

AGENDA
FIRST on line JOINT USER FORUM ITALY-SPAIN
10TH JULY 2020 10:00 – 13:45

Ecosystem mapping and monitoring using Copernicus: SPAIN
Forest and shrublands ecosystems

10th July 2020

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Methodologies for monitoring the conservation status of habitat types (Scientific societies)

Metodologías para el seguimiento del estado de conservación de los tipos de hábitat



Incorporating RS variables to assess area of occupancy, structure, function, future perspectives & pressures and threats:

e.g. primary net production, disturbance regime, area of occupancy, soil moisture, biomass, climate change, hydrological regime, ...



- Roquedos, pedregales y glaciares
- Cuevas
- Pastizales
- Bosques y matorrales no fluviales
- Bosques y matorrales de ribera
- Ríos
- Formaciones tobáceas
- Lagos, lagunas y humedales de interior
- Turberas
- Ecosistemas costeros

Novedades

Listas patrón
El MAPAMA establece las Listas Patrón de las especies terrestres y marinas y de los hábitats terrestres...
[+info](#)

Preguntas frecuentes...
Acceso a los recursos genéticos y reparto de beneficios
[+info](#)

Noticias sobre Biodiversidad

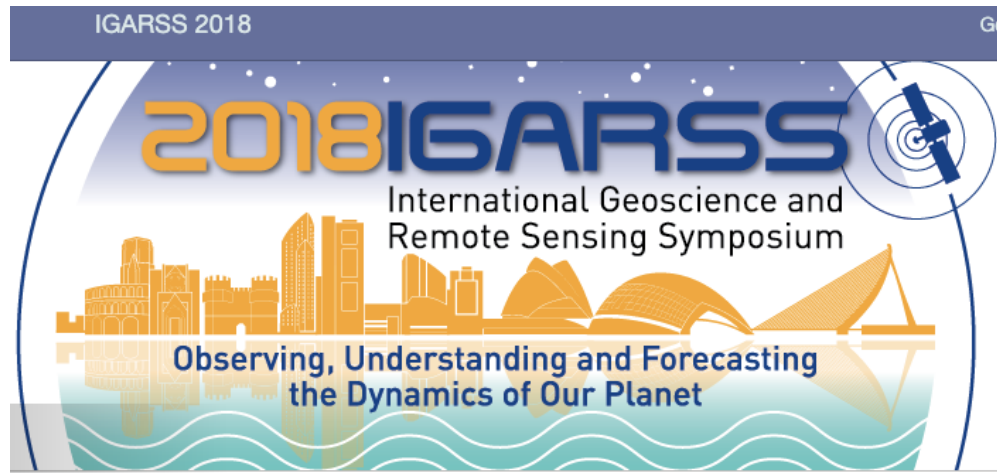
28/02/2020
Finaliza con éxito el primer operativo realizado en España contra el tráfico internacional de maderas

14/02/2020
La COP13 del Convenio de Conservación de Especies Migratorias abordará la inclusión de 10 nuevas especies para las que es necesario reformar su protección

Science-policy interface workshop for SWOT analysis of RS ecosystem functions (2017, University of Almería)

SATELLITE REMOTE SENSING OF ECOSYSTEM FUNCTIONS: OPPORTUNITIES AND CHALLENGES FOR REPORTING OBLIGATIONS OF THE EU HABITAT DIRECTIVE

J. Cabello^{1*}, P. Mairota², D. Alcaraz-Segura³, S. Arenas-Castro⁴, P. Escribano¹, P.J. Leitão^{5,6}, J. Martínez-López⁷, A. Regos⁴ and J.M. Requena-Mullor¹



From data to decision-making

Epistemological and technical issues affect the effectiveness and usefulness of the use of RS, steps to overcome these issues:

- Increase dialogue between RS scientists and managers and decision-makers.
- Conceptual impacts derived from RS ecosystem functions on management.
- Instrumental impacts useful to conservation practice and decision-making.
- Synergies and interoperability between products from different sensors, including fusion of optical multispectral and radar data.
- Indicators to couple with very clear final products for managers.
- Fostering RS capacity of managers and conservation practitioners

