

FROM PREVISION TO RECOVERY: FORESTLAND WILDFIRES RISK MANAGEMENT

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Cartographic and Geological Institute of Catalonia.

We are a public body that provides rigorous and quality information about the territory to address the challenges of our society, such as climate change, risk and natural resource management, sustainable development or energy transition.

Our scientific knowledge and expertise facilitate decision-making by administrations for territorial management, thus contributing to offering a better service to citizens, and places us among the leading institutes at an international level in the field of geoinformation.

Since 1982, we have guaranteed the officiality and independence of the (geo)information we provide as well as our services, which range from data capture to the implementation of solutions.

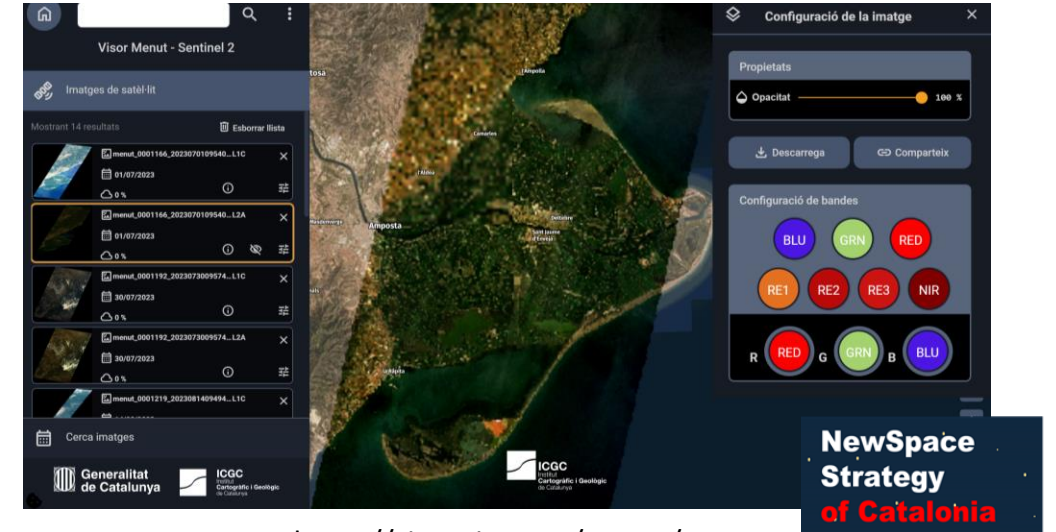
Observe to Understand. Understand to act.



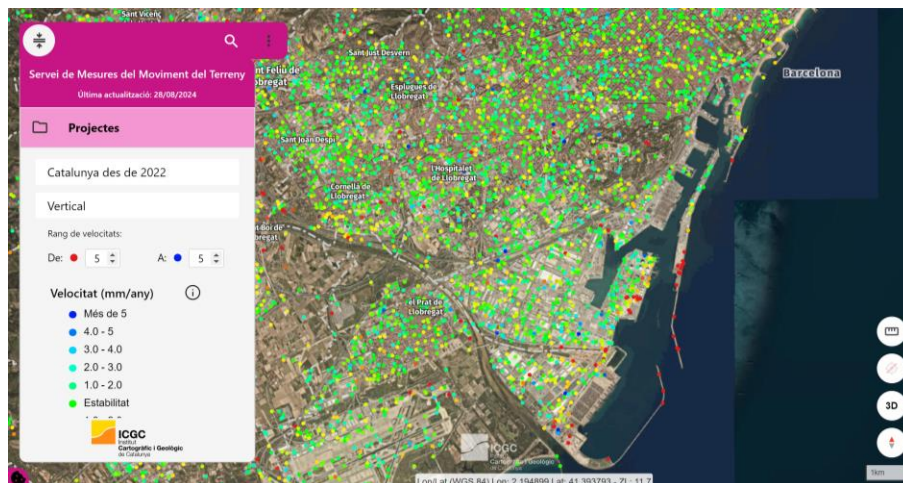
Cartographic and Geological Institute of Catalonia – Earth Observation Activities



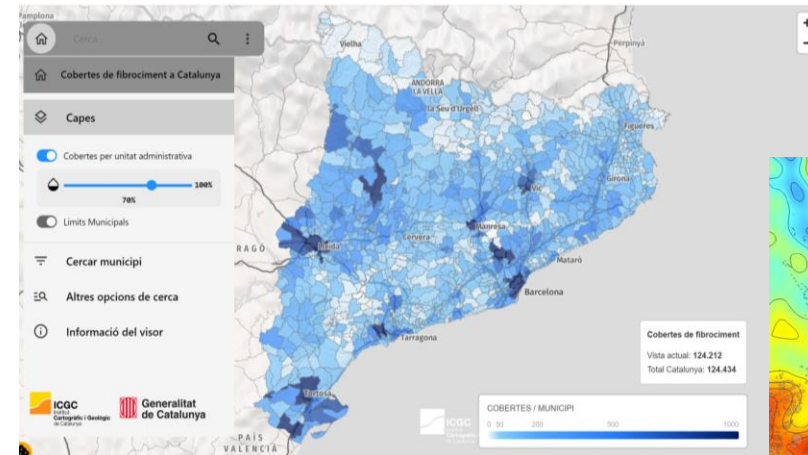
<https://www.icgc.cat/ca/Geoinformacio-i-mapes/Dades-i-productes/Imatge/Ortoimatges-Sentinel-2-mensuals>



