

Theme 5: Conservation, restoration and management of ecosystem

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CARBON SEQUESTRATION POTENTIAL OF THE SOIL OF GIR FOREST, GUJARAT

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Gujarat is a western state of India which enjoys a tropical climate. The major concentration of forests is found all along the eastern border of the state and the hilly portion of Saurashtra. Gir is the jewel of Saurashtra. Spread over 1412 sq. km., of undulating land with dry deciduous forest, Gir is best known as the last – respite for the Asiatic lion (*Panthera leo persica*) in the wild. Gir has a topography made up of succession of rugged ridges, isolated hills, plateaus and valleys. Besides, being the last abode of Asiatic lions, Gir also forms a unique habitat for leopard, rusty spotted cat, pangolin, ruddy mongoose, civets, paradise flycatcher etc. This work deals with the analysis of soil samples collected from different areas of Gir forest. Stratified Random Sampling was employed to collect soil samples from surface as well as 10, 20 and 30 cm depths. The collected samples were analysed for macronutrients, micronutrients, organic carbon and organic matter. The amount of carbon sequestered was also calculated. Significant variations were seen in organic carbon content among samples collected from different places as well as from different depths. The micronutrients also showed marked variations at different places and depths. The average organic carbon content in % was 0.63 kg/hac. The average pH content of the soil samples was 6.5 to 7.5. The average phosphorus content was less than 1 ppm and average potash content was 15 to 25 ppm.