The Increase in Methane

Turning attention to other gases responsible for climate change, Dr. McElroy explained that the reasons for the rise of methane are not clearly understood since conventional explanations, such as the rise in cattle and in rice cultivation, cannot account for the observed increase. In his view, this increase in methane levels is an early warning of climate change itself, which suggests that the self-cleansing attributes of the atmosphere may be slowing down.

Policy Responses

Dr. McElroy suggested that scientists and policy makers have had a tendency to become the victims of simple models in the assessment of the impact on climate of greenhouse gases. He stressed that much could be learned by studying the climate of the past. The belief that the earth is "somehow or another indestructible" is not a scientific view, but an emotional one. We can change, and are changing, the composition of the atmosphere.

In developing firm policy responses to these issues, Dr. McElroy argued that we must at least anticipate the possibility of scenarios which will be worse rather than better than we think. He emphasized the need to develop new and better indices of global climate change rather than relying on only one parameter such as the global average temperature. He suggested an indicator that would measure the height of the tropopause (the top of the region of weather over the earth). If varying heights of the tropopause are in fact related to historical instances of severe climate change, Dr. McElroy concluded that it may be possible to monitor processes within the global climate system by observing this one indicator. He emphasized that this indicator was still only an idea and that there may be alternative climate indices. Identifying these indices could help in developing "early warning systems" of climate change. Prudent policy, at a minimum,