



SCIENTIST 1

It's time to face the facts—the increasing amounts of carbon dioxide and CFCs in the atmosphere are making our planet's climate warm up. We've seen the warning signs in our increasing world temperatures. The 1980s were the hottest decade in recorded history—six of the warmest years ever recorded were 1981, 1983, 1986, 1987, 1988, and 1989. While this isn't proof that global warming has begun, it certainly should warn us that something is happening to our climate.

Over the past 100 years, average world temperatures have risen by about 1°F. That may not seem like much of an increase, but keep in mind that temperatures today are only about 9°F warmer than they were during the last ice age. It takes only a small change in temperature to cause big changes in our world. And if we continue to put as much carbon dioxide into the atmosphere as we're putting into it now, the world's average temperature may increase by 3 to 10°F within the next 50 years.

If temperatures do rise, we can expect some drastic changes to take place. As temperatures go up, sea levels will rise and many coastal areas will become flooded. The warming could make droughts occur more often in certain areas. Some places, like the Midwest, could become so hot and dry that many crops couldn't grow there anymore. And all over the world, plants and animals may not be able to adapt quickly enough to the sudden changes in their habitats. Some species could even become extinct.

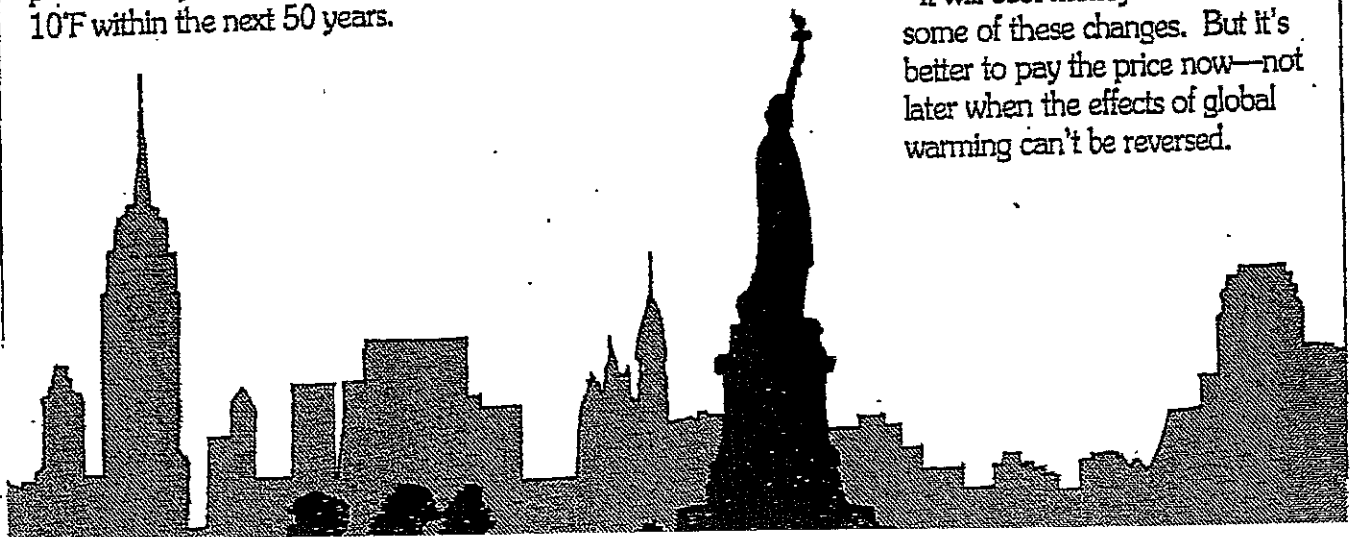
Some people claim that we should wait until we're absolutely sure of global warming before we do anything to control it. I disagree. If we wait too long, it may be too late to prevent damage from the warming trend.

We must cut carbon dioxide production by at least 20 percent and phase out CFCs now. And since people in the United States produce a lot of the car-

bon dioxide and CFCs that go into the air, we have to set an example for the rest of the world. We must develop safer chemicals to replace CFCs. We have to switch to solar power and other alternative energy sources. And until we make that switch, we have to use less fossil fuel and become more energy efficient. Industries that continue to use coal and other fossil fuels should be taxed for the excessive carbon dioxide they release. A tax should also be placed on gasoline to encourage people to drive less. And car makers should be required by law to make cars that get better gas mileage.

Individuals must do their part too, by taking public transportation instead of driving their cars so much and by buying more energy-efficient appliances and cars. And we have to stop the burning of tropical rain forests. By preserving these forests, we can reduce carbon dioxide emissions caused by the burning and save the trees and other vegetation that help absorb carbon dioxide.

It will cost money to make some of these changes. But it's better to pay the price now—not later when the effects of global warming can't be reversed.





SCIENTIST 2

There's been a lot of concern lately that the world's climate is warming up. Some scientists say that the increased amounts of carbon dioxide and CFCs in the atmosphere are causing this global warming. According to them, the only way to avoid global disaster is to cut carbon dioxide emissions by at least 20 percent—a move that would affect people all over the world.

I say there's not enough scientific evidence to back up this call for drastic action. Let's consider the facts. It is true that there's more carbon dioxide in our atmosphere than there used to be and that we have added gases, such as CFCs, that were never part of our atmosphere before. But there's just not enough evidence to prove that these gases are making the world warm up. In the past 100 years, average world temperatures have risen by only 1°F. And this hasn't been a constant rise—between 1940 and 1970, world temperatures actually dropped, and some scientists suggested that another ice age might be on the way. This latest rise could be just another small change in a natural climate cycle.

It's very important to keep in mind that many of the predictions about the effects of global warming are based on *theory*. Scientists have come up with these predictions by plugging information about our atmosphere into computers. The computers make predictions

about what will happen if we add certain amounts of carbon dioxide and other gases. The problem is, different computer models can give you different answers! Some models have predicted that the increase in carbon dioxide will cause more clouds to form. These clouds would block sunlight and cancel out much of the warming. And, according to other models, it's possible that the earth's huge oceans will absorb any extra heat. We just don't know enough yet about how our atmosphere works.

Because of this uncertainty about what is really happening in our atmosphere, I believe we need to do more research before we make any big changes. To significantly cut the amount of carbon dioxide we put into the atmosphere would make life harder for many people—especially those living in less developed countries. How can we ask them to cut back on releasing carbon dioxide when they're just now getting the cars and factories that people in more developed countries have had for so long? And in the United States, cutting carbon dioxide production would cost billions of dollars each year. Forcing industries to stop using fossil fuels might drive some smaller firms out of business and hurt people in regions where coal mining provides many jobs. We must do more research before we make changes that, in the end, may cause more harm than good.

QUESTIONS

1. What are the main points brought up by each scientist?
2. What are the advantages and disadvantages of the alternative presented by Scientist 1?
3. What are the advantages and disadvantages of the alternative presented by Scientist 2?
4. Can you think of a course of action that is a compromise between the two plans presented by the scientists?
5. What do you think is the best course of action? Why do you feel this is the best thing to do?
6. Do you think it's important to stay informed about scientific issues? Why or why not? What are some ways you can affect the decisions that politicians and other leaders make about the environment?