

## 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>	Comparison of manual and automated coverage path planning for mechanized forest regeneration	Author
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<i>Authors' affiliation(s)</i>	1 Department of Engineering Sciences and Mathematics, Luleå University of Technology, Luleå, Sweden 2 Skogforsk (The Forestry Research Institute of Sweden), Uppsala, Sweden 3 Département de génie mécanique et de génie industriel, Université Laval, Québec, Canada	Author
<i>Owner of the material</i>		Author
<i>Publisher</i>	Silva Fennica, and the authors	Author
<i>Funder</i>	This research was partly conducted within Trees For Me, a center of excellence supported by the Swedish Energy Agency [P2021-90272] and almost 50 stakeholders. In addition, this work was supported by AutoPlant, which was funded by the Swedish Innovation Agency, VINNOVA [2023-02747]. Finally, sincere gratitude is expressed to Holmen Skog for providing the PlantMax and hpr data.	Author
<i>Description</i>	Article and figures	Author
<i>Methods</i>	-	Author
<i>Variables</i>	-	Author
<i>Author keywords</i>	Routing, Precision Forestry, Planting, Site preparation, Automation, Mechanization	Author
<i>Vocabulary keywords (community standard)</i>	-	Author
<i>Discipline</i>	Forest Engineering, Forest vehicle systems, Precision Forestry	Archive/Repository/Publisher
<i>Type of material</i>	Article and digures	Author
<i>Language</i>	Eng, swe	Author
<i>Time range covered</i>	YYYY-MM-DD	Author
<i>Geographic region</i>	SE	Author
<i>Version</i>	-	Author
<i>File format(s)</i>	docx, png, jpg, shp	Author
<i>Availability of the materials (open, embargo, registration,</i>	The map information can mostly be found in the GitHub repository <a href="https://github.com/LTU-Machine-Design/CPP_comparison_mechanized_forest_regeneration">https://github.com/LTU-Machine-Design/CPP_comparison_mechanized_forest_regeneration</a>	Author

<i>limited, registration required)</i>	DEM and DTW maps are licenced, and is available at these authorities <a href="https://www.lantmateriet.se/sv/geodata/vara-produkter/produktlista/">https://www.lantmateriet.se/sv/geodata/vara-produkter/produktlista/</a> <a href="https://www.skogsstyrelsen.se/e-tjanster-och-kartor/karttjanster/geodatatjanster/rest/">https://www.skogsstyrelsen.se/e-tjanster-och-kartor/karttjanster/geodatatjanster/rest/</a>	
	The coverage path planners are not commercial software, but it is possible to set up a similar model by following the steps and equations in this, and the previous papers.	
<i>Justification for access restrictions</i>	Licenced maps for input data.  The source code for the two coverage path planners are not available due to intellectual property, but it is possible to set up a similar model by following the steps and equations in this, and the previous papers.	Author
<i>Licence</i>	CC BY-SA 4.0	Author
<i>Connections with other research materials</i>	HasPart, the CPP are further development from <a href="https://doi.org/10.1007/s11676-025-01834-x">https://doi.org/10.1007/s11676-025-01834-x</a> And <a href="https://doi.org/10.1080/14942119.2025.2469201">https://doi.org/10.1080/14942119.2025.2469201</a> But this paper and the dataset is standalone and has not any connections with previous works.	Author
<i>Access to the connected research materials</i>	Both previous coverage path planners are published open access at <a href="https://doi.org/10.1007/s11676-025-01834-x">https://doi.org/10.1007/s11676-025-01834-x</a> <a href="https://doi.org/10.1080/14942119.2025.2469201">https://doi.org/10.1080/14942119.2025.2469201</a>	Author
<i>Codes only: hardware/software requirements for running the code</i>	<a href="https://github.com/LTU-Machine-Design/CPP_comparison_mechanized_forest_regeneration">https://github.com/LTU-Machine-Design/CPP_comparison_mechanized_forest_regeneration</a>  Both TerraTrail and Pathfinder are not commercial software. Both are just algorithms that are developed within a research project.  The codes of both coverage path planners is not open source, but it is possible to set up a similar model by following the steps and equations in this, and the previous papers.	Author
<i>Connections to other products of research</i>	<a href="https://doi.org/10.1007/s11676-025-01834-x">https://doi.org/10.1007/s11676-025-01834-x</a> <a href="https://doi.org/10.1080/14942119.2025.2469201">https://doi.org/10.1080/14942119.2025.2469201</a> <a href="https://doi.org/10.3390/f15020263">https://doi.org/10.3390/f15020263</a>	Author
<i>Personal data</i>	None	Author
<i>Confidential or secret data</i>	The source code is not available, but it is possible to set up a similar model by following the steps and equations in this, and the previous papers.	Author
<i>Publication date</i>	GitHub: 2025-05-16	Archive/Repository/Publisher
<i>Preservation policy</i>	The data is published on GitHub until further notice.	Author
<i>Permanent identifier (PID)</i>	-	Archive/Repository/Publisher