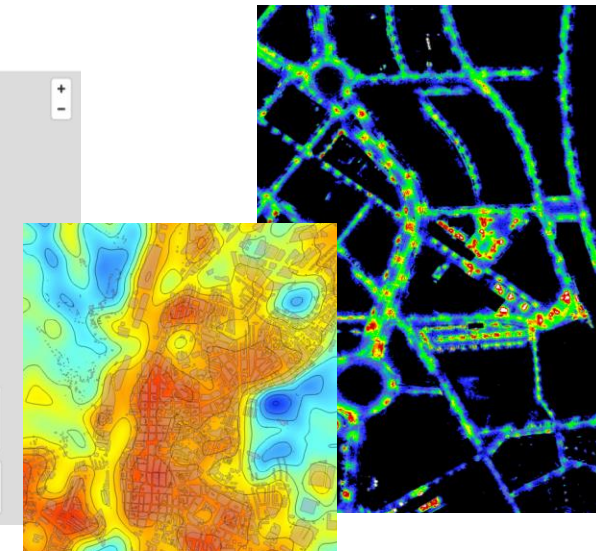
<https://visors.icgc.cat/menut/>



<https://visors.icgc.cat/subsidencia-projectes/#/0419>



<https://visors.icgc.cat/fibrociment-cobertes/>



SCOPE AND DESCRIPTION

- Close to 65% of the Catalan territory is cover by Forestland
- As a Mediterranean country the occurrence of wildfires is very high and increasing the 6th generation of wildfires because climate change conditions
- The ability to avoid collapse in the face of extreme fires by identifying, developing and deploying innovative means that promote landscape resilience becomes paramount

ICGC has carried out thanks to Earth observation assets, innovative developments to evaluate the state of forestland, key metrics on forest morphology, urban-forest interface status, recovery-resilience of forestland covers, to assure socio, economic and ecosystem values of the forestland:

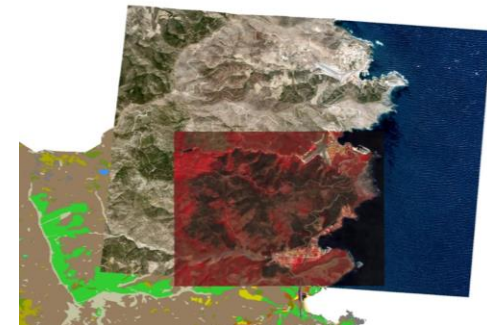
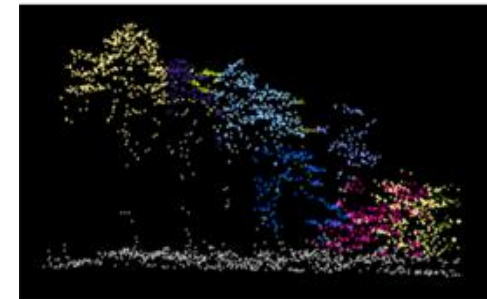
WILDFIRES RISK MANAGEMENT = F (threat, Exposure, Vulnerability)

Developments showed at this presentation has been carried out as part of research and productive activities at ICGC as well as at the framework of the European Green Deal Project FIRE RES

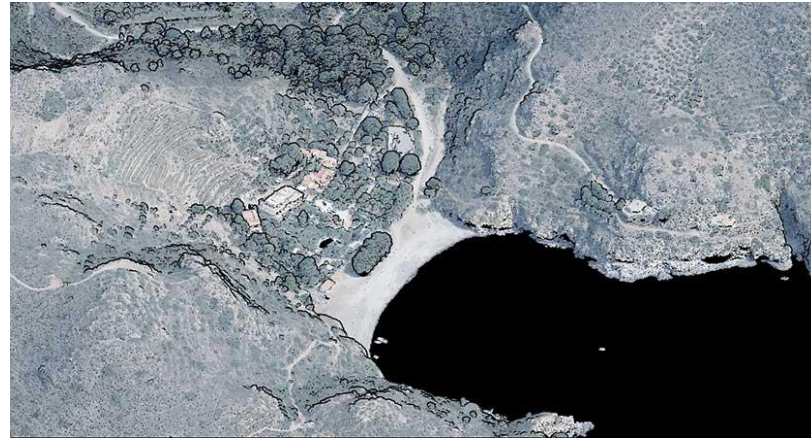


FIRE-RES
Innovative technologies & socio-ecological-economic
solutions for fire resilient territories in Europe

