Treevia uses machine learning to analyse data collected from IoT sensors in the forest environment | Photo source Treevia

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DIGITAL 'SMART FOREST' TECHNOLOGY IMPROVES FOREST MANAGEMENT AND MONITORING

🇧🇷 SUSTAINABILITY

A startup is using online software and IoT technology to collect, analyse, and visualise data on forest assets

Spotted: At COP26, the Brazilian government announced targets for ending deforestation — a particularly important issue in a country that is home to nearly two-thirds of the Amazon rainforest. Against this backdrop, it is more important than ever for owners of forest assets to make sustainable decisions based on data.

Sao Paulo-based Treevia is a technology platform that uses machine learning to monitor multiple variables in forest environments. Data is collected through extremely precise internet of things (IoT) sensors embedded within the forest environment. By providing accurate, automated, and structured data, Treevia hopes to empower researchers and forest-based companies to take meaningful actions that improve both productivity and sustainability.

Treevia currently offers two solutions. The first focuses on forest inventory — allowing forestry businesses to register their assets quickly and simply, while recording relevant information such as soil data, planting date, and genetic material. Accessible and intuitive dashboards allow the user to track relevant data and make decisions about their crops. Information from IoT sensors is made available in real-time through mobile devices.

The second solution is aimed at researchers performing forest experiments. It allows easy access to data from sensors measuring factors such as forest growth and weather conditions. All data is accessible online in structured format — and can be exported to an Excel document.

Treevia recently announced a new partnership with Wyld Networks, a company that has developed advanced sensor-to-satellite technology. The partnership will provide Treevia with low-power sensors to collect data from remote locations affordably and efficiently.

Currently, Treevia monitors over 100,000 hectares of forest, but the startup has big ambitions. Its ultimate goal is to monitor 1 billion hectares—one quarter of the world's forest area—by 2030.

From drones that spread seeds, to technology that matches trees to the eco-system, Springwise has spotted several recent innovations aimed at the world's valuable forest environments.

Written by: Matthew Hempstead

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Email: contato@treevia.com.br
Website: treevia.com.br

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Takeaway:

Last year, the United Nations published its first report on progress against the six global forest goals adopted in 2017. Global Forest Goal 1 enshrines the importance of sustainable forest management, while the second goal emphasises forest-based economic, social, and environmental benefits. Treevia's technology helps with both by making it easier to pursue practices that are both more productive and more sustainable. The UN report stresses the importance of data for forest management, explaining that 'The need for timely, quality, and accessible data and statistics has never been more urgent.'