FACT SHEET

Whiting *(Merlangius merlangus)*

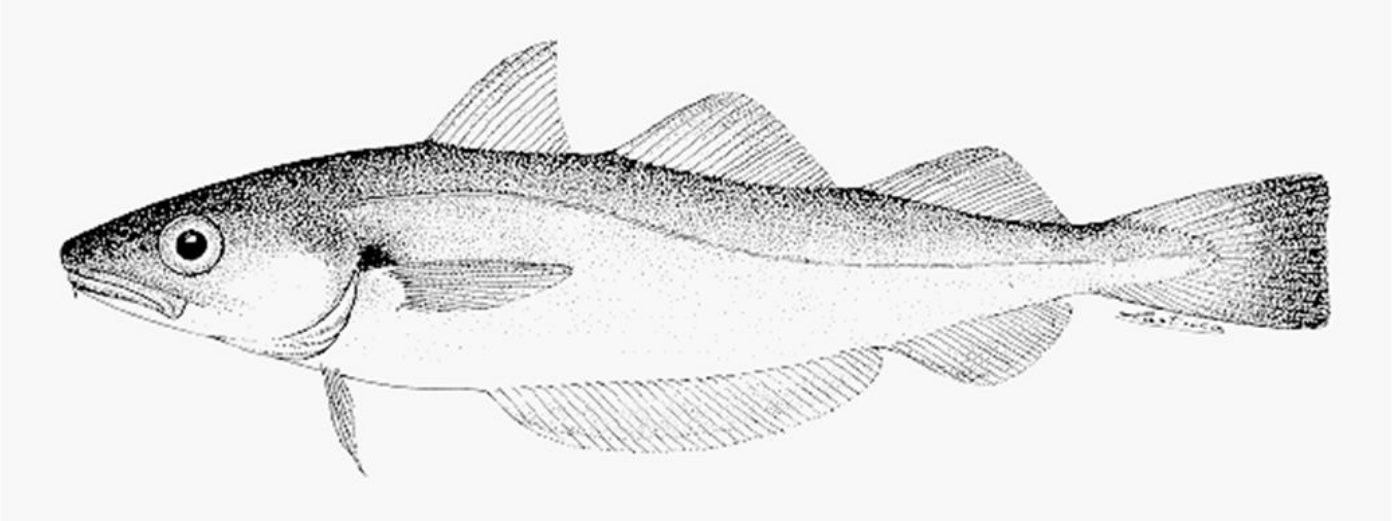


Image taken from (Cohen et al. 1990)

Introduction

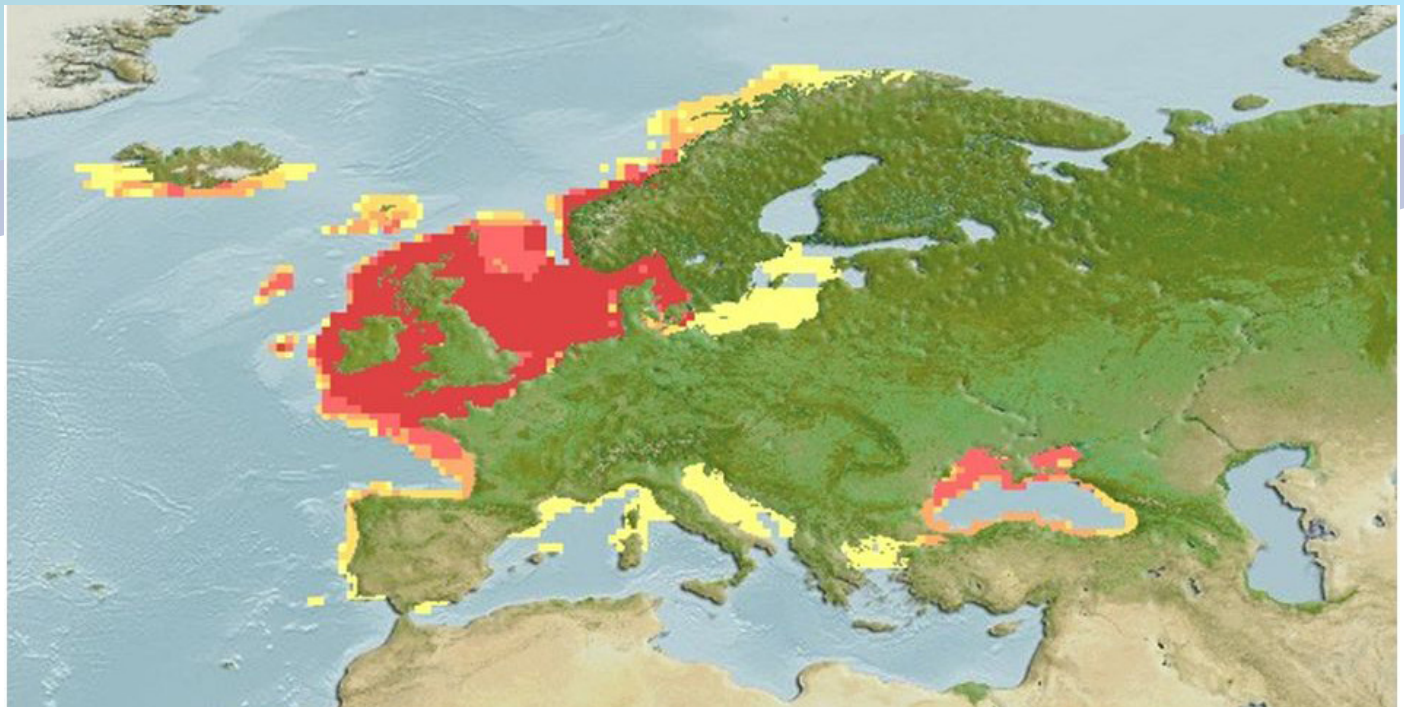
Whiting are a very common fish of the Northeast Atlantic and adjacent areas, including the Black Sea, Aegean Sea and Adriatic Sea. Found throughout the Irish Sea they are common in waters from 30 to 100 m, mainly on mud and gravel bottoms, but also on sand and rock. Trawl surveys continue to show that juvenile whiting are very abundant in the coastal waters of the Irish Sea, and that whiting are one of the most abundant fish species taken in the surveys.

