

ORAL HISTORY 01-83-05-07

John Kelley

Fairbanks, Alaska

1980s

Steve Lay

University Focus series

John Kelley talks about the greenhouse effect. He said it will affect our lives and the way we conduct our business in the future. He explained how the greenhouse effect works. He said the temperature will rise in certain parts of the world, change precipitation patterns and cause melting of ice as an example. There may be a rise in sea level.

They started the study of atmospheric carbon dioxide at Point Barrow. They have noted year by year increases over the past twenty years. It was also noted in Hawaii and in the Antarctic. He said measurements at the turn of the century showed that carbon dioxide might be rising then. There are now many more baseline stations making measurements. It is now rising to one and a half parts per million per year which is about twice what they were measuring before. Most of the carbon dioxide they feel is coming from the burning of fossil fuels. Combustion products go into the atmosphere.

John said they have not observed any ice caps melting. It is a controversial subject. Locally one may see local melting but he feels there is time to do something about this. It is not going to happen overnight. He said the ocean removes carbon dioxide. The ocean takes up about half of the carbon dioxide produced. They aren't sure about what the total effect of the ocean plays. He said cold waters dissolve more carbon dioxide and the coldest waters are of course at the poles. He said there are parts of the carbon dioxide problem that are very complex. It would be unwise to jump to conclusions, but there is reason for concern. He said they are at an early stage predicting what will happen. The past has seen large amounts of carbon dioxide caused by natural phenomena such as volcanism. Human beings are now a major part of the cause. He said they need accurate measurements. Stations need to be located in reasonably isolated areas. This calls for worldwide cooperation. At the present this is being done by through the World Meteorological Organization which is a UN organization. They are beginning to see good background stations located around the world. This needs to be a long term project.

He said we see climatic variations happening all the time. He said we have time to cope with the problem of carbon dioxide. He commented on fluorocarbons. Carbon dioxide is vital to life.

He commented about the gradual rise of carbon dioxide and the expected gradual changes. He talked about models. He said from year to year there may be changes in the rise of carbon dioxide.