News



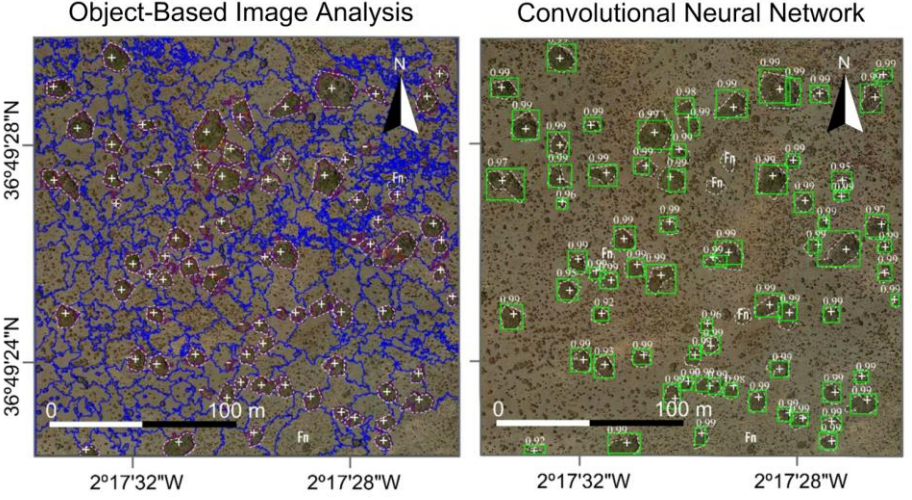
Copernicus Sentinel-2 helps to identify groundwater dependent ecosystems

25 July 2019

The identification and location of groundwater-dependent ecosystems are the first move in protecting and managing them. Such identifications are challenging where the surface signs of groundwater are not obvious. Copernicus Sentinel-2 data are lending a hand in establishing these ecosystems.

