

# Dynamic Treatment Units

stand free forest planning with spatial regard

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# Overview

TRADITIONAL FOREST PLANNING

THE DYNAMIC TREATMENT UNIT APPROACH

PAST STUDIES

OUR PROJECT



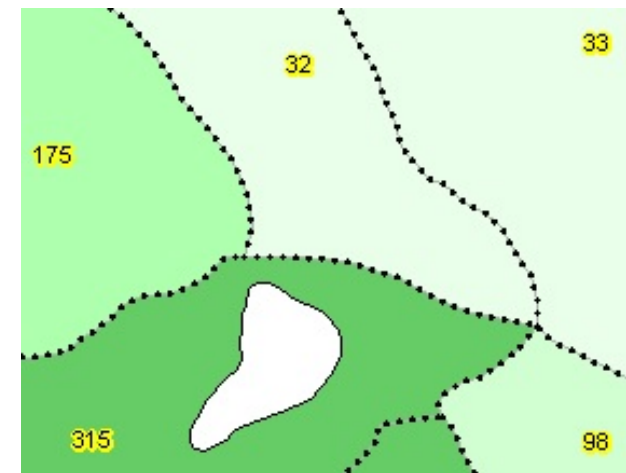
# Traditional forest planning

TRADITIONAL FOREST PLANNING: THE  
STAND APPROACH

BEFORE/AFTER/DURING INVENTORY

INITIAL STATE

DELINEATION USUALLY PERMANENT  
THE WHOLE PLANNING HORIZON



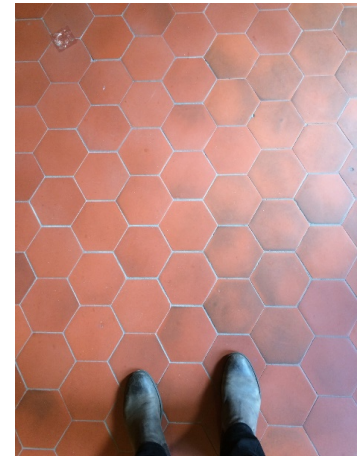
Source: <https://www.pcskog.se/2016/laser.htm>

# The stand approach

- EXPENSIVE TO OBTAIN AND STORE HIGH RESOLUTION DATA
- DELINEATION SUBOPTIMAL
- STATIC OVER TIME
- THRESHOLD EFFECTS WHEN OPTIMIZING

# Dynamic Treatment Units

- THE CONCEPT OF THE STAND STAND IS REJECTED
- "PIXELWISE" DESCRIPTION VIA AIRBORNE LASER
- AUTOMATED SEGMENTATION ALGORITHMS
- DEMANDS SPATIAL REGARD



# DTUs: not a new concept

PAST STUDIES REVOLVING:

HEURISTICS

SPATIAL REGARD HANDLED BY VARIOUS  
"SURROGATE VARIABLES"

FINNISH STUDIES

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Thuresson &  
Holmgren (1997)

Lu & Eriksson  
(2000)

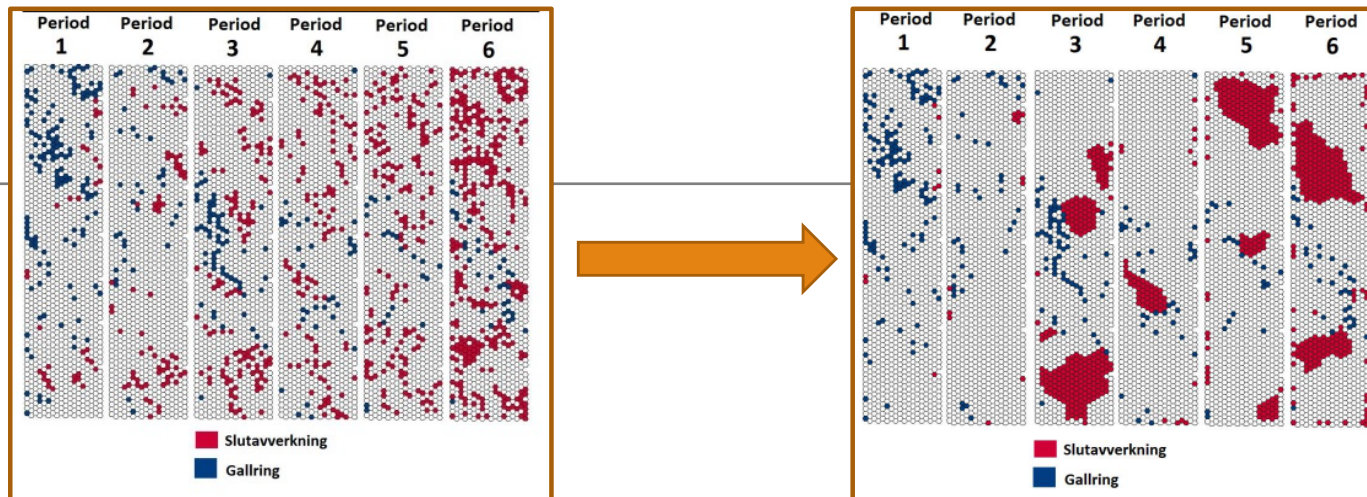
Lind (2000)

Heinonen (2000)  
Pukkala et al (2009)  
Packalén et al (2011)



# Pilot study

- SJÖDIN & WÄSTLUND 2015
- HEUREKA
- SPATIAL DRIVER: "COMMON BORDER"



# Project outline

A MATTER OF CLUSTERING TREATMENTS IN SPACE AND TIME

QUANTIYING COST IN A CORRECT MANNER

ECOLOGICAL HABITAT MODELLING

TWO DIFFERENT MODELS – "PRECISE" AND "APPLICABLE"

MORE THOROUGH COMPARISON WITH STAND APPROACH



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