

	Species	Total number recorded 1981-2012	Guild	Years present	Core species	Density Dependence detected	Non-linearity /threshold in log pop. - Log pop change plot	log pop. /Log pop. change gradient > 1	Bulmers R	Bulmers R*	Notes on detailed analysis
1	<i>Sprattus sprattus</i> (L.) - Sprat	46734	Pelagic	31	Yes	Yes	No	No	Sig. 5% level	No	Recruitment declines with increasing adult abundance giving strong evidence for density-dependence. Stock-recruitment relationship fits a Ricker curve.
2	<i>Merlangius merlangus</i> (L.) - Whiting	43241	Proximo-benthic	31	Yes	Yes	Yes	Yes - when abundance above threshold	Sig. 5% level	Sig. 10% level	
3	<i>Pomatoschistus minutus</i> (Pallas) - sand goby	9579	soft benthic	31	Yes	Yes	No	No	Sig. 5% level	Sig. 5% level	
4	<i>Solea solea</i> L. - Dover sole	7235	soft benthic	31	Yes	Yes	No	No	Sig. 5% level	No	Mortality increases with recruitment - population number has followed a sigmoidal curve and is now varying around carrying capacity
5	<i>Trisopterus minutus</i> (L.) - poor cod	6296	Proximo-benthic	30	Yes	Yes			Sig. 5% level	Sig. 5% level	
6	<i>Trisopterus luscus</i> (L.) - pout	3970	Proximo-benthic	31	Yes	Yes	No	No	Sig. 5% level	Sig. 5% level	Pout abundance notably stable with no trend
7	<i>Liparis liparis</i> (L.) - sea snail	2865	soft benthic	31	Yes	Yes	No	No	Sig. 5% level	Sig. 5% level	Published work Henderson, P. A. & Seaby, R. M. H. (1999) shows a high proportion of temporal variability linked to temperature mediated migrations. Underlying population remarkably stable.
8	<i>Platichthys flesus</i> (L.) - flounder	2862	soft benthic	31	Yes	Yes	Yes	Yes - when abundance above threshold	Sig. 5% level	No	
9	<i>Clupea harengus</i> L. - herring	2688	Pelagic	29	Yes	Yes	No	No	Sig. 5% level	No	Population recovering with an almost stepped increase in abundance post 2000
10	<i>Dicentrarchus labrax</i> (L.) - bass	2599	Proximo-benthic	31	Yes	Yes	No	No	Yes	No	Published work Henderson and Corp showing that high recruitment suppresses subsequent recruitment for next 2 years.
11	<i>Giliota mustela</i> (L.) - 5-bearded rockling	2061	soft benthic	31	Yes	Yes	No	No	Sig. 5% level	No	Recently the exponential increase has stabilised and now the over-winter loss of biomass is greatest in high biomass years giving good evidence for density-dependence.
12	<i>Gadus morhua</i> L. - cod	1781	Proximo-benthic	30	Yes	Yes	No	Yes but -1.095 so unconvincing	Sig. 5% sig level for both number and biomass	Sig. 5% for biomass	Biomass notably stable with no long-term trend
13	<i>Limanda limanda</i> (L.) - dab	1579	soft benthic	31	Yes	Yes	Yes	Yes when data is split pre and post 1994	Sig. 5% level	No	Abundance is temperature dependent which is why the data set shows discontinuity
14	<i>Liza ramada</i> (Risso) - thin-lipped mullet	1516	sheltered	31	Yes	Yes	No	No	Sig. 5% level	Sig. 5% level	Biomass notably stable with no long-term trend
15	<i>Entelurus aequoreus</i> (L.) - snake pipefish	739	Pelagic	29	Yes	Yes	No	No	No	No	There was a single large burst in abundance centred on 2008
16	<i>Euriglyptus gurnardus</i> (L.) - grey gurnard	518	soft benthic	27	Yes	No	No	No	Sig. 5% level	Sig. 5% level	There was a single large burst in abundance centred on 2007
17	<i>Allosa fallax</i> (Lacepede) - twaite shad	516	passage	28	Yes	not included					Passage migrant
18	<i>Aphia minuta</i> (Risso) - transparent goby	445	Pelagic	31	Yes	Yes	No	Yes post 1989 when numbers increased	Sig. 5% level	No	
19	<i>Anguilla anguilla</i> (L.) - eel	315	passage	30	Yes	not included	No	no	No	No	Exponential decline reported Henderson et al (2012) - anthropogenic impact
20	<i>Conger conger</i> L. - conger eel	289	hard benthic	31	Yes	Yes	No	No	Sig. 5% level	Yes 10% sig level	
21	<i>Trisopterus esmarkii</i> - norway pout	240	Proximo-benthic	28	Yes	Yes	No	No	Sig. 5% level	No	
22	<i>Merluccius merluccius</i> (L.) - hake	197	Proximo-benthic	17	No	No			zero abundances		Species disappeared in 1999 probably linked to climate change.
