

Supplementary File S2: Formulas for calculating carbon storage

CS values are calculated formulas follows:

$$C_i = C_{i-above} + C_{i-blow} + C_{i-soil} + C_{i-dead} \quad (S1)$$

$$C_{tot} = \sum_{i=1}^n C_i \times S_i \quad (S2)$$

where C_i is the total carbon density (t/ha) of land use type i , $C_{i-above}$ is the aboveground carbon density (t/ha) of land use type i , and C_{i-blow} is the underground carbon density (t/ha) of land use type i . C_{i-soil} is the soil organic carbon density (t/ha) of land use type i , and C_{i-dead} is the dead organic carbon density (t/ha) of land use type i . Dead organic carbon data are difficult to obtain, and only three other carbon sinks are considered in this study. C_{tot} is the total CS (t) of the ecosystem, S_i is the area of land use type i (ha), and n is the number of land use types [1].

References:

1. Zhu, W.; Zhang, J.; Cui, Y.; Zhu, L. Ecosystem Carbon Storage under Different Scenarios of Land Use Change in Qihe Catchment, China. *J. Geogr. Sci.* **2020**, *30*, 1507–1522, doi:10.1007/s11442-020-1796-6.