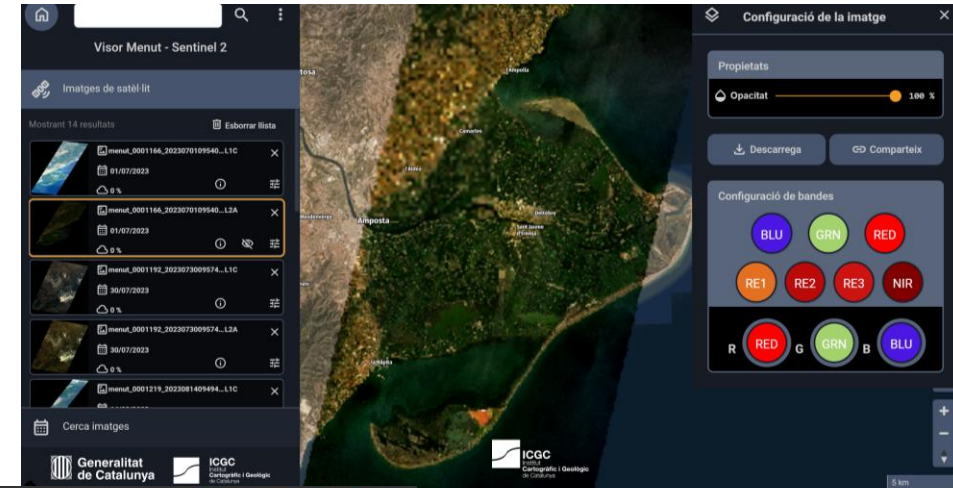
<https://fire-res.eu/>



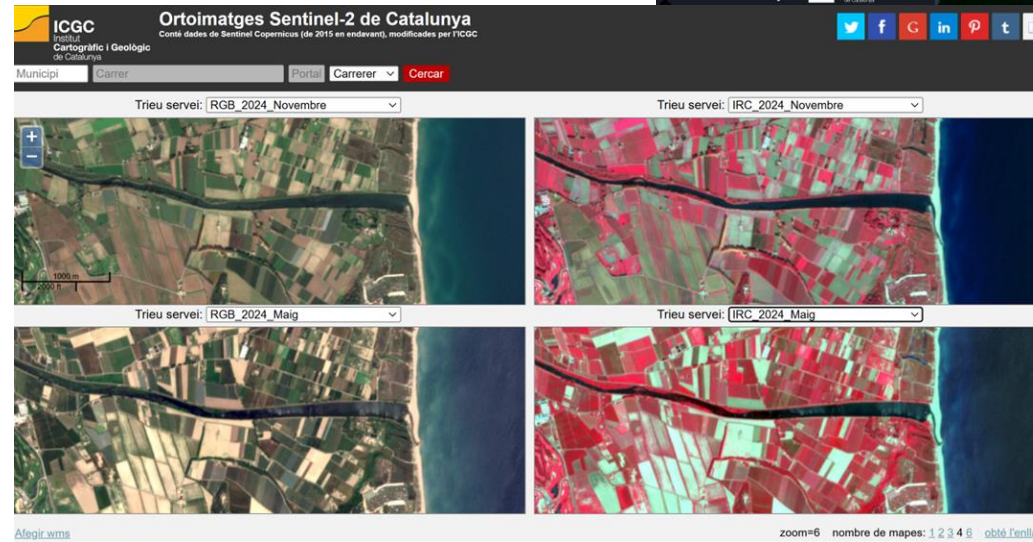
E.O/GEO DATA SETS



<https://visors.icgc.cat/menu/>



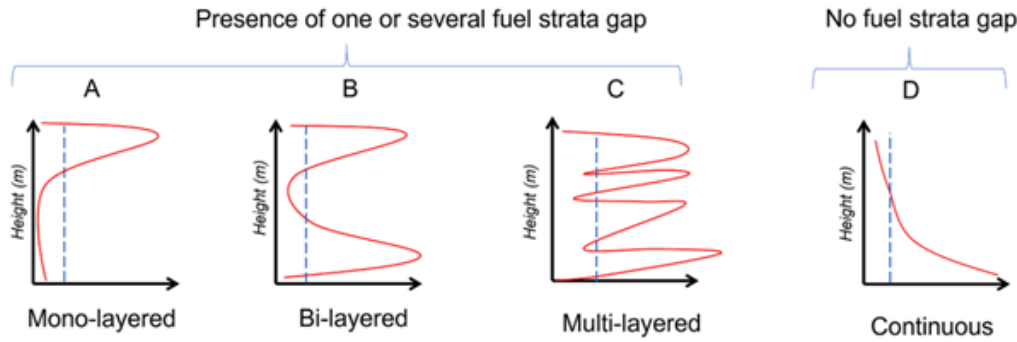
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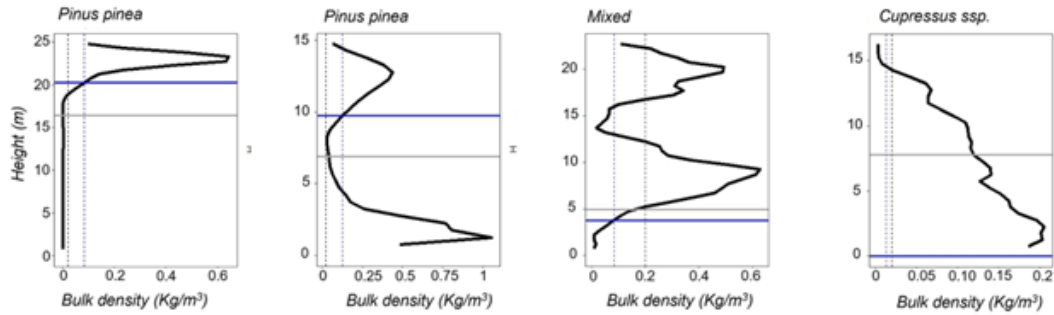
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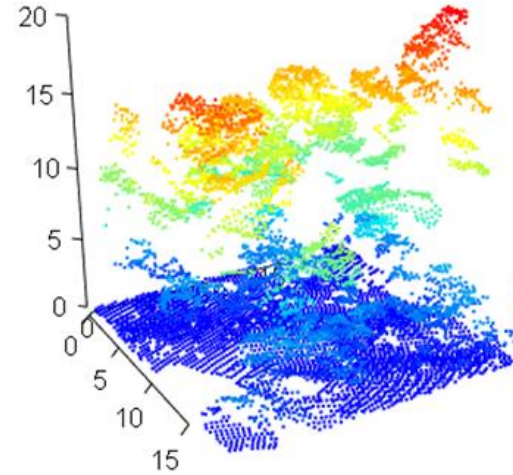
PREVISION PHASE: KNOWLEDGE FORESTLAND STATUS



