Table E5-1: Models and other assessment approached to produce Biomass and Anthropgenic mortality reference points to feed international stock assessment through compilation of individual EMU data.

List is of inputs requires either to run or validate models

Models and other assessment approached used in National accounts

Model	Acronym		Produces B_0 Y/N	Produces $B_{current}$ Y/N Y/N	Produces B_{best} Y/N	Produces $\sum_A$ Y/N	Computing platform	User Friendly interface?	Published (P) Peer reviewed (PR), Grey literature (G)	Mortality **Rate** or **Biomass** based or combined	Used by (list Country codes)	Inputs - eel biology/data							
												recruitment indices	Stocking separate to natl recruitment	fishing mortality rate	Anthopogenic mrtality rates	natural mortality rate(s)	Sex ratio	Length at age or other growth rate	Length-weight relationships
Demographic camargue model	DEMCAM		Y	Y	Y	Y	Matlab	YES	PR	Rate	IT,	Y		Y		Y	Y	Y	
Swedish Analytical model	SWAM			Y	Y		Matlab	No	G	Rate	SE	Y	Y	Y		Y		Y	
Model of eel population within a hyddrographic network	GLOBANG		Y	Y	Y	Y	Matlab	No	P	Rate	FR	Y		Y		Y	Y	Y	
Scenario-based model for eel populations	SMEP		Y	Y	Y	Y	MS-DOS	Any spreadsheet user	G	Biomass	GB	Y	Y	Y	y	Y	Y	Y	
Framework of eel Density analyses	EDA		Y	Y	Y		R	R skills needed	G	Combined	FR, BE, ES, IE								
German eel Model	GEM/GEM2		Y	Y	Y	Y	EXCEL	Y	Model G, Use of PR	Rate	DE	Y	Y	Y	Y	Y		Y	Y
Length-based Virtual Population Assessment	LVPA		Y	Y	Y	Y	Various specific	No	P	Rate	NL	Y	Y	Y	Y	Y		Y	
Dutch eel Models - Combination				Y	Y	Y	Multiple		PR	Combined	NL			Y	Y	Y	Y	Y	Y
CAGEAN model (Deriso et al., 1985)				Y	Y	Y			PR	RATE	PL		Y	Y		Y		Y	Y
Simplified eel population model (Dekker et al 2008)				Y						Rate	LT		Y	Y				Y	Y

Extrapolation methods from historical production (B0 Estimates)	Y								NL LT, PL,GB									
Extrapolation methods from area based production assumptions - literature or nearest site (B0 Estimates)	Y								IE, GB, DK, ES									
Extrapolation methods from area based production assumptions - literature or nearest site (Bcurrent Estimates)		Y							IE, GB, DK, ES									
Extrapolation methods from area based production assumptions - literature or nearest site (Bbest Estimates)			Y						GB, DK.ES, IE	Y				Y				
Mark-recapture (Silver eel BIomass) - Commercial Fishery		Y		Y					GB,DK									
Mark-recapture (Silver eel BIomass) -Scientific only		Y							IE									
Total trapping/index site		Y							IE									

						Fishery data			Inputs: Anthropogenic factors			Inputs - Environment data				
Yellow eel densities	Cohort data or numbers at age	Silvering age/Rate	Population Immigration /emigration rates	Density dependent effects	Carrying capacity estimates	Landings	Catch length composition	Continuous data series	Dams and passability /connectivity	Habitat quality influences	Fisheries impacts	geographical subdivision/zoning y/n	Habitat area	temperature	Slope (rivers)	Stream order
		Y														
		Y														
	Y	Y	Y	Y	Y				Y							
Y		Y							Y	Y		Y				
Y									Y	Y	Y	Y		Y	Y	Y
	Y	Y														
		Y				Y	Y	Y								
		Y	Y			Y	Y		Y		Y	Y	Y			
	Y					Y						Y				
		Y				Y	Y									

									Y	Y		Y	Y	Y		
									Y	Y		Y	Y	Y		
					Y				Y		Y	Y	Y			
						Y										