

Demographic variables and stock status of pike,



The demographic variables of pike (*Esox lucius*) were studied at the southern edge of the species' distribution in the Anzali Wetland, south-western Caspian Sea. The main aim was to provide data for the assessment of the stock and to explore possible fisheries management measures such as setting minimum landing size based on length-at-maturity. Pike collected from commercial landings ranged from 15.4 to 75.4 cm in fork length (FL), from 52.9 to 3462.5 g in weight and were between 0 and 8 years old. Von Bertalanffy growth function parameters were $L_{\infty} = 90.6$ cm FL, $k = 0.12$ yr⁻¹ and $t_0 = -1.74$ yr⁻¹. Male pike matured at 1–2 years with L50 of 28.6 cm FL, whereas females matured at 2–3 years with a L50 of 33.9 cm FL. Instantaneous total mortality (Z) was estimated as 0.93 yr⁻¹, while fishing mortality (F) was estimated to be 0.66 yr⁻¹. Yield-per-recruit analysis indicated that pike in the Anzali Wetland seems to be growth-overfished under the current fishing regime with no management measures, and substantial increases in yield could be achieved by increasing the length at first harvest. The results indicated that management actions such as

enforced legislation are required to obtain a better stock status and higher yield. Management could be more effective if the number of fishers and their catch could be controlled, e.g., through the allocation of fishing licenses.

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