



Beetles LIFE LIFE17NAT/FI/000181 Deliverable

Action A3: Forest attribute maps

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Action A3, Deliverable 1 *Forest attribute maps*

Forest attribute maps

Deliverable 1 contains maps of nine different forest attributes for the Hiidenportti area. The attributes describe the state of the forests and can be used, e.g., when planning artificial deadwood accumulation within this LIFE project. Following forest attributes are included:

- Basal area weighed mean diameter (Dg , Fig. 1)
- Basal area weighed weighed mean height (i.e., Lorey's mean height, Hg , Fig. 2)
- Volume (V , Fig. 3)
- Basal area (G , Fig. 4)
- Stem count (N , Fig. 5)

In addition to the basic attributes afore, presence of four main tree species (Norway spruce, Scots pine, birch, and European aspen) is reported through species-specific proportions from total basal area (Fig. 6-9). All attributes are mapped for 16 m x 16 m grid cells. The estimates for forest attributes were derived using Random forest modelling and statistical height and density metrics from dense (15 points/m²) airborne laser scanning (ALS) data.

The attributes presented here as illustrative pictures are also available as raster layers suitable for spatial analyses. The raster layers are distributed upon request through Metsähallitus (www.metsa.fi/beetleslife).

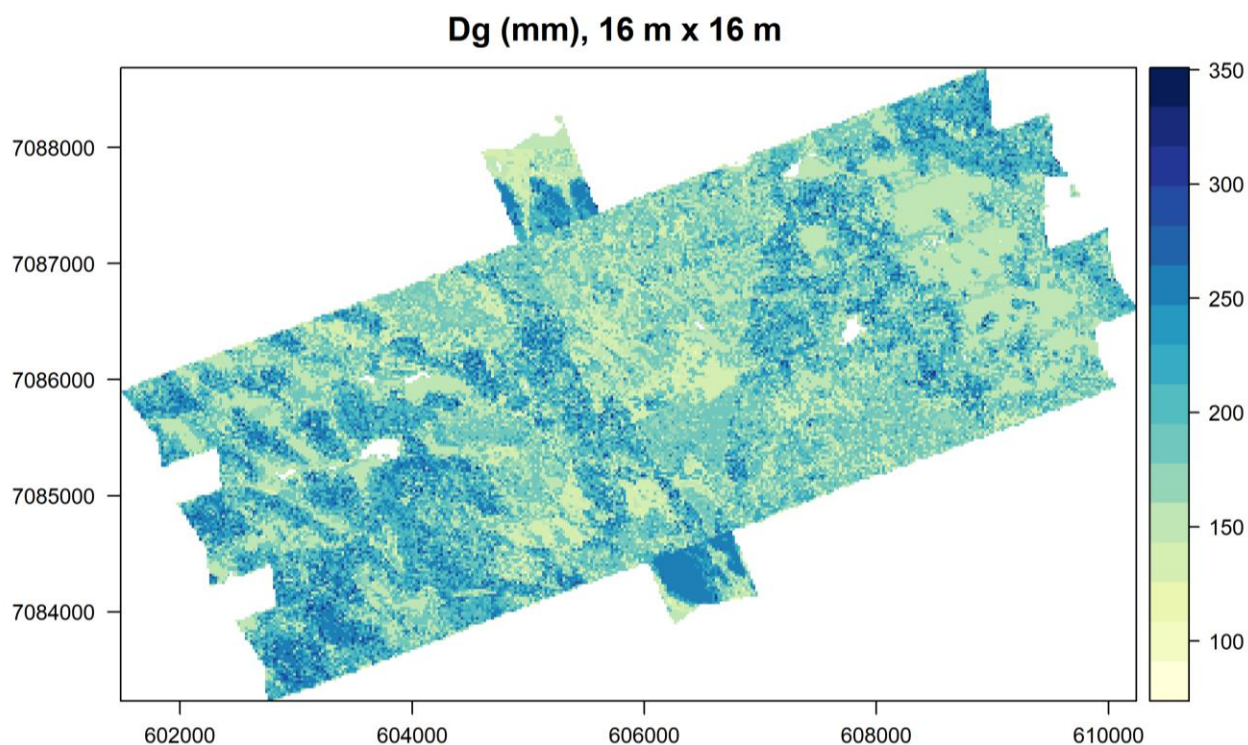


Fig 1. Basal area weighed mean diameter (mm) in 16 m by 16 m grid cells

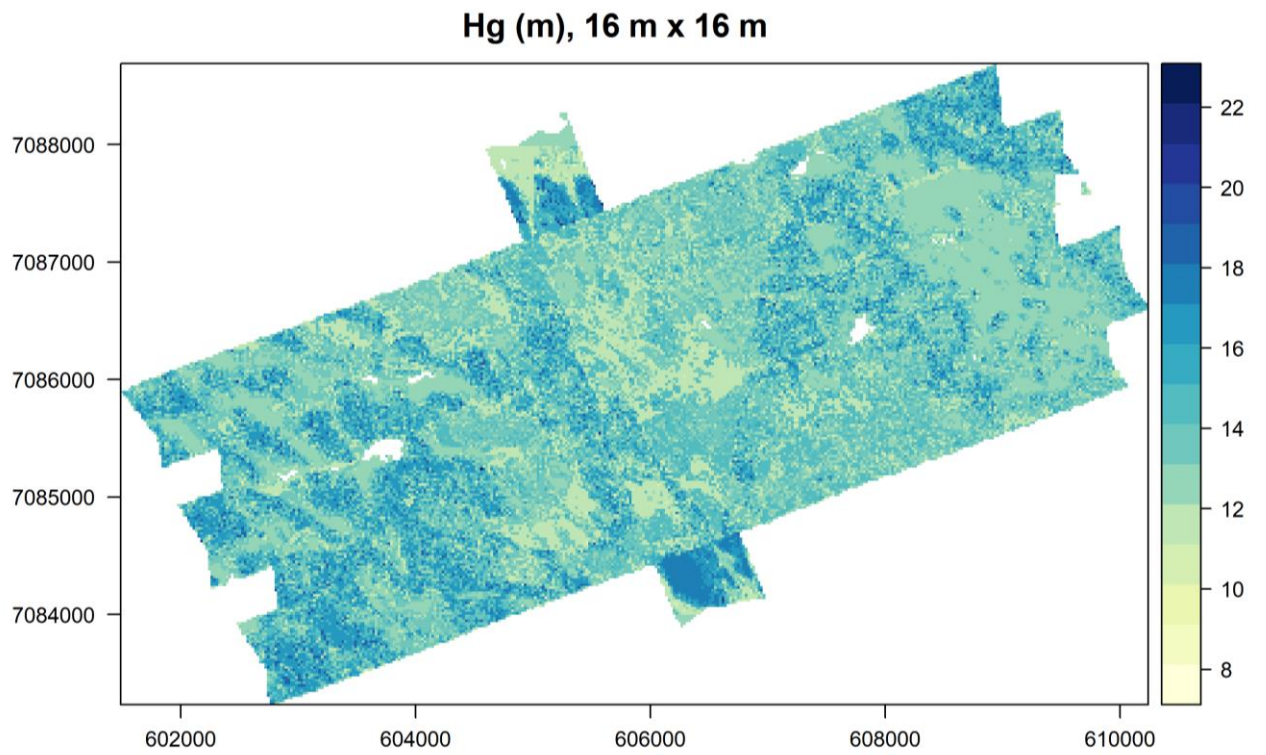


Fig 2. Basal area weighed mean height (m) in 16 m by 16 m grid cells.

