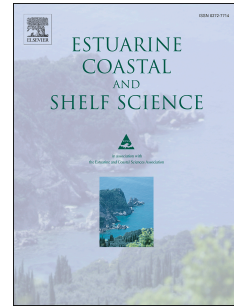


Accepted Manuscript

Assessment of fish communities in a Mediterranean MPA: Can a seasonal no-take zone provide effective protection?

Charalampos Dimitriadis, Maria Sini, Vasilis Trygonis, Vasilis Gerovasileiou, Laurent Sourbès, Drosos Koutsoubas



PII: S0272-7714(17)30821-1

DOI: [10.1016/j.ecss.2018.04.012](https://doi.org/10.1016/j.ecss.2018.04.012)

Reference: YECSS 5816

To appear in: *Estuarine, Coastal and Shelf Science*

Received Date: 11 August 2017

Revised Date: 8 March 2018

Accepted Date: 7 April 2018

Please cite this article as: Dimitriadis, C., Sini, M., Trygonis, V., Gerovasileiou, V., Sourbès, L., Koutsoubas, D., Assessment of fish communities in a Mediterranean MPA: Can a seasonal no-take zone provide effective protection?, *Estuarine, Coastal and Shelf Science* (2018), doi: 10.1016/j.ecss.2018.04.012.

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1 **Assessment of fish communities in a Mediterranean MPA: can**
2 **a seasonal no-take zone provide effective protection?**

3 Charalampos Dimitriadis^{a,*}, Maria Sini^b, Vasilis Trygonis^b, Vasilis
4 Gerovasileiou^c, Laurent Sourbès^a, Drosos Koutsoubas^{a,b}

5 ^aNational Marine Park of Zakynthos, Eleftheriou Venizelou 1, Zakynthos, 29100, Greece

6 ^bUniversity of the Aegean, Department of Marine Sciences, University Hill, Mytilene 81100,
7 Greece

8 ^cInstitute of Marine Biology, Biotechnology and Aquaculture, Hellenic Centre for Marine
9 Research, 71003, Heraklion, Crete, Greece

10 * *Corresponding author. E-mail address: xdimitriadis@marine.aegean.gr (C. Dimitriadis).*

11 **Abstract**

12 The efficacy of a Mediterranean Marine Protected Area (National Marine Park of
13 Zakynthos – NMPZ, Ionian Sea, Greece) that implements a seasonal no-take zone as part
14 of its management scheme was assessed using fish data collected *in situ* with underwater
15 visual census. Sampling was conducted at two habitat types (*Posidonia oceanica*
16 meadows and rocky reefs) that occur at sites of different protection level with respect to
17 fisheries (high protection: seasonal no-take zone within the MPA; intermediate: zones
18 within the MPA where small-scale fishing is allowed; none: areas outside the MPA, where
19 all types of fishing are allowed, including trawlers, purse seiners, and recreational fishing).
20 The data were used to examine the effects of protection level and habitat type on
21 community parameters, trophic structure and functional diversity of fish populations that
22 occupy the upper sublittoral zone. Overall, habitat type had a more pronounced effect than
23 protection level on all investigated parameters. Biomass, density and number of fish

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