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Online class J.J. College, Ara, Dr. Binul Pandit

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Question → Describe Sulphur cycle? ^{paper-III - Group-B - Ecology}

Ans → This is also a sedimentary cycle. Sulphur is structural component of protein. It links air, water and soil where microbes play an important role. Most of the organisms take sulphur as sulphates dissolved in water. This comes to the soil after death and decay of organism and then it is utilized by the plants. The sulphur cycle involves following steps. —

- (i) The sulphur bacteria like *Thiobacillus* oxidises sulphur found in soil into sulphate. This sulphate is present in the soil in soluble form and is directly taken up by plants.
- (ii) The plants synthesize protein from sulphate.
- (iii) When plants are eaten by animals, sulphur becomes incorporated in the tissues of animals in the form of protein.
- (iv) Decomposition of plant and animal bodies by micro-organisms causes release of sulphur in the form of hydrogen sulphide.
- (v) Some amount of hydrogen sulphide is converted back into a reutilizable sulphate by bacteria.

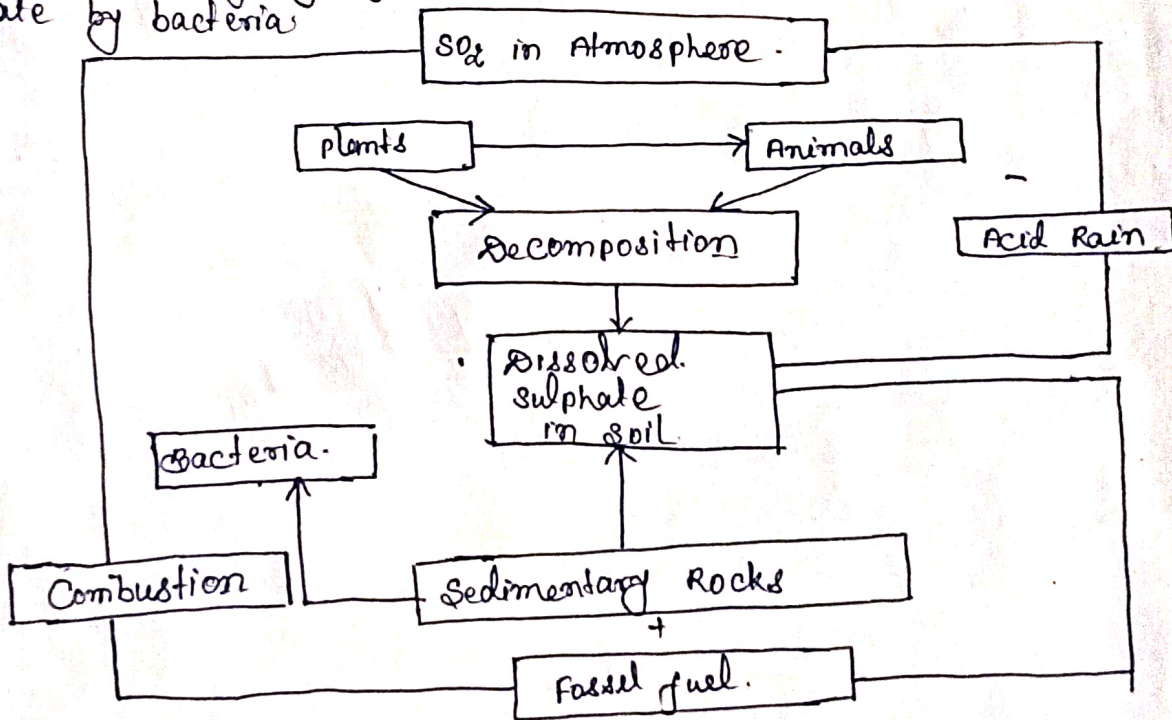


Fig - Sulphur cycle.

- (i) Some amount of sulphur becomes converted into sulphur dioxide due to burning of fossil fuels which becomes one of the major sources of air pollution.
- (ii) The sedimentation of sulphur is made due to precipitation in presence of iron in aerobic condition which results in the formation of ferrous sulphide. This ferrous sulphide is soluble in neutral and alkaline water.