

Coastal Community Development and

Data Information Integration and Distribution Analysis

The following is a summary and analysis of findings thus far from the literature search, interviews with planning team members, and February 13-14th meeting discussions as part of the Great Lakes Needs Assessment. The analysis contains the following information:

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Definitions of Key Terminology for the Needs Assessment

Based on the discussions, staff is proposing that the following definitions be used for the discussion here and within the next phase of the needs assessment.

Coastal Community Development (CCD) is the actions (land and infrastructure planning processes, plan implementation, land and infrastructure management, land use education, and land use regulation) taken by the various levels of government (local, state, regional) that lie within coastal areas of the Great Lakes Region to ensure sustainable development.

Data Information Integration and Distribution (DIID) – This area of discussion includes issues relating to collecting and managing data, integrating data into management decisions regarding Great Lakes resources, and distributing data and information to user groups.

Sustainable development according to the Brundtland Report, a 1987 report from the United Nations, is a process of developing (land, cities, business, communities, etc) that "meets the needs of the present without compromising the ability of future generations to meet their own needs". One of the factors which it must overcome is environmental degradation but it must do so while not forgoing the needs of economic development as well as social equity and justice.

Local Government Units (LGUs) – Governing bodies at the county, city, and township level among the eight Great Lake states.

Plan(s) – The local comprehensive land use plans prepared and implemented by LGUs

Local Watersheds are the subwatersheds within a Regional Watershed that may fall across local jurisdictional boundaries (see map 1).

Regional Watersheds are areas defined by the five Great Lake drainage basins and further defined within them by their ecological unity, based on such characteristics as climate, landforms, soils, vegetation, hydrology and wildlife (see map 2).

Regional System or Regional Scale – The all encompassing Great Lakes watershed (see map 2).



Center – specifically used to describe the Coastal Services Center within NOAA

Great Lakes Regional Presence – how CSC is defining its efforts to develop regional support for the Great Lakes

Coastal Community Development (CCD) Analysis

Introduction

This analysis is a summary of the findings to date based on the literature review, planning team member phone interviews and planning team meeting discussions that took place February 13 and 14 of 2006 in Ann Arbor, MI. Out of these discussions three themes clearly emerged that offer a working framework of how a NOAA Coastal Services Center Great Lakes regional presence might best serve the Great Lakes needs. The three major themes can be described as follows:

1. The need to establish a regional vision and framework for Coastal Community Development (CCD) in the Great Lakes. (Coordinate Regionally)
2. Help local leadership understand their link to the Great Lakes Region and encourage them to implement sustainable planning practices that align local decision-makers with this broader regional vision. (Lead Locally)
3. Create a toolbox that will allow local government units (LGU's) to develop effective plans that incorporate coastal community development principles, enable LGU's to understand their regional connections and allow them to better monitor progress and evaluate effectiveness of local decision-making in attaining regional goals.

The two themes (coordinating regionally and leading locally) emphasize the context within which a Great Lakes regional presence would operate by placing the focus on how the local and regional levels interact to coordinate CCD efforts. The third area addresses the practical tools needed to implement a region-wide vision, brings the various stakeholders together, allows for the exchange and dissemination of information, addresses monitoring and evaluation to complete a full planning cycle of issue identification, plan development, implementation, evaluation and plan adjustment.

Coastal community development (CCD) related activities take place at the local, regional watershed and regional system level. Within and among these different levels there is a range of capabilities of entities working on CCD issues. This includes technical capabilities, level of staff training to effectively use planning tools and technology, amount of staff etc. The various state programs and local units of government cover a broad range in their ability to process, educate, monitor, and adapt regional scale tools and models pertinent to CCD with this regional scale in mind. Even the best equipped local government units (LGUs) at this time lack the Great Lakes regional watershed perspective or the capacity or appropriate incentives to employ that perspective in their day-to-day decisions in ways that can reduce negative impacts on or enhance the system.

Need 1: Establish a regional framework to coordinate CCD issues.

Analysis of the literature and discussions to date emphasize **why there is a need for enhanced regional coordination** as observed from the following refined points.

There is a need for:

- A shared vision for the Great Lakes region as a whole. Such a vision is currently not well defined.
- Better characterization of the regional system and regional watersheds. (For the purpose of this analysis working definitions have been proposed at the beginning of this document).
- A common shared understanding of the regional roles and leadership in managing the Great Lakes as a resource (working toward a shared vision).
- The establishment and monitoring of sustainable development indicators on a regional watershed level which requires improved coordination to better measure progress or decline in meeting overall regional system management goals (measuring progress towards attaining the region wide vision).
- The (re) establishment of a more comprehensive/coordinated focus within NOAA on Great Lakes needs and improved linkages with NOAA's audience such as Sea Grant , NEMO programs and CMPs.

