enhance horizontal governmental partnerships regionally by coordinating existing and future economic development and tourism initiatives across counties (e.g., Sunrise Side Tourism, US-23 Heritage Route, NEMCOG)
- Fully implement community Master Plans and coordinate ordinances with neighboring jurisdictions
- Develop a regionally coordinated strategy to identify governmental, corporate, and foundation funding opportunities

1.5.2 Theme 2: Growing an Entrepreneurial Community and Attracting Business Interests

Fostering both homegrown and external businesses that are loyal to local communities is needed to develop a sustainable regional economy. Pursuing economic diversity by utilizing *all* local resources will ensure a balanced economy.

Potential Actions:

- Enhance cooperation between the public and private sectors to promote business location in Northeast Michigan (i.e., the Chamber of Commerce draws new businesses)
- Educate local government officials about how their actions can encourage or inhibit growth and opportunities
- Recruit coastal businesses such as diving outfitters, marinas, restaurants, and equipment rental and guide services by providing education on how to launch and/or expand a business
- Partner with Alpena Community College to develop marketing strategies
- Support service industry needs by assisting with business management plans for coastal businesses
- Develop restaurants and shops around the commercial fishery
- Develop entrepreneurial lessons in middle school curriculums

- Establish a regional inventor and entrepreneur club for networking and educational purposes
- Establish funding and resources to carry out additional research for future economic decision-making including a study on where users are coming from, regional transportation trends, and a continued cultural assessment

1.5.3 Theme 3: Incorporation of Modern Technologies

Increased use of modern technologies is needed in order to effectively promote the region to non-residents. The use of modern technologies decreases marketing costs over time, ensures that the correct audiences are targeted, and ensures that the most current information is available in a timely manner.

Potential Actions:

- **Increase visibility of the area's resources to non-residents by marketing regional tourism opportunities via the web, providing itineraries for various types of tourism (drive-thru, vacation destination, second or retirement home)**
- Market entrepreneurial opportunities via the web
- Utilize GIS technology to visualize economic and tourism-related trends

1.5.4 Theme 4: Natural, Cultural, and Maritime Heritage Resources Tourism

Establishing diverse tourism opportunities is needed in order to sustain the tourism segment of the economy. Sustainable tourism opportunities that are appropriate to the landscape will protect and enhance resources.

Potential Actions:

- Diversify the tourism portfolio by increasing non-traditional tourism opportunities with viable options for tourism throughout the year
- **Balance the tourism portfolio by maintaining traditional tourism opportunities and connecting natural resources, cultural resources, and maritime heritage**
- Develop coastal access points such as camping, boating, and picnicking facilities in order to increase harbor usage
- Enhance marina access by working with the State Waterways Commission to change seasonal and transient boat slip policies
- Provide interpretive opportunities for greenways and blueways including increased signage and self-guided tours
- Offer guided educational access on the coast
- Coordinate cross-marketing partnerships between natural, cultural, and maritime heritage sites (e.g., the Marine Sanctuary interprets cultural and maritime heritage resources at state park lands)
- **Market NE MI as a maritime heritage and nature-based tourism destination**
- **Capitalize on the presence of the Marine Sanctuary to build complimentary enterprises**
- **Utilize the Marine Sanctuary as a gateway visitor center for regional opportunities**

- Develop advisory groups for state and federal planning processes that affect local natural, cultural, and maritime heritage resources (e.g., an advisory council for state parks on the model of the Marine Sanctuary advisory council)
- Network state lands through the state parks planning process

1.5.5 Theme 5: Preserving Sense of Place and Community Character

Protecting and enhancing the distinguished physical and social quality of the region reinforces a sense of place and community character. Such qualities are attractive to residents and non-residents alike.

Potential Actions:

- **Increase public awareness of regional resources through education and outreach campaigns**
- Develop place-based education curriculums for K-12 students
- Provide view-sheds along coastal highways
- Protect and enhance the unique and diverse character of regional city and village centers through distinct shops, restaurants, and festivals
- Protect quality of life by balancing local resources with economic development needs
- Protect historic architectural resources through local ordinances
- Enhance community and regional recreational and social opportunities by providing spaces for community interaction
- Preserve working landscapes through tools such as conservation easements and purchase of development rights

1.6 RANKING POTENTIAL ACTIONS

Considering the large number of proposed potential actions and the limited resources available to develop forecasts and implementation guidance for each action, it was necessary to narrow the list to those deemed most valuable by the NEMIA participants. The policy theme areas and potential actions were prioritized at the January 2007 workgroup meeting using Turning Point® technology. Turning Point® is an interactive tool that provides audience polling and results in-real time. Participants can rate lists on a scale or prioritize lists through forced-choice comparisons and results can be displayed immediately on-screen. Such a tool ensures that all participants have an equal voice in decision-making. Twenty-five stakeholders participated in this exercise.

Policy theme areas were ranked using forced-choice comparisons in response to the question: “Which is more critical?” The percentage of time a theme area was selected as “most critical” is as follows:

- 1 - Preserving a Sense of Place and Community Character: 65%
- 2 - Natural/Cultural/Maritime Heritage and Resources Tourism: 55%
- 2 - Growing an Entrepreneurial Community and Attracting Business Interests: 55%
- 3 - Government Coordination and Communication: 35%
- 4 - Incorporating Modern Technologies: 25%

Potential actions within these theme areas were ranked on an eight-point scale in response to the questions: “How important is this action?” and “How achievable is this action?” On the scale, zero referred to “not important” and “not achievable” while eight referred to “most important” and “most achievable”. Six potential actions scored six or above on both the importance and achievability scale. These six actions are bolded in the above list. Assessment teams focused forecasting and guidance efforts on these six selected policy options and presentation of implementation considerations is scheduled to occur in early May of 2007.

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