

VALUATION OF ECOSYSTEM SERVICES OF *ENDANE* BIODIVERSITY CORRIDOR, KAHAWATHTHA, SRI LANKA

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In light of the recent acceleration of deforestation and forest degradation in Sri Lanka, valuation of ecosystem services is essential for appraising the value of natural ecosystems among the decision makers and rural communities. Only a handful of researchers have attempted to value forest ecosystems of Sri Lanka. We identified key ecosystem services and their financial value in *Endane* Biodiversity Corridor that connects a peripheral forest reserve to *Sinharaja* forest complex. The forest corridor has two main sections: the upper and the lower. The upper section is located within the homegardens of *Uda Delwala* village, while the lower section is administered by *Dilmah* Conservation of *Dilmah* Ceylon Tea Company. We employed a range of methods for estimating respective ecosystem services including interviewing households, key stakeholders within and around the corridor, and surveying tree flora in nineteen, 20 m × 20 m plots for estimating the carbon stock. The benefit transfer method was used to value supporting and regulation services. Our results revealed that the total value of ecosystem services provided by *Endane* Biodiversity Corridor was 6,447US\$ ha⁻¹yr⁻¹. This amount included: provisioning services of 1957US\$ ha⁻¹yr⁻¹ supporting services of 645US\$ ha⁻¹yr⁻¹ regulation services of 3,807US\$ ha⁻¹yr⁻¹ and cultural services of 38.8US\$ ha⁻¹yr⁻¹. Considering the total area of the corridor of 59.3 ha, the total value of ecosystem services was estimated at 382,362US\$ per year. The upper section of the corridor generated a high amount of provisioning services due to the high contribution of regulatory services to enrich the respective production systems. In addition to the unvalued ecological benefits of connecting two forest reserves, *Endane* Biodiversity Corridor generate an annual ecological wealth to the rural communities that are less likely to be replaced by conventional development initiatives or a single ecological service assessed.

Keywords: Ecosystem service valuation, Provisioning services, Supporting services