MEÄN SAUNA
Inventory of old smoke saunas in the Swedish Torne river valley using laser scanning and photogrammetry.

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The cultural heritage of the Swedish Torne river valley has been dominated by the Finns. A strong manifestation of this are the numerous smoke saunas on the area. Due to the Lapland war in 1944-'45 the building stock as well as saunas were largely destroyed in Northern Finland. The smoke saunas in the Swedish side were left untouched and are representing the historical type of Finnish sauna culture and sauna buildings in Torne river valley and Lapland.
Every time a smoke sauna is warmed up there is a risk of fire, especially with old saunas. In Torne river valley there is a strong risk of cultural heritage vanishing, since no inventory of these saunas has been done on Swedish side.
In Project MEÄN SAUNA selected old smoke saunas in Swedish Torne river valley will be inventoried by researching of history, laser scanning and photogrammetry. 3D models of sauna buildings will be created and saunas will be classified.
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Introduction

Photo and Video Documentation

Survey

Case studies

Survey activities

Conclusion
Photo and Video Documentation
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3D Laser Scanning is a non-contact, non-destructive technology that digitally captures the shape of physical objects using a line of laser light. 3D laser scanners create “point clouds” of data from the surface of an object. In other words, 3D laser scanning is a way to capture a physical object’s exact size and shape into the computer world as a digital 3-dimensional representation.
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Laser Scanning Survey

Case studies
Some unknown obstacles: How does soot and charcoal on the wood surface affect the measurements?

Possible answer 3-5 mm thicker

Figure 13. The figure shows the point cloud generated from the half-painted board. A top view shows the transition between the painted area, the left side of the board, and the untreated area, the right side of the board.
Photo and Video Documentation
Laser Scanning Survey
Laser Scanning Survey
Photo Modelling Processes
Photo Modelling Processes
Photo Modelling Processes
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Photo Modelling Processes
Conclusive Considerations & Comments
Thank you for your attention

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Involved institutions

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Suomalaisen Kirjallisuuden Seura

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