

Cycles of Biogeochemical Elements and Impact of Their Disturbance on Human Activity in Mining Areas

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ABSTRACT

Many natural processes on Earth are cyclical. The circulation of water between the oceans, the atmosphere and the continents are a familiar example. Another illustration is the formation and transformations of glucose generated by photosynthesis from carbon dioxide and its consumption by herbivores which regenerate carbon dioxide by respiration.



The sufficient and balanced supply of biogenic elements, through nutrient cycles, often called "biogeochemical cycles", underlies all other ecosystem services. The term is most commonly used to refer to the global cycles of the "elements of life" C, O, N, S and P, but its use is extended to regional cycles as well as to other elements or substances.

The study of biogeochemical cycles is the investigation of the conversion and transport of substances in terrestrial systems. In most cases, cycles connect biotic and abiotic subsystems. The transport of substances in biogeochemical systems is usually represented graphically by means of diagrams or flowcharts, which are composed of boxes (or compartments or reservoirs) connected by lines directed by arrows. The alteration and dysfunction of the cycle of elements linked to anthropogenic activity impact, among other things, agricultural production and human health. This study illustrates the disruption of the cycle of some biogenic elements essential to the nutrition of plants in mining areas.

Keywords: Cycle, Elements, Transport, Climate change, Production.

