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CO_2 & CLIMATE

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Stabilization of Climate, Session F6

Let us begin with a review of elements in the earth-atmosphere system.

Glacial period. Geologists have identified over 20 glacial periods. The time appears to vary in a range from about 70 to 120 thousand years. The ice volume in the world appears to vary over the last million years from a mimimum of 35 to a maximum of 80 millions of cubic kilometers.

Interglacial period. An interim time of around ten to twelve thousand years. We are at the end of one now.

Major signs of change from interglacial to a glacial period.

Atmospheric carbon dioxide has been below 280 parts per million for over 10,000 years and has now risen rapidly since 1900 up to 350 ppm.

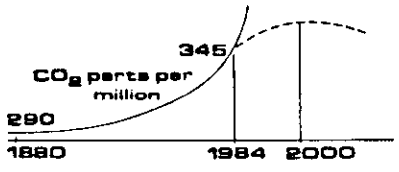
Reduction in global biomass on land (primarily forests) has been approximately 40% since 2500 years ago.

Soil mineral content is down 25% to 40% or more. A good source for such information is the Brookside Farms Laboratory Association, Inc., New Knoxville, Ohio, where they handle over a million soil samples a year from the U.S. and other countries.

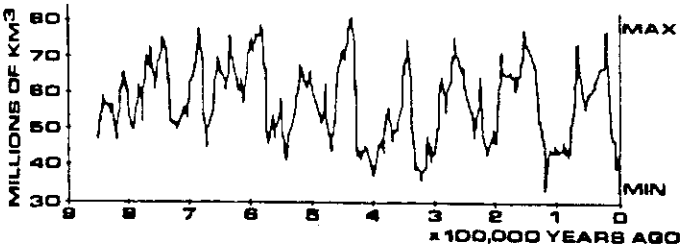
Health of the trees, plants, animals and humans goes down when the soil is depleted of minerals. Forests start dying (as in Europe recently and parts of the U.S. and Canada) and are increasingly subject to pests and forest fires under the stress of mineral depletion, increasing heat and drought in the summers, and increasing frost and freezing spells from Autumn into the Spring.

Snow and cloud cover. Satellite pictures show increasing snow cover in the northern hemisphere. Snow, in general, is deeper, comes sooner and lasts longer into the Spring. Cloud cover in the middle latitudes is increasing in days per year, area covered, and density of moisture due to the CO/2 induced warming in the lower latitudes.

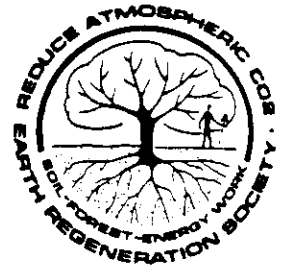
One example you can easily check concerning the dynamics of rapid cooling is the article in Nature September 10, 1987 which says: "With increasing CO/2 concentrations the cooling effects of cloud optical properties will dominate over the greenhouse effect..."



ATMOSPHERIC CARBON DIOXIDE INCREASE AND PROPOSED REDUCTION



VARIATION OF GLOBAL ICE VOLUME



A NEWSLETTER ABOUT CYCLES OF GLACIATION, THE NEGATIVE EFFECTS OF AN INTERGLACIAL/GLACIAL TRANSITION ON LIVING SPECIES, AND A COUNTER PROGRAM.

Heat loss from the earth. Snow and clouds reflect heat away from the earth's surface, increasing the rate of cooling, especially in the latitudes above 50 degrees. Consider, in Europe, areas from central France and Germany northwards. Snow has fallen in recent years for the first known time as far South as Saudi Arabia and Southern Italy.

Lakes rising. In the U.S., Salt Lake and the Great Lakes are rising and increasingly causing damage to roads, railways, utilities, houses and apartment buildings. This is due primarily due to the increased CO/2. The opposite of warming and evaporation in the lower latitudes is the dumping of rain and snow in the higher latitudes.

Animal, bird and tree species are moving down from the colder latitudes, each in their own way. C. Bertrand Schultz points to the sighting of arctic ravens as far south in recent times as Kansas and Italy. Look also to various tree species dying out in the north and tending to grow further to the south, a sign of oncoming climate intermittant cold intensities..

"Greenhouse" effect The greenhouse effect leads to more evaporation of water primarily in the lower latitudes. Here then is moisture which is later dumped as cloud cover, hail, rain storms and snow in the higher latitudes.

Transition from interglacial to glacial period. The evidence is all around us, and mounting rapidly. Consider: this is the first time in the last 10,000 years that CO/2 has risen above 280 ppm — and is up to 350 ppm. The forests were not cut back so far, or dying so rapidly, during the little ice ages a few centuries ago. The soil minerals were not as depleted then as now, leading to the current massive forest dieback.

The increased use of fossil fuel in this century has speeded up the process. Transition to greater conservation and alternative energy sources is, therefore, an essential part of an earth regeneration program.

Glaciation means intense weather changes, food destruction, lack of adequate growing seasons, and eventually increasing areas of winter snow that no longer melt off in the summer.

When the realities of the whole system become general public knowledge, the demand for response, through employment programs and international cooperation, will produce rapid and extensive changes in goals. This means labor and other citizen groups participating in planning and implementing an earth regeneration program and change in control and use of resources.

There will be differences about the specific steps required in each region regarding soil, forests, energy, land use, food, and work planning. They can be resolved within the framework of the emergency conditions we are facing.

Climate stabilization can reasonably be viewed as ecological action in its broadest sense. Ecological survival is very much the order of the day for 1988. All societies will be facing obliteration, unless they accomplish a massive effort to stabilize before it is too late. Protection against the extremes of climate change must be a dominant theme in every society. Nature is moving constantly in the present glaciation pattern. It is the role of human society to try and catch up.

This conference on Restoring the Earth can help significantly to unite us in our efforts to develop an adequate quality of life, and to stabilize climate before we are irrevocably into the next glacial cycle.

Reference material for the above may be obtained from the Earth Regeneration Society.