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Marta Albo  **Puigserver**, Juan Bueno  Pardo, Miguel Pinto, João N. Monteiro, Andreia Ovelheiro, Maria A. Teodósio and Francisco Leitão, 2022. [Ecological sensitivity and vulnerability of fishing fleet landings to climate change across regions.](https://doi.org/10.1038/s41598-022-21284-3) Sci Rep 12, 17360 (2022). <https://doi.org/10.1038/s41598-022-21284-3>

Abstract: The degree of exposure of fishing communities to environmental changes can be partially determined by the vulnerability of the target species and the landings composition. Hence, identifying the species that ecologically most contribute to the vulnerability of the landings are key steps to evaluate the risk posed by climate change. We analyse the temporal variability in intrinsic sensitivity and the ecological vulnerability of the Portuguese fisheries landings, considering the species proportions derived both from the weights and revenues. To account for the diversification of species of each fleet, we explored the species dependence of the fishery in combination with the vulnerability of them. The analyses were carried out separately for three fleet typologies and three regions. Opposite to what has been observed at a global scale, the ecological sensitivity of the fisheries landings between 1989 and 2015 did not display a decline across areas or fishing fleets. Considering each fleet independently, for trawling, where average vulnerability was lower than in the other fleets, the sensitivity of the landings increased since the 2000s. On the other hand, the high vulnerability found in multi-gear fleets was compensated by diversification of the species caught, while purse-seine fleets targeted low vulnerability species but presented a high fishery dependence on few species. The results highlight the importance of combining information on ecological vulnerability and diversification of fishing resources at a regional scale while providing a measure of the ecological exposure to climate change.

Keywords: