

## 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>	Digital hemispherical photographs and its analysis code used in a research article	Author
<i>Author &amp; ORCID</i>	Zhang, Shaohui (0000-0001-7876-9635); Korhonen, Lauri (0000-0002-9352-0114); Nummenmaa, Timo (0000-0002-9896-0338); Bianchi, Simone (0000-0001-9544-7400); Maltamo, Matti (0000-0002-9904-3371).	Author
<i>Authors' affiliation(s)</i>	University of Eastern Finland ( <a href="https://ror.org/00cydd11">https://ror.org/00cydd11</a> ); Tampere University ( <a href="https://ror.org/033003e23">https://ror.org/033003e23</a> ); Natural Resources Institute Finland (Luke) <a href="https://ror.org/02hb7bm88">https://ror.org/02hb7bm88</a> .	Author
<i>Owner of the material</i>	Zhang, Shaohui (0000-0001-7876-9635) ; Korhonen, Lauri (0000-0002-9352-0114).	Author
<i>Publisher</i>	Zenodo	Author
<i>Funder</i>	The Research Council of Finland ( <a href="https://ror.org/05k73zm37">https://ror.org/05k73zm37</a> )	Author
<i>Description</i>	Digital hemispherical photographs and self-developed R simulation codes. The images were used in the simulation programme to produce results that were detailed in the research article.	Author
<i>Methods</i>	The digital hemispherical photographs were acquired using a Nikon Coolpix 8800 camera and an FC-E9 fisheye converter. 12 images were acquired at plot level. Image analysis was performed in Hemispherical Project Manager (HSP, <a href="https://kosmos.ut.ee/en/services/free-hemispherical-software">https://kosmos.ut.ee/en/services/free-hemispherical-software</a> ). Simulation analysis was performed in R using the self-developed codes.	Author
<i>Variables</i>	Digital hemispherical photography (DHP), leaf area index (LAI)	Author
<i>Author keywords</i>	Digital hemispherical photography, leaf area index	Author
<i>Vocabulary keywords (community standard)</i>	Digital hemispherical photography, leaf area index	Author
<i>Discipline</i>	Forest sciences	Archive/Repository/Publisher
<i>Type of material</i>	Research data, analytical R code	Author
<i>Language</i>	ENG	Author
<i>Time range covered</i>	2011-06-01 to 2016-08-31	Author
<i>Geographic region</i>	Finland	Author
<i>Version</i>	v 01	Author
<i>File format(s)</i>	.bmp, .r, .NEF	Author
<i>Availability of the materials (open, embargo, registration, limited, registration required)</i>	Open	Author
<i>Justification for access restrictions</i>	Not applicable	Author
<i>Licence</i>	Creative Commons Attribution 4.0 International	Author
<i>Connections with other research materials</i>	Not applicable	Author

<i>Access to the connected research materials</i>	Not applicable	Author
<i>Codes only: hardware/software requirements for running the code</i>	R programme version 4.3.3 under Windows 10 Version 22H2 R can be downloaded via <a href="https://www.r-project.org/">https://www.r-project.org/</a>	Author
<i>Connections to other products of research</i>	<a href="https://doi.org/10.14214/sf.24044">https://doi.org/10.14214/sf.24044</a>	Publisher
<i>Personal data</i>	Not applicable	Author
<i>Confidential or secret data</i>	Do not contain confidential or secret information	Author
<i>Publication date</i>	2024-08-07	Archive/Repository/Publisher
<i>Preservation policy</i>	The record and files are publicly accessible	Author
<i>Permanent identifier (PID)</i>	10.5281/zenodo.13236565 <a href="https://github.com/UEFshzhang/SimulateIMG57">https://github.com/UEFshzhang/SimulateIMG57</a>	Archive/Repository/Publisher