Online Supplement Table 4.2 List of species assessed for discard survival in Europe and for which evidence was generated to support granted exemptions to the Landing Obligation on the basis of 'high survival' (European Council enacting delegated regulation), specifying fishing gear, location of observational/experimental study and any specific treatment associated with a corresponding discard survival estimate. MD, maximum number of days that a species was monitored for post-release survival; N, number of specimens assessed. In some cases, average (per fishery/trip/gear operation) minimum % mortality was given instead of the minimum and maximum, and in some cases *, indicates 95% confidence interval limits. n/a, information was not available or could not be located.

Key species	Scientific name	Fishing gear	Location / ICES	Estimated discard survival min%	max %	MinDays	MaxDays	*N*	Treatment	Reference	Delegated Regulation (EU) No
Invertebrates											
Carpet clams	*Venerupe ris spp.*	Dredges (HMD)	Western Mediterranean Sea	n/a	n/a	n/a	n/a	n/a	n/a	Pescamed 2016; 2018	2017/86; 2018/153; 2018/2036
Scallop	*Pecten jacobeus*	Dredges (HMD)	Western Mediterranean Sea	n/a	n/a	n/a	n/a	n/a	n/a	Pescamed 2016; 2018	2017/86; 2018/153; 2018/2036
Venus shells	*Venus spp.*	Dredges (HMD)	Western Mediterranean Sea	n/a	n/a	n/a	n/a	n/a	n/a	Pescamed 2016; 2018	2017/86; 2018/153; 2018/2036
Norway lobster	*Nephrops norvegic us*	Pots, traps, creels	West of Scotland (VIa)	99%	100 %	11	25	96 x 6	Controls (Creel caught)	Wileman et al. 1999	2018/46
Norway lobster	*Nephrops norvegic us*	Nephrops trawl	West of Scotland (VIa)	19%	37 %	11	25	96 x 9	Trawl Discards (Summer)	Wileman et al. 1999	2018/46
Norway lobster	*Nephrops norvegic us*	Pots, traps, creels	Bay of Biscay (VIIIb)	88%	88 %	3	3	16	Controls (Creel caught)	Méhault et al. 2011	2016/2374; 2018/2033
Norway lobster	*Nephrops norvegic us*	Twin trawl	Bay of Biscay (VIIIb)	51%	51 %	3	3	1557	Trawl Discards (Summer)	Méhault et al. 2011	2016/2374; 2018/2033
Norway lobster	*Nephrops norvegic us*	Bottom trawls	Portuguese waters (IXa)	32%	58 %	6	7	(144 - 240)	Trawl Discards (Winter)	Castro et al. 2003; Castro et al. 2005	2016/2374; 2018/2033
Norway lobster	*Nephrops norvegic us*	Bottom trawls	Portuguese waters (IXa)	27%	45 %	6	10	(228 - 240)	Trawl Discards (Spring)	Castro et al. 2003; Castro et al. 2005	2016/2374; 2018/2033

Norway lobster	*Nephrops norvegicus*	Bottom trawls	Portuguese waters (IXa)	13%	35 %	7	9	(223 - 240)	Trawl Discards (Summer)	Castro et al. 2003; Castro et al. 2005	2016/2374; 2018/2033
Norway lobster	*Nephrops norvegicus*	Bottom trawls	Portuguese waters (IXa)	43%	60 %	6	8	240	Trawl Discards (Autumn)	Castro et al. 2003; Castro et al. 2005	2016/2374; 2018/2033
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	25%	60 %	14	14	320 x 2	Short Tow (Autumn)	Ridgway et al. 2006	n/a
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	10%	17 %	14	14	320 x 2	Long Tow (Autumn)	Ridgway et al. 2006	n/a
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	39%	60 %	14	14	320 x 2	Short Tow (Spring)	Ridgway et al. 2006	n/a
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	38%	42 %	14	14	320 x 2	Long Tow (Spring)	Ridgway et al. 2006	n/a
Norway lobster	*Nephrops norvegicus*	Pots, traps, creels	Skagerrak (IIIa)	98%	99 %	15	15	81 x 2	Controls, Winter (Creel caught)	Valentinsson & Nilsson 2015	2015/2440; 2016/2250
Norway lobster	*Nephrops norvegicus*	Pots, traps, creels	Skagerrak (IIIa)	94%	96 %	15	15	(81-83) x 3	Controls, Summer (Creel caught)	Valentinsson & Nilsson 2015	2015/2440; 2016/2250
Norway lobster	*Nephrops norvegicus*	Twin trawl	Skagerrak (IIIa)	57%	62 %	15	15	(26-81) x 3	SELTRA, Winter	Valentinsson & Nilsson 2015	2015/2440; 2016/2250
Norway lobster	*Nephrops norvegicus*	Twin trawl	Skagerrak (IIIa)	67%	83 %	15	15	(40-81) x 3	Swedish grid, Winter	Valentinsson & Nilsson 2015	2015/2440; 2016/2250
Norway lobster	*Nephrops norvegicus*	Twin trawl	Skagerrak (IIIa)	37%	38 %	15	15	(45-81) x 3	SELTRA, Summer	Valentinsson & Nilsson 2015	2015/2440; 2016/2250
Norway lobster	*Nephrops norvegicus*	Twin trawl	Skagerrak (IIIa)	33%	49 %	15	15	(80-81) x 3	Swedish grid, Summer	Valentinsson & Nilsson 2015	2015/2440; 2016/2250
Norway lobster	*Nephrops norvegicus*	OTB	Skagerrak (IIIa)	80%	89 %	9	9	(25-28) x 2	Control ((Trawl caught, quarantined)	Bruun Nielsen 2015	2016/2250
Norway lobster	*Nephrops norvegicus*	OTB	Skagerrak (IIIa)	0%	48 %	9	11	(23-96) x 7	Long tow, Summer	Bruun Nielsen 2015	2016/2250

Norway lobster	*Nephrops norvegicus*	OTB	Skagerrak (IIIa)	50%	60 %	8	11	(8-20) x 2	Short tow, Summer	Bruun Nielsen 2015	2016/2250
Norway lobster	*Nephrops norvegicus*	Pots, traps, creels	North Sea (Farne deeps, Rockall) (VIb)	92%	92 %	13	13	245 x 1	Controls, Winter (Creel caught)	Armstrong et al. 2016	2016/2250; 2018/46
Norway lobster	*Nephrops norvegicus*	Twin trawl	North Sea (Farne deeps, Rockall) (VIb)	33%	70 %	13	15	(199 - 212) x 9	NetGrid, Winter	Armstrong et al. 2016	2016/2250; 2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	96%	96 %	2	2	253 x 1	Controls, Winter (Creel caught)	Albalat et al. 2016	2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	91%	91 %	2	2	262 x 1	Controls, Spring (Creel caught)	Albalat et al. 2016	2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	92%	92 %	2	2	404 x 1	Controls, Summer (Creel caught)	Albalat et al. 2016	2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	89%	97 %	2	2	150 x 2	Short tow, Winter	Albalat et al. 2016	2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	86%	91 %	2	2	(57-146) x 3	Short tow, Spring	Albalat et al. 2016	2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Scotland (VIa), Clyde	88%	95 %	2	2	150 x 3	Short tow, Summer	Albalat et al. 2016	2018/46
Norway lobster	*Nephrops norvegicus*	Pots, traps, creels	West of Ireland (VIIb)	98%	98 %	15	15	204 x 1	Controls, Summer (Creel caught)	Oliver et al. 2017	2018/46
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	West of Ireland (VIIb)	59%	78 %	15	15	(208 - 313) x 6	SELTRA, Summer	Oliver et al. 2017	2018/46
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	86%	86 %	14	14	131 x 1	Control, Short tow, Spring	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	61%	61 %	14	14	255 x 1	Control, Short tow, Summer	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438

Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	70%	74 %	14	14	(128 - 130) x 2	Control, Short tow, Autumn	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	32%	47 %	14	14	(135 - 267) x 3	Standard sorting, Spring	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	33%	42 %	14	14	(122 - 133) x 6	Standard sorting, Summer	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	22%	53 %	14	14	(129 - 132) x 5	Standard sorting, Autumn	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	34%	50 %	14	14	(260 - 264) x 3	Chute sorting, Spring	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	52%	62 %	14	14	(122 - 133) x 6	Chute sorting, Summer	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Twin trawl	Bay of Biscay (VIIIb)	44%	74 %	14	14	(126 - 131) x 6	Chute sorting, Autumn	Méhault et al. 2016; Mérillet et al. 2017; Vogel et al. 2017	2015/2438
Norway lobster	*Nephrops norvegicus*	Nephrops trawl	Catalan Sea	30%	78 %	14	14	1100	Season	Breen and Morales Nin 2017	2018/153; 2018/2036
Spiny lobster	*Palinurus elephas*	Trammel nets	Balearic Islands	56	72 %	7	7	127	n/a	Breen and Morales Nin 2017	2018/2036
Teleost fish											
Atlantic Chub mackerel	*Scomber colias*	Purse seine (artisanal)	West of Ireland (VIIb,c)	99%	100 %	2	3	(13-47) x 4	Crowding time (≤10 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014

Atlantic cod	*Gadus morhua*	Trap nets, pots	Baltic Sea	>90%	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	1396/2014; 2018/2034; 2018/2035
Atlantic cod	*Gadus morhua*	Pots, fyke nets (FPO, FYK)	ICES 22, Belt Sea; 23, The Sound	100%	100 %	4	10	118	Soak time 19-47 hrs (autumn-winter)	Ern et al. 2018	2018/45; 2018/2035
Atlantic herring	*Clupea harengus*	Purse seine	North Sea (IVc)	98%	99 %	4	5	>29,000 x 3	No crowding (<7 kg.m^{-3})	Tenningen et al. 2012	1393/2014; 1395/2014; Norway-FOR-2004-12-22-1878,§48
Atlantic herring	*Clupea harengus*	Purse seine	North Sea (IVc)	98%	98 %	4	5	>28,000 x 3	Low Crowding (58-142 kg.m^{-3})	Tenningen et al. 2012	1393/2014; 1395/2014; Norway-FOR-2004-12-22-1878,§48
Atlantic herring	*Clupea harengus*	Purse seine	North Sea (IVc)	48%	72 %	4	5	>19,000 x 3	High Crowding (220-478 kg.m^{-3})	Tenningen et al. 2012	1393/2014; 1395/2014;Norway-FOR-2004-12-22-1878,§48
Atlantic herring	*Clupea harengus*	Purse seine	North Sea (IVc)	95%	100 %	5	5	>5000 x 3	No crowding (<5 kg.m-3)	Tenningen et al. 2012	Norway-FOR-2004-12-22-1878,§48
Atlantic herring	*Clupea harengus*	Purse seine	North Sea (IVc)	90%	99 %	5	5	>3800 x 3	Low Crowding (54-160 kg.m-3) 10-15 min	Tenningen et al. 2012	Norway-FOR-2004-12-22-1878,§48
Atlantic herring	*Clupea harengus*	Purse seine	North Sea (IVc)	50%	78 %	5	5	>7800 x 6	High Crowding (200-393 kg.m-3) 10 - 15 min	Tenningen et al. 2012	Norway-FOR-2004-12-22-1878,§48
Atlantic mackerel	*Scomber scombrus*	Purse seine	North Sea (IVc)	54%	100 %	2	5	>11,000 x 5	Not crowded	Huse & Vold 2010	1393/2014; 1395/2014; Norway-FOR-2004-12-22-1878,§48
Atlantic mackerel	*Scomber scombrus*	Purse seine	North Sea (IVc)	0%	72 %	2	5	>10,000 x 5	Crowded	Huse & Vold 2010	1393/2014; 1395/2014; Norway-FOR-2004-12-22-1878,§48
Atlantic mackerel	*Scomber scombrus*	Purse seine (artisanal)	8, 9, 10, CECAF	88%	97 %	2	6	(53-111) x 6	Crowding time (≤10 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014
