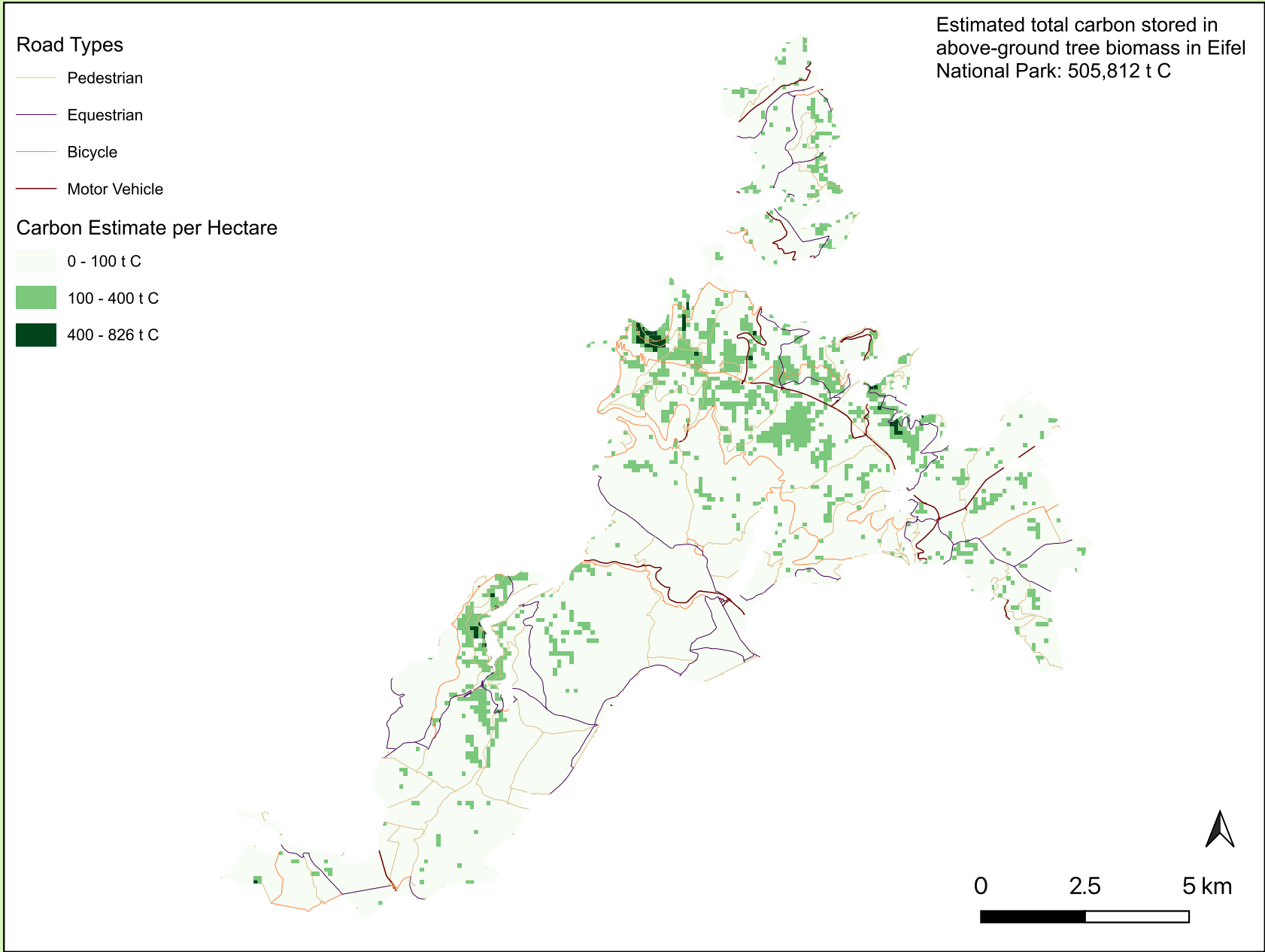


Tree Carbon Stock Estimation (in Relation to Road Type Distance)

Study Case: Eifel National Park, Germany



Author: Max Sonntag
Date published: 10.04.2025
Projection: EPSG:25832
Source: geoportal.nrw

Estimation method:

- Combining different species-specific allometric equations to calculate above-ground biomass (AGB) using only diameter at breast height (DBH) and tree height (H):
$$AGB = 0.04 \times DBH^{2.42} \times H^{1.125}$$
- Approximating diameter at breast height (DBH) by tree height (H):
$$DBH = \exp(-0.45 + 1.1 \times \ln(H))$$
- Approximating tree carbon by kg C / tree = 0.5 AGB

Sources (see Readme):
Cienciala et al. 2005
Pretzsch 2009
Chave et al. 2014
IPCC 2006

