

MULTIFARIOUS SCOPE OF AGRO-FORESTRY

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Abstract: Agroforestry is an ecologically sustainable land use system that maintains increase total yield by combining food crops (annuals) with tree crops (perennials) and/or livestock on the same unit of land. A large hectare is available in the form of boundaries, bunds, wastelands where this system can be adopted. Farmers retain tree of *acacia nilotica*, *acacia catechu*, *Dalbergia sissoo*, *Mangifera indica*, *Zizyphus mauritiana* and *Gmelina arborea* etc in farm land. Agroforestry-the deliberate combination of woody perennials on the same piece of land with agricultural crops and/or animals, plays a crucial role in climate change mitigation especially due to its tree component. Trees accumulate CO₂ (which is the most predominant GHG) in their biomass. Agroforestry not only helps in climate change mitigation but also climate change adaptation. It is an established fact that despite our present effort at climate changes mitigation (GHG reduction), there is a more pressing need to cope with the impact of climate change (adaptation). For instance, the trees in agroforests provide shade for both companion crops and the farmer against the rising temperatures, and also shelter the crops against the harmful effect of raging storms. The presence of trees on the farms ensures income diversification through the provision of additional resources like fruits, nuts, timber, vegetables, fodder, etc. People should be aware about the scope and benefits of Agroforestry and they should participate in implementation and development of Agroforestry in India. Therefore, agroforestry system is economically and ecologically sound practices with enhancement of overall farm productivity, soil enrichment through litter fall, maintaining environmental services such as climate change mitigation (carbon sequestration), phytoremediation, watershed protection and biodiversity conservation.

Keywords: Agroforestry, Biodiversity, Bund, Climate change, Phytoremediation

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