23	<i>Agonus cataphractus</i> (L.)	191	hard benthic	31	Yes	Yes	No	No	Sig. 5% level	Sig. 5% level	Hooke's abundance has changed little over 30 years
24	<i>Pleuronectes platessa</i> L.	179	soft benthic	28	Yes	Yes	No	Yes	Sig. 5% level	No	
25	<i>Pollachius pollachius</i> (L.)	113	Proximo-benthic	27	Yes	Yes	No	Yes	Sig. 5% level	No	
26	<i>Mullus surmuletus</i> L.	111	soft benthic	17	No	No	No	No	Frequent zero abundances		Warm water migrant
27	<i>Cyclopterus lumpus</i> L. - lump sucker	109	hard benthic	18	No	No	No	No	Frequent zero abundances		Cold water species almost absent since 2000
29	<i>Giliota septentrionalis</i> (Collet)	87	soft benthic	28	Yes	Yes	No	No	Sig. 5% level	No	Data from 1999-2011 used for Buller's test. Occurs in small numbers during winter
30	<i>Callionymus lyra</i> L. - dragonette	86	hard benthic	26	Yes	No	No	No	Frequent zero abundances		Too uncommon for analysis, but numbers are notably constant through time.
31	<i>Raja clavata</i> L. - thornback ray	76	soft benthic	26	Yes	No	No	No	Frequent zero abundances		Too uncommon for analysis, but numbers are notably constant through time.
32	<i>Micromesistius poutassou</i> - blue whiting	67	Proximo-benthic	9	No	No					Rare transient - fits random model
33	<i>Syngnathus rostellatus</i> Nilsson	66	sheltered	25	Yes	No	No	No	Frequent zero abundances		Low numbers recorded, but abundance notably constant
34	<i>Maurulius muelleri</i> (Gmelin) - pearlides	56	Pelagic	17	No	No	No	No			Deep water transient - fits random model
35	<i>Pomatoschistus microps</i> (Kroyer) - common goby	53	soft benthic	9	No	No			zero abundances		Occasional visitor - prefers upper estuarine waters - fits random model
36	<i>Scyllorhynchus canaliculus</i> (L.) - dogfish	53	soft benthic	23	Yes	Yes	No	No	Sig. 5% level		Numbers are remarkably constant, but small. Analysis undertaken on time series from 1999
37	<i>Gasterosteus aculeatus</i> L. 3-spined stickleback	52	freshwater	22	No	No	No	No	Zero abundances		Freshwater species which washes out of rivers in winter
38	<i>Syngnathus acus</i> (L.) - greater pipefish	44	sheltered	13	No	No	No	No	Zero abundances		Fits random model
39	<i>Chelidonichthys lucerna</i> L. - tub gurnard	39	soft benthic	15	No	No	No	No	Zero abundances		Fits random model
40	<i>Atherina boyeri</i> Risso - sandmelt	27	sheltered	14	No	No	No	No	Zero abundances		Lives in lagoons - fits random model
41	<i>Gobius niger</i> L. - black goby	27	soft benthic	11	No	No	No	No	Zero abundances		Fits random model
42	<i>Pagrus major</i> (L.) - turbot	27	soft benthic	11	No	No	No	No	Zero abundances		Fits random model
43	<i>Liza aurata</i> - golden grey mullet	24	sheltered	4	No	Rare visitor	No	No	Zero abundances		Too rare to fit any model
44	<i>Ammodytes tobianus</i> L. - greater sandeel	22	soft benthic	15	No	No	No	No	Zero abundances		Prefers clean sand - fits random model
45	<i>Lophius piscatorius</i> L. - angler fish	19	soft benthic	7	No	Rare visitor					Deeper water species - fits random model
46	<i>Scophthalmus rhombus</i> (L.) - brill	19	soft benthic	9	No	Rare visitor					Fits random model
47	<i>Trachurus trachurus</i> (L.) - horse mackerel	16	Pelagic	13	No	No	No	No	Zero abundances		Fits random model
48	<i>Labrus bergyllus</i> Ascanius - bellin wrasse	15	hard benthic	6	No	Rare visitor					Fits random model
49	<i>Gadropsanus vulgaris</i> (Cloquet) - 3bearded rockling	10	soft benthic	5	No	Rare visitor					Fits random model
