

Mitigation of Climate Change by Carbon Sequestration

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Abstract

Day by day environment has polluted or lost its originality by our selfish activities to the environment like deforestation, industrialisation, burning of fossil fuel, the conversion of land for agriculture which increases concentrations of the atmospheric greenhouse gasses (GHG). Among the different GHGs most common is carbon dioxide (CO₂), which increases global average surface temperature from 13.5 °C to 14.5 °C (1850 to 2000). It ultimately changes the climate. Climate change is a gravest threat to the present agriculture. Climate change is a change in the statistical distribution of weather patterns lasts for an extended period of time. To tackle global warming due to increasing concentration of CO₂, carbon sequestration is one of the most important options. Carbon sequestration is the long term capturing and secure storage of carbon that would, otherwise, be emitted or remain in the atmosphere. Carbon dioxide is absorbed by plants through photosynthesis and stored as carbon in biomass in tree trunks, branches, foliage and roots and soil (EPA, 2008). Among the different carbon sequestration strategy, agroforestry plays an important role in carbon sequestration directly by sequestering carbon at the rates ranging from 1.5 to 3.5 Mg C ha⁻¹ yr⁻¹ and indirectly by reducing pressure on natural forests which induce carbon sequestration. Afforestation can also be used as a tool to reduce level of CO₂ in the atmosphere as forest soil is the major sink of carbon, storing about 3755811MT of carbon in India's forest soil. Out Of 80% potential that the tropics possess to sequester carbon, forestation/farm forestry account for 50%.

Keywords: Climate Change, Carbon Sequestration, Deforestation
