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EFFECTS OF HYDROLOGICAL MODIFICATION ON GROWTH AND CONDITION OF THE NATIVE CYPRINID LUCIOBARBUS SCLATERI FROM THE SEGURA RIVER BASIN (SE IBERIAN PENINSULA)

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Freshwater ecosystems have been profoundly altered by human activities, including alteration of natural flow regimes and modification of riparian habitat. Segura river basin is an intensely regulated basin, located in a semiarid climate region of the southeastern Iberian Peninsula, which receives external water resources by Tajo-Segura transfer (annual mean water transfer of 340 hm^3) to the Mundo river, the main tributary of the Segura river. This situation has led to severe modification of the natural flow regimes of these rivers which could negatively affect native fish fauna.

Growth and condition indices ara particularly useful for monitoring fish populations and to assess the effects of environmental conditions on individual or population health. Thus, the objective of this study was to anaylse the possible differences in growth (instantaneous growth rate and mean backcalculated length) and condition (morphometric and biochemical indices) of southern Iberian barbel *Luciobarbus sclateri* populations, inhabiting three river sectors with different flow and riparian habitat conditions in the Segura river basin.

Flow alteration was higher in the Mundo river sector and riparian habitat quality (assessed through RQI index) was lower in that sector. There were significant differences in growth and condition indices among study sectors, with significantly higher values in the most altered river sector (Mundo river). This situation was probably related to adaptive response of *Luciobarbus sclateri* populations subjected to higher water discharges. Results emphasize the importance of studying biological traits to correctly assess anthropogenic impacts on native fish fauna.

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