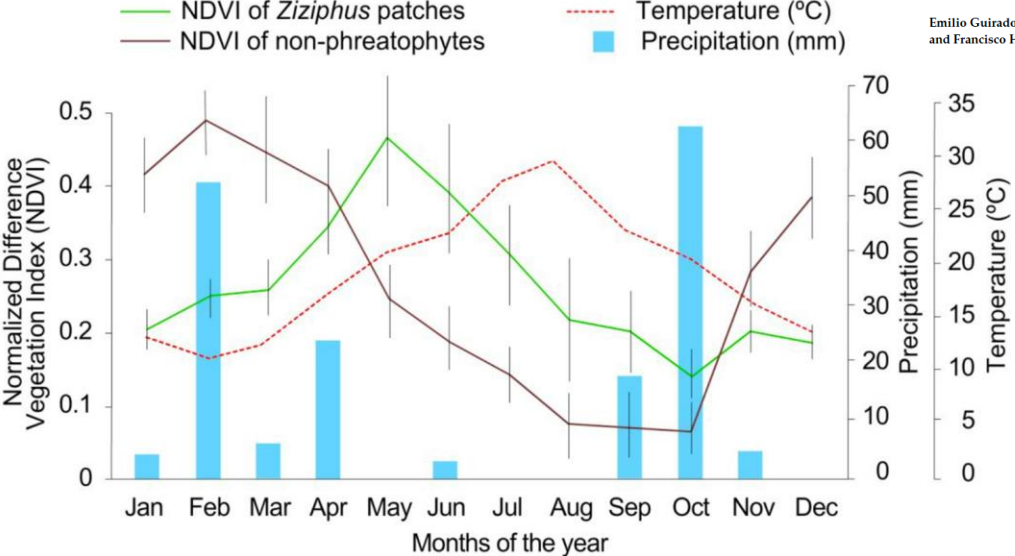
5220* 92/43/EEC


Artificial intelligence and OBIA



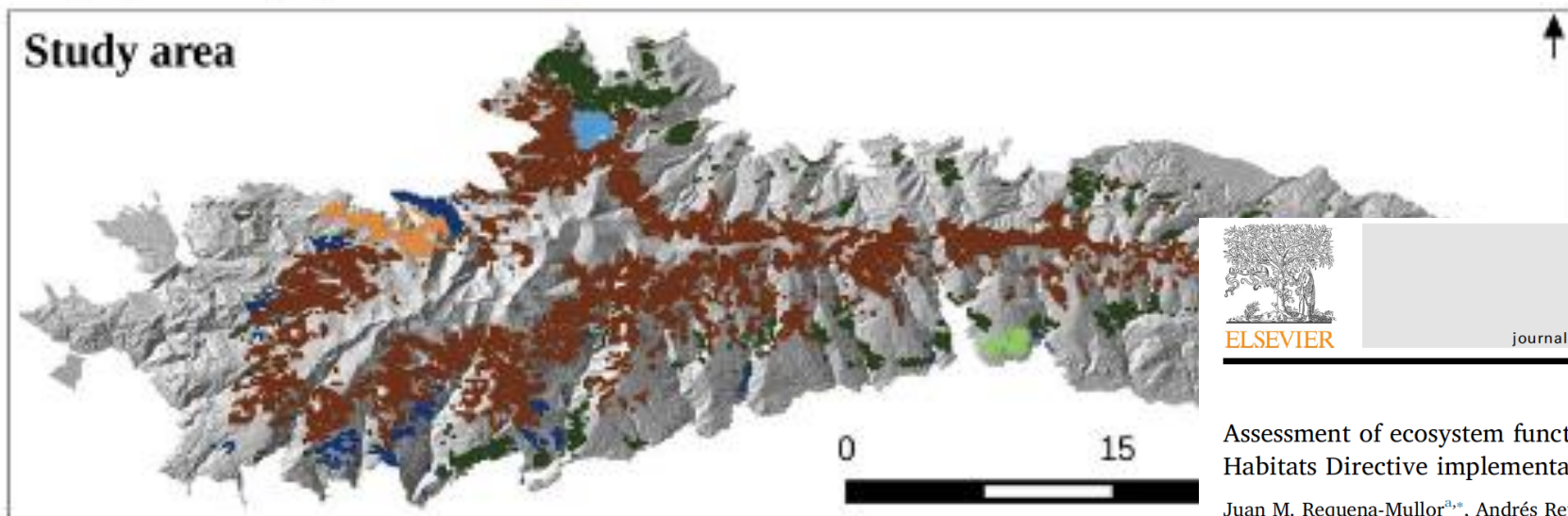
