

## Ciclos Biogeoquímicos

- Movimiento y conversión de materiales por actividades bioquímicas en la atmósfera, hidrosfera y litosfera (escala GLOBAL); incluye transformaciones físicas (disolución, precipitación, volatilización, fijación), químicas (biodegradación, biosíntesis) y/o una combinación de éstas.

### Desulfuración:

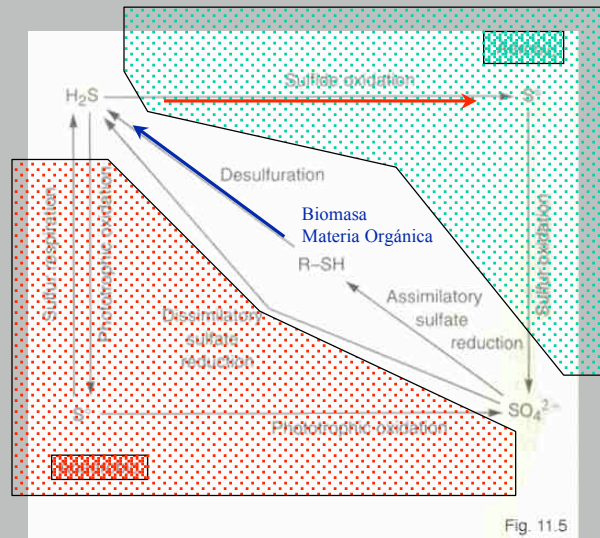
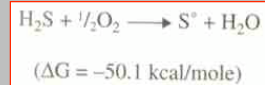
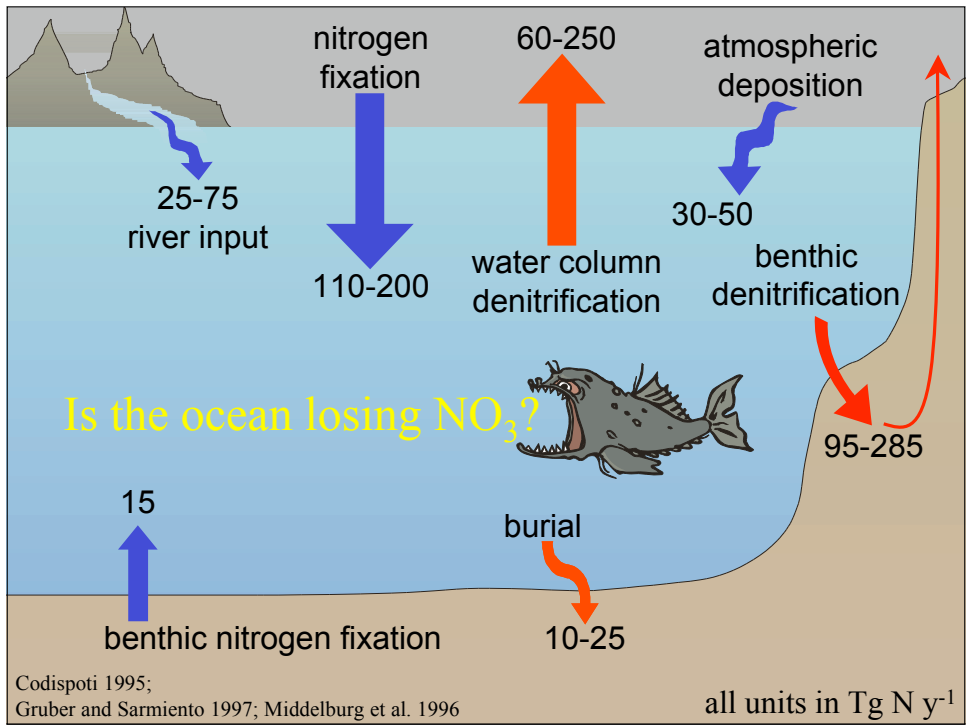
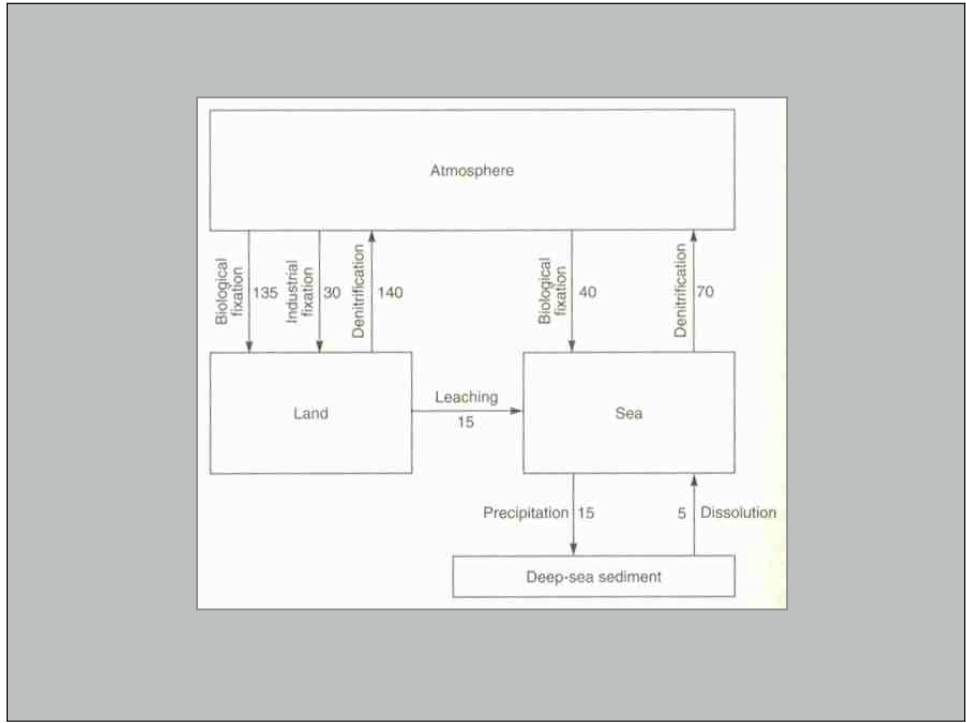