Atlantic mackerel	*Scomber scombrus*	Purse seine (artisanal)	8, 9, 10, CECAF	4%	88 %	2	6	(18-57) x 3	Crowding time (14-48 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014

Atlantic salmon	*Salmo salar*	Trap nets, pots	Baltic Sea	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	1396/2014; 2018/211
Blackspot (Red) seabream	*Pagellus bogaraveo*	Hookline "voracera"	Portuguese waters (IXa)	25%	100%	1	1	6 x 16	Physiological recovery evaluation after capture	Ruiz-Jarabo et al. 2018a	6794/2018; 2018/2033; 2018/2036
Blackspot (Red) seabream	*Pagellus bogaraveo*	Hookline "voracera"	Portuguese waters (IXa)	84%	97%	1	4	102	Survival	Ruiz-Jarabo et al. 2018b	6794/2018; 2018/2033; 2018/2036
Blackspot (Red) seabream	*Pagellus bogaraveo*	Hookline "voracera"	Portuguese waters (IXa)	n/a	n/a	100	>2500	7066	Tagging and recapture	Ruiz-Jarabo et al. 2018a,b	6794/2018; 2018/2033; 2018/2036
Common sole	*Sole solea*	Otter trawl (OTB)	North Sea (IVc)	47%	48%	14	15	287	n/a	Ribeiro Santos et al. 2016	2018/45; 2018/2035
Common sole	*Sole solea*	Otter trawl (OTB)	English Channel (VIId)	80	87	14	14	50	adjusted estimate for avian predation and based on an extension model	Randall et al. 2017	2016/2250; 2018/2035
Common sole	*Sole solea*	Pots, fyke nets (FPO, FYK)	North Sea, Skagerrak and Kattegat (IV and III)	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	2018/45; 2018/2035
Common sole	*Sole solea*	Beam trawl (pulse)	North Sea (IVc)	24%*	35%*		21	226	Tow duration	van der Reijden et al. 2017	2018/2035
Common sole	*Sole solea*	Beam trawl (pulse)	North Sea (IVc)	0%	50%	15	180	274	Tow duration, and sorting modifications	Schram and Molenaar 2018b	2018/2035
Common sole	*Sole solea*	Trammel net	Bristol Channel (VIIf)	19	20	3	4	96	Gear types	Smith et al. 2015	n/a
Common sole	*Sole solea*	Rapido trawl	Adriatic Sea	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2017/86; 2018/2036
European anchovy	*Engraulis encrasicolus*	Purse seine (artisanal)	Bay of Biscay (VIII)	91%	98%	2	6	(512 - 1035) x 4	Crowding time (≤10 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014
European anchovy	*Engraulis encrasicolus*	Purse seine (artisanal)	Bay of Biscay (VIII)	54%	83%	2	6	(453 - 600) x 2	Crowding time (15-25 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014

European eel	*Anguilla anguilla*	Hook-and-Line	Norway	50%	63%	n/a	161	32	Hook type and size	Weltersbach et al. 2016	n/a
European eel	*Anguilla anguilla*	Hook-and-Line	Mecklenburg-Western Pomerania, Germany	36%	92%	n/a	43	110	Hook size, removal	Weltersbach et al. 2018	n/a
European hake	*Merluccius merluccius*	Pots, fyke nets (FPO, FYK)	Baltic Sea	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	2018/45; 2018/2035
European seabass	*Dicentrarchus labrax*	Hook-and-Line	Aquaculture facility	70%*	95%*	10	10	83	Natural baits	Lewin et al. 2018	Used in stock assessment
European seabass	*Dicentrarchus labrax*	Hook-and-Line	Aquaculture facility	88%*	100%*	10	10	61	Artificial lures	Lewin et al. 2018	Used in stock assessment
European seabass	*Dicentrarchus labrax*	Hook-and-Line	Spain, North Sea (IVc)	85%	93%	7	7	152	n/a	Ruiz et al. 2016; Molenaar and Steenbergen 2016	2018/2036 (*de minimis*)
