

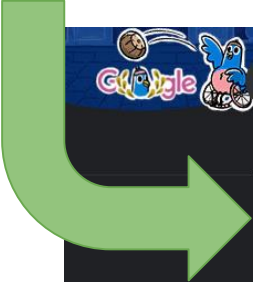
Benthic Habitats and how to find them with Google Earth Engine

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Benthic Habitats




Benthos is the community of organisms that live on, in, or near the sediment at the bottom of water bodies. Numerous species of bacteria, algae, and protozoa are part of the microscopic benthos.

ScienceDirect.com
<https://www.sciencedirect.com/topics/benthos>
Benthos - an overview | ScienceDirect Topics

Wikipedia
<https://en.wikipedia.org> · ... · Μετάφραση αυτής της σελίδας
Benthos
Benthos also known as benthon, is the community of organisms that live on, in, or near the bottom of a sea, river, lake, or stream, also known as the ...

Βένθος (Benthos) :



Περισσότερες εικόνες

Με τον όρο βένθος χαρακτηρίζεται το σύνολο των έμβιων οργανισμών που ζουν και αναπαύονται στο βυθό των υδάτινων σωμάτων.

Benthic Habitats



Rock crab (*Cancer irroratus*)

Kirt L. Onthank

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Common sole (*Solea solea*)

© Biopix: JC Schou



Source: Dimitris Poursanidis, Konstantinos Topouzelis & Nektarios Chrysoulakis (2018) Mapping coastal marine habitats and delineating the deep limits of the Neptune's seagrass meadows using very high resolution Earth observation data, *International Journal of Remote Sensing*, 39:23, 8670-8687, DOI: [10.1080/01431161.2018.1490974](https://doi.org/10.1080/01431161.2018.1490974)

Benthic Habitats

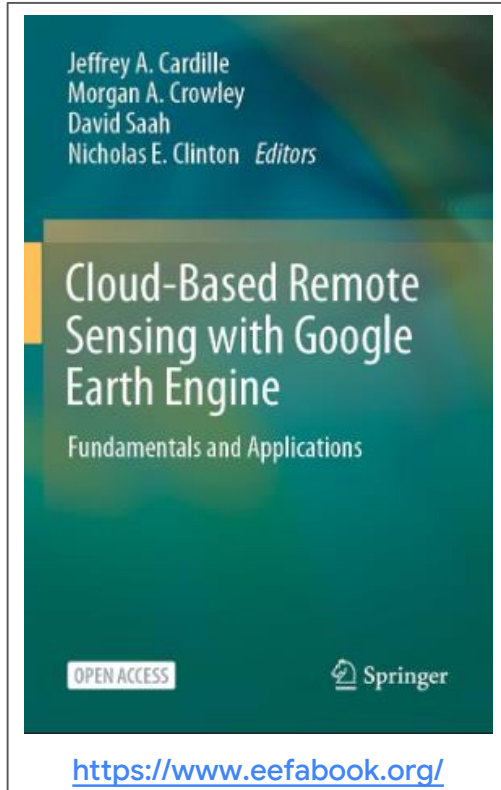
Seagrass meadows are among the most productive habitats in the coastal zone, performing essential ecosystem functions such as:

- water oxygenation and nutrient provision,
- seafloor and beach erosion stabilization
- nursery areas and refuge for commercial and endemic species
- carbon deposition and sequestration (blue carbon)



Source: Dimitris Poursanidis, <https://www.grida.no/resources/13420>

...And how to find them



Chapter A2.2 Benthic Habitats

(Dimitris Poursanidis, ~~Aurelie Shapiro~~, [Springer Link](#), Spyridon Christofilakos)

Section 1: Inputting Data

[Code Checkpoint](#)

[A22b](#)

Section 2: Preprocessing Functions

[Code Checkpoint](#)

[A22c](#)

Section 3: Supervised Classification

[Code Checkpoint](#)

[A22d](#)

Section 4: Satellite Derived Bathymetry
With Random Forest

[Code Checkpoint](#)

[A22e](#)

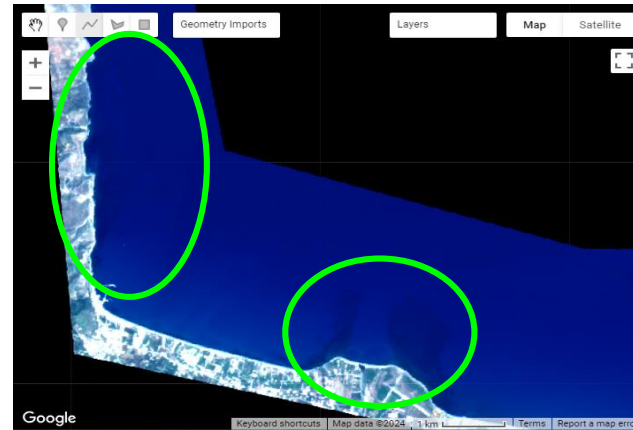
[eefabook](#), Chapter A2:2 Benthic Habitats

