

Expert details consequences of climate change

By Kathryn Reed

STATELINE – Despite a litany of information documenting how climate is changing and examples of its devastating impacts, one Nobel Peace Prize recipient remains optimistic.

“We still do have a choice. That is the very real reason for optimism,” Bill Collins told a group of more than 40 people Jan. 10 at Harrah’s Lake Tahoe.

Collins was the keynote speaker Friday for the three-day Operation Sierra Storm Meteorologist’s Conference. He is the lead author of the Intergovernmental Panel on Climate Change, heads the Climate Sciences Department at Berkeley Lab and teaches at Cal.



Climate change expert Bill Collins talks Jan. 10 at Harrah’s Lake Tahoe in Stateline. Photo/Kathryn Reed

Climate change is evident from 2012 being a record hot year in the United States, to Australia breaking 123 records in 90 days in 2012, to the world temperature increasing about three-

quarters of a degree centigrade since 1900, to the sea level rising 200 millimeters in the last 100 years.

Cities abutting major water bodies like San Francisco and Oakland are looking at how to handle the rising water. In the Maldives where the elevation is 1 meter above sea level Collins said people are experimenting with building artificial islands.

“Carbon dioxide is increasing from human activities,” Collins said.

In 1950 there were 270 parts per million, whereas in 2010 there were 400 parts per million in the atmosphere.

“Through isotopic analysis we know it is man-made. The source is fossil fuels,” Collins said.

That is what people have control over – the use of fossil fuels. What they don’t have power over are volcanoes and the sun, which are the two primary natural causes of climate change.

A potential irony is that as the Arctic ice melts, it will be easier to drill for oil there.

Forecasting models are split when it comes to whether the United States will see more precipitation or less because of the storm tracks. But what is known is what does fall from the sky is going to be in the form of more rain and less snow. This has significant consequences for places like California and Nevada that depend on snowpack for their reservoir storage and sustained water supply.

“It’s critically important to all of us. Water is irreplaceable. Fossil fuel is replaceable,” Collins said.

It is a warming Earth that alters moisture and rainfall.

“What was unusual will become the usual by the end of the 21st

century," Collins said. This is because of the change in the hydrological cycle.