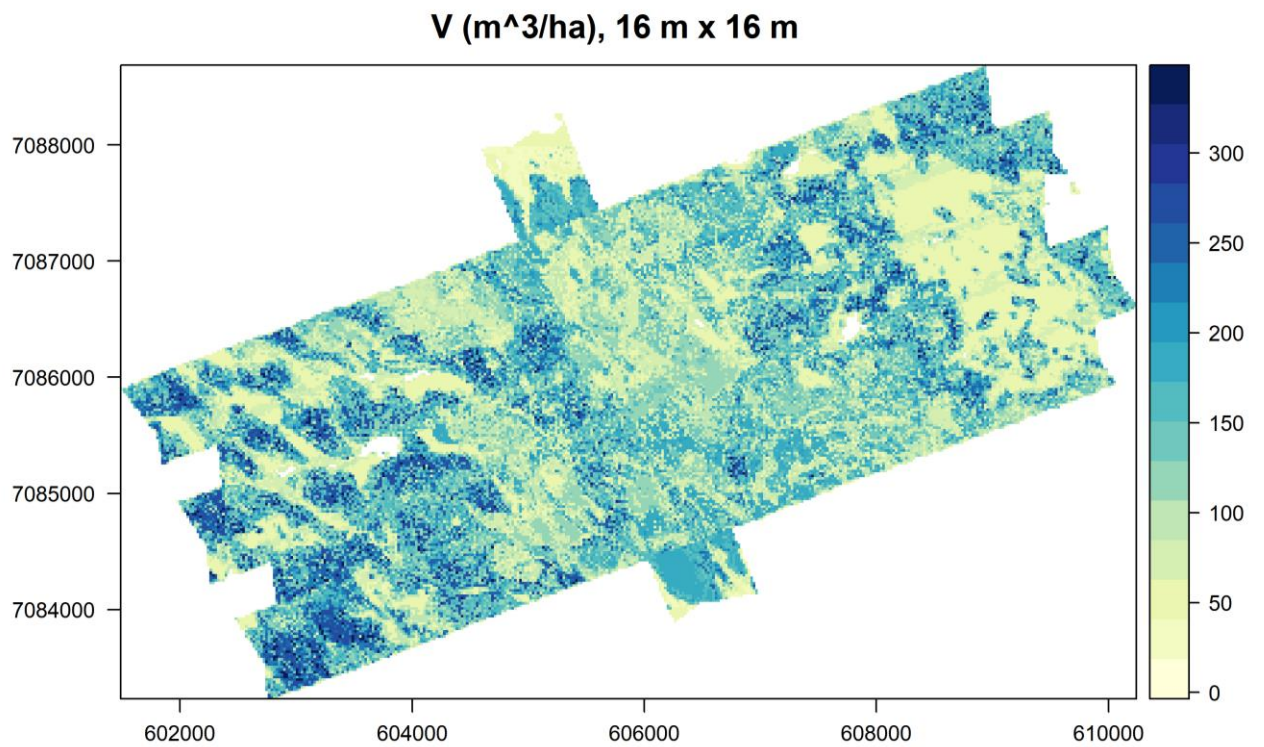


Fig 3. Total volume (m^3/ha) in 16 m by 16 m grid cells.

