

Universidad de Huelva

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THE PROBLEM

 NO_2^- (ppm)

The Estero de Domingo Rubio Protected Area (Huelva, SW Spain) is bordered to the south by an industrial complex, to the west by the Tinto River estuary, and to the north by agricultural lands, which exerts strong pressure on the system due to polluted irrigation returns. The Estero have suffered repeated dramatic ichthyofauna mortally events at the end of summer seasons (2022 and 2023)





NO₃⁻

October 16th 2022 **200 Tons** dead fish

May the cause of such mortality be associated with the increase of chemical pollutants?

 SO_4^2 -



PO₄³⁻

- flows from the surrounding agriculture that feed the system
- An almost exponential growth of the surface for intensive agriculture and irrigation was observed at the end of the last century. Also noteworthy the increase of **industrial use surface**, up to about 14 % of the total surface of the Estero de Domingo Rubio surrounding
- A large reduction in the surface occupied by natural habitats from 63.98% to 35.75% over the course of 67 years

DNCLUSIONS

- The protection of the wetland and the implementation of SUSTAINABLE AGRICULTURAL PRACTICES are key measures to ensure the preservation of this system and the associated biota.
- COOPERATION between farmers, ecologists and the authorities is essential to find solutions and keep the ecological balance of this wetland and its sustainable conservation

REFERENCES

Real Decreto 817/2015, de 11 de septiembre, por el que se establecen los criterios de seguimiento y evaluación del estado de las aguas superficiales y las normas de calidad ambiental. Boletín Oficial del Estado, 219, 80582-80677, de 12 de septiembre de 2015. https://www.boe.es/eli/es/rd/2015/09/11/817



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