50	<i>Crenimugil labrosus</i> (Risso) - thick-lipped mullet	9	sheltered	4	No	Rare visitor					Fits random model
51	<i>Lampetra fluviatilis</i> (L.) - river lamprey	9	passage	8	No	not included					Passage migrant
52	<i>Selmo selmo</i> L. - salmon	9	passage	8	No	not included					Passage migrant
53	<i>Crystalllogobius linearis</i> (von Duben) - crystal goby	8	Pelagic	4	No	Rare visitor					Fits random model
54	<i>Hyperoplus lanceolatus</i> (Lesauvage) - greater sandeel	8	soft benthic	6	No	Rare visitor					Fits random model
55	<i>Spinachia spinachia</i> (L.) - 15-spined stickleback	7	hard benthic	6	No	Rare visitor					Fits random model
56	<i>Spondylosoma ophiurus</i> (L.) - black sea bream	7	hard benthic	7	No	Rare visitor					Fits random model
57	<i>Parablennius gottorpinge</i> L. - tompot blenny	6	hard benthic	6	No	Rare visitor					Fits random model
58	<i>Ctenolabrus rupestris</i> (L.) - goldsinny	6	hard benthic	5	No	Rare visitor					Fits random model
59	<i>Engraulis encrasicolus</i> (L.) - anchovy	6	Pelagic	3	No	Rare visitor					Fits random model
60	<i>Gobius pagonellus</i> - rock goby	5	soft benthic	2	No	Rare visitor					Too rare to fit any model
61	<i>Sardina pilchardus</i> (Walbaum) - pilchard	5	Pelagic	2	No	Rare visitor					Too rare to fit any model
62	<i>Raniceps raninus</i> (L.) - tadpole fish	4	soft benthic	4	No	Rare visitor					Too rare to fit any model
63	<i>Regilissidium leucom</i> (Risso) - solenette	3	soft benthic	2	No	Rare visitor					Too rare to fit any model
64	<i>Centrolabrus exoletus</i> (L.) - goldsinny	3	hard benthic	2	No	Rare visitor					Too rare to fit any model
65	<i>Labrus mixtus</i> - cuckoo wrasse	3	hard benthic	3	No	Rare visitor					Too rare to fit any model
66	<i>Micrometopus kitz-lemon sole</i>	3	soft benthic	3	No	Rare visitor					Too rare to fit any model
67	<i>Molva molva</i> (L.) - ling	3	soft benthic	3	No	Rare visitor					Too rare to fit any model
68	<i>Trigla lyra</i> - piper	3	soft benthic	2	No	Rare visitor					Too rare to fit any model
69	<i>Ballistes carolinensis</i> (Gmelin) - trigger fish	2	hard benthic	2	No	Rare visitor					Too rare to fit any model
70	<i>Ctenilabrus melops</i> (L.) - corkwing wrasse	2	hard benthic	2	No	Rare visitor					Too rare to fit any model
71	<i>Petromyzon marinus</i> - sea lamprey	2	passage	2	No	not included					Passage migrant
72	<i>Raja brachyura</i> - blond ray	2	soft benthic	2	No	Rare visitor					Too rare to fit any model
73	<i>Raja microcellata</i> - small eyed ray	2	soft benthic	2	No	Rare visitor					Too rare to fit any model
74	<i>Zoarces viverrus</i> L. - john dory	2	Pelagic	2	No	Rare visitor					Too rare to fit any model
75	<i>Belone belone</i> (L.) - garfish	1	Pelagic	1	No	Rare visitor					Too rare to fit any model
76	<i>Glyptocephalus cynoglossus</i> - witch	1	soft benthic	1	No	Rare visitor					Too rare to fit any model
77	<i>Nereophilus lumbriciformis</i> - worm pipefish	1	sheltered	1	No	Rare visitor					Too rare to fit any model
78	<i>Pollachius virens</i> (L.) - saith	1	Proximo-benthic	1	No	Rare visitor					Too rare to fit any model
79	<i>Trachinus vipera</i> Cuvier - weaver	1	soft benthic	2	No	Rare visitor					Too rare to fit any model
80	<i>Zenopsis punctatus</i> (Bloch) - topknot	1	hard benthic	1	No	Rare visitor					Too rare to fit any model
81	<i>Ammodytes marinus</i> - sandeel	1	soft benthic	1	No	Rare visitor					Too rare to fit any model