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VULNERABILITY OF MARINE FORESTS TO TEMPERATURE AND UV RADIATION: EFFECTS ON THE RECRUITS

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Macroalgal forests provide essential ecosystem services and are home for a wide variety of organisms. The genus *Cystoseira* includes several species, each being dominant in a determined range of environmental variables. Most *Cystoseira* species are Mediterranean endemisms and show clear signs of regression across all their distribution range. Even if these regressions are well known, the ultimate drivers are still not clearly understood. Here we explore experimentally how climate change affects two *Cystoseira* species adapted to contrasting hydrodynamic regimes: exposed (*C. mediterranea*) and sheltered (*C. crinita*).

Viability of *Cystoseira* populations strongly rely on their recruitment. We focus in the recruitment survival of both species, at normal (21°C to 25°C) and high temperatures (28°C), and at increased rates of UV radiation (PAR and PAR+UVA+UVB).

Results show that normal temperatures did not affect *Cystoseira* recruitment, whereas unusual high temperatures (28°C) lead to the death of settlers of both species. In contrast, UVA-UVB radiation showed a cumulative impact on the recruitment survival, strongly impairing the development of recruits growing at all temperature conditions. Our results are the first experimental evidences of climate strongly compromising the viability of *Cystoseira* forests.