## Why Is Mitigation Important?

## **Key Points**

Although mitigation of climate change is a global process that will take centuries to effect, it is valuable to take certain mitigation steps now. Reducing the production of greenhouse gases in the region will result in immediate improvements in the regional environment and contribute to better health and well-being and to economic efficiencies in households and businesses.

Why be concerned about mitigation?

At first glance, the most immediately useful and least economically disruptive response to climate change and climate variability is to develop strategies for adapting to and moderating those impacts of climate change and variability that affect us most directly. Because climate change is a global phenomenon, this argument goes, and because it takes decades and even centuries for some greenhouse gases to disappear from the atmosphere, we should seek ways to deal with the local impacts of climate change and variability rather than trying to reduce it at the global level. Attempts to mitigate climate change could involve efforts that will take years and require concerted and expensive international cooperation.

For example, one of the principal means of mitigating climate change is reducing the production of greenhouse gases. Since mitigation strategies will only indirectly affect our local climate, many reasonable people assume that mitigation should not be a priority for the region. One problem with this approach is that if every city and country decides to give low priority to the mitigation of greenhouse gases, current trends in the global climate will continue and may even accelerate, causing more severe direct and indirect impacts in local areas.

A related problem is that focusing on adaptation to local impacts of climate change without attempting to reduce future changes to Earth's climate is not a responsible position for a city or region, a state, or a country. This is an issue of good governance and responsible stewardship of the Earth, not an issue that speaks to the self interest of local governments or even the nation.

## Near Term Benefits of Mitigation

Perhaps most important, giving low priority to the mitigation of future climate change ignores the reality that the reduction of greenhouse gas production is not useful merely because it contributes to the reduction of

future global climate change. Mitigation strategies can have other, extremely valuable collateral benefits for the tri-state region, benefits that are often overlooked. They include:

- · Improvements in local environmental quality,
- Improvements in local public health and well-being, and
- Stimulation of the local economy.

In general environmental terms, reducing greenhouse gases can lead to an immediate improvement in the quality of the local environment. Air quality in the region could improve, bringing with it health benefits such as reducing the incidence of asthma and other upper respiratory diseases. Water quality could also improve, and public funds spent on improving water quality could be used for other beneficial purposes.

Many mitigative measures could also have economic benefits for the region. In residential and commercial construction, sustainable building practices can lead to healthier indoor environments, lower energy use, and a reduction in pollution and greenhouse gas emissions. If greenhouse gases are reduced because of the availability of a public transportation system that is more efficient and cost-effective than the current system (which is dependent upon the use of private automobiles) families might end up paying less for transportation and the region itself would be less dependent upon imported sources of energy. Switching from older, less efficient appliances to newer, energy-efficient appliances and technologies is another mitigation strategy that lowers energy costs for households and contributes to greater profitability for businesses.

These changes would be observable in a few years, certainly in decadal rather than century time scales. In a very real sense, mitigation of greenhouse gases would contribute to improving the regional environment and would be a gift that could be enjoyed in our lifetimes and those of our children.

**Roberta Balstad**, CIESIN, Columbia University (http://www.ciesin.columbia.edu)

**W. Christopher Lenhardt**, CIESIN, Columbia University (http://www.ciesin.columbia.edu)