

GREAT LAKES NETWORK CLIMATE EDUCATION AND OUTREACH STRATEGIES: AN INTEGRATED APPROACH

The Great Lakes region includes almost 10,000 miles of shoreline (more than the U.S. East Coast), and 20% of the world's surface freshwater. There are 85 million residents (a quarter of the U.S. population), and 13 million students in grades K-12. The Lakes support the region's economy through manufacturing, shipping, tourism, and other businesses, and provide recreational opportunities for millions of visitors each year.

However, many of these residents and visitors only have a rudimentary understanding of the Great Lakes ecosystem, and about the effects that a changing climate could have on the region. Climate models predict reduced overall precipitation and lowered lake levels, along with an increase in extreme precipitation events and more summer heat waves, all of which would affect the Great Lakes economy and quality of life. Educators – both classroom and place-based – need to be aware of these predicted impacts, and be able to communicate them effectively to their audiences.

Needs for specific education materials are addressed in *Great Lakes Climate Needs - A Guide for Implementation* and in *2013 Teacher Needs Survey* (both available from Ohio Sea Grant). This document focuses on expanding materials to larger audiences, and on improving distribution channels.

Expanding Materials for Larger Audiences

While many education materials tend to be targeted to one audience or another, the information contained in those materials could very well be suitable for other audiences with little adaptation. With budget a concern for many organizations, this repurposing could allow programs to reach a wider audience without much additional cost.

Examples of repurposing could include:

- Turning a graphic or diagram created for a curriculum lesson into a poster for a classroom or place-based education facility, or into a handout for a science fair or Extension presentation.
- Making large-format posters from an education facility or science exhibit available in smaller formats for classroom use, or as newspaper or magazine inserts.
- Fact sheets originally developed for Extension purposes can form the basis of classroom activities.

Once climate information is no longer restricted to activities with climate change as their main focus, further opportunities for information dispersal may become available. Not focusing exclusively on climate impacts, but making these effects a “normal” part of a larger picture could expand audiences by removing the initial hurdle of talking about climate change with those who may be unfamiliar or uncomfortable with the concepts involved.



Extension agents presenting on fishing, for example, can include a few slides on the impacts a changing climate would have on Great Lakes fisheries. Presentations on invasive species can include information on how warmer waters would affect available habitats for current and potential invasive species in the region. And talks on economic development can address warmer weather and lower lake levels along with less climate-dependent influences on life in the Great Lakes.

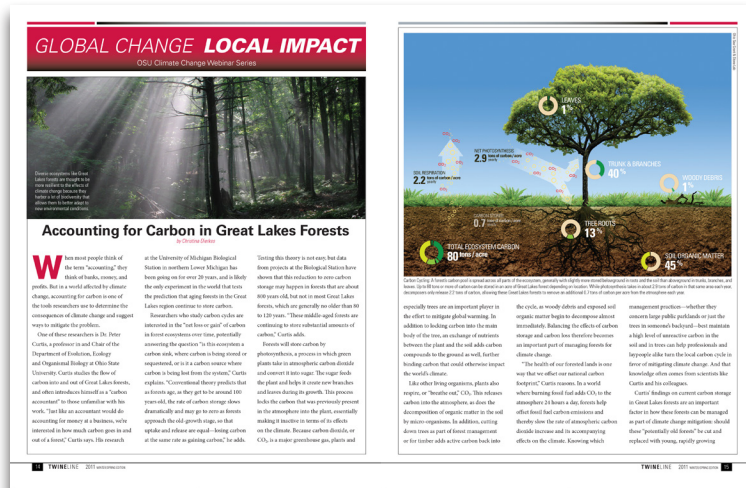
Education materials should be developed to make it easy for educators to adapt their current habits – PowerPoint slides can be created to fit seamlessly into a larger talk, and accompanying background materials can help educators become more comfortable with the materials before presenting. Curriculum activities should be easy to use, with student worksheets already created, so teachers only have to make copies of those sheets before using them in the classroom.

Distribution Channels

Sea Grant programs and other institutions in the Great Lakes region are developing outstanding curricula and activities to support educators in their work, but marketing and distribution of these materials is time-consuming and demanding. It is also never complete because of constant influx of people new to the region or new to the education professions.

Regional websites like changingclimate.osu.edu and greatlakesliteracy.net and institutions like the Center for Great Lakes Literacy can create repositories of education materials from a variety of agencies, and therefore make it easier for teachers to access a range of activities. While no one website can claim to have all materials for Great Lakes education listed in its pages, repositories help educators to explore their options more easily, and can connect them to other sources better than a simple web search would.

In addition, repositories that are carefully curated and include descriptions of the listed activities instead of just a web link can be less overwhelming than those that simply provide a long list of links. A good summary description of the activity may even draw educators into a lesson they may not otherwise have looked at.



While it's important to tailor presentations and handouts at conferences to the correct audience, this doesn't have to mean that something developed "for teachers" isn't of interest to place-based educators and vice versa. Including different types of educational materials on the same handout or the same website (maybe sorted by topic area instead of by audience) can showcase the variety of efforts in which programs are involved while providing educators with ideas for new activities even if the materials are not completely perfect for their setting. In turn, feedback from those educators can help organizations develop new materials that have been requested by the target audiences.

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