Example of real profiles

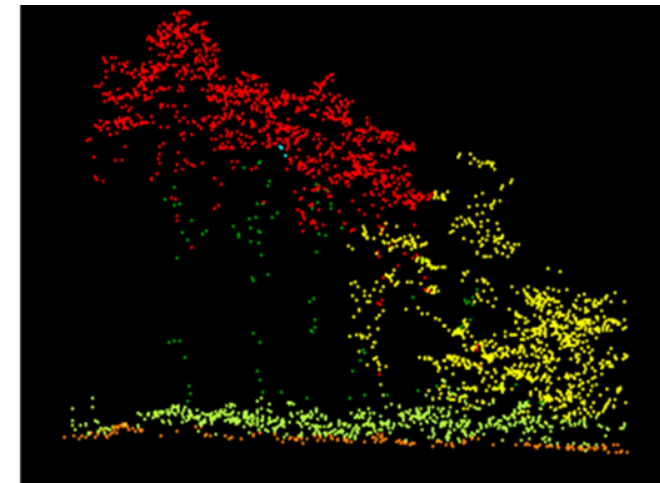
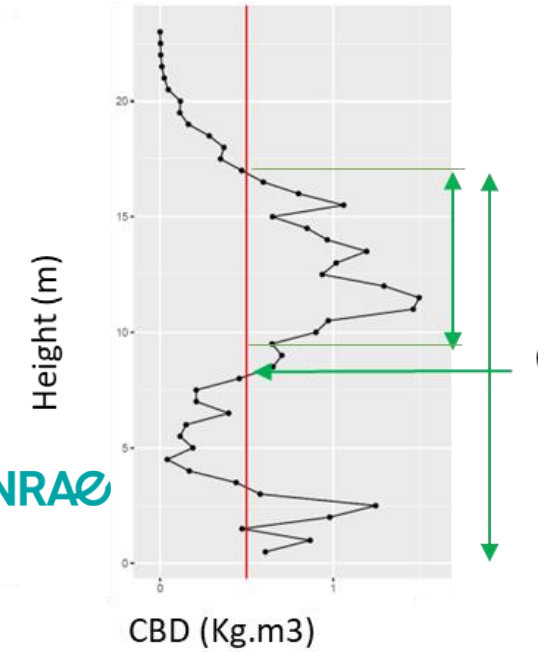


- Ground
- Scrubs/understory
- Medium veg/trunks
- Riparian veg trees
- Pinus

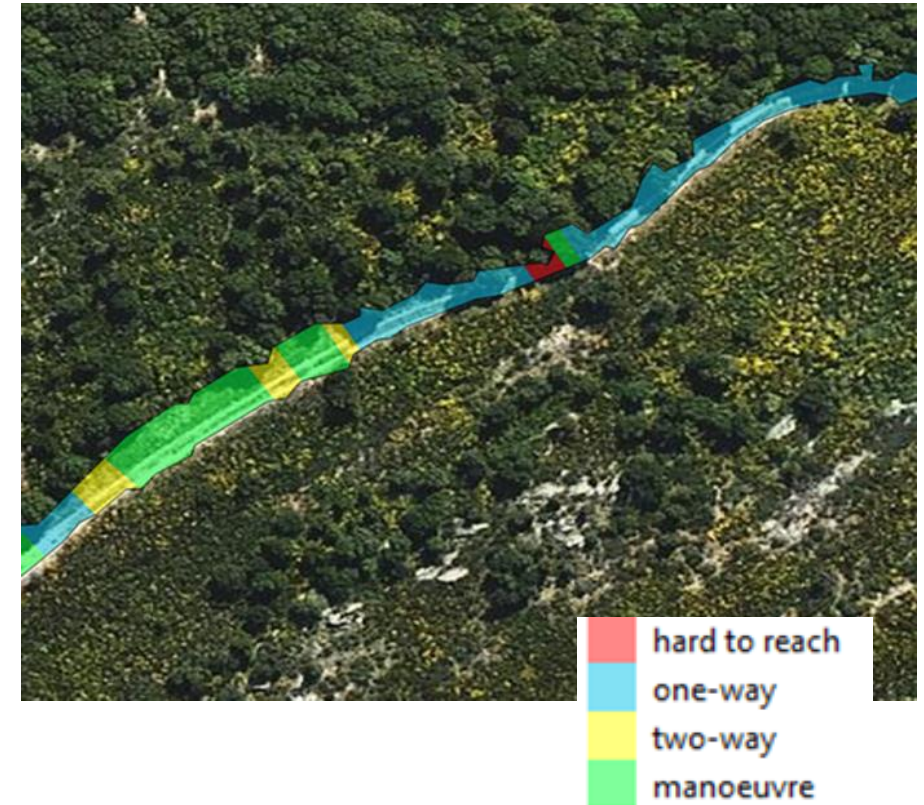
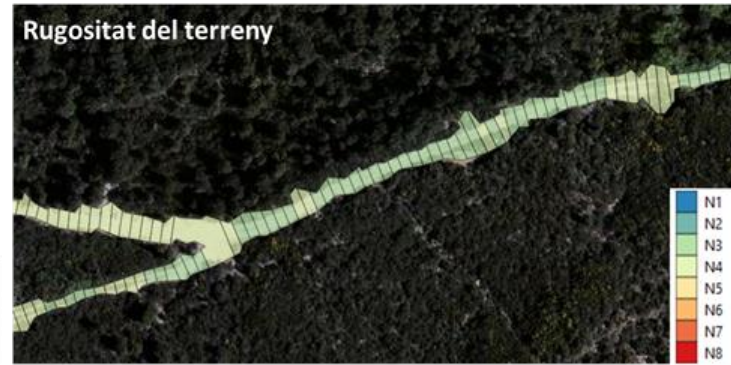
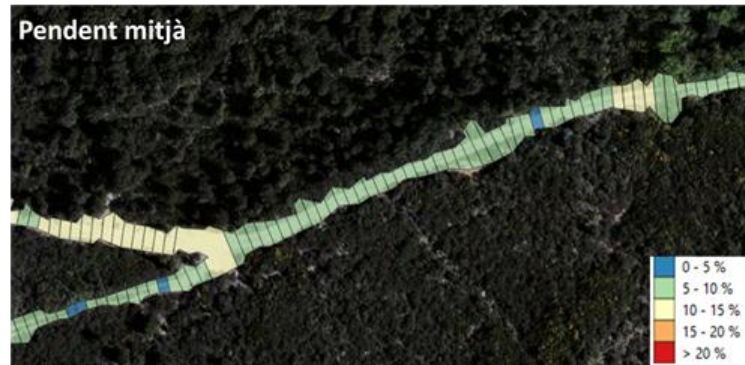
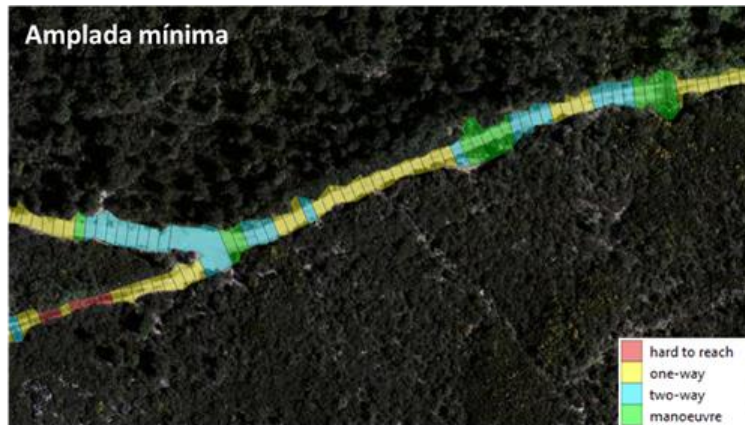