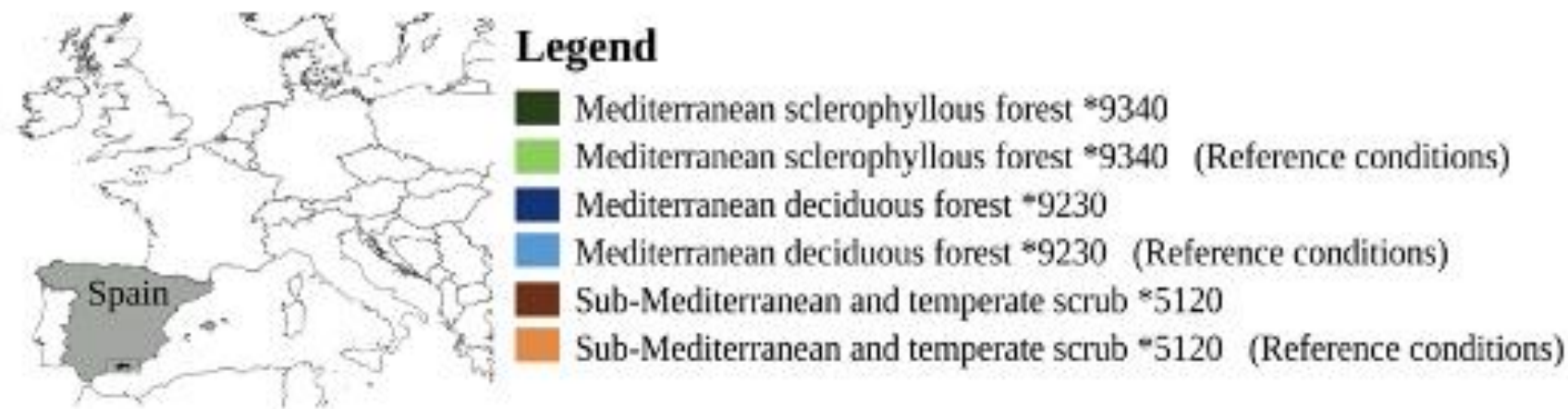
	Precision	Recall	Balanced Score
Object-Based Image Analysis	88.88%	97.29%	92.90%
Convolutional Neural Network	100.00%	93.24%	96.50%