Through the literature review, structured interviews with planning team members and planning team discussions the following suggestions were made for how to **establish a framework for regional coordination**. These are outlined below using the same themes identified in the needs above.

Shared Vision

- Coordinate at the regional level-establish a regional perspective.
- Establish a Great Lakes vision that includes societal goals.
- Clearly identify watershed needs on a basin and regional level (for integrating ecosystem management into sustainable planning)
- Promote an integrated, systems approach to addressing stresses on the Great Lakes system addressing root drivers and causal links, rather than managing individual sources of stress.

Shared understanding of need and Leadership

- Establish goals and identify leadership (authority or chain or responsibility) for implementation of region wide goals
- Transfer knowledge and experiences between states and LGU's. Build on regional capacity and experience and prevent LGU's from having to re-invent the wheel.
- Provide for inter-jurisdictional coordination
- Provide regional land use materials from entities with credibility that can help increase awareness of opportunities and needs for the Great Lakes at the local level.
- Engage a diverse array of groups to maintain interest and establish a regional sense of ownership.

Monitoring and Evaluation

- Assist with land use plan evaluations by reviewing its regional components.
- Develop indicators to measure effectiveness of plans attaining regional goals

Great Lakes regional presence as Great Lakes Voice within NOAA

- Establishment of one NOAA location that gives priority to the Great Lakes region's needs.
- Establishment of an entity to prioritize the spending of NOAA assets in relation to their efforts in the Great Lakes Region.
- The region needs an advocate within NOAA, this would include improving the region's access to financial resources through a better understanding of the Planning, Programming and Budgeting System (PPBS) within NOAA as well as an advocate for the region's technical needs. In relation to the resources issue, the region needs to pay attention, not just to federal legislative decisions, but also the administrative process as this impacts resource allocation for the Great Lakes Region.

Need 2: Help Local Leadership understand the link to the regional system

Analysis of the literature and discussions to date established that many of the decisions impacting the regional system are made at the local level on a day-to-day basis. Strengthening the regional coordination by providing regional leadership and creating a regional vision offers a policy framework for the local entities and may influence the LGU CCD actions. This will in turn affect the regional watershed and regional system. The literature and discussions to date emphasize **why there is a need for enhanced local leadership** as observed from the following refined points:

- Communication among LGUs is fragmented and can lead to duplication of efforts.
- Individual actions, taken at the local level, impact the system as a whole. In order for the local decision makers to consider the cumulative impacts of their decisions there needs to be an avenue to help them understand how their actions fit within the regional system. Therefore a regional vision is a critical prerequisite for setting local goals.
- A greater understanding of the connectivity among LGUs using regional watersheds as a geographic organizing principle is necessary to recognize the need for coordination at the regional, state, and local levels.
- In order for local decision makers to incorporate sustainable development principles in their CCD decision making, barriers for incorporating these principles have to be identified and overcome.
- A better understanding of the decision-making process within each LGU can identify opportunities to influence the end results.

Suggestions were made from the literature and discussions on **how to help enhance local leadership**. They include:

Help LGU's understand how their actions impact the regional system

- Provide information to LGUs on how their actions may impact their regional watershed followed by the regional system as a whole in an effort to change actions for a desired sustainable outcome.

- Help increase knowledge of sustainable planning principles and promote a political desire to reflect these principles in local, state, and regional governmental policy.
- Identify opportunities for sustainable development (what are we already doing well in the region?) and lower or remove barriers for change where resistance is present by introducing desirable land use tools.

Promote incorporating sustainability principles into local CCD decision-making

- Help to lower the barriers to applying new techniques (example of translating science into simple tools, or exchange or regional case studies) that foster more informed decisions.
- Provide on-going education to the public sector (boards, councils, commissions, task forces, etc.) and the private sector (developers, realtors, builders, etc.) on CCD issues.
- Help LGU's understand societal and economic benefits of sustainable planning.

Promote data collection at local level to measure how LGUs are meeting regional sustainability goals

- Provide education and training on the use of sustainable development indicator measurement tools to help create greater insight whether goals are met at the regional watershed level. This could be used to create regional peer pressure to hold individual decision-makers accountable.
- Monitor and assess local plans for consistency in addressing CCD issues in the regional watershed.

