

## *Supplementary Material*

### **Supplementary material 1**

#### **Details on the general circulation model CNRM-CM5 and the regional climate model CNRM-RCSM4**

##### **The global climate model CNRM-CM5**

CNRM-CM5 is one of the GCMs participating to CMIP5 international exercise and it is driven by GHG and aerosols concentrations following the observations between 1950 and 2005 and the RCP8.5 scenario from 2006 to 2100. It has a relatively low spatial resolution typically 100-150km depending on the components and can not represent well the Mediterranean Sea complexity. In the CMIP5 GCM ensemble, CNRM-CM5 is known to have an intermediate ECS (Equilibrium Climate Sensitivity) value of 3.3K in the middle of the IPCC likely range [1.5; 4.5] K. Over Europe, CNRM-CM5 is known to be one of the best choices among the CMIP5 GCMs to drive regional climate models (McSweeney et al., 2015), with intermediate warming values in all seasons for the RCP8.5 scenario and with the particularity of simulating an increase in precipitation in Summer (McSweeney et al., 2015). More details about CNRM-CM5 can be found in Voltaire et al. (2013).

##### **The regional climate system model CNRM-RCSM4**

CNRM-RCSM4 is the fourth generation of fully-coupled regional climate system models developed at CNRM and dedicated to the study of the Mediterranean climate and Mediterranean Sea. In its current version, it includes the daily coupling and the high-resolution representation of the atmosphere over the Euro-Mediterranean zone at a 50km resolution, of the land surface and river at the same resolution and of the Mediterranean Sea at about 10 km spatial resolution. The ocean component is constituted by the NEMOMED8 regional ocean circulation model (Beuvier et al., 2010) that covers the whole Mediterranean Sea plus a small part of the Atlantic Ocean but not the Black Sea. It has 43 vertical levels and a spatial resolution varying from 12km in the South to 9km in the North with a 6km zoom at the Strait of Gibraltar. More information about CNRM-RCSM4 can be found in (Sevault et al., 2014).

The CNRM-RCSM4 simulation spans the 1950-2100 period driven by the CNRM-CM5 simulation at its atmosphere and ocean lateral boundaries, by observed GHG and aerosol concentrations up to 2005 and by the RCP8.5 scenario values afterwards. CNRM-RCSM4 is one of the coupled regional climate system models involved in the multi-model Med-CORDEX international initiative (Ruti et al., 2015,

[www.medcordex.eu](http://www.medcordex.eu)). In this context, CNRM-RCSM4 has been evaluated in various multi-model studies showing state-of-the-art skills to reproduce the Mediterranean climate statistics (Cavicchia et al., 2018; Panthou et al., 2018), the ocean heat content (Harzallah et al., 2018) and some Mediterranean key phenomena such as the intense air-sea fluxes and deep water formation (Dunić et al., 2019; Somot et al., 2018), the regional cyclones (Flaounas et al., 2018), the medicanes (Gaertner et al., 2018) and the marine heatwaves (Darmaraki et al., 2019).

Recently, five RCP8.5 scenario simulations using five different Med-CORDEX coupled regional climate system models have been compared in Darmaraki et al. (2019). CNRM-RCSM4 showed a good representation of the mean Sea Surface Temperature (SST), extreme SST and SST trend for the current climate despite a cold bias ( $-0.6^{\circ}\text{C}$ ). Concerning the future SST evolution under RCP8.5, CNRM-RCSM4 showed a climate change signal close to the multi-model mean for the mid-21st century and the weakest warming among the 5 models for the end of the 21<sup>st</sup> century.

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**Table S1. Input parameters of the OSMOSE-MED for each of the 100 species modelled.  $L_{\infty}$ ,  $K$ ,  $t_0$ : the von Bertalanffy growth parameters;  $b$ : the exponent of the allometric length-weight relationship,  $c$ : constant of proportionality of the allometric length-weight relationship;  $L_{mat}$ : size at maturity;  $\Theta$ : relative fecundity;  $A_{max}$ : longevity;  $D$ : Mortality rate due to predation from other species that are not explicitly considered in the model;  $L_{rec}$ : size at recruitment;  $A_{rec}$ : age at recruitment. ( $L_{pred} / L_{prey}$ ): minimum and maximum predation ratios for juveniles and adults. For the same parameter, if different estimates were available in the Mediterranean Sea, the average was considered. See Appendix C for the corresponding list of references.**

Common name	Scientific name	Growth					Reproduction					Mortality					Diet			
		$L_{\infty}$ (cm)	$K$ ( $yr^{-1}$ )	$t_0$ (yr)	$c$ ( $g\ cm^{-b}$ )	$b$	$\Theta$ (eggs $g^{-1}$ )	$L_{mat}$ (cm)	$D$ ( $yr^{-1}$ )	$A_{max}$ (yr)	$L_{rec}$ (cm)	$A_{rec}$ (yr)	Mean catch (t)	$(L_{pred} / L_{prey})_{max}$		$(L_{pred} / L_{prey})_{min}$		$L_{thres}$ (cm TL)		
Allis shad	<i>Alosa alosa</i>	70.300	0.351	0.000	0.00359	3.21267	140	40.0	0.24	8	null	1	1605	35 ; 35	70 ; 70	null				
Twaite shad	<i>Alosa fallax</i>	52.100	0.241	-0.580	0.00548	3.28350	143	22.5	0.20	8	null	1	1811	5 ; 5	30 ; 30	null				
European eel	<i>Anguilla anguilla</i>	70.187	0.408	-0.502	0.00125	3.18882	3906	60.0	0.26	13.2	null	1	1053	8 ; 8	25 ; 25	null				
Meagre	<i>Argyrosomus regius</i>	140.000	0.145	-0.225	0.01739	2.85120	900	53.3	0.28	42	null	1	1988	6 ; 6	85 ; 85	null				
Giant red shrimp	<i>Aristaeomorpha foliacea</i>	7.139	0.444	-0.140	0.00135	2.63000	5477	3.7	0.72	8	2.5	null	65	4.5 ; 7.5	50 ; 50	3				
Blue and red shrimp	<i>Aristeus antennatus</i>	7.433	0.331	-0.078	0.28801	2.46267	9386	2.6	0.90	10	2.5	null	5802	4.5 ; 7.5	50 ; 50	3				
Big-scale sand smelt	<i>Atherina boyeri</i>	14.750	0.210	-0.925	0.00677	3.09347	784	5.4	0.15	4	null	1	420	15 ; 15	100 ; 100	null				
Bullet tuna	<i>Auxis rochei rochei</i>	57.388	0.181	-4.155	0.05420	2.68000	242	35.8	0.21	5	null	1	6753	5 ; 5	20 ; 20	null				
Garfish	<i>Belone belone</i>	54.800	0.351	-1.463	0.00173	2.88150	11	30.6	0.20	8	null	1	1571	8 ; 8	82 ; 82	null				
Bogue	<i>Boops boops</i>	32.400	0.180	-1.363	0.00676	3.13503	1396	13.0	0.40	5	13	null	36904	15 ; 15	150 ; 150	null				
Blue runner	<i>Caranx crysos</i>	41.200	0.350	0.000	0.00890	3.11000	790	23.1	0.30	11	null	1	0	2 ; 2	10 ; 10	null				
Tub gurnard	<i>Chelidonichthys lucerna</i>	55.057	0.416	-0.467	0.01197	2.95491	587	20.2	0.29	14.8	21.5	null	540	6 ; 6	85 ; 85	null				
Mediterranean rainbow wrasse	<i>Coris julis</i>	27.200	0.146	-1.513	0.00788	3.14100	78	16.2	0.20	6	null	1	53	6 ; 6	350 ; 350	null				
Common dolphin fish	<i>Coryphaena hippurus</i>	101.450	1.659	0.036	0.00970	3.01370	120	68.4	0.30	3.66	27.8	null	4866	2.58 ; 2.58	10 ; 10	null				
Common shrimp	<i>Crangon crangon</i>	7.790	1.170	0.000	0.01020	2.80600	815	2.5	0.55	2	null	1	631	2.5 ; 3	200 ; 200	0.35				
Cristal goby	<i>Crystallogobius linearis</i>	5.400	0.970	-0.300	0.00589	3.13000	8050	2.7	0.20	1	null	1	0	4 ; 4	20 ; 20	null				
Common dentex	<i>Dentex dentex</i>	90.625	0.088	-2.362	0.01150	3.12029	650	38.6	0.23	26	null	1	3705	6 ; 6	85 ; 85	null				
Pink dentex	<i>Dentex gibbosus</i>	107.240	0.120	-0.900	0.00820	3.13000	311	41.5	0.27	16	null	1	47	6 ; 6	85 ; 85	null				
Morocco dentex	<i>Dentex maroccanus</i>	34.900	0.170	-1.720	0.06370	2.73500	448	10.0	0.25	10	null	1	0	6 ; 6	35 ; 35	null				

