



Biomass and Carbon Stocks in Agroforestry Land use System in Sub-tropics of J&K

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Abstract: Biomass, carbon stocks and carbon dioxide equivalent (CO₂e) in agroforestry land use system was assessed for *kandi* areas in sub-tropics of Jammu & Kashmir. Agri-horticultural system was the prominent agroforestry land use system in the study area. *Mangifera indica* gave the highest above and below ground biomass (46.19 Mg ha⁻¹). The average total biomass in tree component was 14.28 Mg ha⁻¹, out of which, the contribution of above ground biomass in tree component was 75.28 percent and 24.78 percent in below ground biomass. Similarly, carbon stocks in tree component were 6.62 Mg ha⁻¹ and the highest were recorded in *Mangifera indica* (21.28 Mg ha⁻¹). The contribution towards carbon stocks of trees and understorey component in agroforestry land use was found to be 6.62 Mg ha⁻¹ (81.23 percent) and 1.47 Mg ha⁻¹ (18.17 percent), respectively. The total output from agroforestry land use system towards biomass was 17.62 Mg ha⁻¹ and corresponding carbon stock was 8.09 Mg ha⁻¹.

Keywords: Agroforestry, Carbon stocks, Carbon dioxide equivalent, Carbon sequestration