Need 3: CCD Toolbox

Analysis of the literature and discussions to date established that in support of the “systems approach” discussed above (regional coordination and local leadership), there is a need for tools at the local level that will enable them to work toward the desired outcomes described in the previous two sections. These tools may include a variety of things such as training, development of models, studies and reports, workshops, conferences, educational outreach etc. The literature and discussions to date emphasize **why there is a need for CCD tools** to implement sustainable development principles at the local level that recognize the role of the LGU within a regional watershed or regional (Great Lakes) scale as observed from the following refined points:

- Land use decision-making takes place at the local level and there needs to be an equal platform of data and analysis for LGUs to enhance their decision-making abilities.
- It will create a better understanding of the direct LGU benefits of sustainable practices and help motivate LGUs to implement these practices.
- LGUs are not always aware of or have access to data and models.
- High resolution data is unavailable in some LGUs.
- Data and models will help LGUs account for cumulative and secondary impacts from actions.

- LGU's need more and better information on economic and societal benefits of sustainable development policies and practices.

Suggestions were made from the literature and discussions on **how to help enhance the availability of CCD data and models**. They include:

Communication and Partnerships

- Promote exchange of knowledge and experience around the Great Lakes on CCD issues by organizing a network of planning professionals that can exchange ideas. Prevent LGU's from re-inventing the wheel.

Training and Technical Assistance

- Offer technical assistance to LGU's by providing training on use of available data and tools.
- Coordinate regional watershed data frameworks and educate LGUs on where and how to use the data.
- Train LGUs to monitor and input data into the regional watershed framework.
- Work with CMPs to develop/standardize coastal zone management performance measures. Coordinate with Sea Grant, GLERL and others on how this could inform their research activities. Assist in gathering data for performance measures.

Funding Support

- Identify funding opportunities for research on societal and economic benefits
- Identify funding opportunities for research on development and implementation of regional watershed CCD indicators (building on efforts already underway under SOLEC).

Information Dissemination

- Compile information on best management practices and success stories around the Great Lakes related to land use.
- Assess academia level research and science exploring the needs and themes identified; and
- Translate such academic research results into materials or training that can have practical application on the local level.

Regional Coordination

- Offer leadership in working with CMPs and Sea Grant Great Lakes networks to specify data requirements so data can be used at the local level, but is also passed on to higher(coarser) levels. This could create opportunities to collect and interpret region-wide data trends (Great Lakes Commission and Canada is already doing this in some areas).
- Function as a regional repository of information and data. Assist CMP managers in identification of what information, data and techniques are available. Interpret observing systems data and share this with state programs.
- Monitor needs on an on-going basis.

Data Information Integration and Distribution (DIID) Analysis

Introduction

This analysis is a summary of the findings to date based on the literature review, planning team member phone interviews and planning team meeting discussions that took place on February 14-15, 2006 in Ann Arbor, MI. Out of these discussions two themes emerged that offer a working framework of how a Great Lakes regional presence might best serve the Great Lakes data information integration and distribution (DIID) needs. The two major themes can be described as follows:

1. The need to establish a regional framework to coordinate DIID issues.
2. The need to strengthen local and state leadership by providing tools, products and services geared toward their use.

Regional, state, and local agencies throughout the Great Lakes Region need access to historic and current data to predict trends, reduce impacts, and plan development accordingly. However, with so many levels of various agencies (eight states, two provinces, thousands of LGUs, etc.) working under their own mandates, data collection and management strategies are often inconsistent. Priorities for data collection and management, incentives for implementing standards, and enhanced efforts in sharing data are often overlooked. Information to date indicates that a regional watershed coordinated approach may be an applicable method to move across political boundaries for DIID results. Furthermore, resources in the form of data tools and training are needed at the local and state level to enable informed and efficient decision-making.

Need 1: Establish a regional framework to coordinate DIID issues

Analysis of the literature and discussions to date emphasize **why there is a need for enhanced regional coordination** as observed from the following refined points. There is a need to:

- Promote data and information consistencies among Great Lakes' organizations (local, state, regional and provincial)
- Provide and encourage a shared vision of regional information utility, empowering organizations and agencies to think beyond political boundaries
- Provide data and information to delivery groups (e.g., Sea Grant repackaging of information to meet the unique needs of LGU's)
- Serve as a regional voice
- Support communication opportunities and partnerships between Great Lakes' organizations

Through the literature review, structured interviews with individual planning team members and group planning team discussions the following suggestions were made

for **how to establish a framework for regional coordination**. These are outlined below using the same themes identified in the needs above.

Consistency

- Adopt data standards and promote their use throughout the watershed
- Assist with data rescue strategies to help provide historic data that is consistent with current data standards
- Promote metadata production and its benefits
- Inventory programs to determine compatibility on a regional watershed and/or regional scale
- Design templates for data collection and management to manage data in a similar format across the various programs
- Promote a proactive data management philosophy (rather than a crisis-management philosophy).
- Assess implementability of indicators currently in place to address basinwide assessment needs.

