

- Forest owners, associations or public administrations with reporting obligations can directly benefit from MySustainableForest (MSF) products. The *Main Forest Types* product is co-designed with the end-user as to adjust it to the user's specific needs.
- Effective forest monitoring is vital for sustainable forest management, to protect resources while enhancing the forest-based industry.
- Remotely sensed data provide low cost and regular forest information for timely silvicultural activities.



The product in a nutshell

The *Main Forest Types* product automatically classifies dominant species on your area of interest. With this product you can:

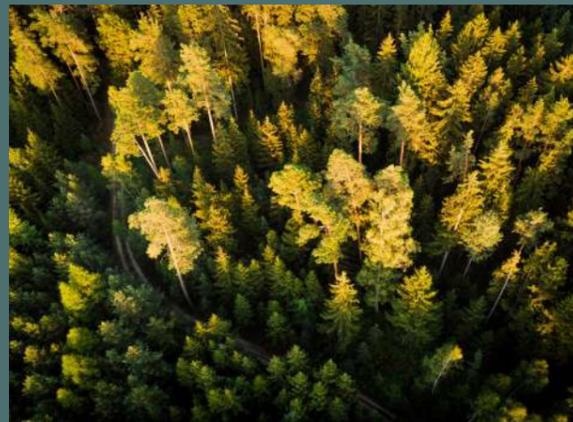
- Plan the silvicultural maintenance task required by the species growth cycle.
- Plan the stratification of the forest inventory.
- Have regular updates of the extent of dominant species, even annually.
- Obtain statistical information of land use and land cover changes over time, tracking how forest composition evolves.
- Estimate other forest data needs such as forest age, biotic damage, biodiversity and wood quality products.



The challenge

Forest ecosystems change speedily: the natural growth of species is affected by invasive and secondary species and disruptive events like pests, fires and floods.

To date, the cartography of main forest types is produced through national or regional forest inventories. In most countries, this process is costly and time-consuming and usually takes place only every 10 years. Changing forest conditions may require more frequent and less expensive updates, thus helping the efficiency of forest monitoring.



MySustainableForest solution

MySustainableForest (MSF) is a geo-information portfolio of products aiming to support silvicultural activities and sustainable management from the afforestation to the forest products transformation markets. The products are based on satellite data, LiDAR and sonic non-invasive measurements.

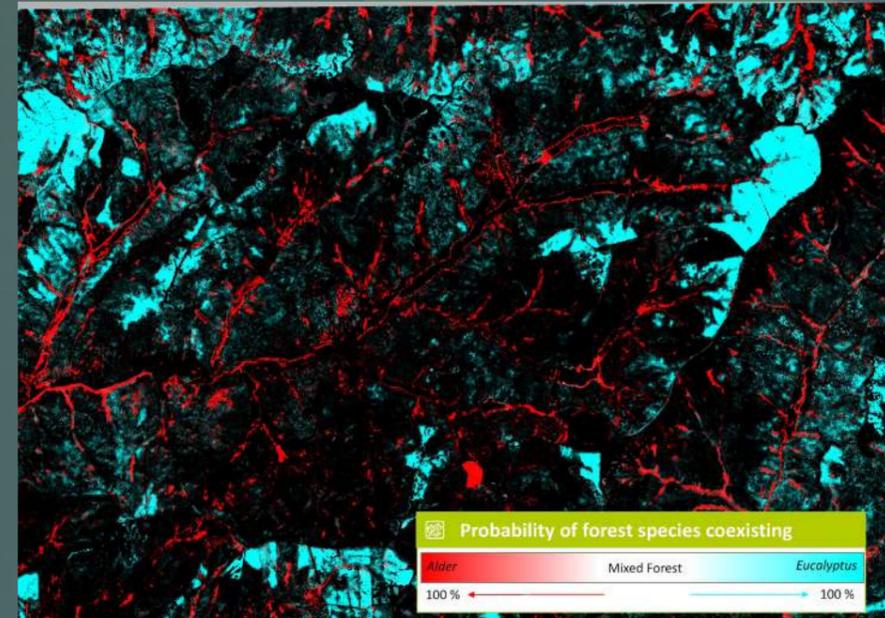
The *Main Forest Types* product classifies homogeneous tree species association, either monospecific or mixed. Additionally, a probability map is generated for each species to obtain the confidence level of each pixel in the classification. The probability maps may be used to study the dominance or coexistence of species in each pixel, as well as to approximate the uncertainty of dominant species map. This information is especially useful when forest types have similar spatial patterns and share habitats. For example, to differentiate two riparian species. With this product, forest type classes are defined and labelled according your own standards or specific needs. The geo-information of the main forest types facilitates the basis to derive more complex forest elements.

What do I need to provide?

The end-user needs to provide two data sets:

The geo-location of the **Area of Interest (AOI)**, through coordinates or a GIS vector layer.

The geo-location of **Training Areas** within the AOI which are zones with detailed knowledge and data of the forest characteristics. This information can be obtained from available forest inventories, field data or vegetation maps. Ground truth data is used as reference information to run automatic classification algorithm.



What will I obtain?

The *Main Forest Type* product provides information on the dominant species spatial distribution and identifies the mix of species present within an area. A probability of forest species coexisting is also provided. These data are provided as geodatabases and can be plot as maps.

The classification files are accessible through the [MySustainableForest platform](https://www.mysustainableforest.com). The information can be downloaded to any OGC standard GIS viewer with a Web Map Service. Product files are metadated.

Full technical specifications are available at [MySustainableForest website](https://www.mysustainableforest.com).

Image 1 (left). Probability map of forest species coexisting. Areas where the algorithm cannot discriminate between species are coloured in white.

Image 2 (below). Main Forest Types product overview. Sample mapping of ZIF da Calha do Grou, Portugal.

