

Metadata form of Silva Fennica

This form is designed for writing the elements of metadata, which are used in the description of research materials such as data and codes. The form is based on the work done in the Work Group “Description of research materials” under the Finnish Open Science Coordination.

Item	Description	Responsible
<i>Name of the data / code</i>	Tree level biomass data consisting of the different tree components	Author
<i>Author & ORCID</i>	Natural Resources Institute Finland https://ror.org/02hb7bm88	Author
<i>Authors' affiliation(s)</i>	All authors work in Natural Resources Institute Finland (Luke) Jaakko Repola, Research Scientist https://orcid.org/0000-0001-7086-0549 Jaana Luoranen, Senior Scientist https://orcid.org/0000-0002-6970-2030 Saija Huuskonen, Senior Scientist https://orcid.org/0000-0001-8630-3982 Mikko Peltoniemi, Research Professor https://orcid.org/0000-0003-2028-6969 Päivi Väänänen, Research Scientist Karri Uotila, Research Scientist https://orcid.org/0000-0003-4871-7564	Author
<i>Owner of the material</i>	Natural Resources Institute Finland (Luke) https://ror.org/02hb7bm88	Author
<i>Publisher</i>	Natural Resources Institute Finland (Luke) https://ror.org/02hb7bm88	Author
<i>Funder</i>	Ministry of Agriculture and forestry of Finland https://ror.org/02zdz1m23	Author
<i>Description</i>	The study aim was to compile tree level biomass models for above- and below-ground tree components of trees growing in planted Norway spruce seedlings stands with admixture of naturally regenerated silver birch (<i>Betula pendula</i> Roth), aspen (<i>Populus tremula</i> L.) and rowan (<i>Sorbus aucuparia</i> L.), The study material was gathered from three different stands in Southern Finland consisting of 152 sample trees. of which 44, 54, 20 and 34 were spruce, birch, aspen and rowan, respectively. Biomass (dry weight, kg) was measured by the tree components: stem (including bark), branches, foliage, stump, and roots (diameter >2mm)	Author
<i>Methods</i>	The experiment was randomized block design. The sample tree was selected by using stratified random sampling i.e., the sample trees were selected through the height distribution so that they represented the whole growing stock. Biomass model for the tree components was estimated by using seemingly unrelated regression (SUR) with maximum likelihood (ML) method in the MIXED procedure of SAS (SAS Institute Inc. 1999)	Author
<i>Variables</i>	Stand (Karkkila, Tammela, Nastola) Tree number Plot number Tree species (2=spruce, 3=silver birch, 5=aspen, 7=rowan) Biomasses (dry weight) of stem, branches, foliage, stump and roots, g Stump diameter, mm Tree height, cm	Author
<i>Author keywords</i>	Tree biomass, biomass of tree components, Norway spruce, birch, aspen, rowan	Author
<i>Vocabulary keywords (community standard)</i>	Forestry, tree biomass, biomass modelling	Author

<i>Discipline</i>	Field(s) of study to which the material is related. This is generally given by the repository as they use specific classifications.	Archive/Repository/Publisher
<i>Type of material</i>	Research data (Excel), model code (SAS-software)	Author
<i>Language</i>	Finnish (fin, fi)	Author
<i>Time range covered</i>	From 2022-07 to 2023-05	Author
<i>Geographic region</i>	Southern Finland (FI-16, FI-18, FI-06)	Author
<i>Version</i>		Author
<i>File format(s)</i>	Excel (xlsx)	Author
<i>Availability of the materials (open, embargo, registration, limited, registration required)</i>	Open, contact with the authors	Author
<i>Justification for access restrictions</i>		Author
<i>Licence</i>	A licence defines the conditions for reuse of the material. Silva Fennica requests the use of Creative Commons licences .	Author
<i>Connections with other research materials</i>	The material is part of the material gathered in the research project “ <i>The effect of precommercial thinning on the carbon balance of spruce seedling stand</i> ” (TaimiCO2) 1) The material is derived from another material e.g., research data is derived from raw data (IsBasedOn), 2) The material is a part of another material (IsPartOf), 3) Other materials are connected to the material (HasPart).	Author
<i>Access to the connected research materials</i>	Contact with the authors.	Author
<i>Codes only: hardware/software requirements for running the code</i>	Normal laptop are enough to read input data, and running the MIXED procedure of SAS (SAS Institute Inc. 1999)	Author
<i>Connections to other products of research</i>	No	Author
<i>Personal data</i>	No	Author
<i>Confidential or secret data</i>	No	Author
<i>Publication date</i>	Date of publication in an archive or repository.	Archive/Repository/Publisher
<i>Preservation policy</i>	The material is preserved permanently in the author’s organization (Luke)	Author
<i>Permanent identifier (PID)</i>	Unambiguous, permanent identifier of the material. The identifier may be DOI, URN or accession number.	Archive/Repository/Publisher