

TABLE I. Estimates of Annual Fluxes (TG/year) of Environmental Sulfur\*

| Source of sulfur                             | Flux number in Figure 2-1 | Eriksson (1960, 1963) | Robinson and Robbins (1968, 1970) | Kellogg et al. (1972) | Friend (1973) | Granat et al. (1976) |
|--|---------------------------|-----------------------|-----------------------------------|-----------------------|---------------|----------------------|
| Biological decay (land)                      | 1                         | 110                   | 68                                | 90                    | 58            | 5                    |
| Biological decay (ocean)                     | 2                         | 170                   | 30                                |                       | 48            | 27                   |
| Volcanic activity                            | 3                         | ---                   | ---                               | 1.5                   | 2             | 3                    |
| Sea spray (total)                            | 4                         | 45                    | 44                                | 47                    | 44            | 44                   |
| To ocean                                     | 4 <sub>1</sub>            | (40)                  | ---                               | (43)                  | (40)          | (40)                 |
| To land                                      | 4 <sub>2</sub>            | (5)                   | ---                               | (4)                   | (4)           | (4)                  |
| Anthropogenic                                | 5                         | 40                    | 70                                | 50                    | 65            | 65                   |
| Precipitation (land)                         | 6                         | 65                    | 70                                | 86                    | 86            | 43                   |
| Dry deposition                               | 7                         | 100                   | 20                                | 10                    | 20            |                      |
| Absorption (vegetation)                      | 8                         | 75                    | 26                                | 15                    | 15            | 28                   |
| Total sulfur involved in atmospheric balance |                           | 365                   | 212                               | 183                   | 217           | 144                  |
| Atmospheric balance                          |                           |                       |                                   |                       |               |                      |
| Land -> sea                                  |                           | -10                   | +26                               | +5                    | +8            | +18                  |
| Sea -> land                                  |                           | 5                     | 4                                 | 4                     | 4             | 17                   |
| Fertilizer                                   | 11                        | 10                    | 11                                | ---                   | 26            | ---                  |
| Rock weathering                              | 12                        | 15                    | 14                                | ---                   | 26            | ---                  |
| Pedosphere -> river runoff                   | 13                        | 55                    | 48                                | ---                   | 89            | ---                  |
| Total river runoff                           | 14                        | 80                    | 73                                | ---                   | 136           | 122                  |

Note: the numbers in parentheses for sub-pathways 4<sub>1</sub> and 4<sub>2</sub> are estimates of the decomposition of the total pathway 4.

\*Sources: as cited in each column and, in part, Friend (1973, Table 4).