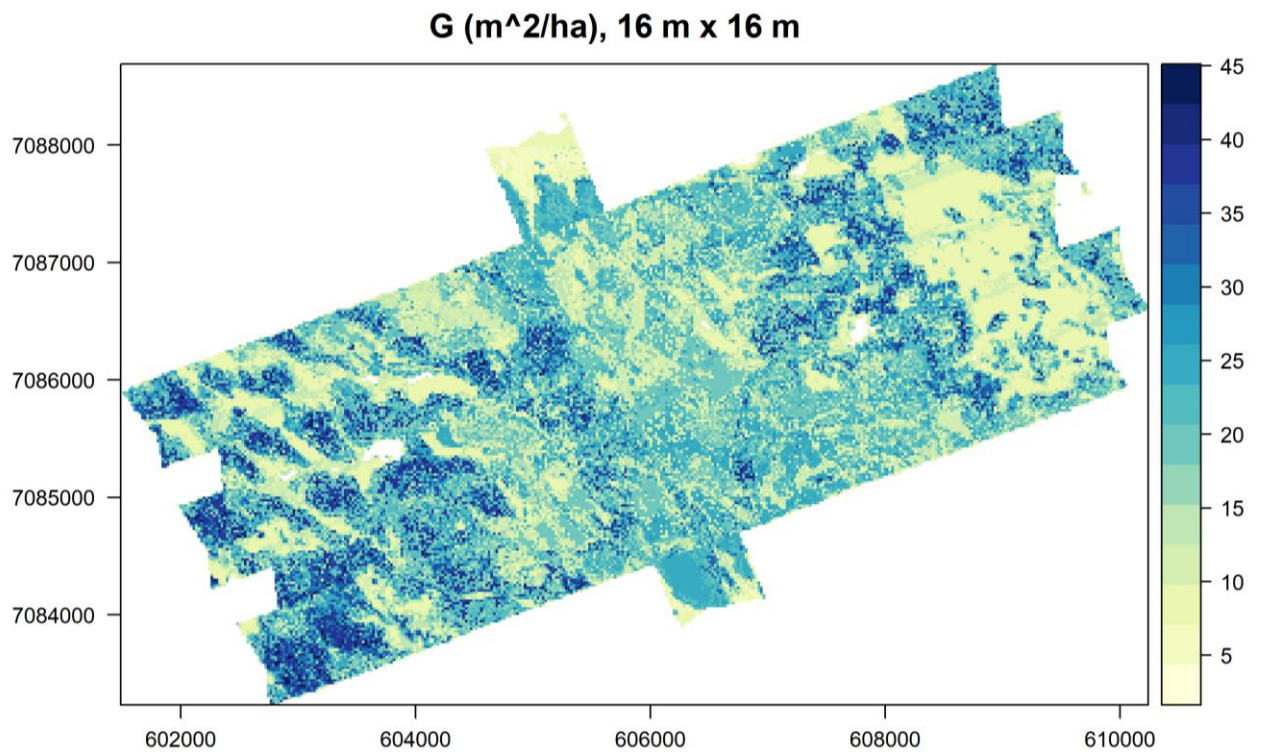


Fig. 4 Total basal area (m²/ha) in 16 m by 16 m grid cells.

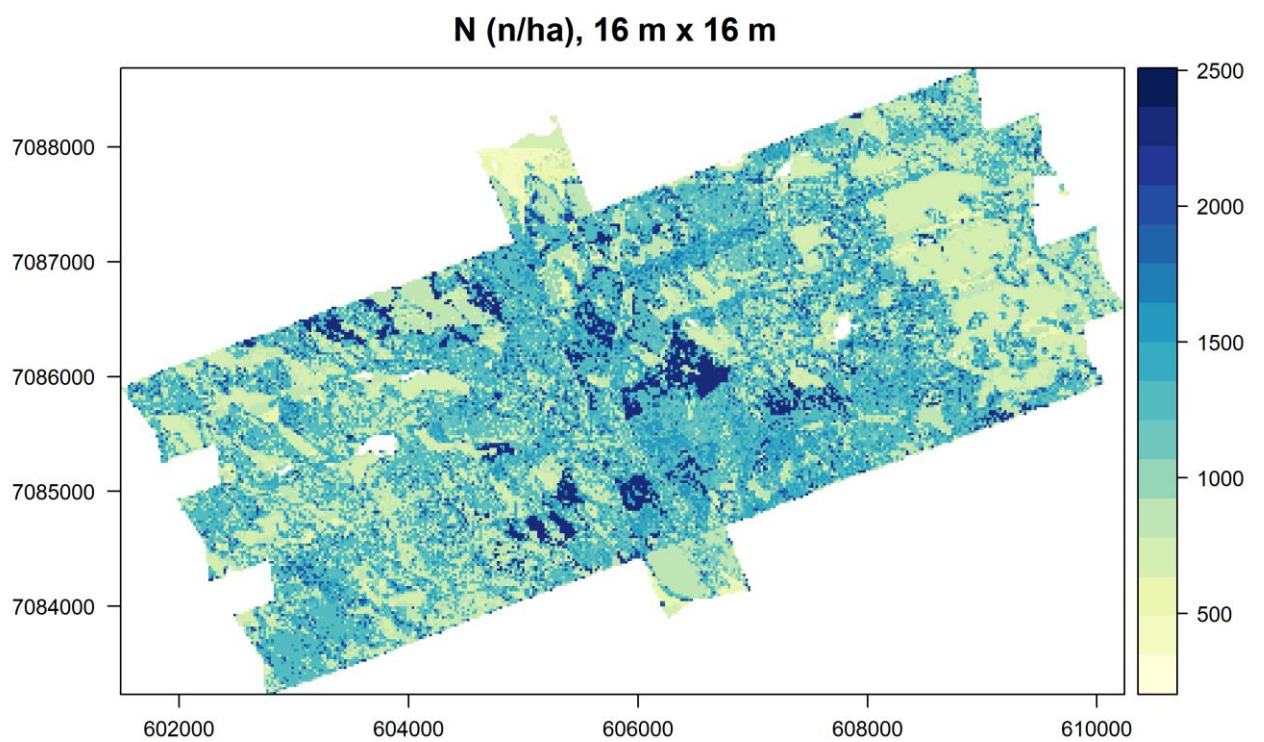


Fig. 5 Stem count in 16 m by 16 m grid cells.

