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| Acronym     | <b>iSINK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Full Title  | <b>Testing the replacement of trees regenerated from vegetative shoots with trees regenerated from seeds as a measure to improve forest carbon sink</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Partner(s)  | <b>Transilvania University of Brasov, Romania</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Grant Theme | Establishing Climate-Smart Forestry and forest restoration pilots in Europe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Start Date  | May 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Duration    | 18 months                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Description | <p>Increasing the forest carbon sink is an important tool that can be used to limit the potential catastrophic effects of climate change. According to the Romanian National Forest Inventory, approximately 15.1% of Romanian forests are regenerated from vegetative shoots, while their corresponding volume is 10.5%, suggesting these forests have a lower-than-average volume stock per hectare. Increasing the stock to country average can unlock a significant potential for increasing the forest carbon sink.</p> <p>This project aims to investigate if and how the replacement of trees regenerated from vegetative shoots with trees regenerated from seeds can help increase the forest carbon sink. iSINK employs terrestrial laser scanning and retrospective dendrochronological analysis of tree growth to obtain a highly accurate picture of the allometry and growth. Data is collected from a national network of 50 sample plots, located in Sessile oak forest stands, 25 in stands regenerated from vegetative shoots (treatment) and 25 in stands from seeds (control). All sample plots are scanned, and increment cores are collected from all trees within sample plots.</p> <p>Based on the measured data, allometric and growth models are developed for trees regenerated from vegetative shoots and seeds. The models are further compared and then used to parametrize the CBM-CFS3 model. The CBM-CFS3 model is used to investigate how the replacing of the trees from vegetative shoots with trees from seeds will affect the long-term forest carbon sink. The project aims at producing recommendations on how to improve forest carbon sink to achieve the climate targets.</p> |



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