Seasonal Dynamics of greenness of *Ziziphus lotus* patches



 remote sensing 
 Article
Deep-learning versus OBIA for scattered shrub detection with Google Earth imagery: *Ziziphus lotus* as case study
 Emilio Guirado ^{1,†}, Siham Tabik ^{2,†,*}, Domingo Alcaraz-Segura ^{1,3,4}, Javier Cabello ^{1,5} and Francisco Herrera ²

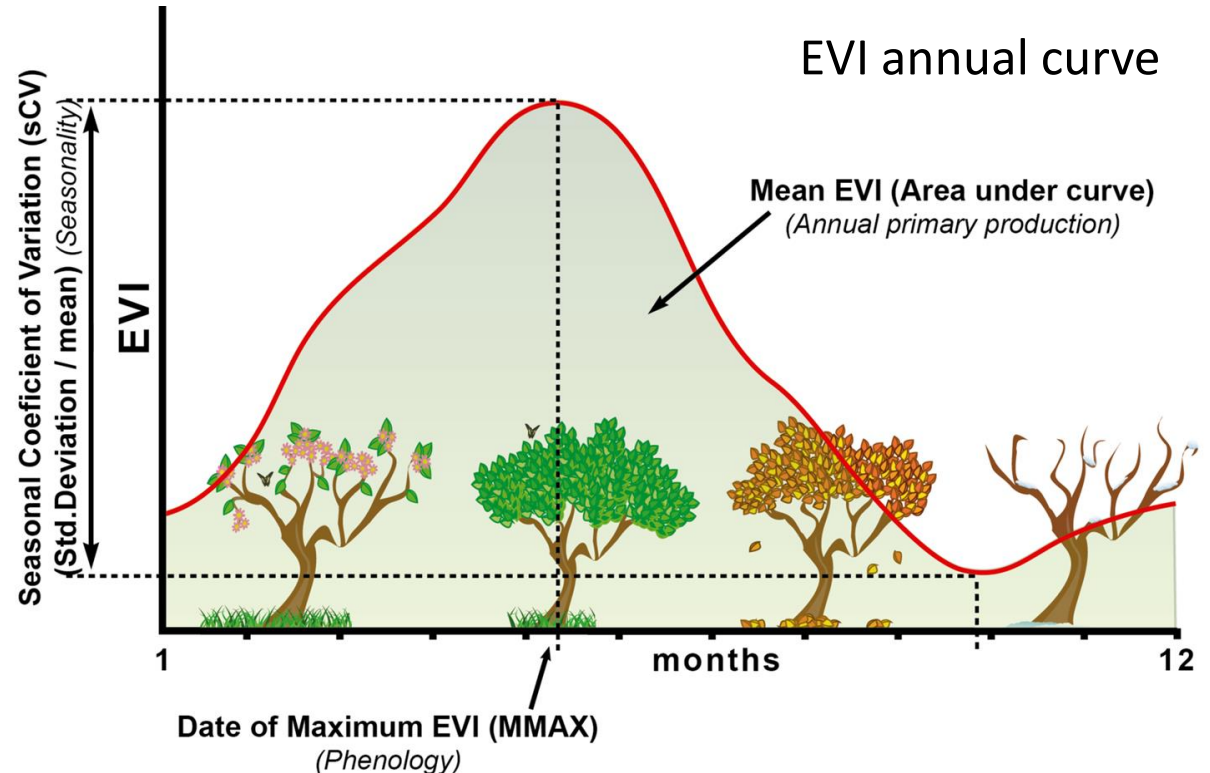
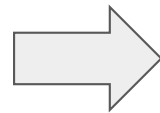
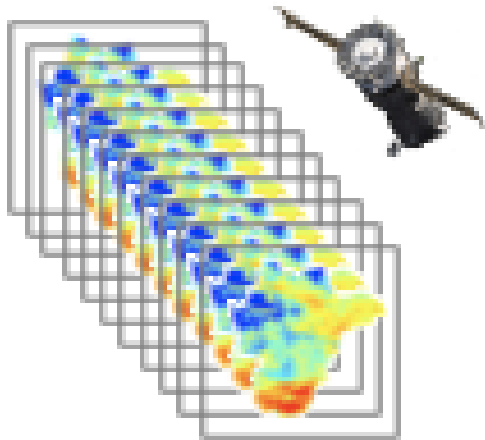
Incorporating ecosystem functioning into conservation status assessment through remote sensing tools