INRAE

Vertical Profile



PREVISION PHASE: KNOWLEDGE FORESTLAND STATUS

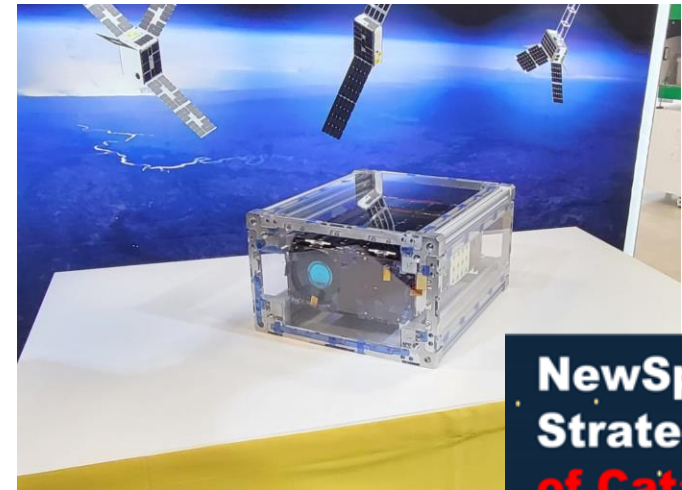
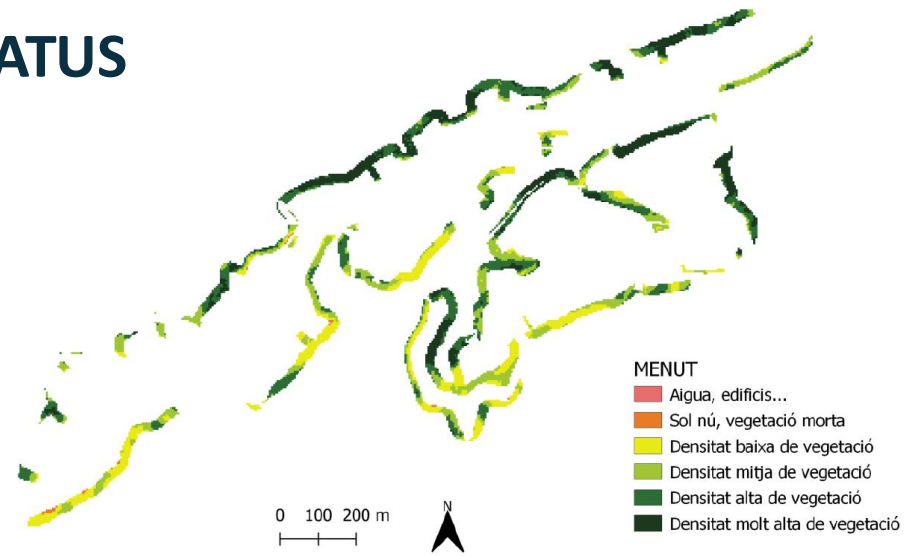
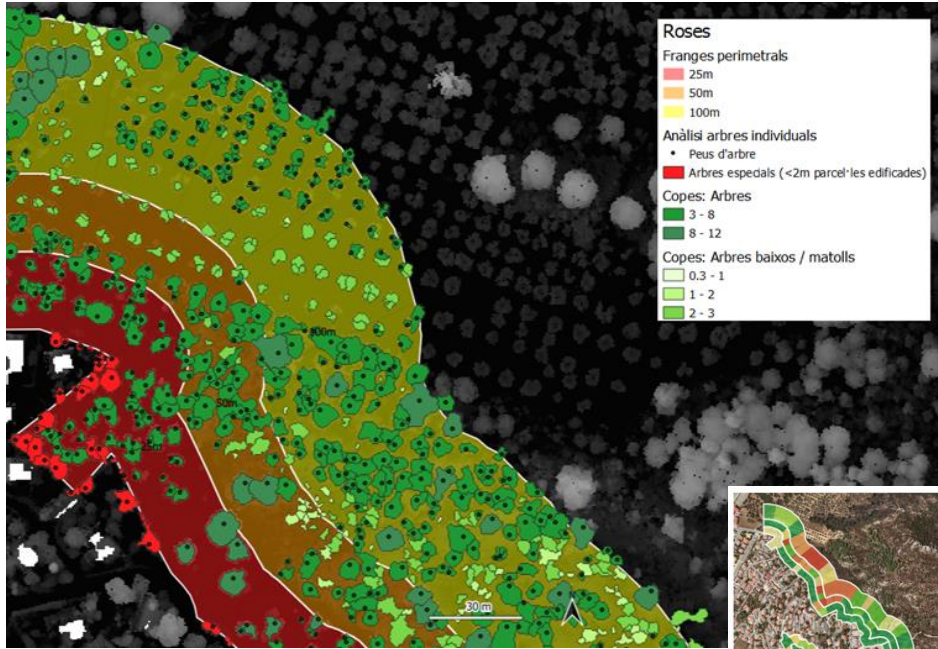


