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Impact of global changes on suitable stopover sites for Aquatic Warblers and possible responses to maintain carrying capacity for the species

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Abstract:

Probably all first-year Aquatic Warblers (AW) migrate by a western flyway and stop in France to refuel [1]. Most of the French ringing data is collected along the Atlantic coastline particularly in bays and estuaries [2]. On these sites, captures are mainly made on intertidal areas. In the Gironde estuary a monitoring scheme has been developed to study the stopover ecology of the AW in intertidal wetlands. The results obtained emphasize high trophic potentialities of intertidal areas for birds to refuel [3] and support the findings available so far which have begun to highlight the importance of low wet vegetation submitted to tidal influence for the migration of the species. The results of the study also raise questions about the impact of global changes on suitable AW's stopover sites and possible responses to maintain the carrying capacity for the species along the Atlantic coastline. In the Gironde estuary, erosion as globally evidenced along the French shore as well as the rising sea level (26 - 82cm expected by the end of the century [4]) raise questions about the future of intertidal wetlands as well as the future of the carrying capacity for the AW along the French Atlantic coastline. Given such threats it is important to study possible responses to maintain the carrying capacity of the AW along the East Atlantic post-breeding flyway of the species. In the Gironde estuary, three interesting possibilities might be considered : 1): locally, the return of reclaimed lands (depolderization) ; 2): the creation of new wetlands behind coastal protection works (dykes...) connected to estuary waters ; 3): the maintenance and development of wetlands with low wet vegetation in reclaimed lands through agri-environmental measures. Solutions planned involve land policies on back-littoral areas to prepare the future of intertidal wetlands taking into account global changes that are already under way. The situation highlights the key role of local authorities as well as associations and organizations such as the French Coastal Conservancy, who can make land acquisitions, and encourage agri-environmental measures to develop a conservation strategy for coastal wetlands considering the threats arising from global changes.

Key words: intertidal wetlands, erosion, rising sea level, habitat management, depolderization, agri-environmental measures.

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