European seabass	<i>Dicentrarchus labrax</i>	69.620	0.247	-0.666	0.01054	3.07277	417	26.5	0.10	7	22.8	null	6983	8	;	8	60	;	60	null
Annular sea bream	<i>Diplodus annularis</i>	22.252	0.281	-1.229	0.01501	3.12911	400	10.6	0.20	13	10	null	4969	6	;	6	20	;	20	null
Zebra seabream	<i>Diplodus cervinus</i>	68.800	0.110	-0.750	0.01160	3.14000	199	25.0	0.20	17	10	null	1	11	;	11	20	;	20	null
Sharpsnout seabream	<i>Diplodus puntazzo</i>	45.280	0.191	-0.306	0.02450	3.00897	3233	21.9	0.20	18	10	null	108	7	;	7	20	;	20	null
White sea bream	<i>Diplodus sargus sargus</i>	44.200	0.152	-1.483	0.01715	3.08188	200	20.8	0.20	10	15	null	5923	6	;	6	20	;	20	null
Common two-banded sea bream	<i>Diplodus vulgaris</i>	30.018	0.195	-1.728	0.01861	3.10391	162	17.4	0.10	7	12.5	null	3683	7	;	7	20	;	20	null
Horned octopus	<i>Eledone cirrhosa</i>	19.280	0.387	-0.030	0.59682	2.62700	7	7.8	0.10	2	3.75	null	7126	5	;	5	25	;	25	null
European anchovy	<i>Engraulis encrasicolus</i>	18.408	0.473	-1.745	0.00527	3.16273	414	10.5	0.10	4.5	10	null	136759	5	;	10	500	;	700	8
White grouper	<i>Epinephelus aeneus</i>	144.325	0.166	-0.767	0.01090	3.01500	515	55.0	0.26	17	null	1	256	5.5	;	5.5	40	;	30	50
Dusky grouper	<i>Epinephelus marginatus</i>	137.467	0.090	-0.767	0.01230	3.05000	334	65.0	0.10	50	null	1	1530	4.5	;	4.5	40	;	30	50
Red-eye round herring	<i>Etrumeus teres</i>	33.770	0.200	-1.631	0.00900	3.12159	196	13.7	0.20	3	null	1	2	10	;	10	500	;	500	10
Grey gurnard	<i>Eutrigla gurnardus</i>	46.000	0.160	0.000	0.00588	3.14714	404	21.0	0.32	21	12.5	null	1658	4	;	4	100	;	100	null
Black-mouthed dogfish	<i>Galeus melastomus</i>	64.000	0.150	0.000	0.00250	3.02000	193	44.5	0.35	8	28.5	null	382	4	;	4	14	;	14	null
Black goby	<i>Gobius niger</i>	15.900	0.391	-1.328	0.01241	3.00141	1563	7.8	0.20	4.33	null	1	182	5	;	5	26	;	26	null
Lusitanian toadfish	<i>Halobatrachus didactylus</i>	52.000	0.130	0.000	0.02022	3.02375	9	28.2	0.05	12	null	1	2	1.1	;	1.1	5.82	;	5.82	null
Shortfin squid	<i>Illex coindetii</i>	29.630	2.000	-0.096	0.01880	3.20000	1778	14.1	0.30	1.13	6.25	null	3620	5	;	5	40	;	40	null
Megrim	<i>Lepidorhombus whiffiagonis</i>	44.800	0.170	-1.070	0.00640	2.99300	603	22.4	0.33	7	10	null	178	2	;	6	15	;	13	15
Golden grey mullet	<i>Liza aurata</i>	43.214	0.247	-0.467	0.01262	2.90264	1152	24.7	0.53	8	null	1	759	15	;	15	100	;	100	null
Thinlip grey mullet	<i>Liza ramada</i>	44.335	0.288	-0.411	0.01228	2.95890	553	28.3	0.42	10	null	1	0	40	;	40	100	;	100	null
Leaping mullet	<i>Liza saliens</i>	38.545	0.229	-0.359	0.01750	2.91513	1822	21.9	0.34	4	null	1	0	40	;	40	100	;	100	null
European squid	<i>Loligo vulgaris</i>	23.800	1.740	0.060	0.05000	2.41810	211	13.8	0.40	1.25	3.25	null	96	10.3	;	10.3	116.7	;	116.7	null
Black-bellied angler	<i>Lophius budegassa</i>	103.000	0.150	-0.050	0.02440	2.84570	102	33.5	0.37	7	6.25	null	121	4.1	;	4.1	10.82	;	10.82	null
Anglerfish	<i>Lophius piscatorius</i>	102.000	0.150	-0.050	0.02113	2.88043	102	34.0	0.27	8	9	null	3608	4.2	;	4.2	7.73	;	7.73	null
Whiting	<i>Merlangius merlangus</i>	39.748	0.143	-1.623	0.01266	3.05593	1700	24.5	0.24	13	7.5	null	4544	1.8	;	1.8	6	;	6	null
European hake	<i>Merluccius merluccius</i>	105.423	0.189	-0.049	0.00434	3.09755	203	28.9	0.10	5.5	7.5	null	26862	1.5	;	2	15	;	12	15
Blue whiting	<i>Micromesistius poutassou</i>	49.300	0.297	0.000	0.00290	3.33267	120	21.0	0.20	8.5	12.5	null	9301	2	;	2	25	;	25	null
Flathead grey mullet	<i>Mugil cephalus</i>	63.700	0.315	-0.275	0.00886	3.14745	1680	44.8	0.31	11	null	1	2582	35	;	35	100	;	100	null
Red mullet	<i>Mullus barbatus barbatus</i>	29.205	0.380	-0.443	0.00771	3.12421	341	11.2	0.10	5	9	null	19749	6	;	6	20	;	20	null

