

Global Change: An Earth Scientist's Perspective on a Changing World

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Summary

Planet Earth has been through many natural changes during its 4.5 billion year history but human population growth accompanied by aspirations for improved lifestyles are placing unprecedented stresses on various natural systems. Scientists believe that Earth has a number of natural feedback systems operating interdependently at varying scales and time-spans. Extraordinary recent growth in urbanization, transportation and consumption are stressing systems far beyond the "natural" state observed from proxy data in the most recent geologic past, and, indeed, beyond historical records. This illustrated lecture explores some of the elements of this story from a geologist's perspective. The audience will see that "Global Change" is not a new phenomenon on our world. But they can also see that modern science can help to place contemporary change into a global perspective. Some of the scientific research that examines the record of the last half million years will be discussed together with the historical background that brings us to our present situation in the first decade of the twenty-first century. Some warnings and projections for the next half century are included.