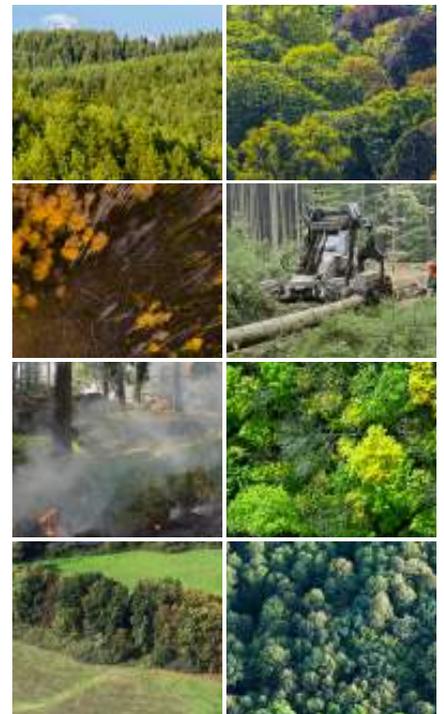# PIONEERING GEOSPATIAL DATA ANALYTICS PRODUCING A NEW LEVEL OF INSIGHT FOR FORESTED ASSETS
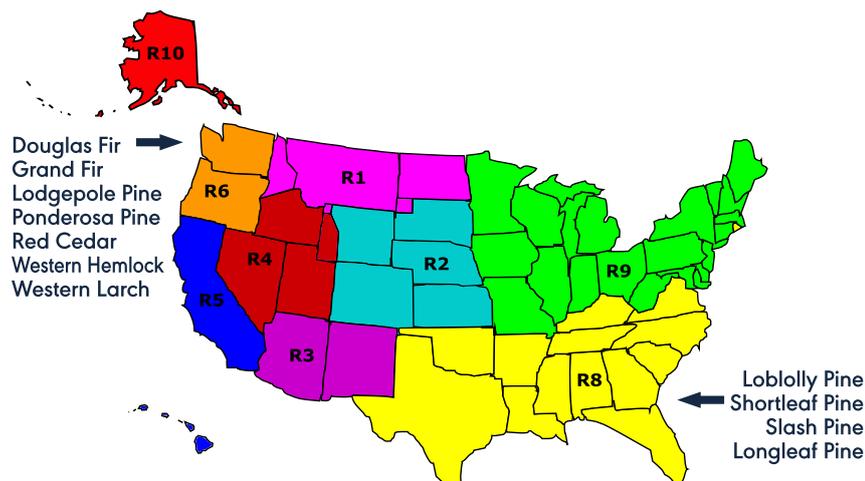
DATA-DRIVEN FOREST MANAGEMENT

Through the analysis of Earth Observation data and imagery, Rezatec can provide accurate, regularly-updated insights relating to key agroforestry issues such as forest density, canopy cover, biosecurity threats and standing volumes.

Our unique forestry data products are made available via a web-based geodata platform, enable fully-informed decisions to be made by owners and managers of forested land assets and can be integrated into existing GIS systems where required.

+ Analyze focused areas or vast geographies

+ Monitor forest change with client required frequency

+ Detect disturbance, damage, disease spread & more

+ Detailed forest mensuration and yield improvement

+ Increase conversion to purchase value

+ Return on Investment many times the cost of the service

USA SPECIES MAP

R10

R6

R1

R4

R2

R9

R5

R3

R8

Douglas Fir
Grand Fir
Lodgepole Pine
Ponderosa Pine
Red Cedar
Western Hemlock
Western Larch

Loblolly Pine
Shortleaf Pine
Slash Pine
Longleaf Pine

USFS Regions:
+ R1 - Northern*
+ R2 - Rocky Mountain
+ R3 - Southwestern
+ R4 - Intermountain*
+ R5 - Pacific Southwest
+ R6 - Pacific Northwest*
+ R8 - Southern
+ R9 - Eastern
+ R10 - Alaska
* Intermountain West

Rezatec
Analyzing Earth Data

WOODLAND COMPARTMENT MENSURATION

Quantification of timber is essential for understanding the true value of the stock. Species distribution, environmental and satellite data is combined to model the count, height and volume of trees within a stand.

TREE SPECIES MAPPING

Used for mapping the distribution of dominant tree species, this product is derived by analysing optical and radar satellite data to model the spatial distribution and proportions of a tree species in a target area.


WINDBLOW

Using a time-series of satellite-derived data, we are able to monitor the changing state of forested assets, identify any rapid changes associated specifically with wind damage and, crucially, alert the client.

DISTURBANCE

We use a sequence of satellite-derived data in order to monitor the changing state of forested assets over time (such as harvesting) and identify any significant changes in the condition and state of the canopy cover.
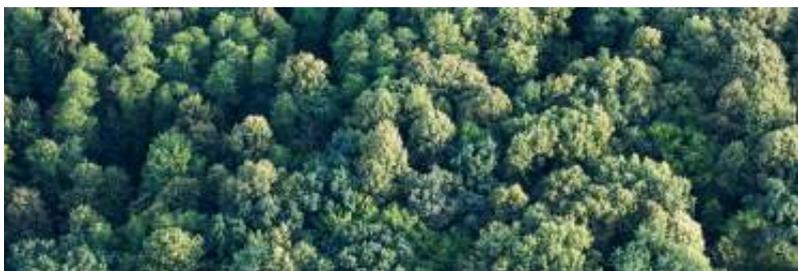
FIRE EXTENT & SEVERITY

Rezatec sources the best available data with suitable spectral content to generate a difference normalised burn index, from which peer reviewed thresholds are assigned. Fire severity classes are assigned and displayed on a map.

BIOMASS & CARBON STOCK

This data product is developed from modelled canopy height, satellite data, a vegetation index and ground data calibration of above-ground biomass to generate spatial representations of biomass and carbon stocks.

HABITAT & CONNECTIVITY

Rezatec's Habitat & Connectivity metrics are developed alongside other land cover classifications, through the analysis of high resolution optical remotely sensed satellite imagery. Useful in identifying habitats that particular species occupy and seeing where road, rail and natural networks link forested land that surround them.

FOREST HEALTH

Where there is a rapid change of encroachment over several years, we can derive a time-series of satellite data in order to monitor the changing state of forested land. Stress and disease are the resulting products which can be used as an alert system for the client to mitigate against with their ground teams and foresters.