

1. Record Nr.	UNINA9910220034803321
Autore	Fabio Roland
Titolo	Microbial Role in the Carbon Cycle in Tropical Inland Aquatic Ecosystems
Pubbl/distr/stampa	Frontiers Media SA, 2017
Descrizione fisica	1 electronic resource (144 p.)
Collana	Frontiers Research Topics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Aquatic microorganisms are tidily related to the carbon cycle in aquatic systems, especially in respect to its accumulation and emission to atmosphere. In one hand, the autotrophs are responsible for the carbon input to the ecosystems and trophic chain. On the other hand, the heterotrophs traditionally play a role in the carbon mineralization and, since microbial loop theory, may play a role to carbon flow through the organisms. However, it is not yet clear how the heterotrophs contribute to carbon retention and emission especially from tropical aquatic ecosystems. Most of the studies evaluating the role of microbes to carbon cycle in inland waters were performed in high latitudes and only a few studies in the tropical area. In the prospective of global changes where the warm tropical lakes and rivers become even warmer, it is important to understand how microorganisms behave and interact with carbon cycle in the Earth region with highest temperature and light availability. This research topic documented microbial responses to natural latitudinal gradients, spatial within and between ecosystems gradients, temporal approaches and temperature and nutrient manipulations in the water and in the sediment.</p>