Ecosystem functioning into conservation status assessment through RS: habitats pixels classification according HD categories

Estimation of two satellite-derived ecosystem functional descriptors related to **primary production** and **seasonality** during the reporting period from the EVI annual curve.

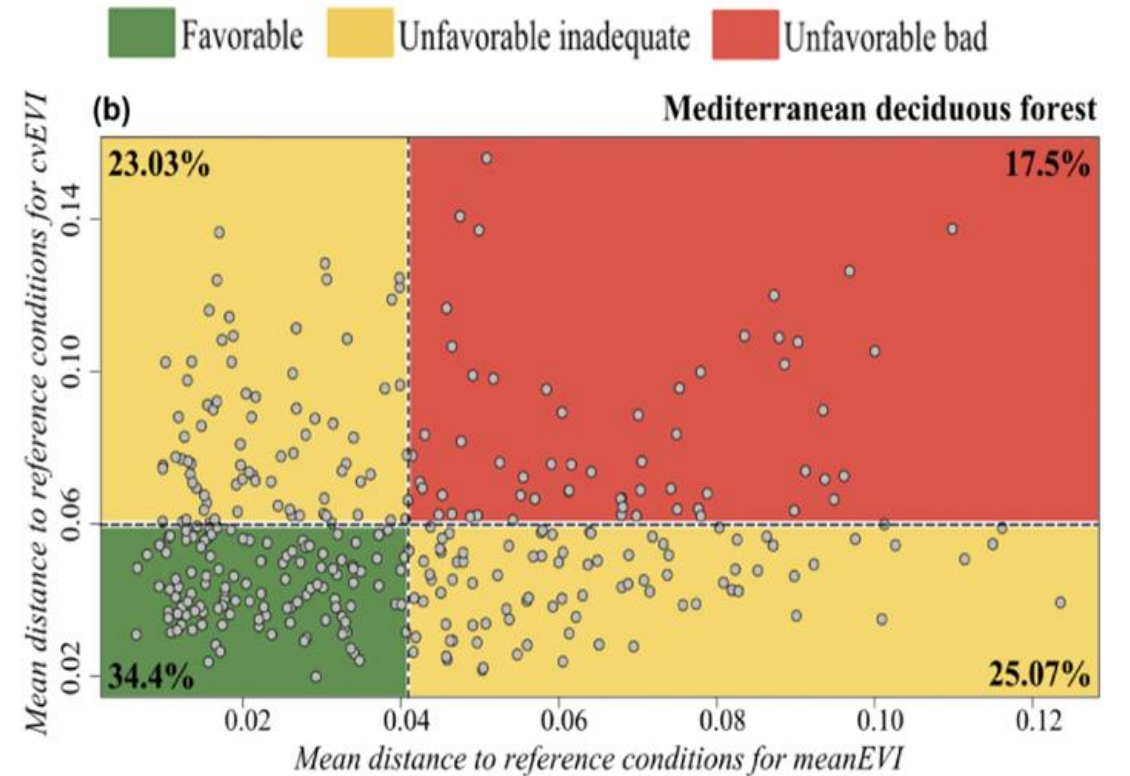
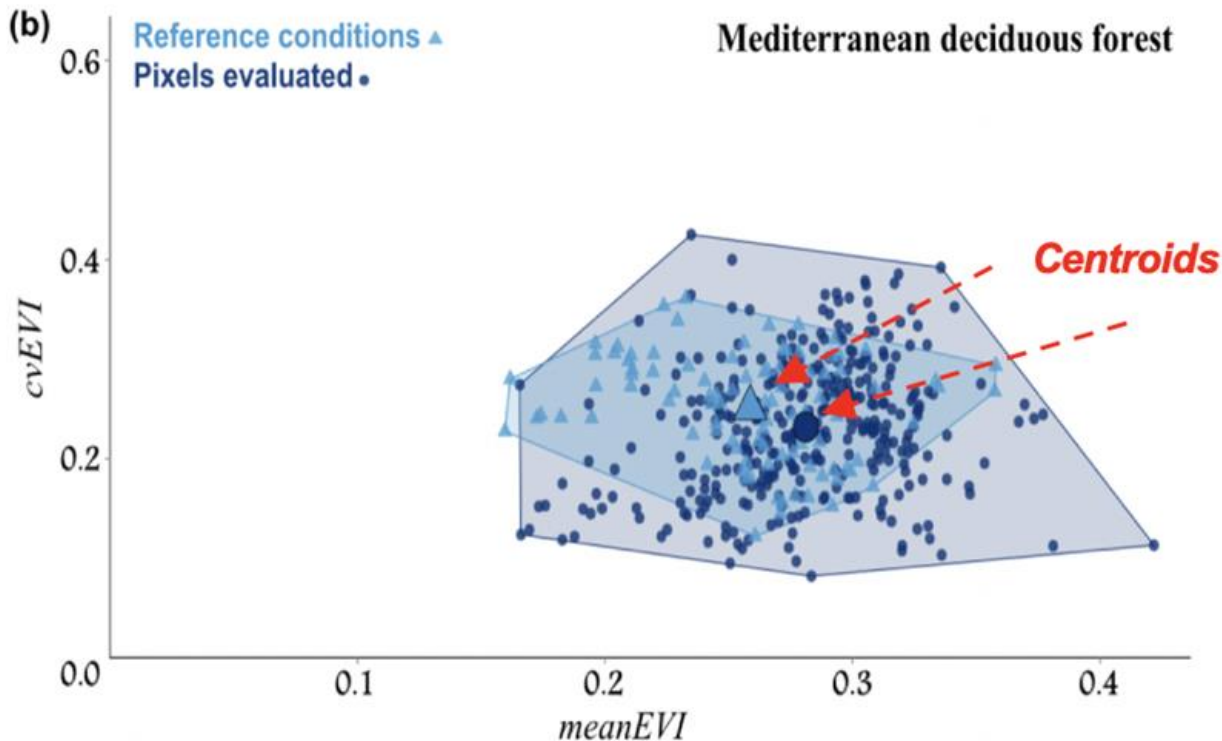
Satellite images temporal series



