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
Name of the data / code	Data of a gap cut site including pendulous lichen, seedling, and tree data. Pienaukkokokeen aineisto sisältäen luppojäkälä-, taimi- ja puuaineiston.	Author
Author & ORCID	Rikkonen, Taru (0000-0002-7352-5241), …	Author
Authors' affiliation(s)	All authors work in Natural Resources Institute Finland (Luke), https://ror.org/02hb7bm88 Rikkonen, Taru 0000-0002-7352-5241, Hallikainen, Ville 0000-0001-5384-8265, Aatsinki, Pasi, Rautio, Pasi 0000-0003-0559-7531,	Author
Owner of the material	Natural Resources Institute Finland, https://ror.org/02hb7bm88	Author
Publisher	Natural Resources Institute Finland (Luke) https://ror.org/02hb7bm88	Author
Funder	Horizon Europe - European Commission (https://ror.org/00k4n6c32), grant agreement 89580, Strategic Research Council - Research Council of Finland (https://ror.org/02vtq1a86) and Natural Resources Institute Finland (Luke) (https://ror.org/02hb7bm88).	Author
Description	To assess the potential for balancing forestry and reindeer husbandry, we investigated the colonization success of pendulous lichen on seedlings within the gaps, created ten years before in a pine-dominated boreal forest in central Finnish Lapland, while also examining the influence of gap edges on the abundance of pendulous lichens in mature trees. The study included three gap sizes (diameters 20, 40, and 80 m) in xeric and sub-xeric sites, arranged in six randomized blocks, with 18 replicates per each gap size.	Author
Methods	The study area was divided into six blocks (30 ha on average, range 15–40 ha), each with a 40 m grid. Nine random points were selected per block, with three gaps of each size, totaling 54 gaps (18 per size). In summer 2010, nine circular plots (radius = 1.26 m) were established per gap: one at the center, one at the forest edge in each cardinal direction, and one control plot 12 m into the forest buffer in each direction, totaling 486 plots. Patch scarification was done in early summer 2010, and pre-existing seedlings were removed. In 2020 and 2021, the number and height of naturally regenerated seedlings and lichen-colonized Scots pine seedlings were recorded. Pendulous lichen abundance was assessed on the five nearest dominant trees in each gap and five control trees in the buffer zone (15 m from control plots). The models constructed for the statistical modelling were a negative binomial model for the number of pendulous lichen-colonized Scots pine seedlings, a binomial model for the presence of pendulous lichens on the longest single seedlings nearest to the circular sample plots, a linear model for the pendulous lichen category within the forest interior and at the gap edge, and a model to test the possible differences in forest edge characteristics between the cardinal directions. In the models, where model predictions were computed and plotted, the R-packages ggeffects and ggplot2 were used.	Author
Variables	ID; block; gap number; circular plot number; lichen category, edge; lichen category, forest; lichen category, mean; sample plot location; direction; gap diameter (m); sample plot location inside gap; nr. of pine seedlings; height of pine seedlings (cm); age of pine seedlings; number of all seedlings; height of all seedlings (cm); basal area (m^2/ha); volume of stock	Author

	(m^3/ha); number of stems; mean diameter (cm); mean height (m); arboreal lichens on highest seedling; age of highest seedlings, years; height of highest seedling (cm); number of seedlings with arboreal lichens.	
Author keywords	Pendulous lichen, gap cutting, continuous cover forestry, Pinus sylvestris Free keywords that describe the materials and make them easy to find after publication.	Author
Vocabulary keywords (community standard)	Lichen, forestry, Pinus sylvestris. https://www.eionet.europa.eu/gemet/en/themes/ https://www.ncbi.nlm.nih.gov/	Author
Discipline	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
Type of material	Research data (Excel), model code (R-software).	Author
Language	English ENG	Author
Time range covered	From 2020-07-15 to 2023-08-28	Author
Geographic region	Lapland (FI-10), Veneselkä fjell (66°56'36"N 26°07'60"E)	Author
Version	1	Author
File format(s)	Excel (xlsx), R-software (.r)	Author
Availability of the materials (open, embargo, registration, limited, registration required)	Data and R-code Data are available for reviewers upon request and will be stored in a repository (e.g. Zenodo) once the manuscript (and hence the data analysis) has been accepted.	Author
Justification for access restrictions		Author
Licence	CC BY-SA	Author
Connections with other research materials	The material is part of the material collected in research project "Potential of continuous cover forestry - regeneration, growth and profitability"	Author
Access to the connected research materials	Contact the authors.	Author
Codes only: hardware/software requirements for running the code	Normal laptop are enough to read input data, and running the R.	Author
Connections to other products of research	Hallikainen et al., 2019 (DOI: 10.1080/02827581.2018.1557248) Miettinen et al. 2024 (DOI: doi.org/10.1080/02827581.2024.2303022)	Author
Personal data	No	Author
Confidential or secret data	No	Author
Publication date	Date of publication in an archive or repository.	Archive/Repository/Publisher
Preservation policy	The data is stored in database and experimental register of Natural Resources Institute Finland permanently as a part of the institutes data policy.	Author
Permanent identifier (PID)		Archive/Repository/Publisher