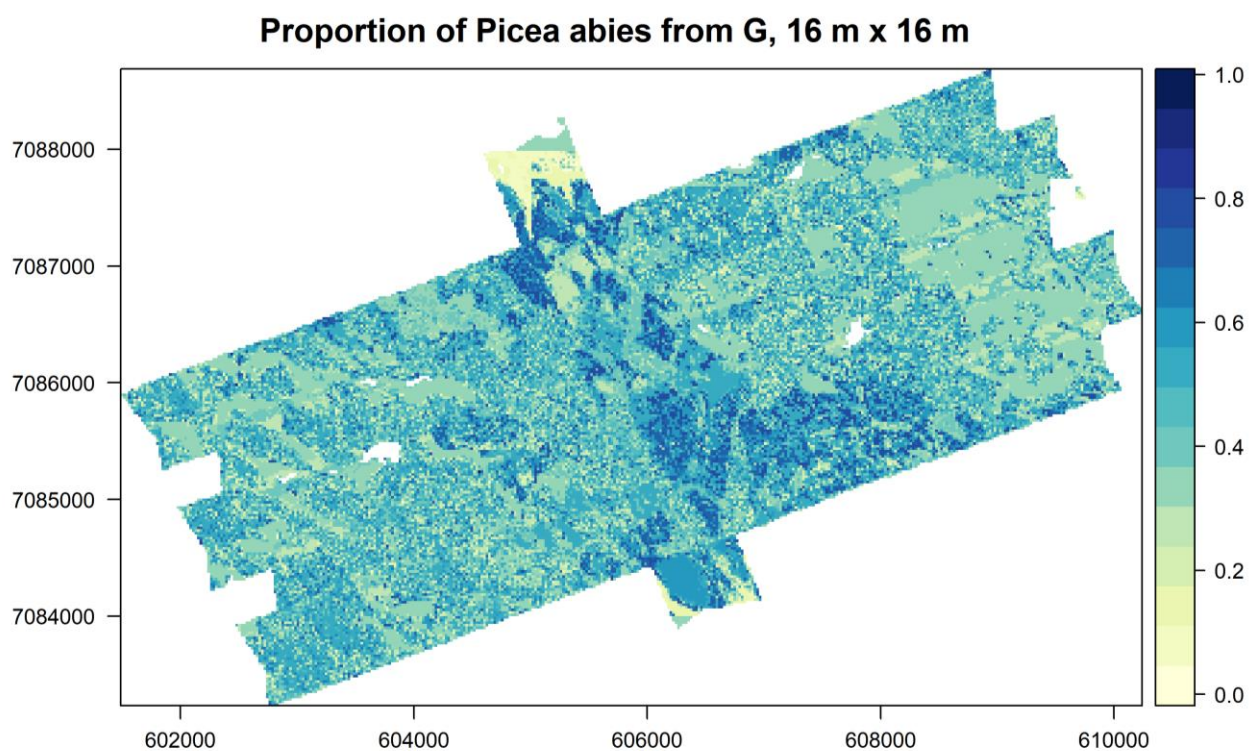


Fig. 6 Proportional basal area of *Picea abies* (Norway spruce) in 16 m by 16 m grid cells.