Striped red mullet	<i>Mullus surmuletus</i>	36.023	0.290	-1.279	0.00917	3.10120	786	15.5	0.21	6.2	10	null	10817	6	;	6	16	;	16	null
Smooth hound	<i>Mustelus mustelus</i>	175.000	0.090	-2.845	0.00191	3.20650	0	107	0.01	24	50	null	367	8	;	8	20	;	20	null
Norway lobster	<i>Nephrops norvegicus</i>	22.700	0.324	-0.290	0.00043	3.17278	68	9.5	0.20	15	1.25	null	6425	10	;	10	50	;	50	null
Common octopus	<i>Octopus vulgaris</i>	29.600	0.560	-0.230	0.42000	2.98700	95	14.5	0.15	1.3	4	null	16796	5	;	5	20	;	20	null
Axillary seabream	<i>Pagellus acarne</i>	28.324	0.287	-1.707	0.00972	3.19022	1134	18.0	0.43	8	12	null	2284	5	;	5	25	;	25	null
Common pandora	<i>Pagellus erythrinus</i>	37.351	0.188	-1.147	0.02173	2.94847	156	16.4	0.24	6.6	11	null	11571	5	;	5	25	;	25	null
Common seabream	<i>Pagrus pagrus</i>	63.960	0.144	0.000	0.02217	3.03114	517	24.7	0.29	12	12	null	5743	6	;	6	60	;	60	null
Common prawn	<i>Palaemon serratus</i>	8.596	0.605	0.000	0.00060	1.96950	1500	5.8	0.20	3	null	1	17	6	;	7.5	700	;	242	3
Common spiny lobster	<i>Palinurus elephas</i>	17.850	0.190	-0.260	0.00450	2.62000	116	8.1	0.10	15	0.4	null	333	8	;	8	100	;	100	3
Deep-water rose shrimp	<i>Parapenaeus longirostris</i>	4.439	0.539	-0.129	0.18924	2.49554	7486	2.2	0.40	6	1.1	null	18449	8	;	12	100	;	242	2
Caramote prawn	<i>Penaeus kerathurus</i>	18.030	0.690	-0.940	0.00469	2.40600	7705	3.0	0.44	3	7	null	8325	10	;	10	75	;	75	null
Forkbeard	<i>Phycis phycis</i>	67.150	0.195	-0.515	0.00520	3.18800	1833	32.2	0.42	5	null	1	850	5	;	5	26	;	26	null
European flounder	<i>Platichthys flesus flesus</i>	38.500	0.420	-2.222	0.00677	3.10100	2611	25.0	0.19	15	null	1	243	22	;	22	330	;	330	null
European plaice	<i>Pleuronectes platessa</i>	55.635	0.146	-1.504	0.00968	3.03033	206	23.9	0.13	32.5	null	1	0	25	;	25	100	;	100	null
Bluefish	<i>Pomatomus saltatrix</i>	111.201	0.173	-0.904	0.01394	2.92726	97	37.0	0.35	9	null	1	8294	7	;	7	50	;	50	null
Marbled goby	<i>Pomatoschistus marmoratus</i>	6.453	1.500	0.000	0.00751	3.19933	1925	3.3	0.20	2	null	1	0	5	;	5	15	;	15	null
Sand goby	<i>Pomatoschistus minutus</i>	8.150	1.154	-0.165	0.00370	3.28900	1229	4.0	0.20	2.6	null	1	0	5	;	5	15	;	15	null
Common guitarfish	<i>Rhinobatos rhinobatos</i>	128.600	0.222	-0.586	0.00127	3.18447	5	74.5	0.15	5	null	1	50	10	;	10	20	;	20	null
Atlantic bonito	<i>Sarda sarda</i>	82.380	0.517	-1.548	0.00656	3.11781	65	40.0	0.27	4	24.5	null	29435	5	;	5	30	;	9	10
European pilchard	<i>Sardina pilchardus</i>	21.302	0.445	-0.852	0.00638	3.08475	350	13.4	0.45	5.5	11	null	212808	15	;	15	500	;	700	10
Round sardinella	<i>Sardinella aurita</i>	27.538	0.437	-2.100	0.01112	2.96122	415	15.2	0.10	6.33	10	null	24628	10	;	10	500	;	700	10
Brushtooth lizardfish	<i>Saurida undosquamis</i>	41.765	0.232	-0.589	0.00740	2.97890	264	16.3	0.50	7.5	null	1	74	6	;	6	85	;	85	null
Brown meagre	<i>Sciaena umbra</i>	54.050	0.184	-0.394	0.02140	3.05940	279	25.8	0.21	21	null	1	697	6	;	6	95	;	95	null
Chub mackerel	<i>Scomber japonicus</i>	39.925	0.315	-0.854	0.00615	3.22250	1567	29.2	0.19	10.5	15	null	12902	6	;	6	50	;	50	null
Atlantic mackerel	<i>Scomber scombrus</i>	37.300	0.431	-0.925	0.00961	3.07767	415	20.8	0.19	17	15	null	9081	5	;	5	50	;	50	null
Turbot	<i>Scophthalmus maximus</i>	63.064	0.290	-0.408	0.02869	2.99830	1078	46.3	0.25	5.3	null	1	1466	19.3	;	19.3	172.7	;	172.7	null
Small red scorpionfish	<i>Scorpaena notata</i>	16.925	0.310	-1.810	0.01776	3.02234	197	11.5	0.20	8	null	1	0	4.5	;	4.5	20	;	20	null
Lesser spotted dogfish	<i>Scyliorhinus canicula</i>	56.800	0.530	0.000	0.00153	3.19565	182	41.3	0.20	10.5	25	null	440	5	;	5	50	;	50	null

Common cuttlefish	<i>Sepia officinalis</i>	28.383	0.800	-0.060	0.29750	2.64750	7	11.0	0.20	1.5	5	null	14554	5	;	5	30	;	30	null
Greater amberjack	<i>Seriola dumerili</i>	174.600	0.190	-0.314	0.02120	2.90550	173	104	0.31	15	null	1	2975	4.5	;	4.5	12	;	12	null
Blacktail comber	<i>Serranus atricauda</i>	49.500	0.110	-0.760	0.00905	3.17550	5655	19.3	0.31	16	null	1	0	6	;	6	124	;	124	null
Common sole	<i>Solea solea</i>	39.600	0.440	-0.460	0.00700	3.06380	500	20.0	0.20	16.7	16	null	6020	22	;	22	330	;	330	null
Gilthead seabream	<i>Sparus aurata</i>	57.033	0.284	-0.627	0.02598	3.01966	108	32.2	0.05	11	15	null	12004	6	;	6	45	;	45	null
European barracuda	<i>Sphyraena sphyraena</i>	55.300	0.123	-3.248	0.05686	2.52700	70	24.5	0.22	8	null	1	2245	3	;	3	8	;	8	null
Yellowmouth barracuda	<i>Sphyraena viridensis</i>	100.600	0.089	-0.825	0.00391	3.00000	56	61.0	0.22	8	null	1	0	3	;	3	15	;	15	null
Blotched picarel	<i>Spicara maena</i>	21.990	0.255	-1.160	0.00280	3.50500	350	11.7	0.10	5	13	null	1402	8	;	8	20	;	20	null
Picarel	<i>Spicara smaris</i>	19.600	0.230	-1.970	0.01134	2.93105	349	9.1	0.20	5.5	9	null	5273	11	;	11	30	;	30	null
Black seabream	<i>Spondyliosoma cantharus</i>	41.700	0.161	-0.848	0.03121	2.94075	664	22.0	0.42	13	null	1	1101	6	;	6	45	;	45	null
European sprat	<i>Sprattus sprattus</i>	14.296	0.344	-1.399	0.00866	2.94760	246	10.8	0.60	6	7.5	null	992	8	;	12	100	;	100	null
Spottail mantis shrimp	<i>Squilla mantis</i>	19.690	0.500	-0.370	0.09900	1.73700	1618	14.0	0.50	3.5	1.25	null	7926	5	;	9	100	;	50	2
Reticulated leatherjacket	<i>Stephanolepis diaspros</i>	27.830	0.350	-0.499	0.01753	3.03367	2589	9.3	0.20	4	null	1	0	15	;	15	30	;	30	null
Albacore	<i>Thunnus alalunga</i>	94.700	0.258	-1.354	0.00339	2.88000	130	66.3	0.85	6	39	null	3896	2.78	;	2.78	41.04	;	41.04	null
Atlantic bluefin tuna	<i>Thunnus thynnus</i>	319.000	0.093	-0.970	0.02310	2.93400	93	111	0.37	14	50	null	16405	2.58	;	2.58	21.46	;	21.46	null
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	35.209	0.335	-0.773	0.01140	2.97076	900	18.0	0.01	12	11.5	null	51710	5	;	5	40	;	40	null
Blue jack mackerel	<i>Trachurus picturatus</i>	62.700	0.080	-2.820	0.00890	2.96000	1018	24.8	0.20	18	11	null	787	6	;	6	40	;	40	null
Atlantic horse mackerel	<i>Trachurus trachurus</i>	32.265	0.322	-0.709	0.00956	3.00361	893	16.5	0.05	9	9.25	null	48019	5	;	5	40	;	40	null
Piper gurnard	<i>Trigla lyra</i>	61.466	0.162	-1.028	0.01197	2.91925	178	19.0	0.20	7.5	null	1	24	6	;	6	85	;	85	null
Pouting	<i>Trisopterus luscus</i>	44.375	0.351	-0.615	0.01086	3.12462	473	21.5	0.05	5	null	1	742	5	;	5	9.67	;	9.67	null
Poor cod	<i>Trisopterus minutus</i>	25.943	0.399	-2.144	0.00754	3.14413	76	13.3	0.10	4.33	11	null	2377	2.2	;	2.2	10.67	;	10.67	null
Goldband goatfish	<i>Upeneus moluccensis</i>	25.698	0.830	0.000	0.01027	3.21717	6433	11.0	0.20	5	null	1	61	5	;	5	25	;	25	null
Swordfish	<i>Xiphias gladius</i>	238.500	0.185	-1.404	0.00475	3.17100	40	223	0.20	10	50	null	14377	2	;	2	24.18	;	24.18	null
Grass goby	<i>Zosterisessor ophiocephalus</i>	27.400	0.169	-2.120	0.00870	3.10233	500	11.8	0.20	5	null	1	0	9	;	9	35	;	35	null
Euphausiids	-	1.840	1.680	-0.198	0.00900	2.92000	42254	1.0	0.25	2	null	1	0	100	;	100	400	;	200	0.6