European pilchard/ sardine	*Sardina pilchardus*	Purse seine (artisanal)	Portugal	41%	47%	28	28	106 (89-126) x 3	Controls (No crowding)	Marcalo et al. 2018	No HSE in place yet
European pilchard/ sardine	*Sardina pilchardus*	Purse seine (artisanal)	Portugal	2%	19%	28	28	143 (134-127) x 3	Standard Slipping practice	Marcalo et al. 2018	No HSE in place yet
European pilchard/ sardine	*Sardina pilchardus*	Purse seine (artisanal)	Portugal	38%	52%	28	28	118 (108-127) x 3	Modified Slipping practice	Marcalo et al. 2018	No HSE in place yet
European pilchard/ sardine	*Sardina pilchardus*	Purse seine (artisanal)	8, 9, 10, CECAF	97%	100%	2	6	(32-413) x 4	Crowding time (≤10 mins)	Arregi et al. 2014a,b; STECF 2014	No HSE in place yet
European pilchard/ sardine	*Sardina pilchardus*	Purse seine (artisanal)	8, 9, 10, CECAF	84%	85%	2	6	(430-520) x 2	Crowding time (20-21 mins)	Arregi et al. 2014a,b; STECF 2014	No HSE in place yet

European plaice	*Pleuronectes platessa*	Pots, fyke nets (FPO, FYK)	North Sea, Skagerrak and Kattegat (IV and III)	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	2018/45; 2018/2035
European plaice	*Pleuronectes platessa*	Nets (GNS, GTR, GTN, GEN)	Belt Sea (22); The Sound (23)	100%	100 %	4	10	118	Soak times: 19-47 hours	Ern et al. 2018; STECF 2018	6793/2018; 2018/2035
European plaice	*Pleuronectes platessa*	Danish seine (SDN)	Skagerrak and Kattegat (IIIa)	20%	86 %	14	14	281	Air exposure (summer)	Karlsen et al. 2018a	2018/2035
European plaice	*Pleuronectes platessa*	Danish seine (SDN)	Skagerrak and Kattegat (IIIa)	84%	100 %	14	14	246	Control (Trawl caught)	Karlsen et al. 2018a	2018/2035
European plaice	*Pleuronectes platessa*	Bottom trawls (OTB, PTB)	Skagerrak and Kattegat (IIIa)	67%	83 %	14	14	249	Winter, targeting plaice	Karlsen et al. 2018b	2018/2035
European plaice	*Pleuronectes platessa*	Bottom trawls (OTB, PTB)	Skagerrak and Kattegat (IIIa)	100%	100 %	14	14	52	Control (Trawl caught)	Karlsen et al. 2018b	2018/2035
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	English Channel (VIId)	4%	15 %	2	3	275	Gear types	Catchpole et al. 2015	2018/2035
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	North Sea (IVc)	11%	22 %	15	18	558	Pulse trawl	Schram and Molenaar 2018a,b	2018/2035
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	North Sea (IVc)	84%	84 %	15	18	277	Control (caught with shrimp and pulse beam trawlers, quarantined)	Schram and Molenaar 2018a,b	2018/2035
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	North Sea (IVc)	43%	57 %	14	34	216	Beam trawl, coastal fleet segments, trawl duration	Uhlmann et al. 2016a,b; Uhlmann et al. 2018	2018/2035
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	North Sea (IVc)	10%	26 %	3	17	216	Beam trawl, Eurocutter segment, trawl duration	Uhlmann et al. 2016b; Uhlmann et al. 2018	2018/2035
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	North Sea (IVc)	3%	5 %	8	8	240	Beam trawl, >221kW segment, trawl duration	Uhlmann et al. 2016b; Uhlmann et al. 2018	2018/2035

European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	Eastern and Western English Channel (VIId,e), Celtic Sea (VII)	30%	32 %	n/a	n/a	1314	Vitality only data, modeled survival	Uhlmann et at., 2018	2018/2034
