

tonous path leads to a doubling of the CO_2 concentration by the year 2035, while moderate uses doubles CO_2 by 2090. In the model, doubling of the CO_2 concentration does not increase world temperature uniformly over the globe; rather there is a 2°C rise at the equator, and 3.5°C at our (Canada's) latitude. One of the effects of this temperature increase would be simply to drive back the sea ice.

A fourfold increase in the CO_2 , which would occur with gluttonous consumption by 2090, will raise the temperature by 3°C at the equator, and 6.5°C at our latitude, causing the sea ice to retreat to the Poles, and creating a climate comparable to that of Charleston, South Carolina. New Yorkers may now rest easy, because the model contradicts earlier beliefs that the Polar ice caps would melt and inundate large expanses of coastal area.

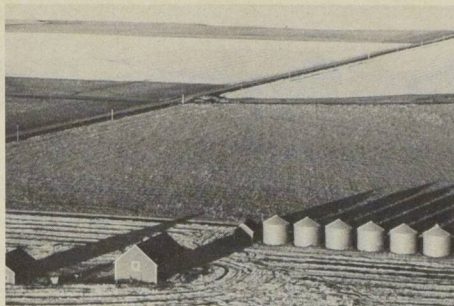
As Ken Hare sees it, there are several possible outcomes to a global warming, some positive and others negative. The prediction causing the most concern is the possible decline in precipitation at the mid-latitudes between 35° and 45° North, the so-called bread basket of the world. This cultivated region is already under considerable pressure for food production by the burgeoning world population.

But Hare cautions that the predicted changes should be considered with a healthy dose of skepticism, because the earth is an exceedingly complicated entity. The models must be validated by much more research to get the detail needed to evaluate the results of increasing CO_2 .

Until additional information can further clarify the issue, we can take some comfort in the fact that conservation measures around the world are already decreasing government estimates on fossil fuel consumption, giving us more time to study the situation. And there may even be economic advantages to some warming. The sea lanes, for example, would be easier to navigate and agricultural productivity in the Northern hemisphere might increase dramatically.

Problem or nirvana? The message Hare left was that the problem may not be as serious as previously believed, but only research and time will tell. \square

Sadiq Hasnain



The CO_2 cycle is complex and not well understood. Terrestrial plants play an important part, as do the oceans and the soil. The rapid depletion of the world's forests and the steady increase in the land put to the plough could aggravate the problem caused by combustion of fossil fuels. (Photo: Photothèque)

Le cycle du CO_2 est complexe et difficile à comprendre. La végétation terrestre, tout comme les océans et les sols, joue un rôle important. La disparition rapide des forêts du globe et l'augmentation continue des surfaces cultivées pourraient aggraver le problème causé par la combustion des combustibles fossiles. (Photo: Photothèque)



CO ₂ Budget				
1981				
27.2	19.27			22.17
15.6	87.26			12.62
32.22	56.72			14.17
44.8	12.15			18.92
9.272	18.23			94.76
19.32	16.92			22.17
22.18	12.16			64.21
722.6	8.22			721.3
1.00	19.81			821.9
89.25	24.2			14.2

