

## Measuring the Effects of Climate Change Policies



Los Angeles is often covered in thick haze. Scientists are studying this and other cities to understand the effects of climate change policies. File photo from 2009. AP

Welcome again, to the daily magazine show, *As It Is*, from VOA Learning English. I'm Mario Ritter. Today, we hear about an unusual artist who decorates prosthetic limbs. We have a story about the lasting appeal of superheroes, just as the latest Superman appears in theaters. But first, we learn about the Megacities Carbon Project, an effort to understand the effects of climate change policies.

Scientists have been able to measure air quality and study its effect on human health for many years. Now, as part of a complex project called the Megacities Carbon Project, scientists are testing new ways to measure gases linked to climate change.

Los Angeles is one of the cities scientists are studying in the project. With a population of 18 million people and many cars, the city is often covered in smog and pollution. Stan Sander is a senior research scientist at the United States space agency's Jet Propulsion Laboratory near Los Angeles. He describes these layers of visible air, or haze, in this way.

"That haze is caused by the fact that the air is trapped inside a layer that's a few hundred meters to a thousand meters in altitude above the LA basin. So it collects those emissions from the cars and other sources and forms that layer."

Jet Propulsion Laboratory scientist Riley Duren says these pollutants include greenhouse gases such as carbon dioxide and methane. And he says, they do not just effect cities.

"So these gases have a small local effect but the bigger impact is on the climate. We're all in this together. It takes several weeks or months for these gases to mix, but they end up in the atmosphere and they affect everywhere - not just in the local city."

The Megacities Carbon Project wants to observe greenhouse gases over long periods of time to try to identify patterns. The goal is to find out if environmental policies are successful in lowering greenhouse gas emissions.

Sixteen highly sensitive monitoring devices are being placed on rooftops and media towers across southern California. These instruments work continuously to analyze what is in the air.

Scientists also use what is called "remote sensing" to monitor the air. Instruments placed on airplanes and a satellite are able to find evidence of carbon dioxide and methane in the air.

There is also a remote sensing instrument on top of Mt. Wilson, northeast of Los Angeles. NASA'S Stan Sander says this remote sensing equipment can study air quality across the Los Angeles area.

"What we're hoping to do here on Mt. Wilson is create a sort of pattern or model for the way other cities might be able to measure their greenhouse gas emissions in a very similar way."

Riley Duren says developed countries are trying to reduce emissions. But he notes that cities in developing nations are growing at an extremely fast rate.

“In the developing world, particularly in South America, Africa and Asia, we’re seeing explosive growth in cities because of the combined effects of urbanization and economic growth.”

He says many of these growing cities are at higher risk for the effects of climate change.

The loss of a limb because of an injury or illness can be a very difficult experience. Many people regain abilities they lost, like walking, by using artificial, or prosthetic, limbs. Faith Lapidus tells us about an artist who decorates prosthetics.

Pete Nichols lost part of his leg in a motorcycle accident three years ago. He wanted a prosthetic device that was just as flashy as his car. He loves his car. It has bright red paint and racing stripes and shiny wheels. His artificial leg is a bright chrome color.

“I love lots of color and I love chrome.”

Pete Nichols did a search online and found Dan Horkey. He is an amputee who had started a company in Seattle called ProstheticInk.com. Dan had also lost his leg in a traffic accident. He decided to add color to colorless prosthetics. He started by adding images of flames.

“It kind of reminded me of the aftermath of my accident, sitting in the hospital and the pain I felt in my leg after they chopped it off.”

Dan Horkey uses local artists to decorate prosthetic arms, legs and braces, offering many colors and designs.

“We have people that want Superman. We have requests that are really just unique to the wearer sometime, so that’s what’s really cool about it. It is all about personalizing their limb.”

Dan Horkey has had a variety of customers. Some are military veterans who were wounded in combat. Another was a five-year-old boy about to start kindergarten.

Pete Nichols says the colorful prosthetics attract attention and start conversations.

“Do not hide it. Find that color, that art scheme, that one [artistic] device that is you.”

Dan Horkey says his work has been getting attention across the United States and in other countries. He says amputees are amazed at how a little color and art can lift their confidence.

World events often seem to call for a superhero – a character with extraordinary powers to put things right. So it is not surprising that comic book superheroes have remained popular for generations. Conventions where people act like superheroes are popular in the United States. Recently, thousands of people attended one such event in Washington. Avi Arditti tells us more.

Acting like superheroes, the good guys, or super-villains, the bad guys, is for many people a way to have fun. Recently, comic book fans went as their favorite characters to Washington’s “Awesome Con DC” convention.

Many take the fun seriously. Dale Harvey stood in brown battle armor with a winged skull across the front. It took him more than four months to make the clothes and equipment of a video game character.

“I get enjoyment out of creating it, out of building it with my friends, just having a good time seeing people’s reaction to it. The most awesome thing for me is watching kids, young and old, have a good time seeing a character come to life.”

Organizers of the “Awesome Con DC” event say more than 5,000 visitors attended over two days.

Ben Penrod says huge hit movies based on comic book superheroes, like The Avengers, have helped fuel the popularity of events like his.

“You had to read comic books to know The Avengers. Now The Avengers is the third highest-grossing film of all time. And people, everybody knows about it.”

I’m Avi Arditti.

Thank you for listening today. Join us at the beginning of the hour Universal Time for the latest news.