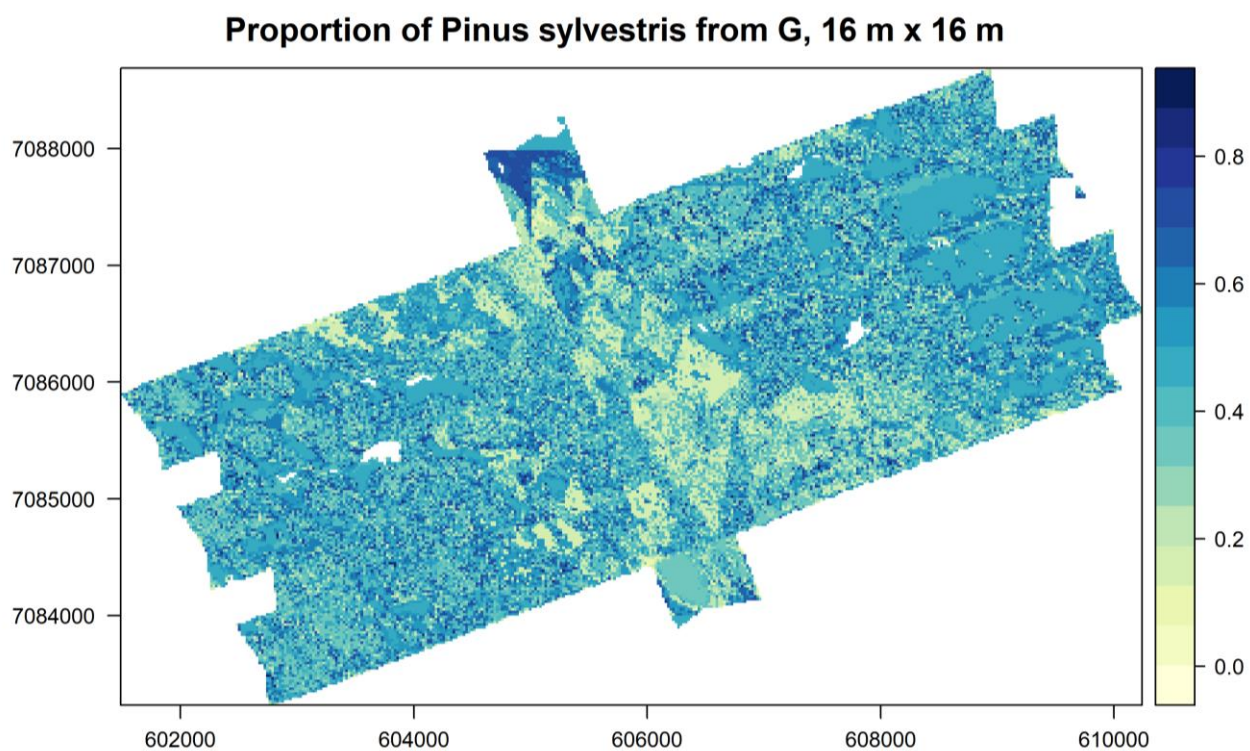


Fig. 7 Proportional basal area of *Pinus sylvestris* (Scots pine) in 16 m by 16 m grid cells.

