

Figure 8.1. The principal sources and sinks of carbon-containing gases in the atmosphere. The numbers alongside the arrows are estimates of average annual fluxes in Tg(C) per year; various degrees of uncertainty, some quite large, are associated with all of the fluxes. The numbers in square brackets are the total amounts of the species in the atmosphere.

Using the information given in Figure 8.1 (attached), estimate the residence time of  $\text{CH}_4$  in the troposphere with respect to influxes. Given that the total influxes of methane are greater than the total effluxes, estimate the annual percentage increase of  $\text{CH}_4$  in the troposphere.

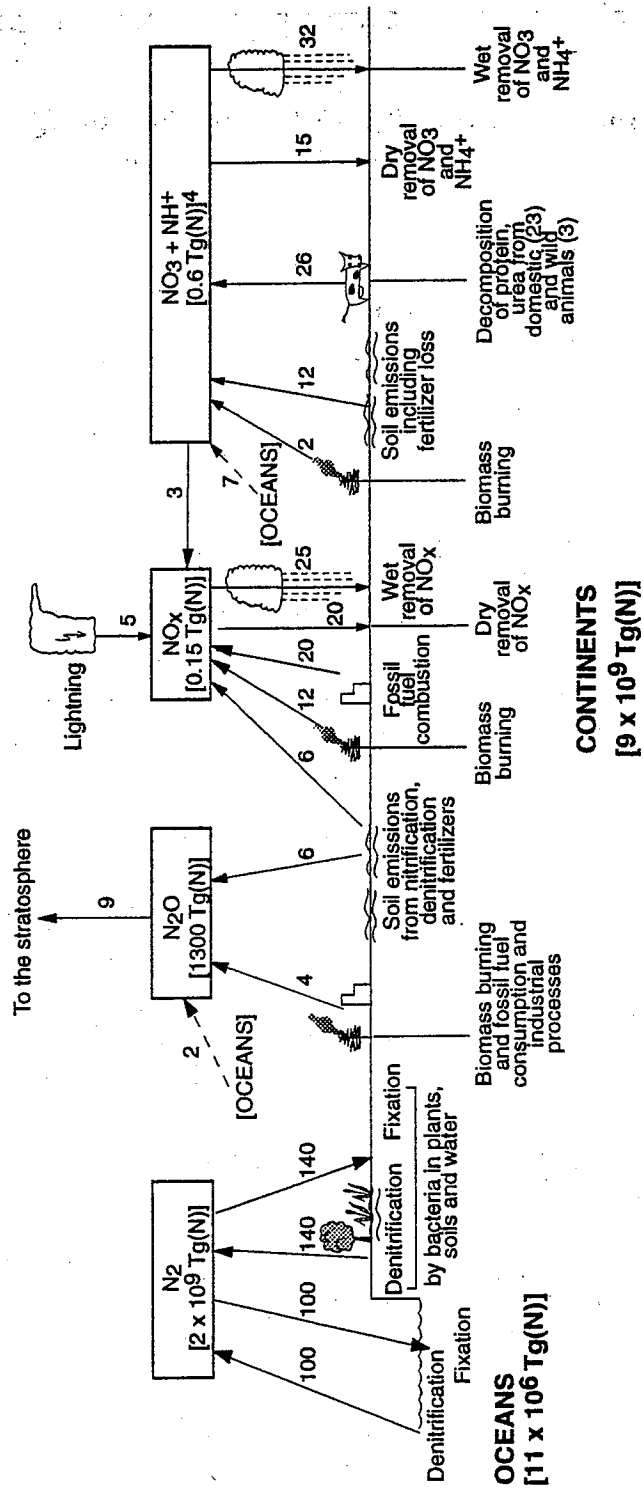


Figure 8.2. As for Fig. 8.1 but for nitrogen-containing gases. Fluxes are in Tg(N) per year.

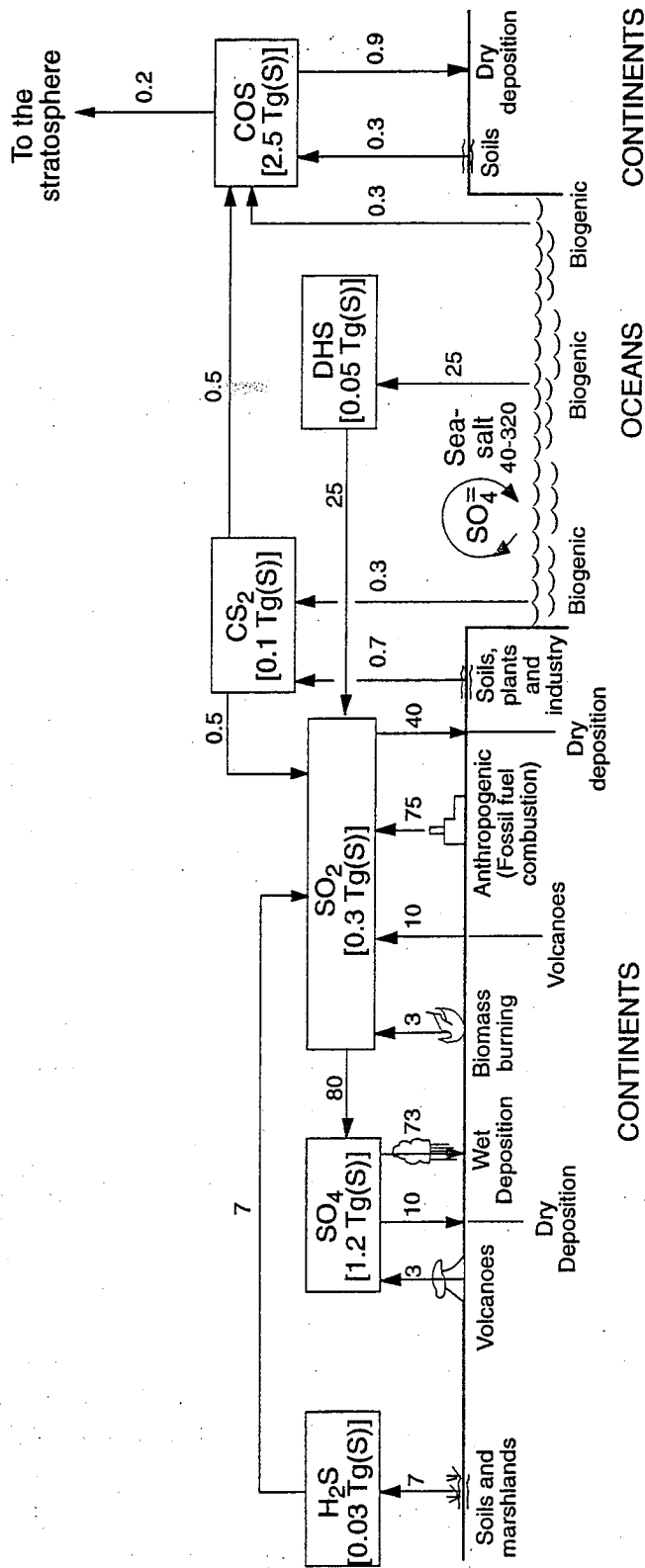


Figure 8.3. As for Fig. 8.1 but for sulfur-containing species in the troposphere. Fluxes are in Tg(S) per year. For clarity, wet and dry removal are shown only over the continents, although they occur also over the oceans.