

Aerial identification of seagrass meadows at risk using artificial intelligence

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EXCELENCIA
MARÍA
DE MAEZTU
2023 - 2027



Funding

- Càtedra del Mar, Iberostar Foundation
 - Call: *Becas para proyectos de investigación (Ayuda 3)*
 - Postdoc level, 3 projects and PhD UIB
 - Research areas: **Environmental** challenges in the **marine** context.
 - Budget: **12.000 €** for research projects
 - Duration **1 year (12/04/2024 – 11/04/2024)**



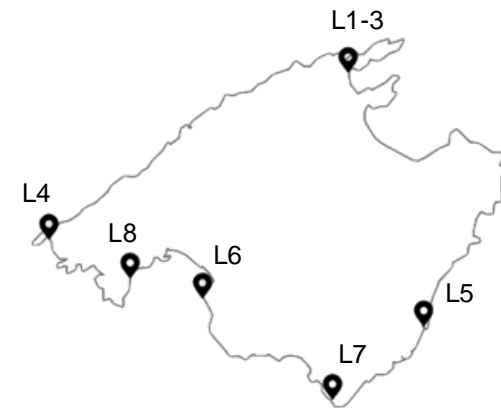
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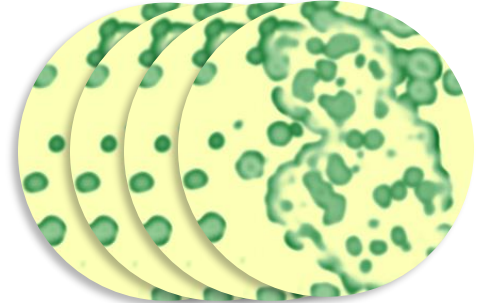
Objectives

- **O1.-** Acquire **high-resolution imagery** of coastal **seagrass** meadows at different localizations of ecological relevance.
 - T1.1 Training
 - T1.2 Geospatial imagery acquisition
 - T1.3 Data analysis and processing



Objectives

- **O2.- Identify** seagrass meadows at **risk** using a previously developed mathematical **model** of seagrass growth to train **machine learning** algorithms.
 - T2.1 Data generation using a mechanistic mathematical model
 - T2.2 Training of an AI model
 - T2.3 Validation using real images



Objectives

- **O3. - Estimate** seagrass vegetation **density** using real and **3D modelling** generated images of seagrass meadows to train a **machine learning** model.
 - T3.1 Data generation using 3D modelling
 - T3.2 AI model based on synthetic and real data

Equipment and other costs

- Drone DJI Mavic 3 Enterprise



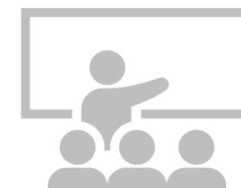
- NVIDIA L40s GPU



- Workstation



- Software licenses & Conference cost





THANK YOU

for your attention



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