Section 2: Preprocessing Functions

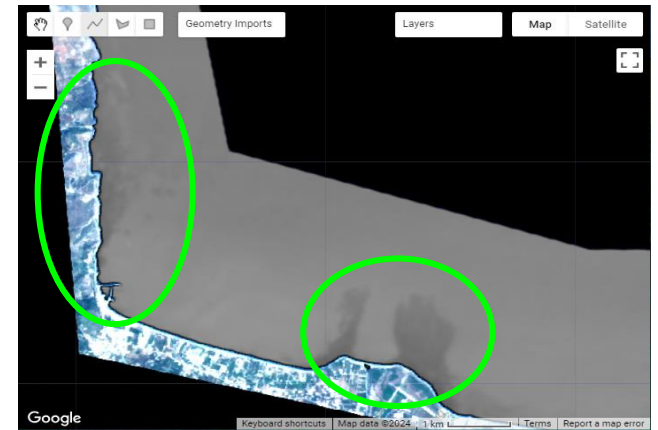
[Code Checkpoint A22c](#)

- 1) Landmask
- 2) Sunglint Correction
- 3) DIV estimation

Original Image in RGB



Depth InVariant Index (DIV)

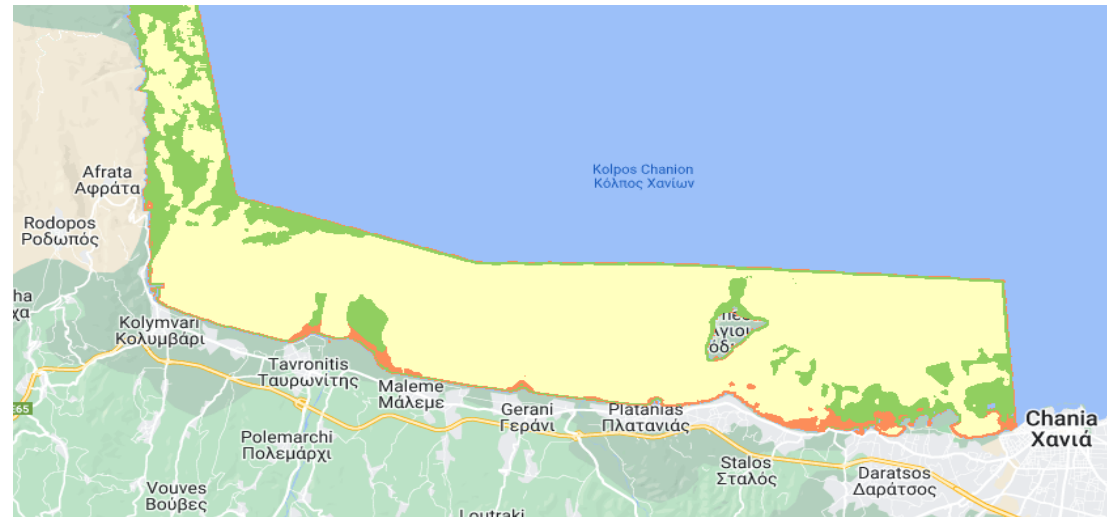


[eefabook](#), Chapter A2:2 Benthic Habitats

Section 3: Supervised Classification

[Code Checkpoint A22d](#)

- 1) Import/split of reference data
- 1) **Benthic Habitat classification with Support Vector Machine**
- 1) Accuracy Assessment

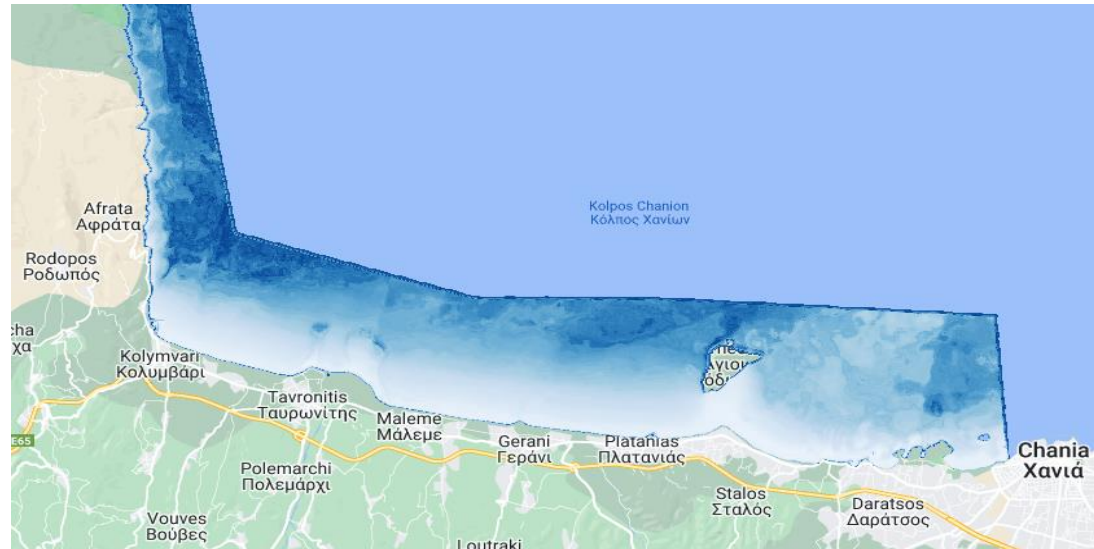


[eefabook](#), Chapter A2:2 Benthic Habitats

Section 4: Satellite Derived Bathymetry Estimation with Random Forest

[Code Checkpoint A22e](#)

- 1) Import/split of reference data
- 1) **Satellite Derived Bathymetry with Random Forest**
- 1) Accuracy Assessment



Thank you for your time!

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