European plaice	*Pleuronectes platessa*	Otter trawls	Bideford Bay (VIIf, VIIg)	75%	88 %	3	6	572	inferred estimates; extra vitality data collected	Smith et al. 2015	2016/2375; 2018/2034
European plaice	*Pleuronectes platessa*	Otter trawls	Eastern and Western English Channel (VIId,e)	45%	67 %	n/a	n/a	1040	modelling survival based on French vitality data	Smith et al. 2015; Morfin et al. 2017	2018/2034
European plaice	*Pleuronectes platessa*	Trammel net	Swansea Bay (VIIf, VIIg)	37%	60 %	3	6	96	extra vitality data collected	Smith et al. 2015	2018/2034
European plaice	*Pleuronectes platessa*	Beam trawls (BT2)	Irish Sea and South-West of Ireland (VIIa, VIIk)	8%	73 %	n/a	n/a	524	extra vitality data collected	Anonymous 2018b	2018/2034
European plaice	*Pleuronectes platessa*	Otter trawls	North Sea (IVc)	28%	37 %	5	21	385	extra vitality data collected	Randall et al. 2016	2018/2035
Haddock	*Melanogrammus aeglefinus*	Pots, fyke nets (FPO, FYK)	North Sea, Skagerrak and Kattegat (IV and III)	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	2018/45; 2018/2035
Horse mackerel	*Trachurus trachurus*	Purse seine (artisanal)	8, 9, 10, CECAF	99%	100 %	2	6	(36-296) x 4	Crowding time (<5 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014
Horse mackerel	*Trachurus trachurus*	Purse seine (artisanal)	8, 9, 10, CECAF	84%	96 %	2	6	(31-107) x 3	Crowding time (20-48 mins)	Arregi et al. 2014a,b; STECF 2014	1394/2014
Saithe	*Pollachius virens*	Pots, fyke nets (FPO, FYK)	North Sea, Skagerrak and Kattegat (IV and III)	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	2018/45; 2018/2035
Turbot	*Scophthalmus maximus*	Gillnets	Black Sea	53%	93 %			726	Commercial soak times 2-4 days	Samsun and Kalaycı 2005	2017/87
Whiting	*Merlangius*	Pots, fyke nets (FPO, FYK)	North Sea (IV)	n/a	n/a	n/a	n/a	n/a	n/a	Anonymous 2018a	2018/45; 2018/2035

	merlangus										
Elasmobranchs - Rays, skates and sharks											
Blonde ray	*Raja brachyura*	BT2	Western English Channel (VIIe)	25%	74%	2	3	26	Tow duration	Ellis et al. 2012	2018/2034
Blonde ray	*Raja brachyura*	BT2	Western English Channel (VIIe)	41%	44%	2	3	26	Modelled results to assymptote from Ellis et al. 2012	Catchpole et al. 2017	2018/2034
Blonde ray	*Raja brachyura*	Otter trawl	Bristol Channel (VIIf)	n/a	92%	20	111	25	DST tags, across vitality classes A,B, and D	Catchpole et al. 2017	2018/2034
Blonde ray	*Raja brachyura*	Otter trawl	Bristol Channel (VIIf)	55%	67%	0	<2	11	Survival was not monitored until asymptote	Enever et al. 2009	2018/2034
Cuckoo ray	*Leucoraja naevus*	Beam trawl	Western English Channel (VIIe)	34%	35%	n/a	n/a	26	Modelled results to assymptote from Ellis et al. 2012	Catchpole et al. 2017	2018/2034
Cuckoo ray	*Leucoraja naevus*	BT2	Western English Channel (VIIe)	25%	83%	2	3	26	Tow duration	Ellis et al. 2012	2018/2034
Cuckoo ray	*Leucoraja naevus*	TR1/TR2	Bristol Channel (VIIf)	n/a	33%	0	<2	6	Survival was not monitored until asymptote	Enever et al. 2009	2018/2034
Cuckoo ray	*Leucoraja naevus*	BT2	Irish Sea (VIIa)	n/a	59%	0	6	32	Survival was not monitored until asymptote, no controls were used	Kaiser and Spencer 1995	2018/2034