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Firefighters pathways - trafficability

PREVISION PHASE: KNOWLEDGE FORESTLAND STATUS



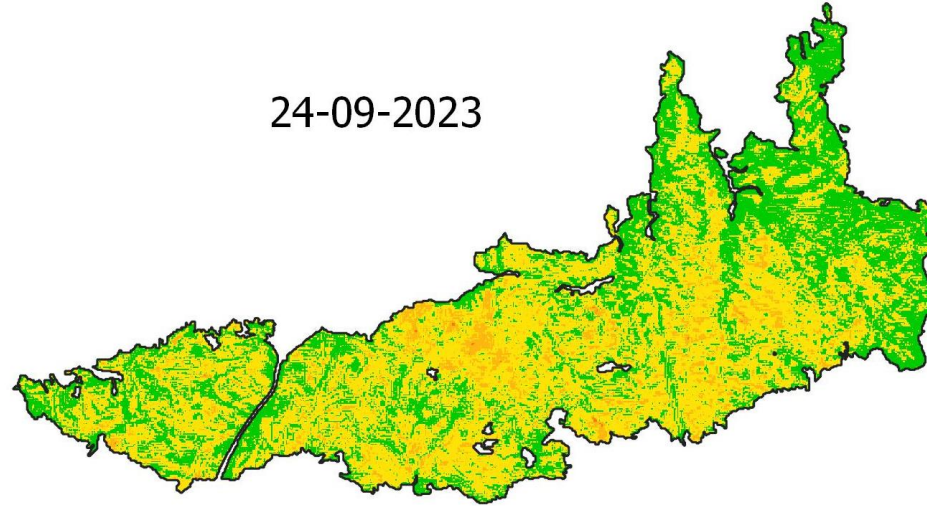
**NewSpace
Strategy
of Catalonia**

<https://politiquesdigitals.gencat.cat/ca/economia/estrategia-new-space-catalunya>






RECOVERY PHASE: RESILIENCE OF FORESTLAND AND EVOLUTION

dNBR Index

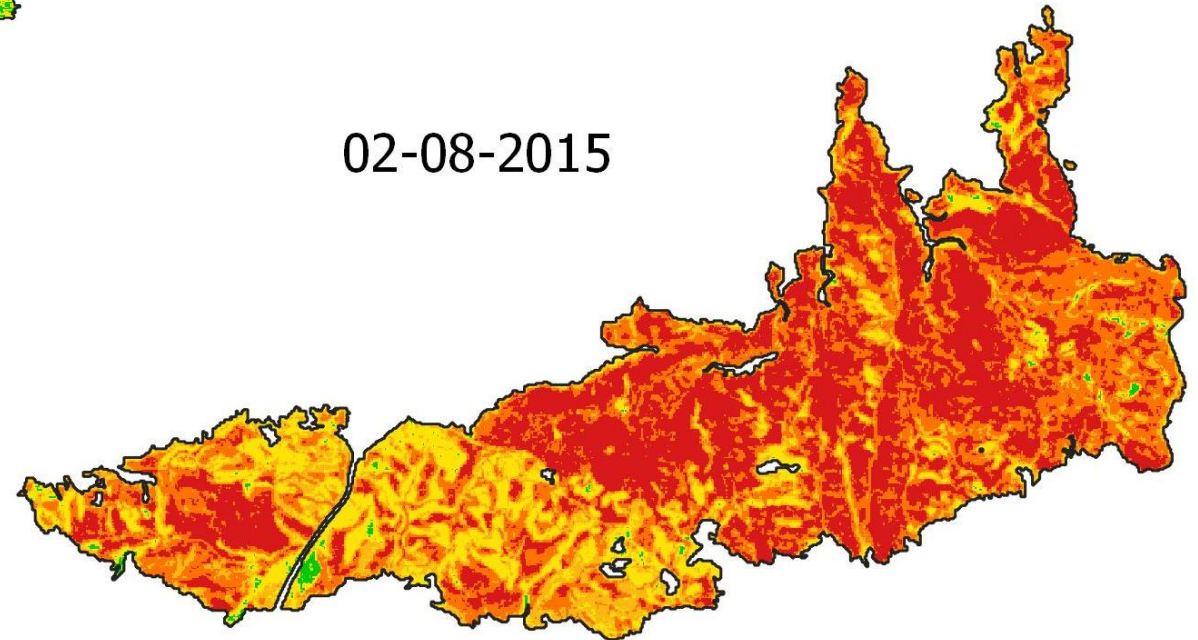
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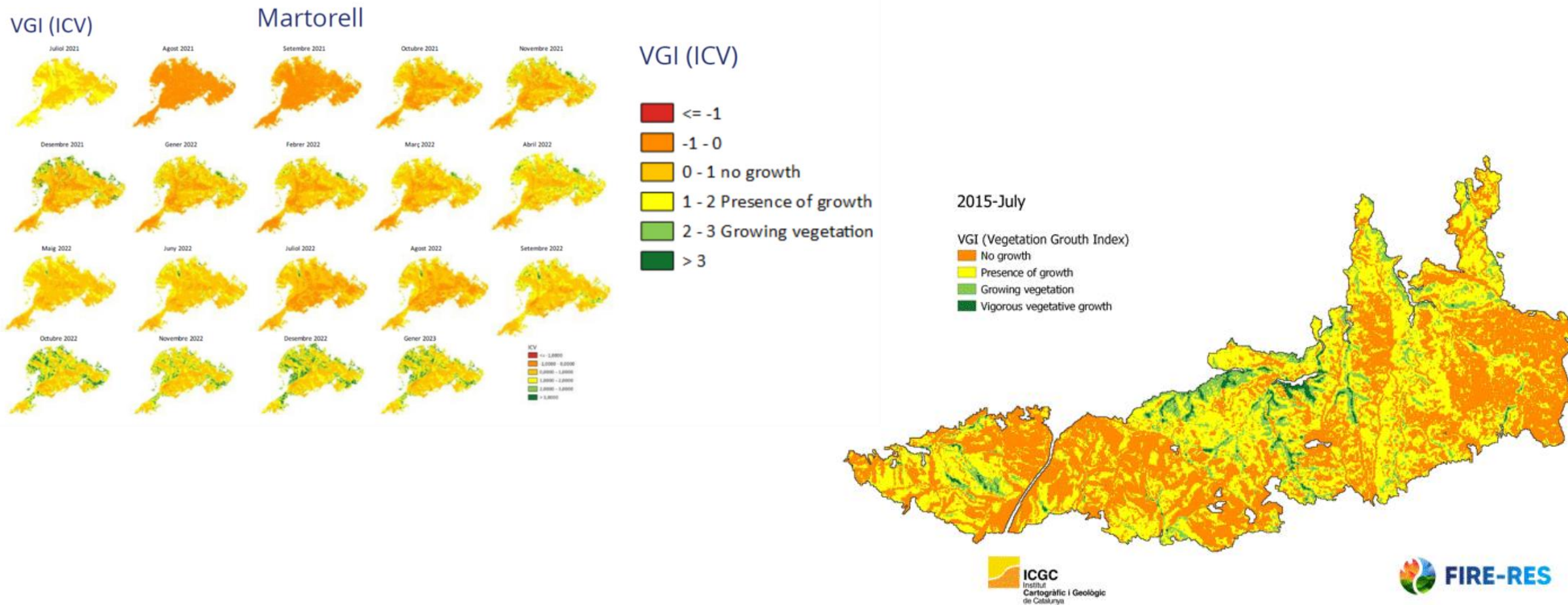
dNBR Index