Ecosystem functioning into conservation status (CS) assessment through RS: habitats pixels classification according HD categories

Pixels in the functional space described by the two functional attributes: both general habitat and reference conditions

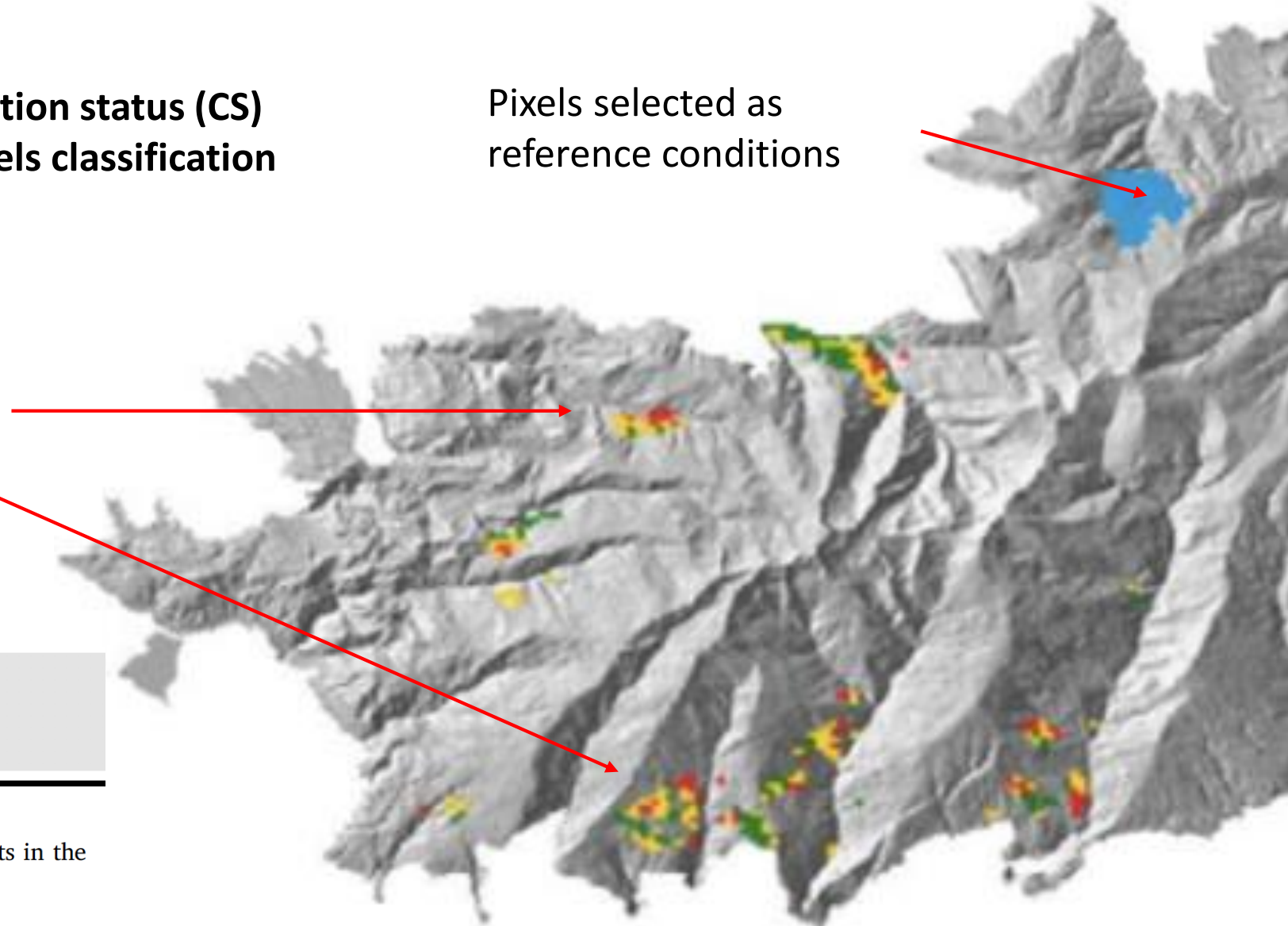
Categorization of pixels CS according distances to reference conditions



Ecosystem functioning into conservation status (CS) assessment through RS: habitats pixels classification according HD categories

Spatially explicit characterization of the habitats in terms of the 3 reporting categories of CS.

Pixels selected as reference conditions



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Ecological Indicators

journal homepage: www.elsevier.com/locate/ecolind

Assessment of ecosystem functioning from space: Advancements in the Habitats Directive implementation

