Data description Sample Plot Inventory Data Parc Naturel du Jorat

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This document describes the dataset published on envidat which accompanies the report documenting the results of the sample plot inventory in the Parc Naturel du Jorat (PNJ, Stillhard et al. 2023). The dataset contains 5 result-tables and 1 lookup table. These are described in-depth below.

All results presented in the files are based on 129 sample plots assessed in winter 2021/22, 57 of these are located in the buffer zone and 72 in the core zone of the PNJ. For more information on the protocol of the assessments see Stillhard et al. (2020).

results_trees.csv

The file `results_trees.csv` contains results of living, standing and lying and dead standing trees as well as for stumps (trees found on the plot but broken / cut below 1.3 m). The columns are described in Table 1

Table 1: Column description results trees

Column	Type	Description
`invnr`	Integer	Inventory-ID. Defines the inventory for which the estimate is valid. For Jorat, only one inventory is available in this results table.
`strat`	Integer	Stratum. Defines the stratum for which the estimate is valid. `1`: Core zone `2`: Buffer zone `9999`: Total
`population`	text	Defines the population for which the estimate is valid. living: All standing and lying living trees dead: All dead standing trees stump: Dead trees with a height < 1.3 m
`dbhclass`	Integer	Defines the dbh-class for which the estimate is valid. See lookup table for the encoding of the values.
`species`	Integer	Defines the species for which the estimate is valid. See lookup table for species encoding.
`estimator`	character	Defines the respective estimator and the unit: `ntrees`: Number of trees [N ha^{-1}] `barea`: Basal area [m^2 ha^{-1}] `vol`: Volume [m^3 ha^{-1}]
`estimate`	Numeric	Estimate for the respective estimator of the population in the defined stratum, dbh-class and species.
`variance`	Numeric	Variance for the respective estimate.

results_regeneration.csv

The file `results_regeneration.csv` contains results of the regeneration survey. The columns are described in Table 2.

Table 2: Column description results regeneration

Column	Type	Description
invnr	Integer	Inventory-ID. Defines the inventory for which the estimate is valid. For Jorat, only one inventory is available in this results table.
strat	Integer	Stratum. Defines the stratum for which the estimate is valid. 1: Core zone 2: Buffer zone 9999: Total
regclass	Integer	Defines the height class for which the estimate is valid. See lookup table for the encoding of the values.
species	Integer	Defines the species for which the estimate is valid. See lookup table for species encoding.
estimate	Numeric	Estimate for the respective estimator of the density [N ha^{-1}] in the defined stratum, regclass and species.
variance	Numeric	Variance for the respective estimate.

results_lying_deadwood.csv

The file `results_lying_deadwood.csv` contains results of the lying deadwood survey. The columns are described in Table 3.

Table 3: Column description results lying deadwood

Column	Type	Description
`invnr`	Integer	Inventory-ID. Defines the inventory for which the estimate is valid. For Jorat, only one inventory is available in this results table.
`strat`	Integer	Stratum. Defines the stratum for which the estimate is valid. `1`: Core zone `2`: Buffer zone `9999`: Total
`speciesgroup`	integer	Defines the speciesgroup / woodtype for which the estimate is valid. `390`: Coniferous species `800`: Broadleaved species `9999`: Total
`deadwood_decay`	Integer	Defines the decay class for which the estimate is valid. See lookup table for the encoding of the values.
`estimate`	Numeric	Estimate for the respective estimator of the volume [m^3 ha^{-1}] in the defined stratum, decay class and speciesgroup.
`variance`	Numeric	Variance for the respective estimate.

results_habitat_trees.csv

The file `results_habitat_trees.csv` contains results for the number of habitat trees. In this context, habitat trees are a) living trees with a DBH $\geq$ 80 cm, b) dead standing trees with a DBH $\geq$ 36 cm and trees bearing at least on Tree related Microhabitat (TreM). The columns are described in Table 4.

Table 4: Column description results habitat trees.

Column	Type	Description
invnr	Integer	Inventory-ID. Defines the inventory for which the estimate is valid. For Jorat, only one inventory is available in this results table.
strat	Integer	Stratum. Defines the stratum for which the estimate is valid. 1: Core zone 2: Buffer zone 9999: Total
population	integer	Defines the population for which the estimate is valid. 1: Living trees 2: Dead trees 99: All trees combined
trem_type	Integer	Defines the type of habitat tree for which the estimate is valid. `htrees`: Habitat trees. Living trees with DBH $\geq$ 80 cm if (`population = 1`) dead trees with a DBH $\geq$ 36 cm (`population = 2`) `trems`: Trees bearing at least one TreM. `total`: Total of habitat trees and trees bearing at least one TreM.
estimate	Numeric	Estimate for the respective estimator of the density [N ha^{-1}] in the defined stratum, population and trem type.
variance	Numeric	Variance for the respective estimate.

results_trems.csv

The file `results_trems.csv` contains results for the density of TreMs per ha [N ha^{-1}]. The columns are described in Table 5.

Table 5: Column description results trems.

Column	Type	Description
invnr	Integer	Inventory-ID. Defines the inventory for which the estimate is valid. For Jorat, only one inventory is available in this results table.
strat	Integer	Stratum. Defines the stratum for which the estimate is valid. 1: Core zone 2: Buffer zone 9999: Total
population	integer	Defines the population for which the estimate is valid. 1: Living trees 2: Dead trees 99: All trees combined
speciesgroup	integer	Defines the speciesgroup for which the estimate is valid. 390: Coniferous species 800: Broadleaved species 9999: All species combined
trem_type	character	Defines the type of habitat tree for which the estimate is valid. See lookup table for description.
estimate	Numeric	Estimate for the respective estimator of the density (N ha^{-1}) in the defined stratum, population and trem type.
variance	Numeric	Variance for the respective estimate.

lookup.csv

The file `lookup.csv` contains descriptions for the relevant values of the 5 datasets described above. The columns are described in Table 6.

Table 6: Column description lookup table.

Column	Description
table	Table the lookups refer to.
column	Column within the table the lookups refer to
value	Value within the column
variable_description	Description of the variable / column
value_description	Description of the values

References

Stillhard, J., S. Keller, G. Projer, M. Hobi, and P. Brang. 2020. Stichprobeninventur in Schweizer Naturwaldreservaten - Anleitung zu den Feldaufnahmen. Version 4.0.1. Eidgenössische Forschungsanstalt für Wald, Schnee und Landschaft WSL, Birmensdorf. URL `https://www.wsl.ch/fileadmin/user_upload/WSL/Wald/Biodiversitaet__Naturschutz__Urwald/Naturwaldreservate/Forschungsmethoden/Anleitung_SPI_NWR_V401.pdf`.

Stillhard, J., I. Murzynowska, G. Projer, M. Hobi, and P. Brang. 2023. Sample plot inventory in the Parc naturel du Jorat 2021. Swiss Federal Research Institute WSL, Birmensdorf, Switzerland. URL `https://www.dora.lib4ri.ch/wsl/islandora/object/wsl:35730/datastream/PDF/Stillhard-2023-Sample_plot_inventory_in_the-(published_version).pdf`.