-  $\leq 0,1000$ Not burnt
-  0,1000 - 0,2700 Low severity
-  0,2700 - 0,4400 Moderate severity
-  0,4400 - 0,6600 High severity
-  $> 0,6600$ Very high severity

02-08-2015

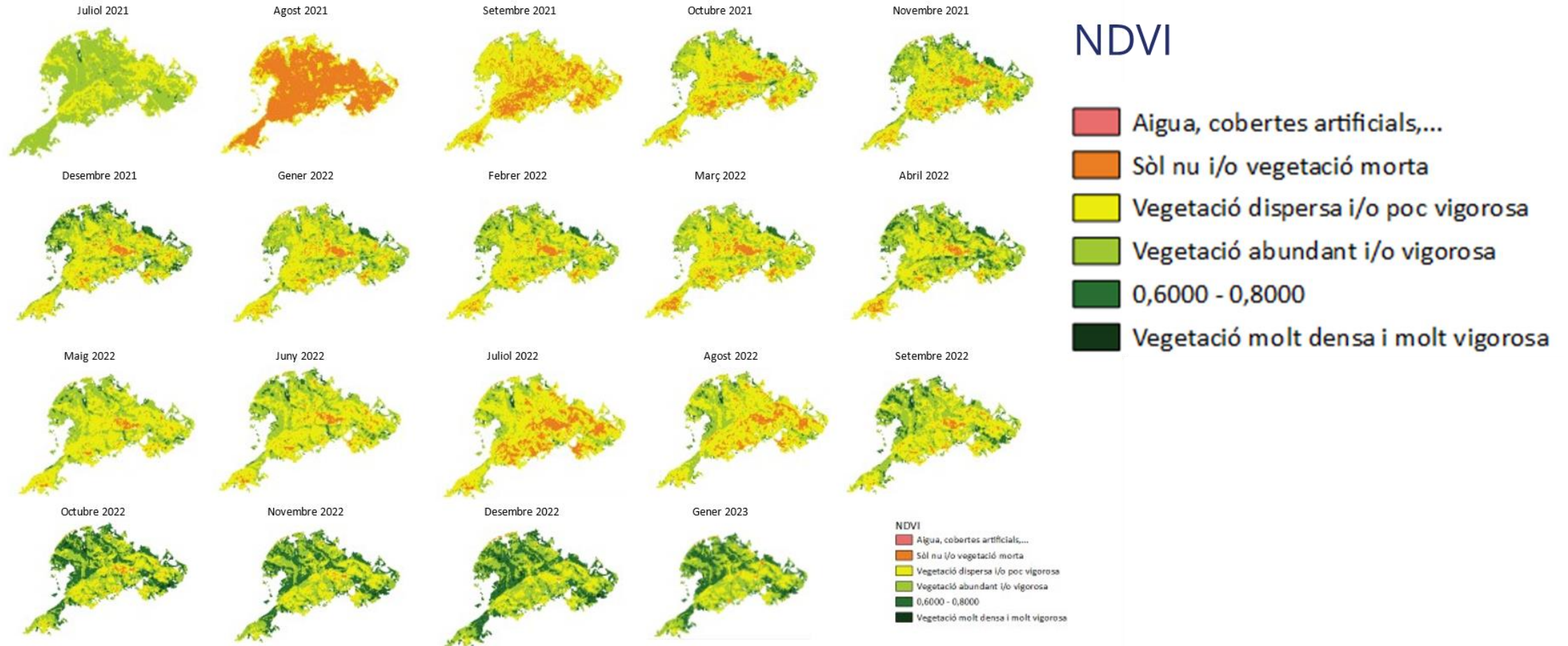


RECOVERY PHASE: RESILIENCE OF FORESTLAND AND EVOLUTION

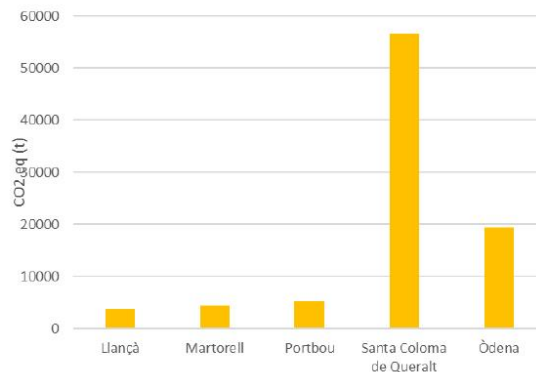
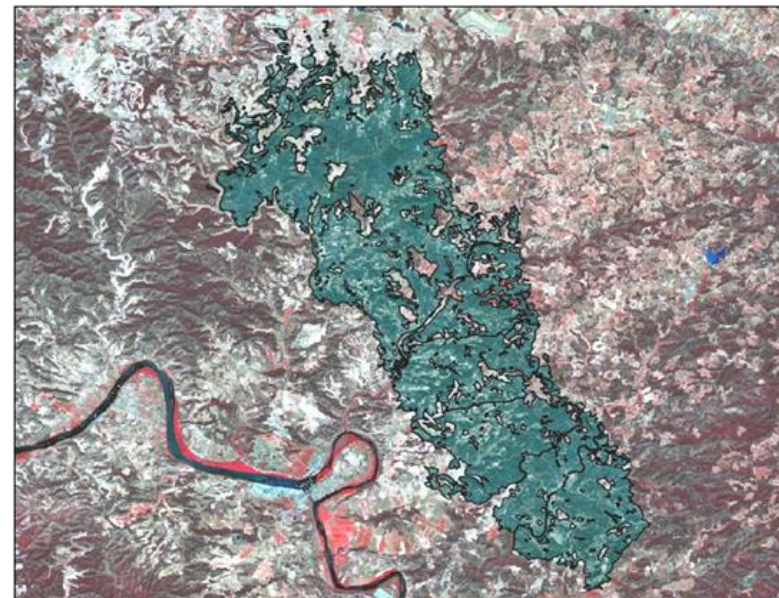
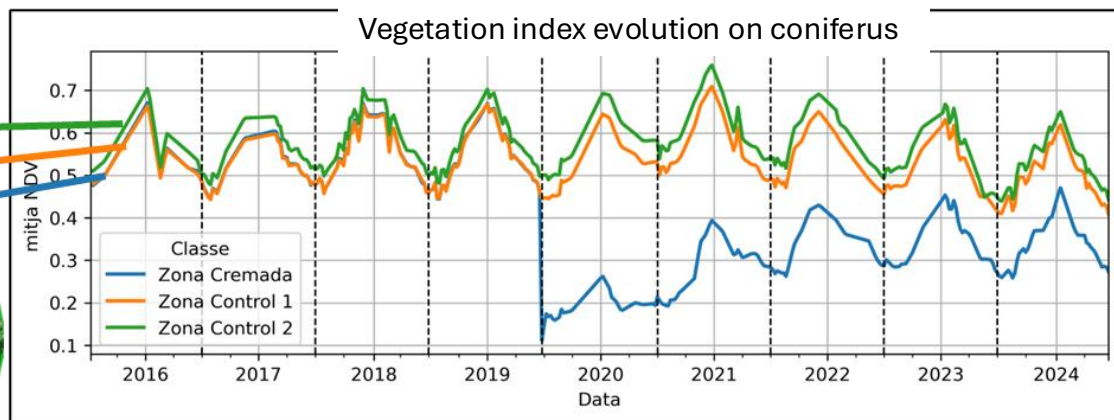
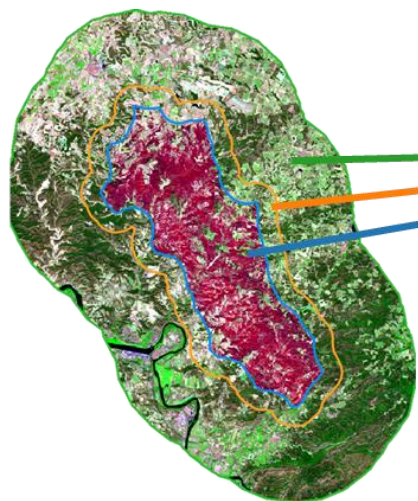


RECOVERY PHASE: RESILIENCE OF FORESTLAND AND EVOLUTION

