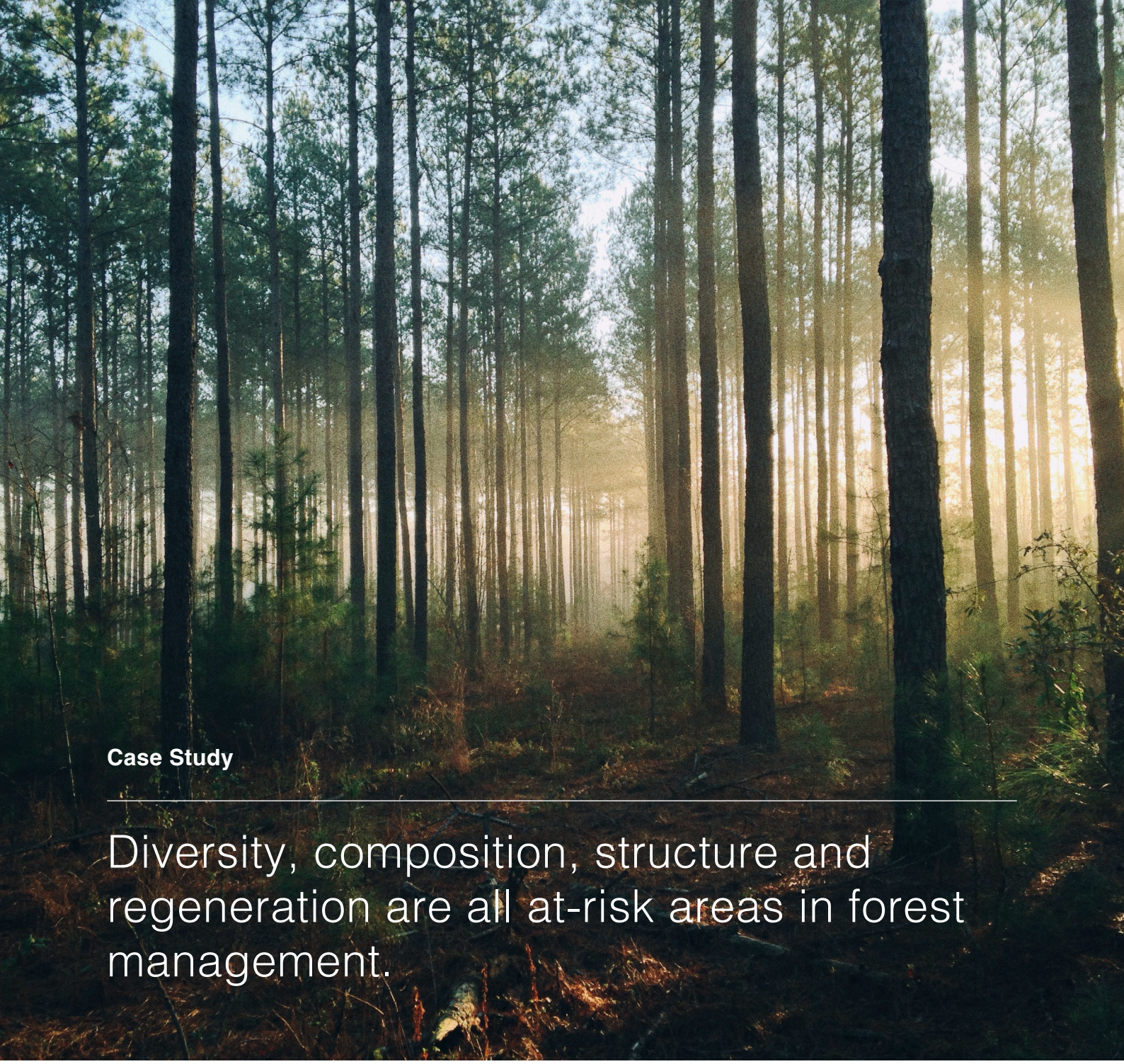

Case Study

Diversity, composition, structure and regeneration are all at-risk areas in forest management.