**Table S2. Reference list of input parameters**

Common name	Scientific name	Growth	Size/Age at maturity	Reproduction	Spawning period	Egg size	Feeding	Catches	Biomass	Source of growth data
Allis shad	<i>Alosa alosa</i>	Froese and Pauly, 2017	Froese and Pauly, 2017	Aprahamian et al, 2003	Aprahamian et al, 2003	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Twaite shad	<i>Alosa fallax</i>	Froese and Pauly, 2017	Froese and Pauly, 2017	Aprahamian et al, 2003	Aprahamian et al, 2003	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
European eel	<i>Anguilla anguilla</i>	Froese and Pauly, 2017	Froese and Pauly, 2017	MacNamara et al, 2016	MacNamara et al, 2016	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Meagre	<i>Argyrosomus regius</i>	Froese and Pauly, 2017	Froese and Pauly, 2018	Gil et al, 2013	Gil et al, 2013	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Giant red shrimp	<i>Aristaeomorpha foliaceae</i>	STECF 2015b	STECF 2015b	Kapiris and Thessalou-Legaki, 2006	Kapiris and Thessalou-Legaki, 2006	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
Blue and red shrimp	<i>Aristeus antennatus</i>	STECF 2015b	STECF 2015b	Kapiris and Thessalou-Legaki, 2006	Kapiris and Thessalou-Legaki, 2006	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Big-scale sand smelt	<i>Atherina boyeri</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Patimar et al, 2009	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Bullet tuna	<i>Auxis rochei rochei</i>	Kahraman et al, 2011	Kahraman et al, 2011	Macias et al, 2006	Macias et al, 2006	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Garfish	<i>Belone belone</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Zorica et al, 2010	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Bogue	<i>Boops boops</i>	STECF 2012	STECF 2012	Lamrini, 2010	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Blue runner	<i>Caranx crysos</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Froese and Pauly, 2017	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Tub gurnard	<i>Chelidonicthys lucerna</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Cicek et al, 2008	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Mediterranean rainbow wrasse	<i>Coris julis</i>	Froese and Pauly, 2017	Froese and Pauly, 2018	Alonso-Fernandez et al, 2013	Tsikliras et al, 2010	Alonso-Fernandez et al, 2013	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common dolphin fish	<i>Coryphaena hippurus</i>	STECF 2014	STECF 2014	Massuti and Morales-Nin, 1997	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common shrimp	<i>Crangon crangon</i>	Froese and Pauly, 2017 Kasapoglou et Duzgunes, 2013	Bilgin and Samsun, 2006	Bilgin and Samsun, 2006	Bilgin and Samsun, 2006	Bilgin and Samsun, 2006	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Cristal goby	<i>Crystallogobius linearis</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Caputo et al, 2003	Tsikliras et al, 2010	Caputo et al, 2003	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		From other ecosystem
Common dentex	<i>Dentex dentex</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Loir et al, 2001	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Pink dentex	<i>Dentex gibbosus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Grubisic et al, 2007	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Morocco dentex	<i>Dentex maroccanus</i>	Froese and Pauly, 2017	Froese and Pauly, 2018	Lamrini and Bouymajjane, 2011	Lamrini and Bouymajjane, 2011	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea



European seabass	<i>Dicentrarchus labrax</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Mayer et al, 1990 Wassef and Emary, 1989 Kara, 1997	Tsikliras et al, 2010	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Annular sea bream	<i>Diplodus annularis</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Chaouch et al, 2013	Tsikliras et al, 2010	Chaouch et al, 2013	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Zebra seabream	<i>Diplodus cervinus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Derbal, 2010	Derbal, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		From other ecosystem
Sharpnose seabream	<i>Diplodus puntazzo</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Papadaki et al, 2008	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
White sea bream	<i>Diplodus sargus sargus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Mouine et al, 2007	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common two-banded sea bream	<i>Diplodus vulgaris</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Hadj Taieb et al, 2013	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Horned octopus	<i>Eledone cirrhosa</i>	Froese and Pauly, 2017	Rjeibi et al, 2014	Rjeibi et al, 2014	Rjeibi et al, 2014	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
European anchovy	<i>Engraulis encrasicolus</i>	STECF 2015b	STECF 2015b	Somarakis et al, 2004	Tsikliras et al, 2010	Somarakis et al, 2004	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
White grouper	<i>Epinephelus aeneus</i>	Froese and Pauly, 2017	Froese and Pauly, 2018	Bouain and Siau, 1983	Bouain and Siau, 1983	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Dusky grouper	<i>Epinephelus marginatus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Renones et al, 2010	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Red-eye round herring	<i>Etrumeus teres</i>	Yilmaz and Hosucu, 2003	Osman et al, 2011	Osman et al, 2011	Tsikliras et al, 2010	Osman et al, 2011	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Grey gurnard	<i>Eutrigla gurnardus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Gokçe, 1998	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Black-mouthed dogfish	<i>Galeus melastomus</i>	STECF 2011	STECF 2011	Capapé et al, 2008	Tsikliras et al, 2010	Capapé et al, 2008	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Black goby	<i>Gobius niger</i>	Froese and Pauly, 2017	Bouchereau, 1997	Bouchereau, 1997	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Lusitanian toadfish	<i>Halobatrachus didactylus</i>	Froese and Pauly, 2017	Palazon-Fernandez et al, 2001	Palazon-Fernandez et al, 2001	Palazon-Fernandez et al, 2001	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		From other ecosystem
Shortfin squid	<i>Illex coindetii</i>	Palomares and Pauly, 2017 Belcari, 1996 Sanchez, 1984	Gonzalez et al, 1996	Gonzalez et al, 1996 Laptikhovskiy et Nigmatullin et al, 1993	Gonzalez et al, 1996	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Megrim	<i>Lepidorhombus whiffiagonis</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Macdonald, 2014	Tsikliras et al, 2010	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		From other ecosystem
Golden grey mullet	<i>Liza aurata</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Hotos at al, 2000 Abdallah et al, 2013	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Thinlip grey mullet	<i>Liza ramada</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Fazli et al, 2008	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Leaping mullet	<i>Liza saliens</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Koutrakis, 2011	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea

European squid	<i>Loligo vulgaris</i>	Froese and Pauly, 2017	Laptikhovskiy, 2000	Laptikhovskiy, 2000	Laptikhovskiy, 2000	Laptikhovskiy, 2000	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Black-bellied angler	<i>Lophius budegassa</i>	STECF 2015a	STECF 2015a	Colmenero et al., 2013	Tsikliras et al., 2010	Colmenero et al., 2013	Barnes et al., 2008 Scharf et al., 2000	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
Anglerfish	<i>Lophius piscatorius</i>	STECF 2015a	STECF 2015a	Colmenero et al., 2013	Tsikliras et al., 2010	Colmenero et al., 2013	Barnes et al., 2008 Scharf et al., 2000	Mean FAO (GFCM) and Sea Around Us		Med Sea
Whiting	<i>Merlangius merlangus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Hislop and Hall, 1974	Tsikliras et al., 2010	Neuheimer et al., 2016	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
European hake	<i>Merluccius merluccius</i>	STECF 2015b	STECF 2015b	Recasens et al., 2008 Al-Absawy et al., 2010	Tsikliras et al., 2010	Recasens et al., 2008	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
Blue whiting	<i>Micromesistius poutassou</i>	STECF 2014	STECF 2014	Macchi et al., 2005	Tsikliras et al., 2010	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Flathead grey mullet	<i>Mugil cephalus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Froese and Pauly, 2017	Tsikliras et al., 2010	By default	Barnes et al., 2008 Scharf et al., 2000	Mean FAO (GFCM) and Sea Around Us		Med Sea
Red mullet	<i>Mullus barbatus barbatus</i>	STECF 2015a	STECF 2015a	Tirasin et al., 2007 Layachi et al., 2007	Tsikliras et al., 2010	Layachi et al., 2007	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
Striped red mullet	<i>Mullus surmuletus</i>	STECF 2013	STECF 2013	Amin et al., 2016	Tsikliras et al., 2010	Amin et al., 2016	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Smooth hound	<i>Mustelus mustelus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Saidi, 2008	Saidi, 2008	Saidi, 2008	Barnes et al., 2008 Scharf et al., 2000	Mean FAO (GFCM) and Sea Around Us		Med Sea
Norway lobster	<i>Nephrops norvegicus</i>	STECF 2015a	STECF 2015a	Briggs et al., 2002	Briggs et al., 2002	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common octopus	<i>Octopus vulgaris</i>	Froese and Pauly, 2017	Zghidi et al., 2004 Cuccu et al., 2013	Zghidi et al., 2004 Cuccu et al., 2013	Zghidi et al., 2004 Cuccu et al., 2013	Cuccu et al., 2013	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Axillary seabream	<i>Pagellus acarne</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Velasco et al., 2011	Tsikliras et al., 2010	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common pandora	<i>Pagellus erythrinus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Klaoudatos et al., 2004	Tsikliras et al., 2010	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common seabream	<i>Pagrus pagrus</i>	Pajuelo and Lorenzo, 1996	Mylonas et al., 2004 Aristizabal, 2009	Mylonas et al., 2004 Aristizabal, 2009	Mylonas et al., 2004 Aristizabal, 2009	Aristizabal, 2009	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common prawn	<i>Palaemon serratus</i>	Froese and Pauly, 2017	Bilgin and Samsun, 2006	Bilgin and Samsun, 2006	Bilgin and Samsun, 2006	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Other
Common spiny lobster	<i>Palinurus elephas</i>	Froese and Pauly, 2017	Goni et al., 2003	Goni et al., 2003	Goni et al., 2003	Goni et al., 2003	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Other
Deep-water rose shrimp	<i>Parapenaeus longirostris</i>	STECF 2015a	STECF 2015a	Sobrino and Garcia, 2007	Sobrino and Garcia, 2007	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
Caramote prawn	<i>Penaeus kerathurus</i>	Ben Meriem et al., 2004	Ben Meriem et al., 2004	Jawadi and Ben Meriem, 2007	Jawadi and Ben Meriem, 2007	Lumare et al., 2011	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Forkbeard	<i>Phycis phycis</i>	Froese and Pauly, 2017	Vieira et al., 2016	Vieira et al., 2016	Vieira et al., 2016	By default	Barnes et al., 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea

European flounder	<i>Platichthys flesus flesus</i>	Froese and Pauly, 2017	Aydin et al, 2011	Aydin et al, 2011	Tsikliras et al, 2010	Aydin et al, 2011	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
European plaice	<i>Pleuronectes platessa</i>	Froese and Pauly, 2017	Froese and Pauly, 2017	Froese and Pauly, 2017	Froese and Pauly, 2017	Froese and Pauly, 2017	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Bluefish	<i>Pomatomus saltatrix</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Villegas-Hernandez, 2015	Tsikliras et al, 2010	By default	Barnes et al, 2008 Scharf et al, 2000	Mean FAO (GFCM) and Sea Around Us		Other
Marbled goby	<i>Pomatoschistus marmoratus</i>	Froese and Binohan, 2000	Tsikliras and Stergiou, 2013	Mazzoldi et al, 2002	Tsikliras et al, 2010	Mazzoldi et al, 2002	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Sand goby	<i>Pomatoschistus minutus</i>	Froese and Pauly, 2017	Bouchereau, 1997	Bouchereau, 1997	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Common guitarfish	<i>Rhinobatos rhinobatos</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Enajjar, 2008	Tsikliras et al, 2010	Enajjar, 2008	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Atlantic bonito	<i>Sarda sarda</i>	Froese and Pauly, 2017		Macias et al, 2005	Tsikliras et al, 2010	By default	Barnes et al, 2008	ICCAT 2016		Med Sea
European pilchard	<i>Sardina pilchardus</i>	STECF 2015a	STECF 2015	Somarakis et al, 2002	Tsikliras et al, 2010	Somarakis et al, 2002	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us	<a href="http://www.fao.org/gfcm/data/safs">http://www.fao.org/gfcm/data/safs</a>	Med Sea
Round sardinella	<i>Sardinella aurita</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Tsikliras and Antonopoulou, 2006 Mustac and Sinovic, 2012	Tsikliras et al, 2010	Mustac and Sinovic, 2012	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Brushtooth lizardfish	<i>Saurida undosquamis</i>	GFCM 2014	GFCM 2014	Kadharsha et al, 2013	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Brown meagre	<i>Sciaena umbra</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Derbal and Kara, 2007	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Chub mackerel	<i>Scomber japonicus</i>	Froese and Pauly, 2017	Techetach et al, 2010	Techetach et al, 2010	Tsikliras et al, 2010	Techetach et al, 2010	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Atlantic mackerel	<i>Scomber scombrus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Meneghesso et al, 2013	Tsikliras et al, 2010	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Turbot	<i>Scophthalmus maximus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Meneghesso et al, 2013	Meneghesso et al, 2013	By default	Barnes et al, 2008 Scharf et al, 2000	Mean FAO (GFCM) and Sea Around Us		Med Sea
Small red scorpionfish	<i>Scorpaena notata</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Munoz et al, 2005	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Lesser spotted dogfish	<i>Scyliorhinus canicula</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Capapé et al, 2008	Capapé et al, 2008	Capapé et al, 2008	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Common cuttlefish	<i>Sepia officinalis</i>	Palomares and Pauly, 2017	Ezzeddine-Najai, 1993	Ezzeddine-Najai, 1993; Guera, 2006	Ezzeddine-Najai, 1993; Guera, 2006	Ezzeddine-Najai, 1993; Guera, 2006	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Greater amberjack	<i>Seriola dumerili</i>	Froese and Pauly, 2017	Honebrink, 2000	Honebrink, 2000	Honebrink, 2000	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Blacktail comber	<i>Serranus atricauda</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Neves et al, 2013	Neves et al, 2013	Neves et al, 2013	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Common sole	<i>Solea solea</i>	STECF 2011	STECF 2011	Farrugio and Le Corre, 1986	Tsikliras et al, 2010	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea

Gilthead seabream	<i>Sparus aurata</i>	Froese and Pauly, 2017	Meneghesso et al, 2013	Meneghesso et al, 2013	Tsikliras et al, 2010	Jeres et al, 2012	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
European barracuda	<i>Sphyraena sphyraena</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Meneghesso et al, 2013	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Yellowmouth barracuda	<i>Sphyraena viridensis</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Meneghesso et al, 2013	Meneghesso et al, 2013	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Blotched picarel	<i>Spicara maena</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Matic-Skoko et al, 2004	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Picarel	<i>Spicara smaris</i>	STECF 2012	STECF 2012	karlou-Riga et al, 2007	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Black seabream	<i>Spondylioma cantharus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Dulcic et al, 1998	Tsikliras et al, 2010	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
European sprat	<i>Sprattus sprattus</i>	Froese and Pauly, 2017	Alheit, 1988	Alheit, 1988	Tsikliras et al, 2010	Neuheimer et al, 2016	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Spottail mantis shrimp	<i>Squilla mantis</i>	STECF 2011	STECF 2012	Mili et al, 2014	Mili et al, 2014	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Reticulated leatherjacket	<i>Stephanolepis diaspros</i>	Box, 2008	Tsikliras and Stergiou, 2013	Rim and Mohamed-Nejmeddine, 2011	Rim and Mohamed-Nejmeddine, 2011	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Albacore	<i>Thunnus alalunga</i>	ICCAT 2017	ICCAT 2017	Saber et al, 2011	Saber et al, 2011	By default	Barnes et al, 2008 Ménard et al, 2006	ICCAT 2016	Winker Henning (comm. pers.)	Med Sea
Atlantic bluefin tuna	<i>Thunnus thynnus</i>	ICCAT 2017	ICCAT 2017	Medina et al, 2007 Fromentin and Powers, 2005	ICCAT 2016	By default	Barnes et al, 2008 Ménard et al, 2006	ICCAT 2016	Fromentin Jean-Marc (comm. pers.)	Med Sea
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Demirel and Yuksek, 2013	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Blue jack mackerel	<i>Trachurus picturatus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Vasconcelos et al, 2017	Vasconcelos et al, 2017	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Atlantic horse mackerel	<i>Trachurus trachurus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Van Damme et al, 2013 Gherra et al, 2013 Abaunza et al, 2003	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Piper gurnard	<i>Trigla lyra</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Agbali et al, 2015	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Pouting	<i>Trisopterus luscus</i>	Froese and Pauly, 2017	Froese and Pauly, 2017	Merayo, 1998	Merayo, 1998	Merayo, 1998	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Poor cod	<i>Trisopterus minutus</i>	Froese and Pauly, 2017	Froese and Pauly, 2017	Merayo, 1998	Tsikliras et al, 2010	Merayo, 1998	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea
Goldband goatfish	<i>Upeneus moluccensis</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Saad, 1998	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Other
Swordfish	<i>Xiphias gladius</i>	ICCAT 2016	ICCAT 2016	Macias et al, 2005	Tsikliras et al, 2010	Macias et al, 2005	Barnes et al, 2008	ICCAT 2016	ICCAT 2016	Med Sea
Grass goby	<i>Zosterisessor ophiocephalus</i>	Froese and Pauly, 2017	Tsikliras and Stergiou, 2013	Franco et al, 2002	Tsikliras et al, 2010	By default	Barnes et al, 2008	Mean FAO (GFCM) and Sea Around Us		Med Sea

