**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

- User: On shore wind industry
- Challenge/Needs:. Accurate estimations of wind energy resources are highly complex and time consuming - ultimately relying on consistent, accurate and timely surface roughness data. Yet, in many cases especially in forested sites, such data is inaccessible or simply not available.
- Initiative: The services and products of WindSight were developed by DHI GRAS during Innowind: an Innovation Fund Denmark partnership from 2017-2020 with VESTAS, Vattenfall, EMD and DTU that aimed to improve the accuracy and coverage of map layers that are used as input to state-of-the-art flow models
- Results: WindSight includes 5 different high-resolution data products on land cover, key forest characteristics, historical and future changes, topography and surface roughness. Novel forest products provide detailed insight on current and historical forest height and forest density. Together with improved land cover product, these provide the backbone of the surface roughness product and provides insight on roughness length. The data can be input to a wide range of software and modelling methods including WindPRO, WaSP and CFD tools.
- Service Provider: DHI GRAS

Target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
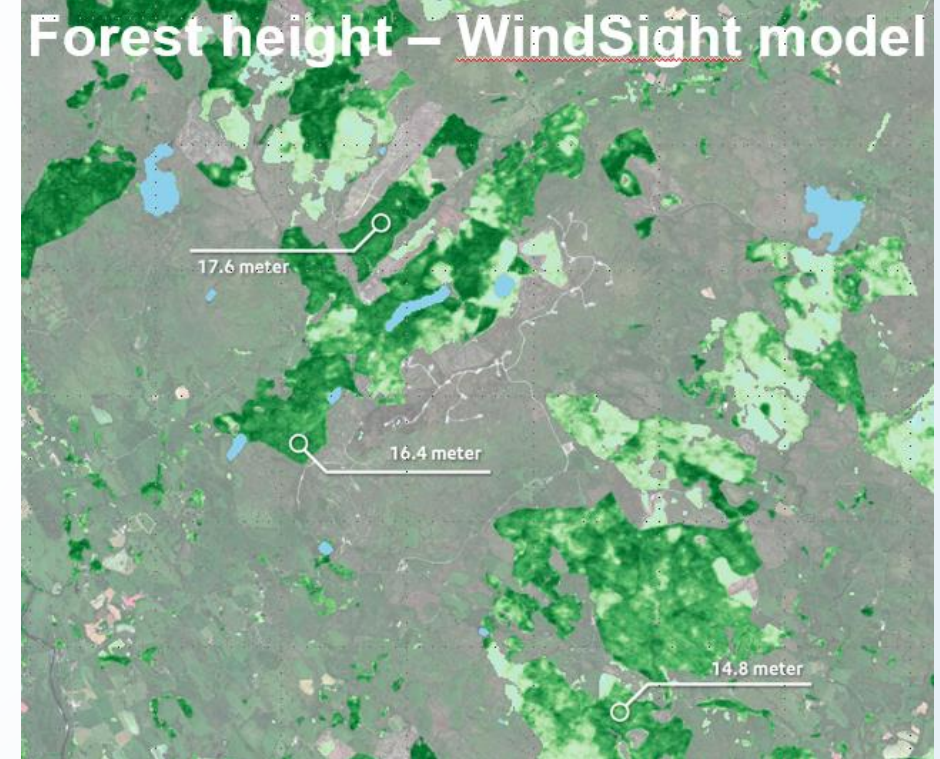
Example: the WindSight model is a low cost – fast delivery forest height model with grid size of 20m

EARSC European Association of Remote Sensing Companies

Reference: https://windsight.dhigroup.com/ / https://www.dhi-gras.com/projects/eo4sdg/