

Carbon Cycle → Carbon dioxide concentration in the atmosphere is only 0.032% which is less than that needed by most of the plants for their maximum efficiency in photosynthesis.

Experiments show that with the same moisture content and sunlight intensity as is available in an open field on sunny days the rate of photosynthesis increases several times if the CO_2 concentration is artificially increased. The CO_2 is the principal source of carbon needed in the building up of all organic world through photosynthesis of green plants and goes back into the environment by the breakdown of these organic compounds through respiration by plant or organisms that eat living or dead plants.

These are various stages through which carbon cycles in the biosphere of carbon fixed by green plants globally is in the range of 9×10^{13} kg of per year. In ocean water, CO_2 remains dissolved in huge quantities estimated to be over 50 times that of the atmosphere. This regulates the atmospheric CO_2 between atmosphere and sea on the one hand and between atmosphere and organisms on the other.

In the atmosphere the CO_2 varies from hour to hour during the day. In the morning CO_2 concentration is on the high side because of accumulated respiration of the community in absence of the opposite process that is photosynthesis in darkness. The O_2 content gradually increases by noon and CO_2 content correspondingly decreases.