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**Table S3. Distribution ranges of high trophic levels species predicted by species distribution models (values are in km<sup>2</sup>) for current (2006-2013) and future periods (2021 – 2050; 2071-2100) under RCP8.5 scenario. Area of a cell in OSMOSE is 400 km<sup>2</sup>.**

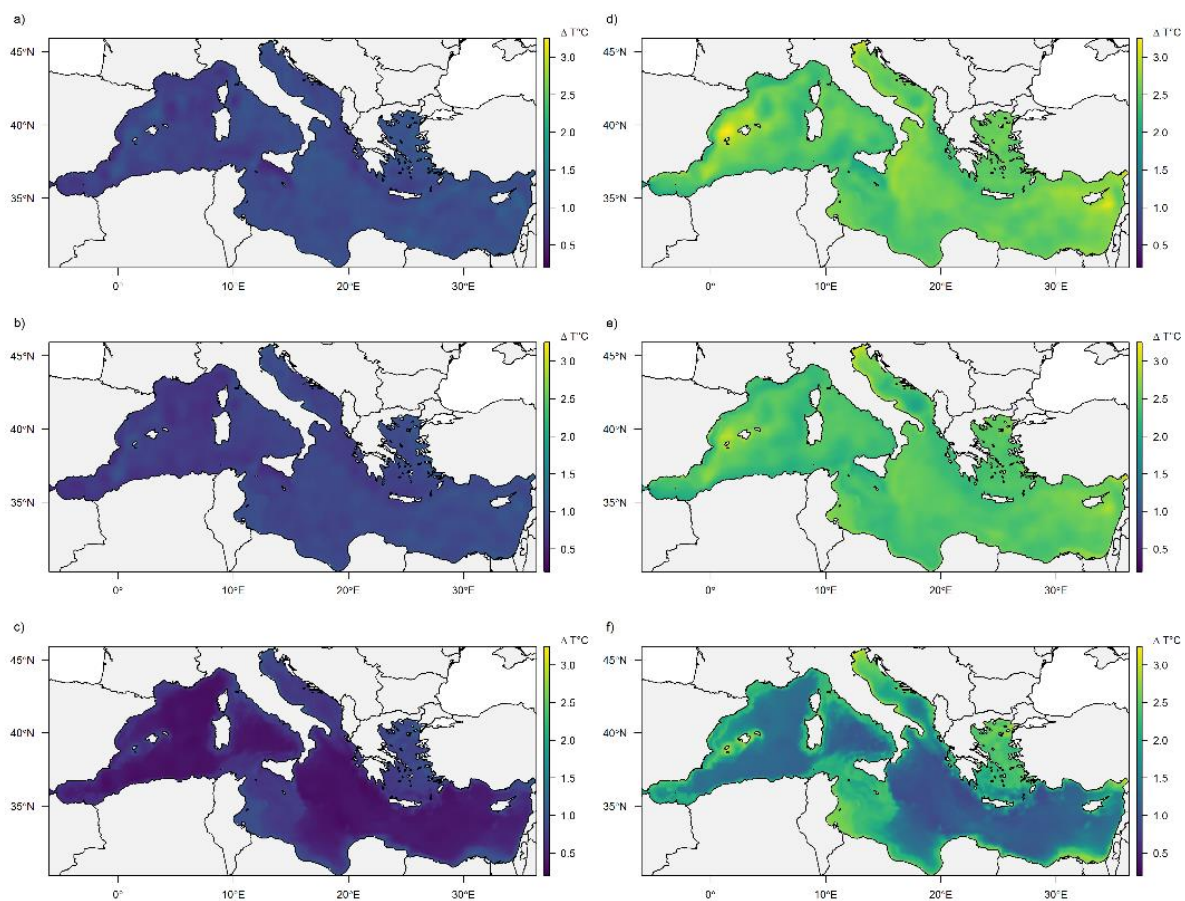
Species	Current	2021 - 2050	2071 - 2100
<i>Argyrosomus regius</i>	468000	486400	515600
<i>Aristaeomorpha foliacea</i>	846400	744400	771600
<i>Aristeus antennatus</i>	847200	861200	866400
<i>Atherina boyeri</i>	644000	686400	712800
<i>Auxis rochei rochei</i>	2421200	2337200	2060000
<i>Belone belone</i>	547600	515200	428000
<i>Boops boops</i>	757600	770000	775600
<i>Caranx crysos</i>	1555600	1652400	2346000
<i>Chelidonichthys lucerna</i>	523600	518000	526800
<i>Coris julis</i>	572400	532800	510000
<i>Coryphaena hippurus</i>	2432000	2442800	2460400
<i>Crangon crangon</i>	325200	326400	328400
<i>Crystallogobius linearis</i>	671600	650400	404000
<i>Dentex dentex</i>	491200	491600	492800
<i>Dentex gibbosus</i>	496400	496000	497600
<i>Dentex maroccanus</i>	634400	806800	939200
<i>Dicentrarchus labrax</i>	336000	334400	337200
<i>Diplodus annularis</i>	672000	662000	652400
<i>Diplodus cervinus</i>	508800	508000	514000
<i>Diplodus puntazzo</i>	440400	443600	407600
<i>Diplodus sargus sargus</i>	323600	323600	325200
<i>Diplodus vulgaris</i>	392400	379200	352400
<i>Eledone cirrhosa</i>	706000	702400	579200
<i>Engraulis encrasicolus</i>	488400	489600	489600
<i>Epinephelus aeneus</i>	284800	338400	598400
<i>Epinephelus marginatus</i>	630800	636000	585200
<i>Etrumeus teres</i>	66000	142400	730400
<i>Eutrigla gurnardus</i>	493200	496400	496400
<i>Galeus melastomus</i>	553200	569200	565600
<i>Gobius niger</i>	242800	241600	226800
<i>Halobatrachus didactylus</i>	660800	621200	587200
<i>Illex coindetii</i>	568000	579200	566400
<i>Lepidorhombus whiffiagonis</i>	767600	777200	778800
<i>Liza aurata</i>	2491600	2490800	2302000
<i>Liza ramada</i>	682800	841200	882400
<i>Liza saliens</i>	623200	691600	703600
<i>Loligo vulgaris</i>	498400	499200	498800
<i>Lophius budegassa</i>	1038800	1052400	1052400
<i>Lophius piscatorius</i>	753600	767600	774400
<i>Merlangius merlangus</i>	438400	434800	448800
<i>Merluccius merluccius</i>	380000	413200	323200
<i>Micromesistius poutassou</i>	939600	495200	51600
<i>Mugil cephalus</i>	230800	221600	215200
<i>Mullus barbatus barbatus</i>	782000	787600	793600
<i>Mullus surmuletus</i>	774400	778800	781600
<i>Mustelus mustelus</i>	641200	634000	634400
<i>Nephrops norvegicus</i>	881600	690800	505200
<i>Octopus vulgaris</i>	468400	469600	484400
<i>Pagellus acarne</i>	725200	627200	500000
<i>Pagellus erythrinus</i>	505200	495200	514000
<i>Pagrus pagrus</i>	326800	331200	339600
<i>Palaemon serratus</i>	338400	294800	205200
<i>Palinurus elephas</i>	700000	552800	469600
<i>Parapenaeus longirostris</i>	705600	723600	735200
<i>Penaeus kerathurus</i>	208400	207200	204000
<i>Phycis phycis</i>	493200	366800	260400

