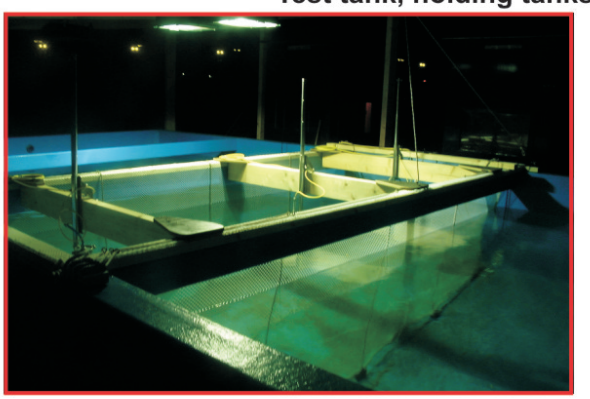
Effects of sounds on North Sea fish species

Anthropogenic underwater noise in the oceans is increasing. Most of this noise is low frequency. The hearing of most fish species is adapted for detecting low-frequency sound. Therefore there is a potential conflict between anthropogenic activities and the ecology of marine fish. However, when a sound is detected it does not always have an effect on the behavior of a fish. Apart from the sound type, the received level determines whether a sound has an effect or not. This study determines the minimum sound levels of pure tones and noise at which some marine fish species begin to react.

Study period: October 2004-December 2006
Location: Oosterschelde Research Center for Aquatic studies, The Netherlands

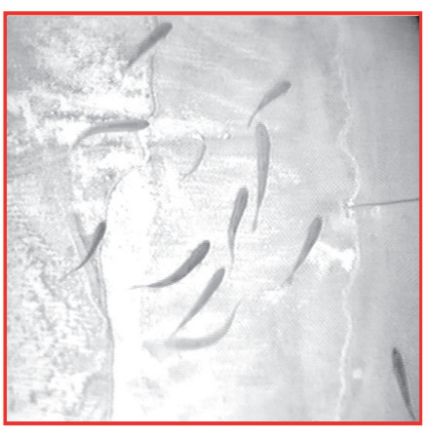
Test tank, holding tanks & equipment cabins

Tank with study area in the day

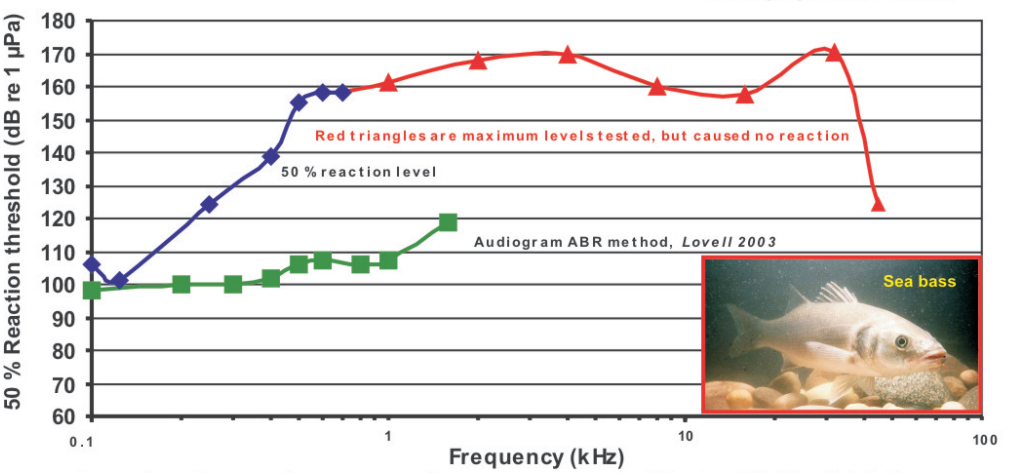


Net enclosure & cameras at night

Sound generating & recording equipment in equipment cabin



Fish filmed from above



Levels of pure tones sea bass responded to in 50 % of trials

Marine fish species tested: sea bass (*Dicentrarchus labrax*), thicklip mullet (*Chelon labrosus*), pout (*Trisopterus luscus*), cod (*Gadus morhua*), pollack (*Pollachius pollachius*), eel (*Anguilla anguilla*), Atlantic herring (*Clupea harengus*), and horsemackerel (*Trachurus trachurus*)

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Study still in progress