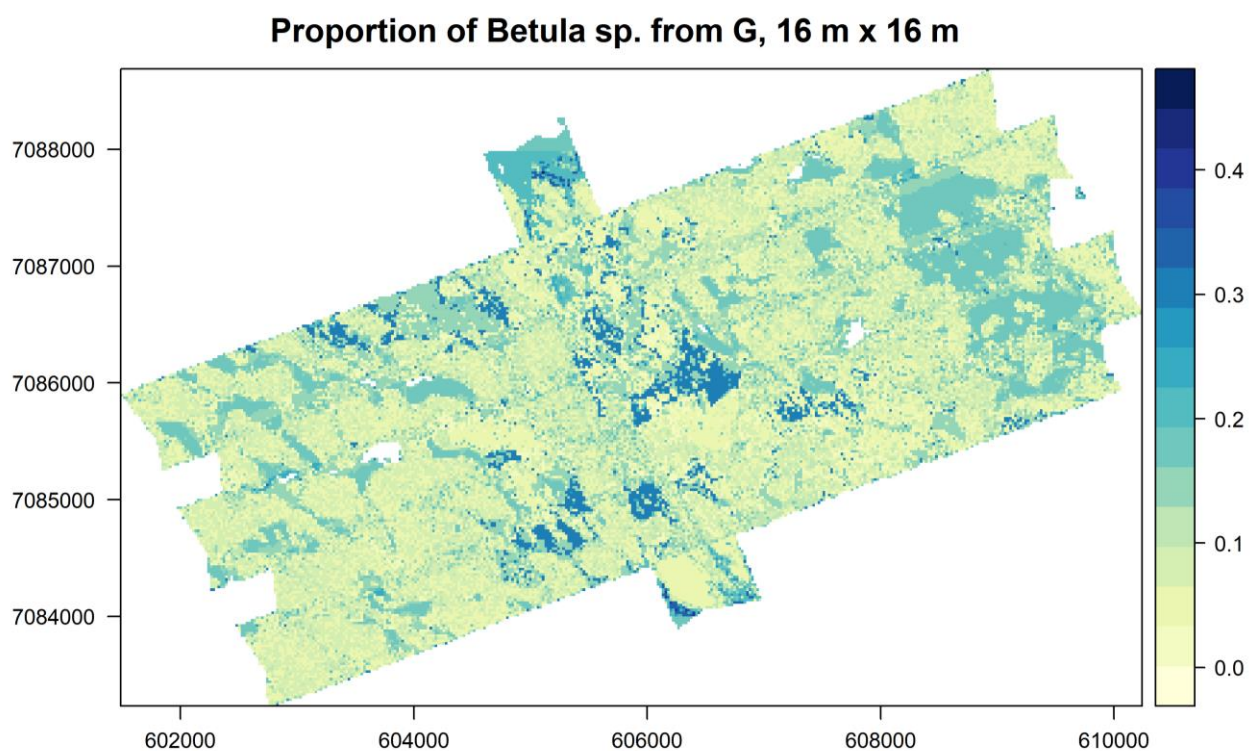


Fig. 8 Proportional basal area of *Betula* sp. (downy birch and silver birch) in 16 m by 16 m grid cells.

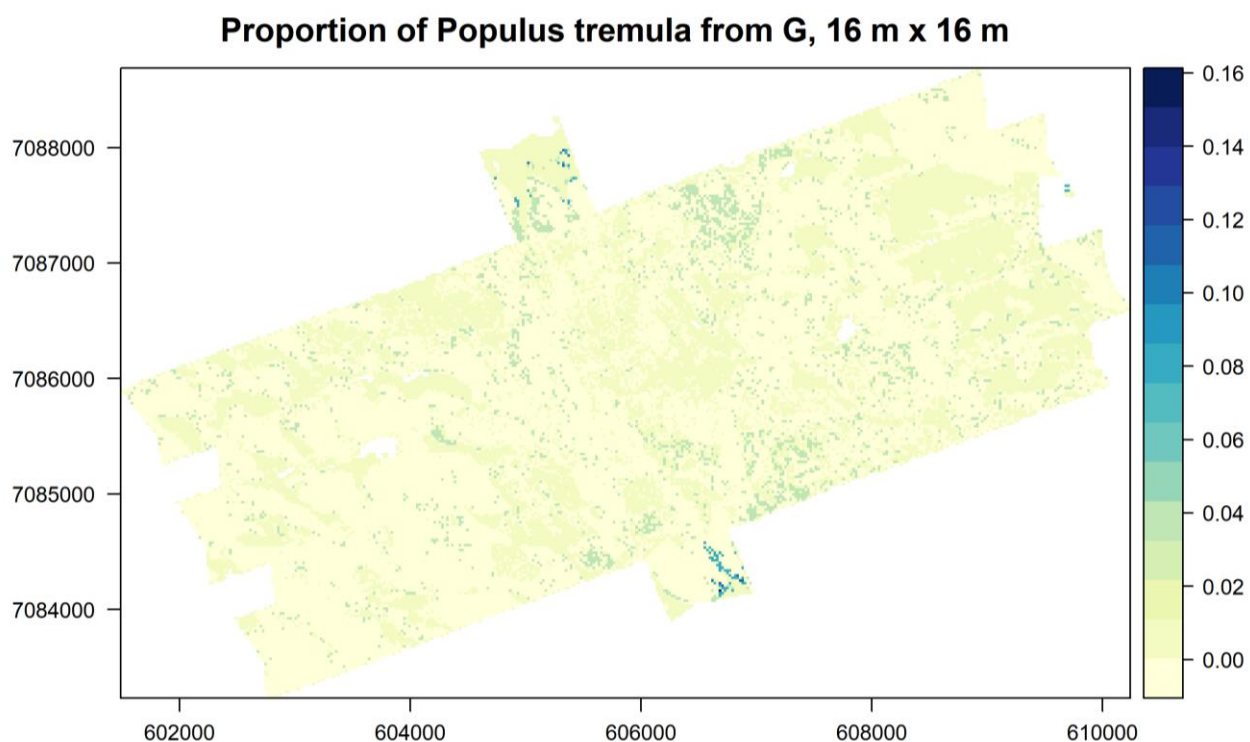


Fig. 9 Proportional basal area of *Populus tremula* (European aspen) in 16 m by 16 m grid cells.