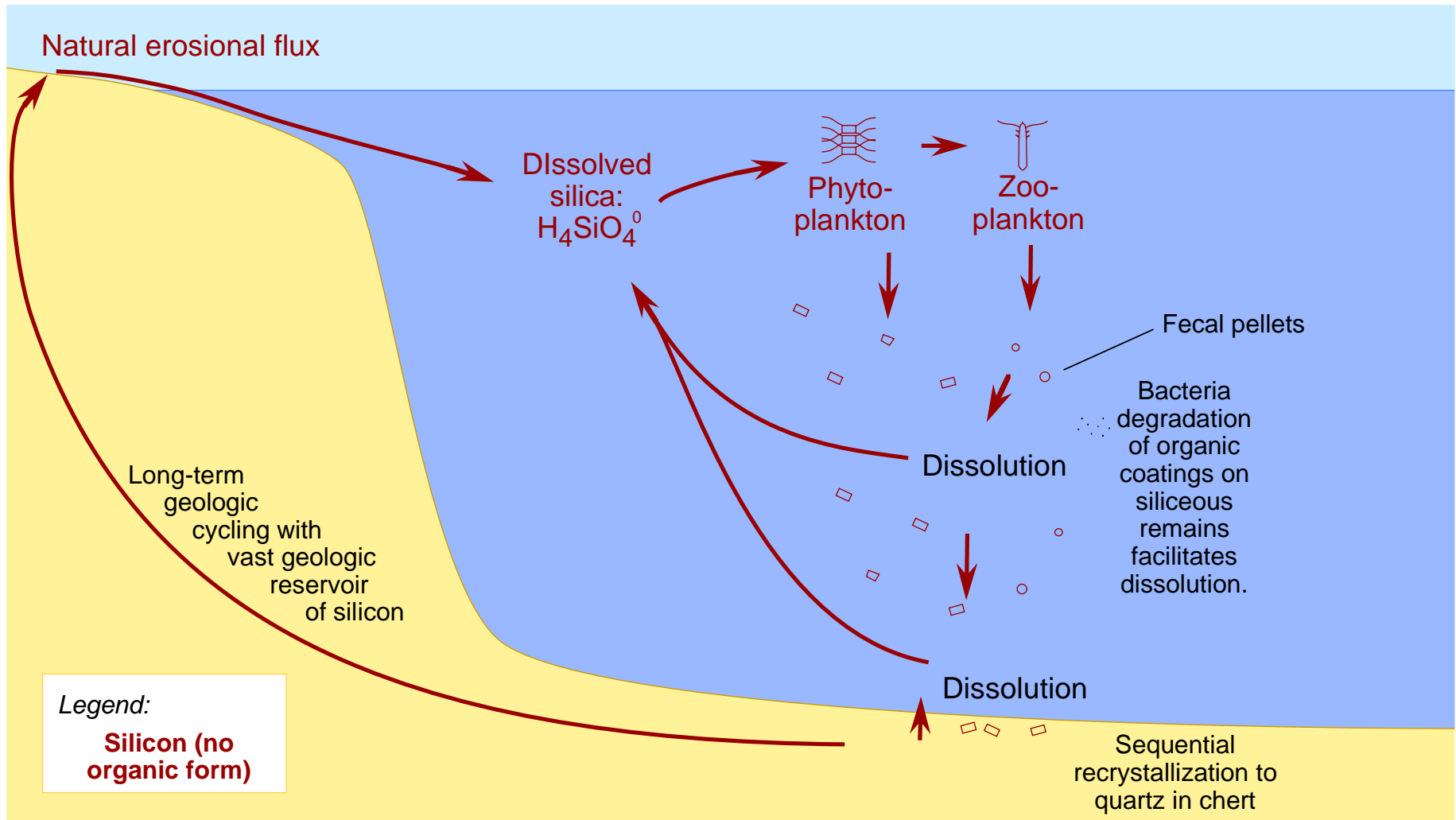


Marine nutrient cycles III: Silicon



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

Critical thoughts:

Photosynthesizers like diatoms and silicoflagellates use Si to make tests of opalline silica ($SiO_2 \cdot nH_2O$).
 Dissolution, rather than bacterial oxidation, returns Si to usable form.
 Recycling by dissolution at depth makes upwelling critical to biological productivity.

Differences from other cycles:

Unlike N and P, Si does not enter organic compounds from which it must be recycled.
 Zooplankton ingest Si but defecate it or otherwise eliminate it, so higher carnivores are not relevant to the Si cycle.