It is in the interests of both the public and private sectors, ecologically and commercially, to be able to develop and deploy best practices. Analysis Ready Mosaics will also help identify patterns shaping the forests.

All these efforts, from modelling to prediction, advisory to mitigation, require timely, accurate measurements, hence EarthDaily EarthMosaics, the chosen solution for forestry.

Technology Partner: aws

Technology Deployed: EarthDaily analytics

Industry: Natural Resource Management

Challenge:

Delivering cloud-free, temporally coherent mosaics for applications customized for the forestry industry.

Increasingly, forests are seen as critical resources as businesses and governments turn their attention towards climate issues. Today, forest monitoring is benefitting from advances in remote sensing and satellite imaging technologies. Recent developments have the capacity to accelerate sustainable forest management (SFM) adoption, allow real-time observability, and optimize effective harvests and policies.

"It's easy to see what mosaic data provides to insurers and others where forestry is a factor," said William Parkinson, a Technical Product Manager at EarthDaily Analytics. "Wildfires are just one example. These cause extraordinary damage to both natural and human environments, but mosaic data predicts and provides context about varying factors such as ground fuels, forest inventory, moisture and weather conditions. It's simply an invaluable resource."

For companies seeking forest conservation opportunities, ecosystem health monitoring, or environmental change forecasting, the new technology represents an improvement over other available mosaic solutions. Unfortunately, existing models can present severe pain points for those hoping to use them. For instance, older-model mosaics often lack industry-specific customization, have poor data quality, and are inconsistent in time-series analysis, reducing the likelihood of meaningful insights.

Solution:

Recently, one prominent conversation technology firm relied on EarthDaily Analytics to collect cloud-free, high-frequency, and high-quality mosaics. This allowed the company to focus solely on what was essential for them – mitigating wildfire risks through monitoring and detection, conducting forest inventory, and restoration activities, and ultimately creating certainty around how new trends and patterns were shaping forest areas.

EarthDaily Analytics has made it possible to update geospatial-mapped forest metrics, validate models of forestry biophysical parameters, and track time-series growing season data using high coverage frequency. In addition, analysis-ready mosaics provide cost-effective, high-frequency monitoring capabilities for vast forest AOIs and offer an automated change detection service.

By leveraging EarthDaily EarthMosaics, customers can now go back in time to identify a trend or a pattern shaping a forest.
Whichever policy or regulation once deployed over a certain time period, there are impacts to be evaluated, lessons to be learned, and most importantly, risks to be mitigated.

Result:

Trusting EarthDaily to take care all heavy lifting of monitoring weather and inventory changes over time means customers can focus fully on their missions. Regardless of the industry or focus area, our EarthMosaic will successfully assist companies in advancing investments in natural climate solutions, beyond forestry.

> *Our change detection system as a tool enables EarthDaily Analytics customers to extract insights, draw conclusions, and then make decisions to manage or mitigate risks accordingly," said Parkinson. "Companies working to advance natural climate solutions will find high-quality, timely mosaic data contributes to a future that is both certain and sustainable."*

— William Parkinson
Product Manager

Key Customers:

- Forestry companies seeking to comply with SFM (e.g. REDD(1) practices) and optimize an annual sustainable harvest level
- Governments / environmental agencies monitoring the natural forests and woodlands for unmanaged or mismanaged forestry practices
- Insurance Companies managing wildfire risks and predicting where there is the most risk for insurance companies

(1) REDD stands for 'Reducing emissions from deforestation and forest degradation' – a mechanism that has been under negotiation by the United Nations Framework Convention on Climate Change (UNFCCC) since 2005

Contact us

EarthDaily Analytics aims to change the way we view the planet. We have assembled an international management team of experienced leaders who have come together to change the Earth Observation industry.

Any questions?
Our experts are happy to help.

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