

Evaluación del efecto barrera de las vías de transporte andaluzas al desplazamiento de la fauna como respuesta al cambio climático

Assessment of the barrier effect of Andalusian transport infrastructures to movement of wildlife in response to climate change

Authors: Real, R., Márquez, A.L.

Location: *Biogeografía de Medios Litorales: Dinámicas y conservación* (2014), ISBN 978-84-617-1068-3, pages 223-227

Language: Spanish

We evaluated the transport infrastructures' potential barrier effect in Andalucía to future distribution shifts of 20 threatened flightless tetrapod species in response to climate change. To develop environmental models for each species we used the favorability function and we considered two circulation models (CGCM2 and ECHAM4) and two emission scenarios (A2 and B2). We only detected a shift in favorable areas in the future for *Salamandra salamandra*. The environmental favorability of *S. salamandra* was predicted to be reduced in the western half of Andalusia, while in the northeast quadrant it will be increased. The possible barrier effect of transport infrastructures for this species was evaluated considering the flow between areas separated by them. *Salamandra salamandra morenica* will have to overcome the barriers of the railroad Cordoba–Almorchón and Ave Sevilla-Córdoba-Madrid to reach the most favorable areas in the northeast quadrant.

Key words: Connectivity; favourability function; predictive biogeography; salamander; spatial modeling.