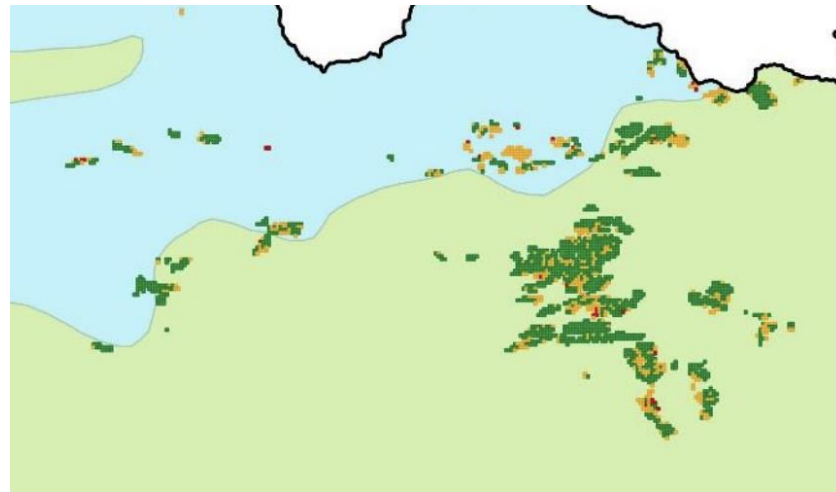
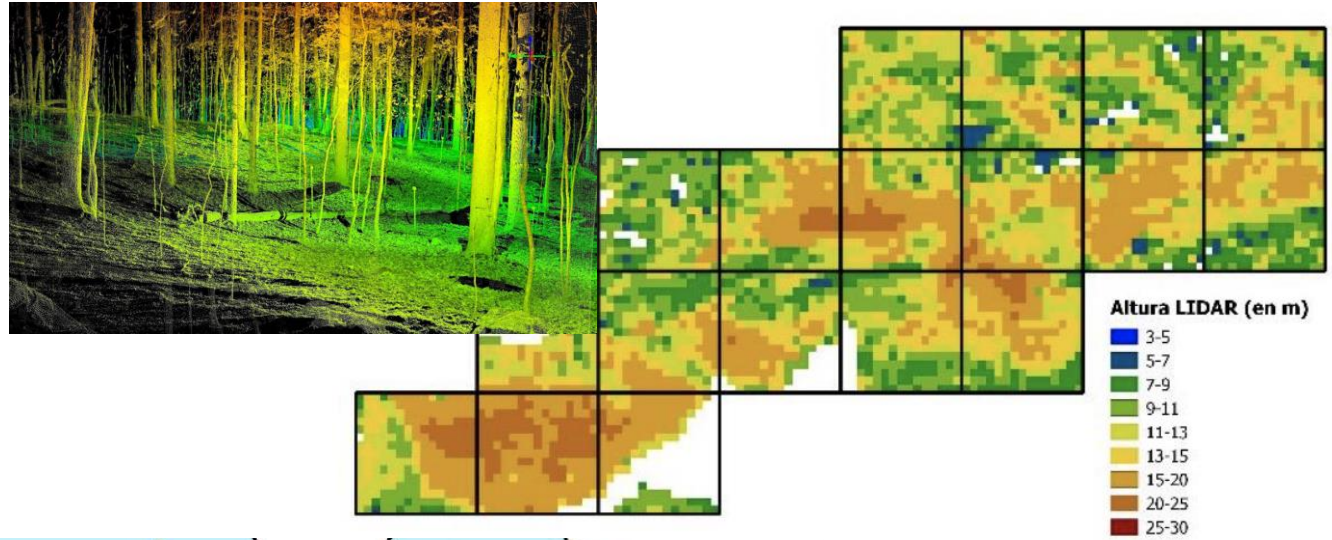
Juan M. Requena-Mullor^{a,*}, Andrés Reyes^a, Paula Escribano^a, Javier Cabello^{a,b}

Standardized procedure to generate structural variables data to estimate CS of forest and shrub types using LiDAR




DESARROLLO DE UN PROCEDIMIENTO ESTANDARIZADO PARA GENERAR DATOS DE LAS VARIABLES ECOLÓGICAS ESTRUCTURALES QUE PERMITAN ESTIMAR EL ESTADO DE CONSERVACIÓN DE LOS TIPOS DE BOSQUE Y MATORRAL UTILIZANDO COMO FUENTE DE DATOS LA TECNOLOGÍA LIDAR

Jordi Vayreda, Carles Batlles, Marta Lerner, Beatriz Vila, David S. Pescador, Julia Chacón-Labela, Francisco Lloret



Distribution of the CS of limestone beech forests Catalonia according structural variables (LIDAR)



**Gracias por su atención!!!
Grazie per la sua attenzione!!
Thank you for your attention!!**

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