As whiting become demersal from late summer onwards, they are found throughout the western Irish Sea although densities appear highest around the periphery of the mud patch in coastal waters and along the southern boundary between Ireland and the Isle of Man. This pattern is also noted by fishermen operating in this area. Densities of young whiting in the eastern Irish Sea appear highest off Cumbria and the Solway Firth in autumn, but are more widespread in spring. Whiting feed on shrimps, crabs, molluscs, small fish, polychaetes and cephalopods. Their eggs are pelagic while larvae and juveniles have been associated with jellyfish (Lynam and Brierley 2007).

Egg and larva surveys have shown that whiting spawn in spring throughout the eastern Irish Sea and in the coastal waters of the western Irish Sea. This is supported by the distribution of actively spawning fish caught during trawl surveys in March.

Whiting recruitment grounds are in the same general area as the spawning grounds, and young whiting are widespread in the coastal bights of the Irish Sea. The western Irish Sea gyre system, that becomes established from late spring onwards, appears important in retaining larvae and pelagic pre-recruits of whiting, as shown by the results of frame-trawl surveys of pelagic pre-recruits in the area.

Tagging studies conducted in the late 1950s show some seasonal dispersal of whiting from the Irish Coast to as far as the Clyde, Liverpool Bay and the Celtic Sea, with evidence of return migrations. (ICES 2015)



Reviewed distribution map for *Merlangius merlangus* (Whiting), with modelled year 2100 native range map based on IPCC A2 emissions scenario. www.aquamaps.org, version of Aug. 2013. Web. Accessed 28 Jan. 2016.

Summary of life history and habitat parameters

Species: *Merlangius merlangus* (Whiting)				
Life Stage	Size and Growth	Habitat	Substrate	Temperature
Eggs	Eggs are 0.97-1.32mm in diameter	most eggs and larvae being found in the coastal bights of the western and eastern Irish Sea[2] increased abundance towards the surface.[6]	pelagic	
Larvae	Length 2 – 17 mm[6]	most eggs and larvae being found in the coastal bights of the western and eastern Irish Sea[2] Associated with jellyfish[3] *M. merlangus* Shallow distributions (<40 m)[6] Widespread[8]	Pelagic,	
Juveniles	by 85 (±6) mm considered settled.[4]	Associated with jellyfish[9] Associated with seasonal gyre in Western Irish Sea[10]	Widespread[8]	

Species: *Merlangius merlangus* (Whiting)				
Adults (feeding)	North Sea asymptotic (max) length 42.2cm[3]	Hard grounds (19%), mud, sand, gravel (13%), sea grass and soft corals (Alcyonium digitatum) (6%)[1]. More commonly found from 30 to 100 m, mainly on mud and gravel bottoms, but also on sand and rock.[3]	Demersal The species is commonly found near the bottom. May move into midwater in the pursuit of its prey.	Where the water is relatively warm, whiting abundance is relatively high, probably reflecting the indirect influence of North Atlantic waters entering the northern North Sea. This positive relationship between abundance and SST breaks down in summer.[5]
Adults (Spawning)	Length at 50% maturity (L50) averaged around 19 cm in males and 22 cm in females.[2]	Whiting has a high spatial fidelity to spawning sites which can be linked to either geographical attachment or year-to-year persistence of the spatial distribution of the population. Environmental factors – temperature and salinity – appear to influence the geographical extent of spawning whiting distribution[7]	Pelagic	Adults are predominantly found in shallow waters, at temperatures between 6 and 9°C

(Bergmann et al. 2004)[1],(Gerritsen et al. 2003)[2]; fishbase[3]; (Bastrikin et al. 2014)[4]; (Zheng et al. 2002)[5];(Conway et al. 1997)[6]; (Loots et al. 2011)[7]; (Ellis et al. 2012)[8]; (Lynam and Brierley 2007)[9]; (Dickey-Collas et al. 1997)[10]

Stock status

ICES advises that when the precautionary approach is applied, there should be no directed fisheries and all catches should be minimized in 2016.

Historical yield and catch composition indicate that the present stock size is extremely low and likely to be well below possible reference points. Landings have been declining since the early 1980s, reaching lowest levels in the 2000s. The survey results indicate a decline in relative spawning stock biomass (SSB).

Fishery

Landings of whiting have declined substantially over time with the majority of whiting caught today asdiscards in the Nephrops fishery below the minimum landings size.. Discarding in this stock is thought to be high in all fleets, particularly in the Nephrops fishery. The Nephrops directed fishery operates on the main whiting nursery areas in the western Irish Sea, and is particularly intensive in the summer months (ICES 2015). Given the continued high discards and low TAC this stock could become a major 'choke species' for the VIIa Nephrops fishery in the context of the landing obligation.

References

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