<i>Platichthys flesus flesus</i>	232000	235200	232000
<i>Pleuronectes platessa</i>	310400	310400	316000
<i>Pomatomus saltatrix</i>	496000	496800	498000
<i>Pomatoschistus marmoratus</i>	280000	296400	280800
<i>Pomatoschistus minutus</i>	494800	502000	502000
<i>Rhinobatos rhinobatos</i>	492800	489600	491200
<i>Sarda sarda</i>	378800	379600	400400
<i>Sardina pilchardus</i>	2334800	2327600	2355600
<i>Sardinella aurita</i>	494400	494000	497200
<i>Saurida undosquamis</i>	283200	501200	786800
<i>Sciaena umbra</i>	346400	359200	361600
<i>Scomber japonicus</i>	2156400	2162800	2162800
<i>Scomber scombrus</i>	467200	468800	479600
<i>Scophthalmus maximus</i>	354800	376800	386400
<i>Scorpaena notata</i>	341600	339600	318400
<i>Scylliorhinus canicula</i>	438800	444000	428400
<i>Sepia officinalis</i>	468800	463200	468800
<i>Seriola dumerilii</i>	2490000	2491600	2470800
<i>Serranus atricauda</i>	218000	132800	135600
<i>Solea solea</i>	794800	808000	820000
<i>Sparus aurata</i>	333600	334000	337200
<i>Sphyræna sphyraena</i>	2480000	2488000	2487600
<i>Sphyræna viridensis</i>	63200	121200	486800
<i>Spicara maena</i>	606800	612000	608000
<i>Spicara smaris</i>	2488800	2489600	2424000
<i>Spondylisoma cantharus</i>	584000	585200	567600
<i>Sprattus sprattus</i>	1390400	1469600	1402400
<i>Squilla mantis</i>	820000	772800	777200
<i>Stephanolepis diaspros</i>	317600	443600	553200
<i>Thunnus alalunga</i>	1922800	1922800	1927600
<i>Thunnus thynnus</i>	1898800	1871600	1868400
<i>Trachurus mediterraneus</i>	502800	501600	502000
<i>Trachurus picturatus</i>	737600	722000	603600
<i>Trachurus trachurus</i>	2446000	2459200	2469200
<i>Trachyrincus scabrus</i>	821600	827200	813600
<i>Trigla lyra</i>	748400	760400	772000
<i>Trisopterus luscus</i>	168800	120800	69600
<i>Trisopterus minutus</i>	222800	121600	77200
<i>Upeneus moluccensis</i>	334000	574000	1055200
<i>Xiphias gladius</i>	2054400	2066000	2101200
<i>Zosterisessor ophiocephalus</i>	192400	202800	199600

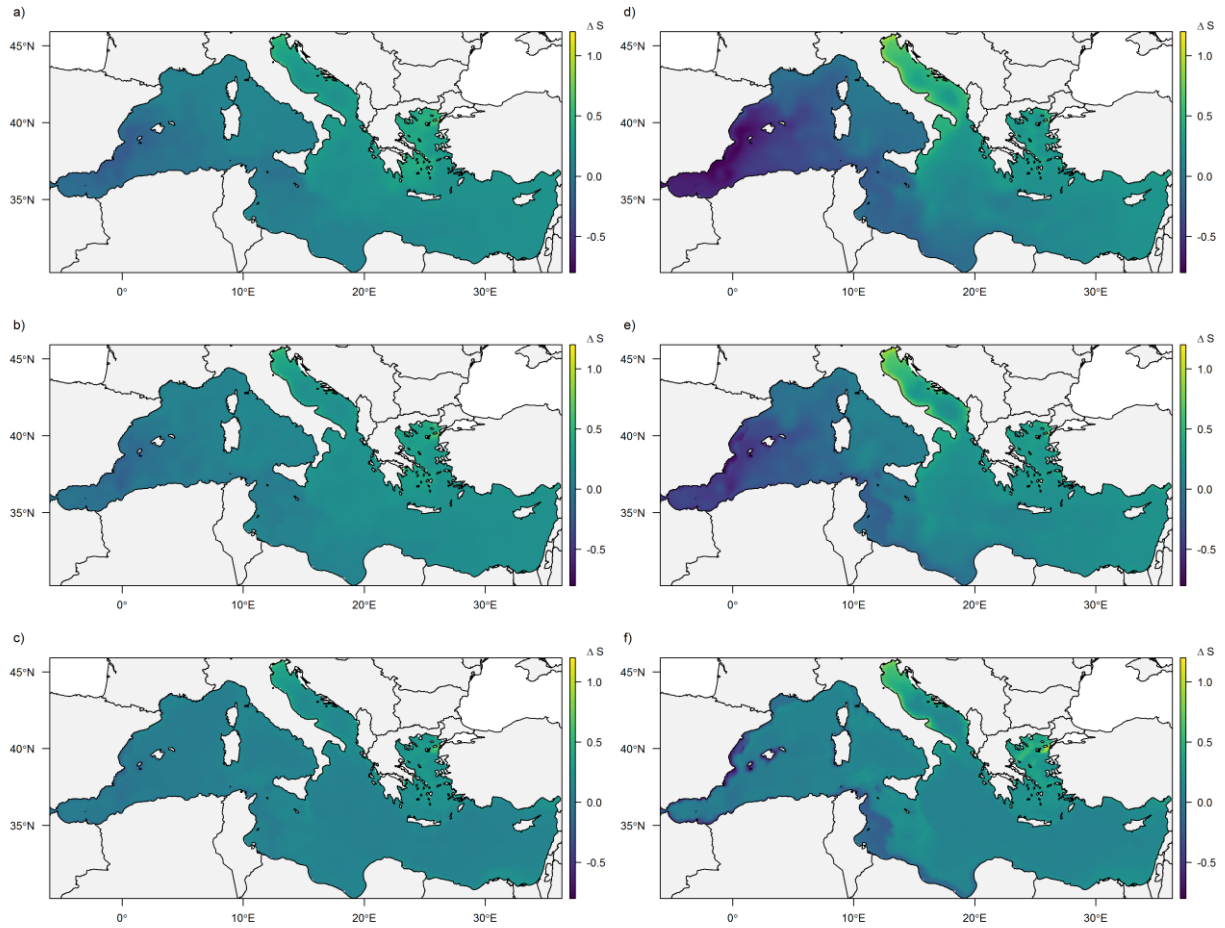
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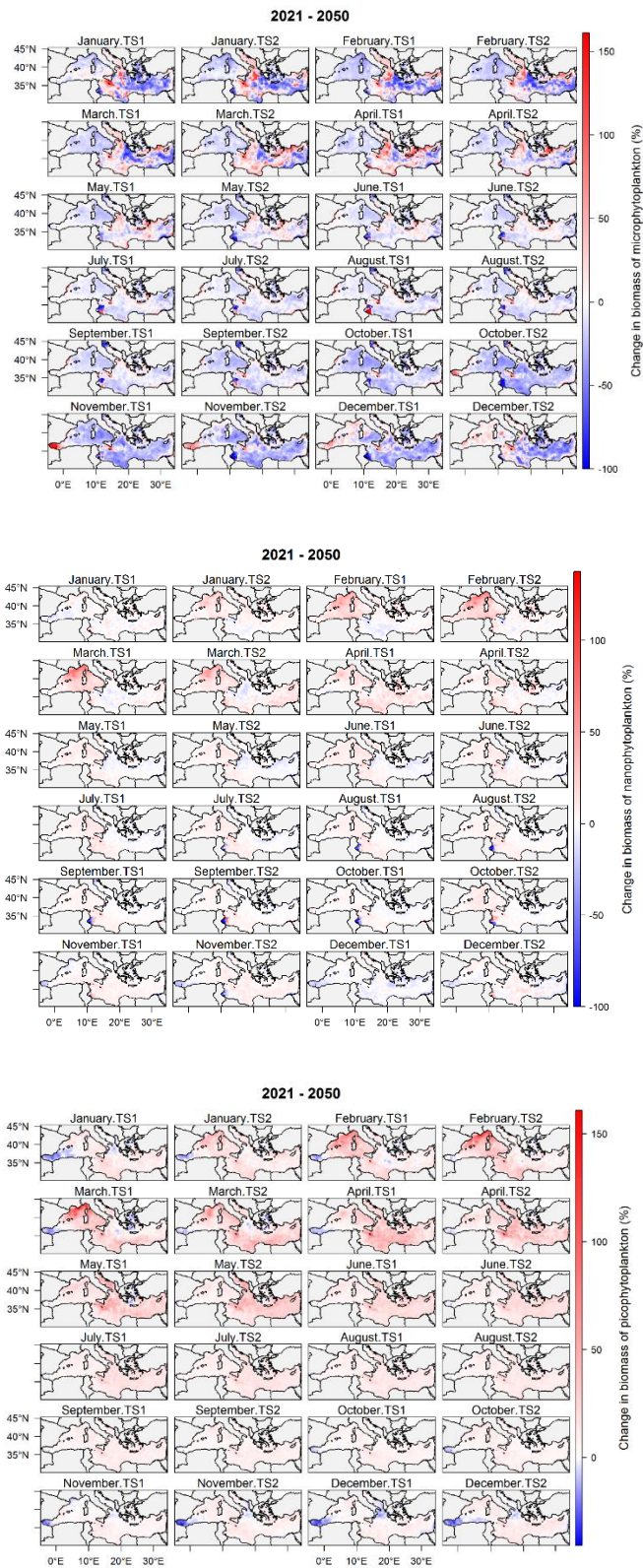
**Figure S1. Maps showing temperature anomalies ( $^{\circ}\text{C}$ ) between the 1970-2005 period and two future time periods (2021-2050, left column; 2071-2100, right column) under the RCP8.5 scenario implemented with CNRM-RCSM4. Maps a and d: sea surface temperature (0-50 m depth); Maps b and e: vertical temperature (0-200 m depth); Maps c and f; Sea bottom temperature (50 m-max bathymetry).**



