



Climate Change Where does it fit in your future plans?



Leslie Dorworth, Aquatic Ecologist, Illinois-Indiana Sea Grant
Robert McCormick, Planning with POWER Project Leader, Illinois-Indiana Sea Grant.

Make It Local

Currently, most of our effort is aimed at managing carbon and climate change at the national and global levels. Most information out there leaves out the local angle, so the public has a hard time connecting with the issue. Because their constituents aren't concerned, neither are local politicians and decision makers who should be planning and preparing for the impact of climate change.

So, how do we make climate change projections understandable and relevant to the general public? How can we help them see it as an important, local issue that local officials should address?

Make It Relevant

The process of making a subject, problem, or issue understandable and securing the most agreement from others is known as *framing*. Whenever we describe a complex problem, we frame it in a manner understandable to our audience. We include local information and data. In other words, we tell a story and tailor the message to the audience. That way, we hope to trigger a new way of thinking about the problem and engage the audience. We hope that the audience recognizes that the issue is important to them and to their community once the local angle is explained to them.

Frame the Climate Message

Unfortunately, climate change is very complex and can be hard to explain. Climate change for a Great Lakes community, in particular, can be a difficult topic to



address. Many people tend to think of changes that may occur in 50 to 100 years. However, we already face climate-related changes that we can discuss as we explain the issue. For example:

- The ice cover on the Great Lakes during the winter months is much thinner than it used to be.
- Storm events are more intense and frequent during the late winter and early spring seasons, which leads to increased periods of drought in the summer.

And as the climate changes in these ways, business and lifestyles in communities in the Great Lakes region are likely to change. Some lifestyle changes might include:

- fewer winter outdoor activities such as ice fishing due to reduced ice cover,
- reduced crop yields due to increased drought in the summer months,



- a move to new crops, which could cause higher food prices,
- reduced ethanol production and exports, and
- stress on limited water supplies due to reduced water levels.

Reframe the Message—Tell a Story

Most climate change messages that the public is exposed to need to be reframed in a manner that makes the issue relevant to them and to other people. Once reframed, each person can build a personal interpretation of the issues based on personal experiences, beliefs, attitudes and knowledge. The original message or frame is only useful if the public sees it as personally relevant as a result of effects on their pocketbook, family, lifestyle, and local community.

Use Science and Policy to Build the Bridge

Science is on one side of the climate issue and policy is on the other side. We need to build a bridge to span the gap. Therefore, science should be the knowledge base from which we develop a clear, concise, and meaningful message to send to the public and policymakers. The message needs to address the attitudes, values, and perceptions of the target audience. It can be communicated through methods such as focus groups, surveys, mass media, and social networking sites.

Ultimately, the connection between the science of climate change and policy must become part of the local agenda for county and municipal governments if we hope to prepare to deal with climate change.

Again, make it relevant to the public; make it understandable; make it important!

Plan for Climate Change at the Local Level

A planner who is thinking locally needs to assess what members of his or her community think are important issues that may have an impact on their current and future quality of life. He or she might start by asking questions such as the following.

1. What might be the local impacts of continued climate change for my city or community? Do we have any local data sets to answer these questions?
2. How could my community adapt to these changes?
3. As a local planner, how can I use climate science, carbon management (such as reducing vehicle use to reduce CO₂ emissions), and infrastructure changes as a tool for my community's future planning and growth in the short term (5–20 years)?
4. If we think about the long-term climate change (more than 100 years), how might this affect such things as infrastructure placement, the expansion of impervious surfaces, and potable water supplies?

Could climate change impact the future development of your community? This question, as well as the above questions, will hopefully cause you to think about the future. Will your community suffer from increased heat stress and higher energy consumption? Could an increased frequency and intensity of flooding and storms lead to increased erosion and, thus, to the loss of homes, crops, and businesses? Could the overall combined effect lead to a decrease in the quality of life?



