Drones
@ BFW

NewFOR – Forest & Drones

Studying drone applications for collecting information and data on forests

NewFOR

Alpine SPACE
THIS PROJECT IS CO-FUNDED BY THE EUROPEAN REGIONAL DEVELOPMENT FUND
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BFW

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Department of Natural Hazards
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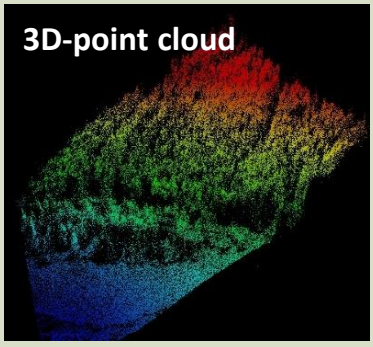
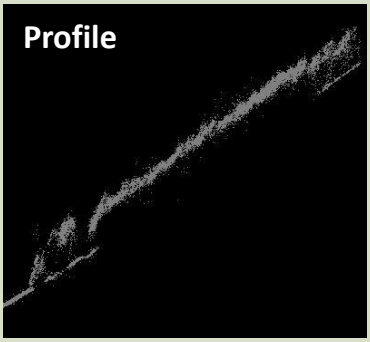
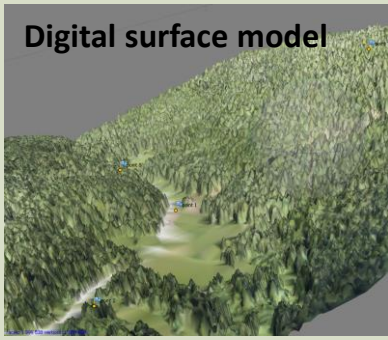
Potential and limitations of mapping alpine mountain forests with drones

THE PROJECT

NewFOR (**New** technologies for a better mountain **FOR**est timber mobilization) kicked-off the BFW drone-era, as we were able to buy and test drones for various applications in the project. We collected imagery with drones at several study sites in **Austria, Italy, Slovenia and Germany**. From these images, we calculated **orthophotos, 3D-point cloud and digital surface models** using cutting-edge **structure-from-motion photogrammetry** software. We compared these results with conventional forestry and airborne laser scanning data, to evaluate the potential and limitations of drone-based geodata.





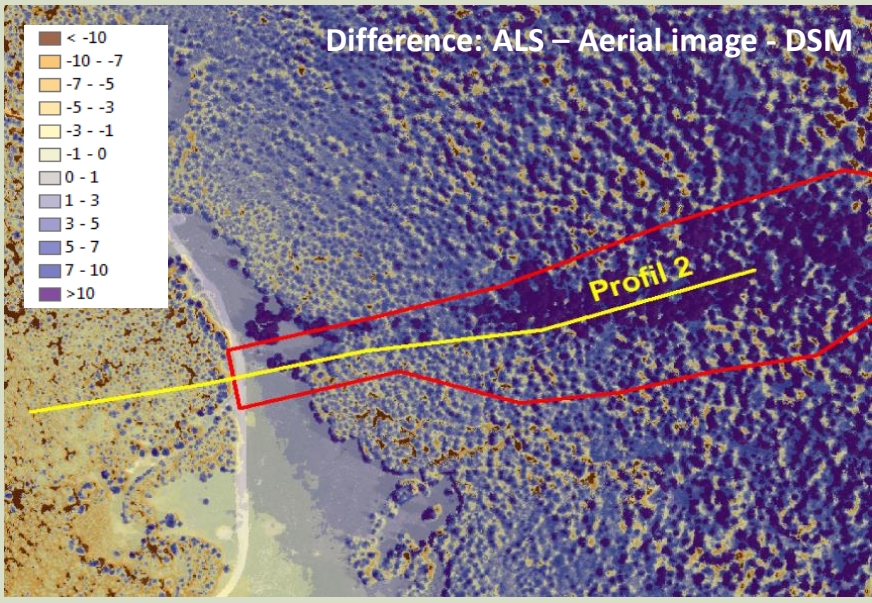


POTENTIAL OF DRONES

- Cost-efficient, flexible, time-critical applications possible
- Extremely high ground resolution of imagery (centimetres to millimetres) → detection of various forest parameters possible
- Flights possible with different sensors → allows documentation of forest damages
- Deployment also feasible in very steep, inaccessible alpine terrain

LIMITATIONS

- Georeferencing imagery in large, compact forest stands
- GNSS reception
- Calculating digital surface models (no ground points available in forest



For more infos on NewFOR, go to:
http://www.newfor.net/en/download/

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