**Figure S2. Maps showing salinity anomalies (PSU) between the 1970-2005 period and two future time periods (2021-2050, left column; 2071-2100 right column) under the RCP8.5 scenario implemented with CNRM-RCSM4. Maps a and d: sea surface salinity (0-50 m depth); Maps b and e: vertical salinity (0-200 m depth); Maps c and f; Sea bottom salinity (50 m-max bathymetry).**

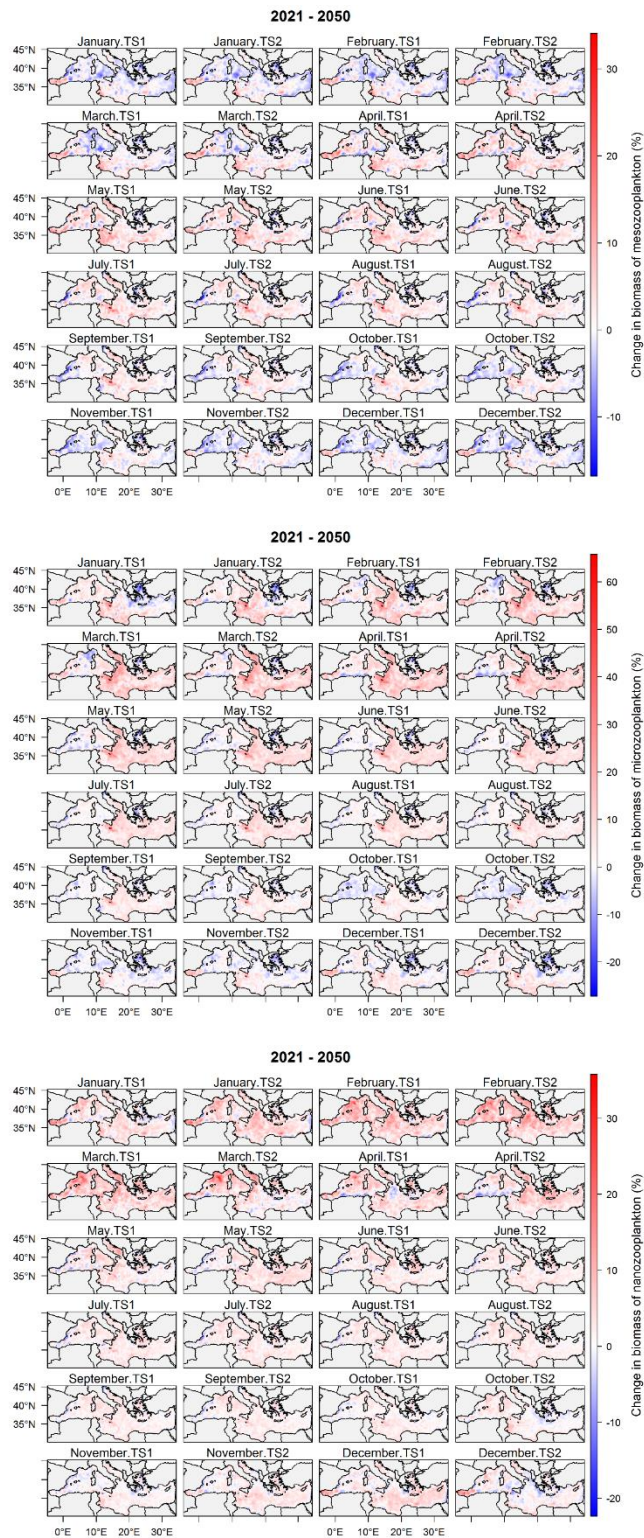


**Figure S3. Projected relative changes in phytoplankton biomass (by time step (TS), 15 days) (pico: bottom; nano-: middle and micro-phytoplankton: top) between historical period and mid-century (2021-2050) obtained with the regional biogeochemical model Eco3M-S, under RCP8.5 scenario.**

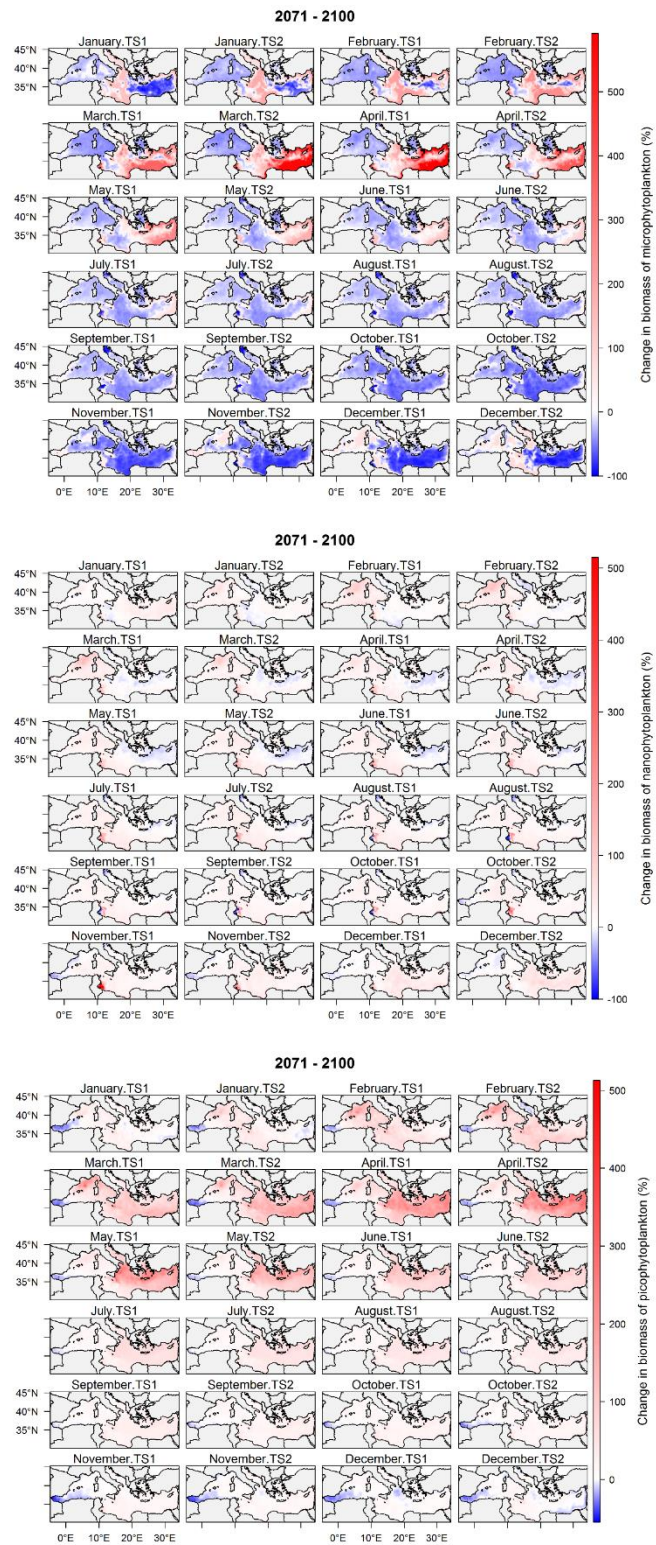




**Figure S4. Projected relative change in zooplankton biomass (by time step (TS), 15 days) (nano-: bottom; micro-: middle and meso-zooplankton: top) between historical period and mid-century (2021-2050) obtained with the regional biogeochemical model Eco3M-S, under RCP8.5 scenario.**



**Figure S5. Projected relative changes in phytoplankton biomass (by time step (TS), 15 days) (pico-: bottom; nano-: middle and micro-phytoplankton: top) between historical period and end of the century (2071-2100) obtained with the regional biogeochemical model Eco3M-S, under RCP8.5 scenario.**





**Figure S6. Projected relative changes in zooplankton biomass (by time step (TS), 15 days) (nano-: bottom; micro-: middle and meso-zooplankton: top) between historical period and end of the century (2071-2100) obtained with the regional biogeochemical model Eco3M-S, under RCP8.5 scenario.**

