



CLIMATE CHANGE:

Communication strategies to support local planning

Update Author:

Melissa Widhalm,
*Operations Manager,
Purdue Climate Change
Research Center*

Leslie Dorworth,
*Aquatic Ecologist,
Illinois-Indiana Sea Grant*

Kara Salazar,
*Assistant Program Leader and
Extension Specialist
for Sustainable Communities,
Purdue Extension,
Illinois - Indiana Sea Grant*

Previous authors:
Leslie Dorworth,
*Aquatic Ecologist,
Illinois-Indiana Sea Grant;*

Robert McCormick,
*Planning with POWER
Project Leader,
Illinois-Indiana Sea Grant*

Introduction

Climate change is happening now. University scientists are measuring alarming trends and changes in temperature, rainfall and other critical environmental indicators around the world, across the United States, and right here in our own backyard. We have a responsibility to take action now to slow and reverse the impacts of a warming climate, and to help our local communities plan for and adapt to the coming changes. However, these actions will require support from both policy makers and the public.

Despite strong evidence that climate change is happening, many people do not realize the urgency with which we need to act, nor do they fully understand the types of impacts facing their communities. One contributing factor is that people often view climate change as happening somewhere else in the world or at a time far in the future. In fact, two-thirds of Hoosiers don't believe climate change will harm them personally¹. This publication provides some basic, but proven, strategies to help local officials more effectively communicate with the public about climate change.

Make it Relevant

Talking about climate change in local, personal terms is an effective way to help people understand the relevance of this issue in their community. When people hear the phrase "climate change" you want them to picture their own neighborhood and the people in their lives rather than imagining a polar bear floating on a melting sheet of ice.

Identifying the key weather and climate variables that affect your community's day-to-day life can be a useful starting point for determining the most relevant impacts to discuss with the public. For example, in Indiana, annual rainfall has already increased by more than 5 inches over the last century, and scientists at Purdue University say this trend will continue². With more rain comes more flooding, soil erosion, damage to bridges, and water quality problems from combined sewer overflows. Each of these impacts affect our local economy, our personal health and our overall quality of life. Another example could be the increasing number of mosquitoes and ticks that have been observed in Indiana in recent

KEY FINDINGS FROM THE INDIANA CLIMATE CHANGE IMPACTS ASSESSMENT

- More frequent heat stress and a doubling of water deficits will reduce corn yields, for current varieties, by 16-20%.
- Livestock productivity and fertility will decline as heat stress events will more than double.
- The growing season for allergens like ragweed will increase by about 4 weeks.
- Winters and springs will be wetter with more precipitation falling as rain in heavy downpours.
- The number of days above 95°F will increase, degrading air quality and triggering asthma attacks and heart attacks.
- Warmer and wetter springs will increase numbers of mosquitoes carrying diseases like malaria and Zika.
- Warming winters will reduce the time available to harvest wood without damaging forest soils.

These impacts are expected by the 2050s⁴.



decades. Researchers have linked these increasing pest populations to warmer, wetter weather conditions, and these trends are expected to continue³. Including such details in your conversations will help people connect to the reality of local climate change.

Climate change should be framed in terms that allow people to envision themselves in the situation and that help them recall their own related personal experiences. For some people, facts and data alone are insufficient for personalizing the issue. Story-telling can be an effective way to demonstrate the relevance of climate change. Stories evoke emotions and can inspire people to view issues from differing perspectives in a way that data alone does not provide.

Find Common Ground

We all want to live in a safe and healthy community that supports an enriching quality of life. When discussing climate change impacts, preparedness or solutions, it is important to explicitly recognize that we are all working toward similar goals. We have many shared values, and connecting on those values helps open the lines of communication. It is also important to identify and publicize the variety of positive benefits that result from community-level actions.

Installing roundabouts is one strategy to reduce a community's carbon dioxide emissions, the primary driver of climate change. Roundabouts also save a significant amount of money in fuel costs, can help improve air quality, and reduce the incidence of personal injury accidents.