Look for Local Science Data Sets

Without access to local climate change and carbon management science and data, local governments cannot develop appropriate policies or plans, or assign adequate resources to tackle the climate change and carbon management challenge.

The two, ultimate questions are “What types of local data are needed to address the gaps in knowledge?” and “What types of science are required to address the gaps in knowledge?” The necessary data to address the gaps may be determined by what the community identifies as important.

With locally relevant data sets and science, communities can plan future development that incorporates climate change. Local science data sets may reveal knowledge gaps and help communities decide how to redirect funds to answer questions about their future!



Additional Resources

Chicago Wilderness

www.chicagowilderness.org

Chicago Wilderness, an alliance of federal, state, and local governments, environmental and non-governmental organizations, and institutions of higher learning working together to improve the quality of life for the citizens of the Chicago region while also protecting natural resources has developed the “Climate Action Plan for Nature.” The plan address biodiversity and climate change in the Chicago region.

Chicago Climate Action Plan

www.chicagoclimateaction.org

The Chicago Climate Action Plan highlights the plans the city of Chicago proposes to reduce the city’s contribution to climate change.

NOAA Climate Services

www.climate.gov/#climateWatch

NOAA Climate Services site provides a national perspective on the impacts of climate change.

Intergovernmental Panel on Climate Change

www.ipcc.ch

The Intergovernmental Panel on Climate Change is the leading body for the assessment of climate change, established by the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.

The Midwestern Regional Climate Center

<http://mcc.sws.uiuc.edu>

The Midwestern Regional Climate Center at the University of Illinois serves the nine-state (Illinois, Indiana, Wisconsin, Michigan, Kentucky, Iowa, Missouri, Minnesota, and Ohio) Midwest region. The center is an excellent source for climate data and research.

Post Carbon Institute

www.postcarbon.org

Post Carbon Institute provides individuals, communities, businesses, and governments with the resources needed to understand and respond to the interrelated economic, energy, and environmental crises that define the 21st century.

For More Information

ID-255 *Protecting Our Water and Environmental Resources*

ID-256 *Nonpoint Source Pollution: A Threat to Our Waters*

ID-257 *Impacts of Development on Waterways*

ID-258 *Strategies for Coping with Runoff*

ID-259 *How to Get Started: Protecting Your Community From Polluted Runoff*

ID-260 *The Relationship Between Land Use Decisions and the Impacts on Our Water and Natural Resources*

FNR-245 *Brownfields: A Rural Community Problem*

FNR-255 *Stormwater Runoff*

FNR-256 *Stormwater and Non-Point Source Pollution*

FNR-257 *Open Space Planning*

FNR-409-W *Smart Growth and Protection of Natural Resources*

FNR-415-W *Sustainable Land Use: Impact on Climate Change and Health*

Planning with POWER Presentation module Model Ordinances are available.

These publications are available on the *Planning with POWER* Web site: www.planningwithpower.org

Local Decision Maker, a new Web-based GIS planning tool and decision support system is now available at: www.purdue.edu/lbm

If you are interested in pursuing the Smart Growth Principles, the protection of natural resources and natural resources based planning, contact Robert McCormick at (765) 494-3627 and or rmccormi@purdue.edu.

Photographs and Figures

- Excess runoff. Planning with POWER, Illinois-Indiana Sea Grant Program.
- Flooding in Munster, IN. September 2008. FEMA, Leo Skinner
- Homes on a stream. climate.the-environmentalist.org
- Flooding along Interstate 80/94 in northwest Indiana. nwitimes.com

PURDUE AGRICULTURE

New 1/11

It is the policy of the Purdue University Cooperative Extension Service that all persons have equal opportunity and access to its educational programs, services, activities, and facilities without regard to race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, disability or status as a veteran. Purdue University is an Affirmative Action institution. This material may be available in alternative formats.

PURDUE
UNIVERSITY

Purdue Extension
Knowledge to Go
1-888-EXT-INFO

Order or download materials at the **Purdue Extension Education Store** • www.extension.purdue.edu/store