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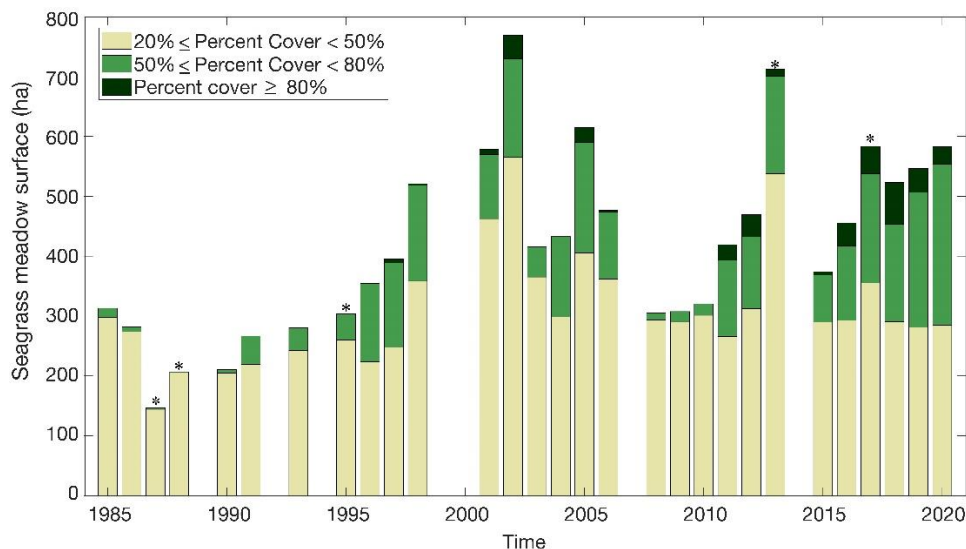
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03/03/2022

Analyzing a four-decade time-series of seagrass parameters based on Earth Observation and possible links with herbivore abundance

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Seagrass meadows are considered as indicators of the health of coastal areas and as foundation species are linked to higher trophic levels. Seagrass parameters based on Earth Observation were calibrated and validated over intertidal meadows dominated by *Zostera noltei*. Then, a multi-mission satellite time-series from 1985 – 2020 was compiled to reconstruct seagrass trajectories over a macrotidal system in the French Atlantic coast. Both the meadow extent and seagrass density displayed increasing trends since 1985. Also, a high degree of interannual variability was observed over time characterized by abrupt losses alternating with periods of slow recovery. Preliminary results on the combined analysis of long-term series of seagrass and Brent goose abundance (an herbivore migrant bird) showed a positive correlation between them, with a similar slope on their trends. Such a coincidence further suggest a strong link between *Z. noltei* trajectories and Brent goose dynamics.