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Shared Vision

- Coordinate at a lake-basin scale to establish a regional perspective

Provide Data and Information to Delivery Organizations

- Transfer knowledge and experiences between states and LGU's. Build on regional capacity and experience and prevent LGU's from having to re-invent the wheel.
- Better understand the needs of state organizations to enhance their ability to serve as a conduit between regional and local entities

Regional Voice

- Attract stable funding specifically for Great Lakes projects by promoting consensus opinions on coordination needs

Communication and Partnerships

- Promote data sharing agreements
- Enhance regional data access and exchange utilizing clearinghouse models and promote multi-agency search engines
- Promote opportunities for organizations to communicate in order to share successes, reduce project duplication, utilize funds efficiently, develop and strengthen partnerships for change, and coordinate activities regionally.

Need 2: Strengthen local and state leadership by providing tools, products and services geared toward their use

Analysis of the literature and discussions to date emphasized that many of the decisions impacting the regional system are made at the local level on a day-to-day basis. By strengthening regional coordination and delivering products and services available at that level to the local level, the regional watershed and regional system will in turn be

strengthened. The literature and discussions to date emphasize **why there is a need to strengthen local and state leadership** as observed from the following refined points:

- LGU's are faced with a lack of time and resources to do their jobs and proactively protect the environment at the same time
- There is a range of capabilities among LGU's that's needs better understanding
- State organizations need to understand the services and products available to them in order to address the needs of local groups

Suggestions were made from the literature and discussions on **how to help enhance local and state leadership**. They include:

Tools and Services

- Provide LGU's an up-to-date toolbox of high-resolution land use/cover maps, parcel maps, terrain data and other watershed-wide data layers to aid in making informed decisions
- Develop LGU-specific mapping applications consistent with their needs and capabilities
- Develop databases and provide technical assistance to help states track performance measures, find funding, and inventory research, monitoring and outreach activities
- Encourage and support workshops/conferences to share successes and develop partnerships

Training

- Provide regional training on metadata development and GIS applications
- Work with state groups to provide training at the local level
- Focus on a Great Lakes education program

Themes common to CCD and DIID

A formal unified regional vision and clarity of leadership in moving toward this vision, is currently absent in the Great Lakes region. As a result, the local entities do not have a regional framework to coordinate their local actions nor can they always understand how their actions impact the system as a whole. There was strong agreement that individual decisions made at this level have a great impact on the overall state of the region. However, it is also recognized that efforts focused at the local level should be grounded in a region-wide perspective and that such a perspective can direct the individual decisions made at the local level toward a common vision for the regional watershed and or the Great Lakes regional system.

- A common shared understanding of the regional system, regional watershed, and LGU roles and leadership in managing the Great Lakes as a resource (includes inter-jurisdictional coordination).
- A shared vision (ecological, economical, societal) for the Great Lakes region as a whole. Such a vision is currently not well defined.
- Coordinate at the regional system level to establish and manage goals toward the regional system vision.
- Improved linkages with NOAA's direct audience such as Sea Grant, CMPs, and state agencies.
- Provide information to LGUs on how their actions may impact their regional watershed followed by the regional system as a whole in an effort to change actions for a desired sustainable outcome.
- Transfer knowledge and experiences among states as well as between states and LGU's. Build on regional capacity and experience and prevent LGU's from having to re-invent the wheel.
- Provide current regional land use/cover data and landscape change assessments that can help increase awareness of local needs
- Produce scientific research and offer it as a practical tool that can be used on the local level.
- Land use decision-making takes place at the local level and there needs to be an equal platform of data and analysis for LGUs to enhance their decision-making abilities.
- Training for LGU's on use of available data and tools.
- Develop networks needed to specify and implement data requirements so data can be used at the local level as well as the regional system level.
- Function as a regional repository of data. Assist states in identification of what data and techniques are available.
- Work on federal policy and regional administrative processes to enhance resource allocation for the Great Lakes Region.

Next Steps

Determining the next steps for this project is based on the project timeline, budget, and analysis provided from the literature and planning teams for the CCD and DIID issue areas.

During February and March, the consultant is summarizing the data to date, defining and refining the audience for both conference calls and surveys, and developing questions for data collection.

In April, six conference calls will be held with state and regional audiences– three for CCD and three for DIID. In early May, the planning teams will discuss the findings and the consultant will then prepare online surveys for the local audiences.

Data will be collected and analyzed and a draft report produced of the 12-step needs assessment process in June. Staff will then meet with the planning teams in June, if necessary for a final discussion of findings to date and recommendations for next steps.