

### **XIII.A.7. Integrated Ecological-Economic Accounting of Phyto-Diversity Mono-Cultures of Exotic Eucalyptus, Tereticornis, Prosopis Juliflora and Indigenous D. Sissoo Plantations**

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The present study deals with the ecological economic evaluation of phyto-diversity component in 10+ year old plantations of and E. Tereticornis, Prosopis juliflora and D. sissoo, at Bir Basherpur Reserve Forest (27039'N 76042'E), Gurgoan. The number, biomass, diversity, abundance, dominance and frequency were estimated. The indices of importance value, diversity, dominance, similarity, dissimilarity and evenness were calculated for each of. the site. The D. sissoo plantations supported the maximum number of plant species on its floor, followed by E. Tereticornis and Prosopis juliflora. The biomass productivity was found 1940.82 kg/ha in D. sissoo, 1285.40 kg/ha in E. Tereticornis and 1061.61 kg/ha in case of Prosopis juliflora. The D. sissoo plantations also overpowered either of the exotics in terms of all the indices values. However, our valuation measures fail to consider this aspect for the assessment of a plantation site, simply of the reason that no markets exist to estimate the value of widely growing plant species. Such, market failures send the wrong signals for the value judgements and policies. Thereby, an attempt had been made to estimate the use-value of various plant species for its five major contributions i.e. food, fuel, fodder, soil stabilisation and medicine. The biomass per plant and life strategy were chosen the prime criteria to assign the value using ordinal analysis. The total value for all the plant species of a site was the maximum in case of indigenous plantation followed by exotics. The integrated accounting of phyto-diversity along with other ecological services for the assessment of plantation, may be bring the change in policies in a better sustainable way.