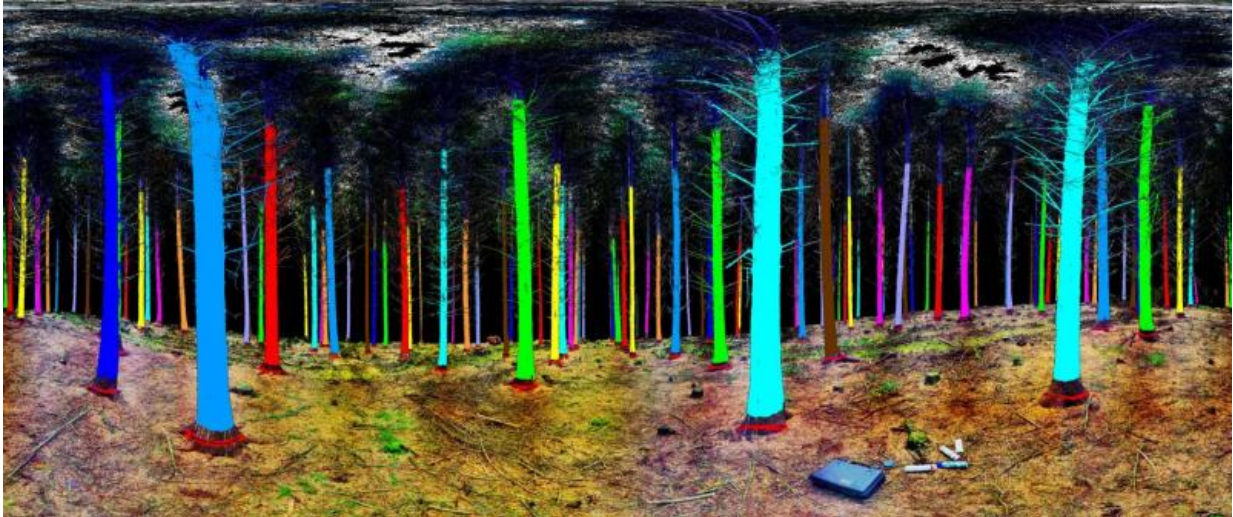


ESA image: Treemetrics woodland laser scan

February 3 2016



Credit: Treemetrics

A commercial forest seen through the 'eyes' of a 3D laser scanning system developed by the ESA-supported Treemetrics company.

The [trees](#) of planet Earth – recently estimated to number three trillion in total – are both environmental and [economic resources](#), and require careful stewardship.

"We estimate 20% of global [forest](#) resources are currently going to waste as they are harvested," explains Enda Keane, CEO of Irish company Treemetrics.

"What Treemetrics aims to deliver is more wood from fewer trees, through a complete end-to-end forest management system. It combines forest mapping, assessment and valuing with decision-making tools for harvest planning as well as real-time monitoring of the cutting and collecting process."

Treemetrics developed a project in collaboration with ESA's Advanced Research in Telecommunications Systems (ARTES) programme's Integrated Applications Promotion to integrate satellite communications into its system, enabling managers to monitor their equipment and track harvesting as it happens, even from remote forest locations.

The company can perform forest mapping through aerial and drone photography and 'laser radar' lidar, as well as satellite Earth observation – using missions including ESA's Sentinel-1 and Sentinel-2.

These maps are given a third dimension through 'ground truthing'. Laser scanners perform a 360-degree survey at regular intervals to measure the straightness and health of trees – accurately estimating their quality as logs in advance of them being logged.

Mr Keane adds: "We are very grateful for the great technical, financial and business planning support we received through ESA's IAP, which enabled the creation of a world class product for the global forest industry."

The company's customers to date include state forest agencies in 26 countries, as well as private forest owners and government agencies.

Provided by European Space Agency

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