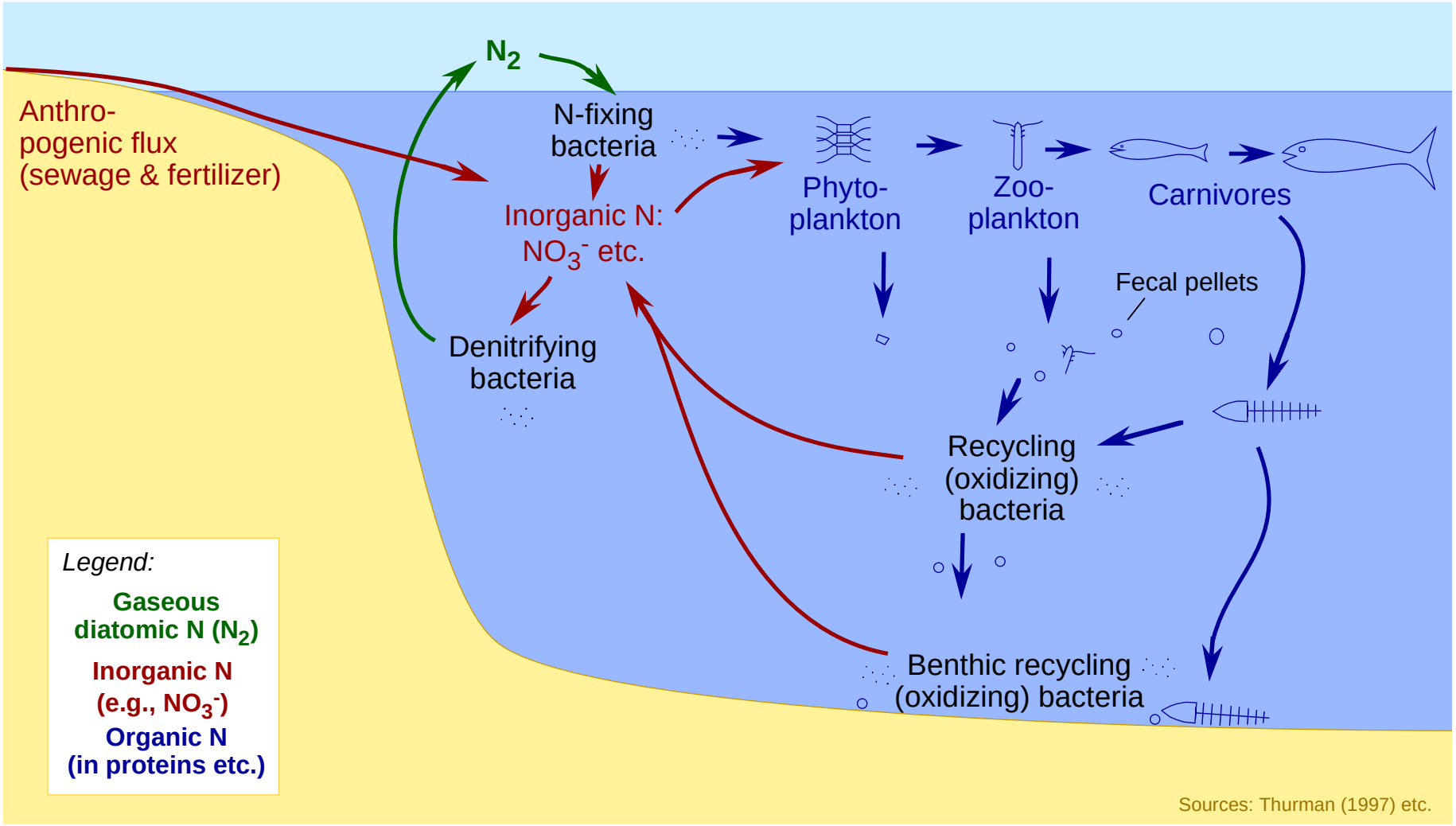
Marine nutrient cycles I: Nitrogen



This is one of a series of pages presenting simple schematic cycles of nutrients in Earth's oceans. The other pages are concerned with phosphorous, silicon, and iron.

Critical thoughts:

Photosynthesizers can only use N in its inorganic forms (e.g., nitrate (NO_3^-)).

Recycling bacteria at depth return N to its inorganic forms.

Recycling at depth makes upwelling critical to biological productivity.

Differences from other cycles:

Atmospheric reservoir of N_2

Very little loss of nitrogen to sediments, and thus

Little natural erosional flux from rivers to oceans

N is seemingly the most commonly limiting nutrient in marine ecosystems.