

University of Brussels entitled, 'Evaluation and Comparison of the Global Carbon Cycle.'

The author begins with:

“Our knowledge of the carbon cycle on a global scale has improved greatly in the past decades. However, the role of the coastal zone in sequestering organic and inorganic carbon, as well as the importance of continental margins in the exchange of carbon with the open ocean, remain controversial. There are contrasting differences in the physical, chemical and biological properties between the coastal zone and the open ocean, leading to marked gradients that influence strongly the exchanges between the two systems. The fluxes at the ocean margins, linked to these horizontal gradients, may play a significant role in the elemental biogeochemical cycles in the oceans at a local or global scale. Our knowledge is, however, presently insufficient for an understanding of the past, present and future behavior of these cycles.”

He ends with:

“Considering the future evolution of the carbon cycle in relation with climatic change, it is obvious that the increase in temperature of the surface layer of the ocean will lead to stronger stratification of the water column. This, in turn, will restrain vertical mixing and thus the transfer of nutrients from deep water to the coastal zone. Thus global warming may decrease the productivity of the coastal zone and constitute a positive feedback for the accumulation of CO₂ in the atmosphere.”

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Air Quality Management, R.E. Hester and R.M. Harrison, (eds.), The Royal Society of Chemistry, Letchworth, UK, 1997, 160 pp. ISBN: 0-85404-235-0

Published as part of their 'Issues in Environmental Science and Technology' series, (Vol. No. 8), the Royal Society of Chemistry has solicited ten experts who authored the following seven chapters:

1. Improving Air Quality in the United Kingdom
2. Emission Inventories
3. Ambient Air Quality Monitoring
4. The European Auto-oil Programme: Scientific Considerations
5. Receptor Modeling for Air Quality Management
6. The Critical Load Approach to Air Pollution Control
7. California's Approach to Air Quality Management

The problem facing environmentalists in control of air pollution was outlined as follows: “The easily won gains in air quality have already been made throughout the

developed world by the implementation of inexpensive but effective control measures. Air quality management is therefore addressing an ever steepening part of the cost/benefit curve, whereby each incremental improvement in air quality becomes increasingly expensive as the atmosphere becomes cleaner. Thus, methods to quantify the improvements required, to predict the source controls most appropriately applied, and to provide cost/benefit analyses of the reductions are becoming increasingly sophisticated. This volume deals with the scientific aspects of such air quality management procedures.’’

The papers present an excellent overview of ambient air sampling, analysis and emission inventories of air pollutants. Most encouraging is the discussion on world-wide improvements in air quality, as evidenced by the papers from the United Kingdom and California (Chapters 1 and 7).

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