Cuckoo ray	*Leucoraja naevus*	Trammel nets	Balearic Islands	60	71%	7	7	296	n/a	Breen and Morales Nin 2017	2018/2036
Small-eyed ray	*Raja microcellata*	TR2	Bristol Channel (VIIf)	55%	67%	2	2	278	Mesh size	Enever et al. 2010	2018/2034
Small-eyed ray	*Raja microcellata*	TR2	Bristol Channel (VIIf)	n/a	51%	0	<3	39	Survival was not monitored until asymptote	Enever et al. 2009	2018/2034
Small-eyed ray	*Raja microcellata*	BT2	Western English Channel (VIIe)	0%	100%	n/a	n/a	n/a	23% Excellent/Good, 72% Moderate/Poor, 5% dead	Ellis et al. 2012; Bird et al. 2018	2018/2034
Spotted ray	*Raja montagui*	BT2	Western English Channel (VIIe)	40%	67%	2	3	14	Tow duration	Ellis et al. 2012	2018/2034

Spotted ray	*Raja montagui*	TR1/TR2	n/a	n/a	n/a	n/a	n/a	457	13% Excellent/Good, 74% Moderate/Poor, 14% dead	Bird et al. 2018	2018/2034; 2018/2035
Spotted ray	*Raja montagui*	GN1 (Pulse)	n/a	n/a	n/a	n/a	n/a	47	66% Excellent/Good, 26% Moderate/Poor, 6% dead	Bird et al. 2018	2018/2034; 2018/2035
Spotted ray	*Raja montagui*	Beam trawl	North Sea (IVc)	21	67	21	21	9	Gear deployment duration	Schram and Molenaar 2018b	2018/2035
Thornback ray	*Raja clavata*	Otter trawl	Bristol Channel (VIIf)	57%	69 %	3	3	47	Commercial hauls (2.7-4.3 h)	Catchpole et al. 2017	2018/2035
Thornback ray	*Raja clavata*	Otter trawl	Bristol Channel (VIIf)	77%	79 %	3	3	34	Short hauls (0.75-2.0 h)	Catchpole et al. 2017	2018/2035
Thornback ray	*Raja clavata*	TR1/TR2	Bristol Channel (VIIf)	57%	69 %	n/a	n/a	162	Enever et al. 2009 estimates modelled to assymptote	Catchpole et al. 2017	2018/2035
Thornback ray	*Raja clavata*	TR1/TR2	Bristol Channel (VIIf)	54%	87 %	0	<3	162	Not monitored to asymptote; survival rate overestimated; 78% Excellent/Good, 11% Moderate/Poor, 1% dead	Enever et al. 2009; Bird et al. 2018	2018/2035
Thornback ray	*Raja clavata*	Trammel nets	North Sea and English Channel (IVc, VIId)	0%	96 %	3	317	60	DST tags, across vitality classes A,B, and D	Catchpole et al. 2017	2018/2035
Thornback ray	*Raja clavata*	Beam trawl	North Sea (IVc)	72%	77 %	1	2.5	249	Research beam trawls, mixed ray species	Depestele et al., 2014	2018/2035
Thornback ray	*Raja clavata*	TR1	North Sea (IVc)	59%	87 %	0	<3	162	Survival was not monitored until asymptote	Enever et al., 2009	2018/2035
Thornback ray	*Raja clavata*	TR2	North Sea (IVc)	61%	93 %	n/a	n/a	n/a	n/a	Bird et al. 2018	2018/2035
Thornback ray	*Raja clavata*	Otter trawl	North Sea (IVc)	n/a	n/a	n/a	n/a	537	Vitality data only and tagging	Randall et al. 2018	2018/2035
Thornback ray	*Raja clavata*	Beam trawl	North Sea (IVc)	0%	82 %	14	180	95	Gear deployment duration	Schram and Molenaar 2018b	2018/2035
Thornback ray	*Raja clavata*	Trammel nets	Balearic Islands	8%	16 %	7	7	224	n/a	Breen and Morales Nin 2017	2018/2036
Thornback ray	*Raja clavata*	Otter trawl	Mediterranean Sea	44%	92 %	0	<2	120	Survival was not monitored until asymptote	Saygu and Deval 2014	2018/2036
Undulate ray	*Raja undulata*	Beam trawl	Western English Channel (VIIe)	n/a	80	2	3	14	49% Excellent/Good, 51% Moderate/Poor, 1% dead	Ellis et al. 2012; Bird et al. 2018; Randall et al. 2018	2018/2036

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