Roundabout in Carmel, Indiana. Photo credit: City of Carmel

Seek Local, Credible Science

Localized data is a powerful way to help people connect with and care about climate change. With access to local climate data and climate change science, local governments can develop appropriate policies and plans, and assign adequate resources to tackle climate change and carbon management challenges. The internet has

STORIES OF CHANGE

According to third-generation Indiana farmer **Chris Mulkey**, rainfall is on the rise and threatening his most precious resource, the soil. Mulkey sat down with the **Purdue Climate Change Research Center** to share what he's doing to leave this land in better shape for his kids, and their kids. See Mulkey's story online at <https://ag.purdue.edu/climate/stories-of-change/>



revolutionized our access to data and science, but there remain challenges in finding credible sources and data at a localized scale that aligns with your time frame of interest. University scientists, such as those with the Purdue Climate Change Research Center, and scientists supported by public funding provide trusted, local, and high-quality data without bias or hidden motives. In Indiana, we are fortunate to have the Indiana Climate Change Impacts Assessment as a local trusted resource. The assessment is overseen by Purdue University and includes contributions from dozens of experts from universities and organizations across the state.

Other Considerations

- It is important to know and understand the basics:
 - Our climate is changing.
 - Climate change is being driven by human activities.
 - Scientists strongly agree that our climate is changing due to human activities.
 - Climate change affects more than just temperatures. There are far-reaching impacts that have serious local and global consequences.
 - There are actions we can take to reduce the severity of climate change and to help communities adapt to changes already underway.
- Simple, clear messages that are repeated often, and by trusted sources, help reduce confusion about climate change.
- Think critically about the message you want to convey and how your choice of words, images and examples can either support or undermine your efforts.
- The messenger is just as important as the message. It is helpful to have trusted, influential members of the community talking about climate change. Without trust, sharing facts and gaining community support will be difficult.
- Have the conversation. A majority of Hoosier adults (68%) are concerned about climate change, but very few people (29%) are talking about the issue.¹ Research shows that increasing dialogue about climate change helps elevate awareness and people's willingness to take action on this important issue facing Hoosier communities.
- Don't forget to listen. If you're not sure where to start with a conversation about climate change, ask the other person what they feel and think. This can help you understand their perspective and identify what matters most to them.
- Help communities be a part of the solution. It's important for people to feel connected to the process of finding and implementing solutions, and for them to see progress toward solutions.

Additional Resources

Purdue Climate Change Research Center (PCCRC)

www.purdue.edu/climate

Established in 2004, the PCCRC is a faculty-led center with more than 90 affiliates working to understand the causes and consequences of climate change and develop solutions to help reduce greenhouse gas emissions and manage the impacts. The center strives to be a trusted source of science-based information for decision-makers in the state and beyond.

Climate Communication

<https://www.climatecommunication.org/>

Climate Communication is a non-profit science and outreach project dedicated to furthering the scientific understanding of Earth systems and global environmental change.

Connecting on Climate: A Guide to Effective Climate Change Communication

<http://ecoamerica.org/wp-content/uploads/2014/12/ecoAmerica-CRED-2014-Connecting-on-Climate.pdf>

Connecting on Climate is a practical guide with best practices for communicating climate change. It was jointly developed by the Center for Research on Environmental Decisions at Columbia University and ecoAmerica.

References

1. Howe, Peter D., Matto Mildenerger, Jennifer R. Marlon, and Anthony Leiserowitz (2015). "Geographic variation in opinions on climate change at state and local scales in the USA." *Nature Climate Change*, doi:10.1038/nclimate2583
2. Widhalm, M., Hamlet, A. Byun, K., Robeson, S., Baldwin, M., Staten, P., Chiu, C., Coleman, J., Hall, B., Hoogewind, K., Huber, M., Kieu, C., Yoo, J., Dukes, J.S. 2018. *Indiana's Past & Future Climate: A Report from the Indiana Climate Change Impacts Assessment*. Purdue Climate Change Research Center, Purdue University. West Lafayette, Indiana. <https://bit.ly/2KDsaga>

References *(continued)*

3. Filippelli, G.M., Widhalm, M., Filley, R., Comer, K., Ejeta, G., Field, W., Freeman, J., Gibson, J., Jay, S., Johnson, D., Mattes, R., Moreno-Madriñán, M.J., Ogashawara, I., Prather, J., Rosenthal, F., Smirat, J., Wang, Y., Wells, E., and J.S. Dukes. 2018. Hoosiers' Health in a Changing Climate: A Report from the Indiana Climate Change Impacts Assessment. Purdue Climate Change Research Center, Purdue University. West Lafayette, Indiana. <https://bit.ly/2lvumFC>
4. Purdue Climate Change Research Center (2019). Issue Brief – Indiana Climate Change Impacts Assessment. Available at https://ag.purdue.edu/indianaclimate/wp-content/uploads/2019/10/Issue-brief_INCCIA_1019.pdf.

Reviewed by: Linda Prokopy and Rose Filley



Purdue Climate Change Research Center