

Copernicus for Climate Change: monitoring Land Use, Land Use Changes and Forestry

Applications for the Ministry of Agriculture,
Fisheries and Food

Guillermo Fernández Centeno gfcenteno@mapa.es









## Updated draft Agenda of the 2<sup>nd</sup> meeting of the NRC Forests

**Venue:** European Environment Agency, <u>Kongens Nytory</u> 6, Copenhagen DK - 1050 October 16-17, 2019

## **Forest-relevant EU policies**

**Rural Development** 

**Civil Protection** 

Bioenergy

**Climate change** 

Water

**Nature** 

**Biodiversity** 

Research

**Development** 

**Industry** 

**Bio-economy** 

Trade

Forest Information System for Europe (FISE)

The Forest Information System for Europe (FISE) is the hub for data and information on forests and forestry in Europe

1. FOREST AND FORESTRY OFFICIAL STATISTICS: EUROSTAT, FOREST EUROPE, UNECE, UNFF, FRA-FAO, ITTO

2. NATIONAL FOREST INVENTORIES



3. COPERNICUS SERVICES







# A STATE OF THE STA

## **COPERNICUS SERVICES**

- ATMOSPHERE
- MARINE
- LAND
  - Systematic monitoring of biophysical parameters
  - Land cover and ¿land use? Mapping
  - Thematic hot-spot mapping
  - Imagery and reference data (image mosaic in high and very high resolutions and reference datasets)
- CLIMATE CHANGE
- SECURITY
- EMERGENCY (EMS)
  - A mapping component (preparedness, prevention, disaster risk reduction, emergency response and recovery)
  - An early warning component:
    - The European Flood Awareness System (EFAS)
    - The European Forest Fire Information System (EFFIS)
    - The European Drought Observatory (EDO) (Insurances, water management, soil erosion)





# Copernicus for forestry applications ongoing

## National Forest Inventory and National Forest Map (SDG 15.1, 15.2)

- LULUCF, Kioto Protocol and UNFCC
  - Land Use: grasslands (including shrublands) and forest lands
  - Land Use Change (deforestation and discrimination where is an effective land use change or not)
  - Forestry
- Desertification UNCCD
  - SDG indicator 15.3.1 (Proportion of land that is degraded over total land area) and Land Degradation Neutrality (UNCCD)
- Common Agriculture Policy. Pasture and grazing areas
  - Pasture Reduction Coefficient (Multi-temporal vegetation index series)
  - Pastures with trees and/or shrubs covered around 16 million ha of land eligible for CAP. Agroforestry Systems and Silvopastoralism

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Implementation of new forest applications

from Copernicus products

- Forest Health Monitoring Program
  - ICP Forests was established in 1985
  - Invasive plant, insects, and diseases: oak decline, pine wilt nematode...
- Forest Management Monitoring Program
  - Forest Management Plans
  - Monitoring forest thinning
  - Clear-cutting and natural regeneration
  - Assesment of prescribed fire practises
- Post- Forest Fire Emergency Stabilitation
   Program
  - Priority areas for restoration actions
  - Monitoring restoration process









### Centro Integrado de Formación Profesional de ALMÁZCARA



#### MAPA PUBLICATIONS (2013)



Eg. Fire Severity Index

