

Photosynthesis transforms solar energy and carbon dioxide into biomass and oxygen. In significant areas of the world's seas and oceans, most photosynthesis is performed by *Prochlorococcus*. Cyanobacteria are eaten by other microorganisms that inhale oxygen and exhale carbon dioxide.

The entire cycle primarily encompasses microscopic life, because there are few large animals in these nutrient-poor waters. Microorganisms such as *Prochlorococcus* play a vital role in the global carbon cycle, as well as in the circulation of other elements.