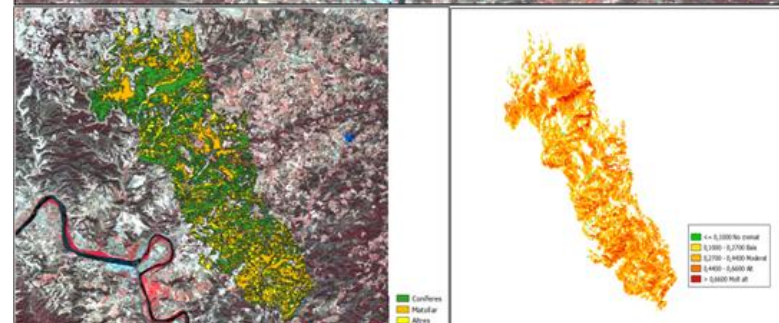
Martorell



RECOVERY PHASE: RESILIENCE OF FORESTLAND AND EVOLUTION



	Coniferus	Shrub	Totals
Superfície (ha)	2965,68	1430,72	4396,40
Biomassa P	73316,01	10673,17	83989,18
Biomassa C	30455,54	8812,02	39267,56
CO₂ eq (t)	53530,52	12708,34	66238,86
CO₂ eq (t/ha)	18,05	8,88	15,07
Total (t/ha)		15,07	



THANKS FOR YOUR ATTENTION !!



-JORDI- from Space



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