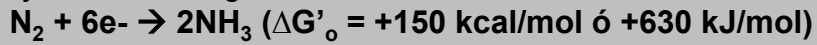
Fig. 11.5

Bacterias Verdes/Púrpura Sulfurosas/no-S

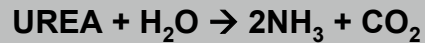


**Reacciones importantes:**

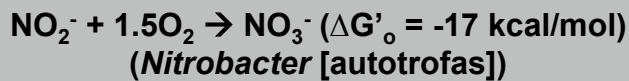
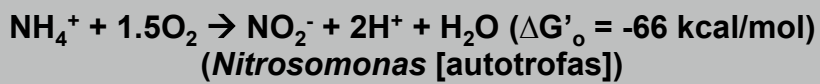
... fijación de nitrógeno



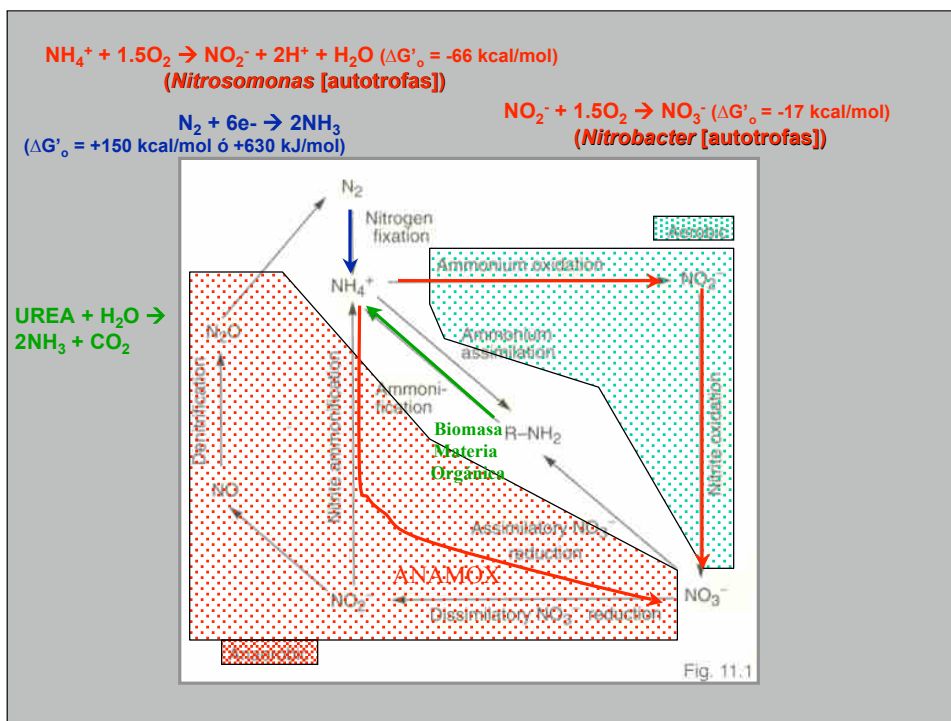
... amonificación

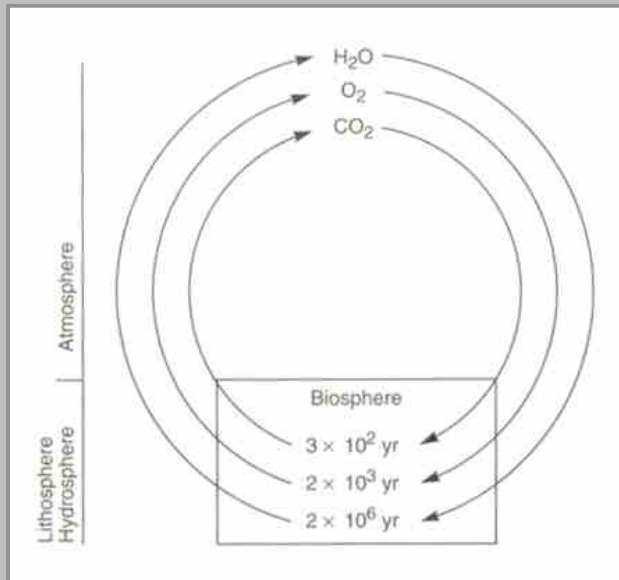


... nitrificación



... desnitrificación





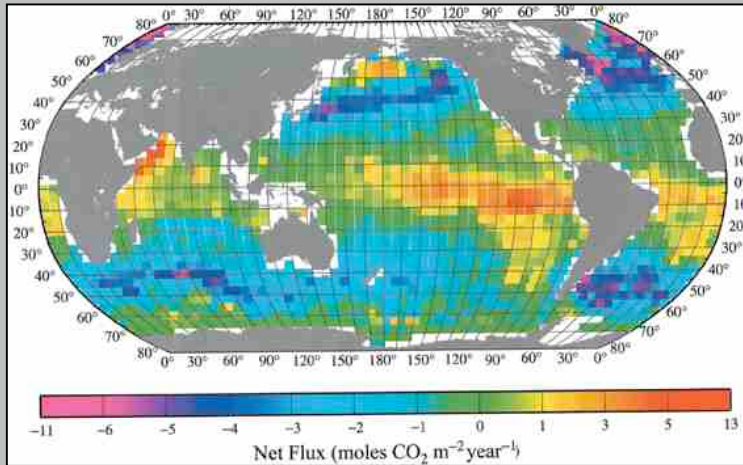
**Table 10.2**

Major carbon reservoirs

Reservoir	Amount (billions of metric tons of carbon)
Atmosphere before 1850	560–610
Atmosphere in 1978	692
Oceans and fresh water inorganic	35,000
