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## Reed biomass carbon sequestration potential within Danube Delta biosphere reserve

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Danube Delta Biosphere Reserve is situated in the South-East part of Romania. It is rich in biological diversity and consists in Danube Delta and surroundings. It is well-known that the Danube Delta Biosphere Reserve has the largest compact reed-bed from the entire Europe. This paper presents an efficient way to estimate the biomass for the entire potential reed areas from the territory of Danube Delta Biosphere Reserve (D.D.B.R.). The data that were used for accomplishing this study consist in LiDAR data with the focus on the vegetation height and orthophotos in Infra Red spectrum division, with 0.25 m resolution. These data were used in order to highlight the reed vegetation by knowing the vegetation height and its chlorophyllian activity. After elaborating the map of potential reed areas, the biomass amount for each region was calculated. Having these numbers and using a specific ratio it could be revealed the amount of sequestered carbon within reed vegetation. On the D.D.B.R.'s territory there are areas that are used for reed harvesting every year for constructions. Thus, it is important to know the potential of reed in carbon sequestration in order to mitigate climate change.

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