

Table 2.1.7. Eastern Baltic cod in SDs 24-32. Input data for Stock Synthesis model.

Type	Name	Year range	Range	Time variant
Catches	Catch in tonnes split into Active/Passive and quarters	1946-2018	0 - 15+	
Age compositions of catch	Catch in numbers per age class , by fleets, by Q	1946-2006	0 - 12+	
Length compositions of catch	Catch in numbers per length class of the fleets, by Q,	2000-2018	5 – 120 cm	
Maturity ogives	Size at 50%maturity(L50) and slope	1946-2018		Yes (1998-2018, Lmat)
Growth	Von Bertalanffy growth parameters	1946-1990		No
Age length keys	Age length keys from BITS Q1 and Q4	1991-2018	0 – 12+	Yes
Natural mortality	Natural mortality by age class	1946-1999	0 - 15+	No
Trawl survey indices	CPUE from BITS Q1, Q4, and two historical trawl surveys	1975-2019		
Length composition of survey catch	Length composition of BITS Q1 and Q4	1991-2019		
Commercial CPUE indices	Commercial CPUE 1-3	1948-1989		
SSB index	SSB index from egg production method	1986-2018		
Larval index	Larval abundance	1987-2018		

Table 2.1.8. Eastern Baltic cod in SDs 24-32. Settings and estimated parameters. The columns show: number of estimated parameters, the initial values (from which the numerical optimization is started), the intervals allowed for the parameters, the priors used, and the value estimated by maximum likelihood. Parameters in bold are set and not estimated by the model.

Parameter	Number estimated	Initial value	Bounds (low, high)	Prior	Value (MLE)
<u>Natural mortality</u> (age classes 0.5, 1.5, 5.5, 15.5)		1.243, 0.857, 0.361, 0.215			
<i>M (2000-2018) of age class 5.5</i>	19	Estimated using random walk annual deviations	(0.1,2.0)	no prior	0.35-0.65
<u>Stock and recruitment</u>					
<i>Ln(R₀)</i>	1	14.8	(13,16)	no prior	15.23
<i>Steepness (h)</i>		0.99			
<i>Recruitment variability (σ_R)</i>		0.60			
<i>Ln (recruitment deviations): 1946-2017</i>	72				