Dissolved organic	1,000
Land biota	600–900
Soil organic matter	1,500
Sediments	10,000,000
Fossil fuels	10,000

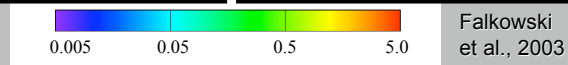
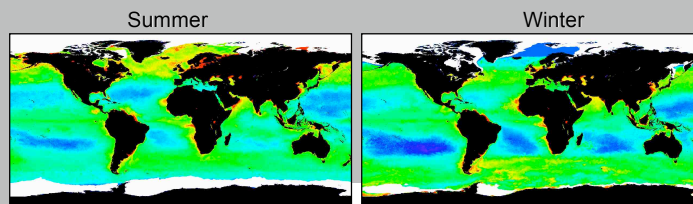
Source: Bolin et al. 1979.



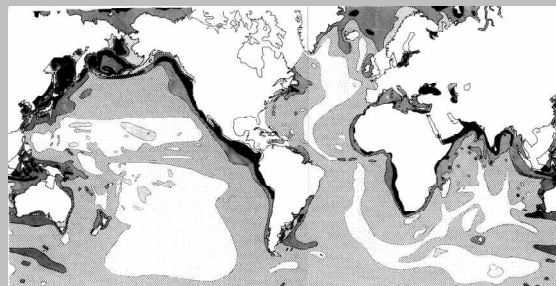


Miller, C.B. 2004. Biological Oceanography. Plate 16.1

### Why study sediments in the Mid Atlantic Bight?

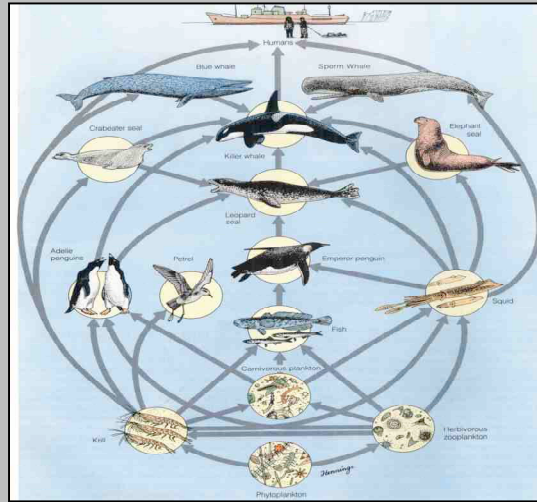


Chlorophyll (mg m<sup>-3</sup>)



Organic carbon in surface sediments, black >2% (Premuzic, 1980)

# Environmental Networks ... Food Web Example



Miller 1992. Living in the Environment. Wadsworth, p. 94

