The datasets here are needed to run the multi-objective optimization model presented in the scientific article ‘Optimizing tree selection for cable yarding operations planning: a multi-objective modelling approach’.

* The file ‘Trees.csv’ includes all the information of the trees belonging to the considered harvest area. The individual trees were derived from the Swiss airborne LiDAR data available at the federal website: [swissSURFACE3D (admin.ch)](https://www.swisstopo.admin.ch/it/modello-altimetrico-swisssurface3d). The LiDAR data were processed using the R package ‘lidR’.
* The ‘Trees\_clusters.csv’ file includes the groups of trees generated from the ‘Trees.csv’ file through a hierarchical clustering algorithm based on the distances between individual trees. It contains all information about the collection operations at the level of clusters of trees, which are identified as cycles in the optimization model.
* The file ‘Canopies\_overlaps.csv’ includes the pairs of adjacent trees and the relative overlapping canopy area between the two trees.
* The file ‘Clusters\_canopies\_overlaps.csv’ includes the pairs of adjacent tree clusters and the relative overlapping canopy area between the two clusters.
* The file ‘Trees\_canopies.rar’ includes the shapefile of the tree canopies with perimeter and canopy area information, which was also obtained via the R lidR package.
* The file ‘Skyline\_Corridors.rar’ includes the shapefiles of the skyline corridors of the cable roads under investigation.
* The file ‘Dragging\_corridors.rar’ includes the shapefiles of the potential lateral dragging corridors for each tree in the ‘Trees.csv’ file.
* The file ‘CableRoadsHarvestArea.rar’ includes the shapefiles of the cable road areas used to calculate the CbA index.
* The file ‘HarvestAreaDivided\_2.rar’ includes the shapefiles of the harvest area divided into 2 sections to be applied in the optimization model.