

Supplementary Materials

Table S1. Species identity and abundance as observed in the coastal surveys.

Species	Abundance	Origin
<i>Siganus rivulatus</i>	1630	invasive
<i>Sillago suezensis</i>	440	invasive
<i>Diplodus sargus</i>	424	local
<i>Mugilidae</i>	235	local
<i>Lithognathus mormyrus</i>	195	local
<i>Hemiramphus far</i>	77	invasive
<i>Obalda melanura</i>	67	local
<i>Sparus aurata</i>	46	local
<i>Thalassoma pavo</i>	40	local
<i>Trachinotus ovatus</i>	34	local
<i>Caranx crysos</i>	30	local
<i>Diplodus vulgaris</i>	24	local
<i>Epinephelus marginatus</i>	23	local
<i>Lagocephalus sceleratus</i>	12	local
<i>Siganus luridus</i>	11	invasive
<i>Boops boops</i>	10	local
<i>Pomatomus saltator</i>	8	local
<i>Sarpa salpa</i>	6	local
<i>Scomberomorus commerson</i>	6	invasive
<i>Saurida undosquamis</i>	4	invasive
<i>Dicentrarchus labrax</i>	3	local
<i>Platycephalus indicus</i>	3	invasive
<i>Pomadasys incisus</i>	3	local
<i>Tylosurus crocodilus</i>	3	invasive
<i>Alepes djedaba</i>	2	invasive
<i>Argyrosomus regius</i>	2	local
<i>Alectis alexandrinus</i>	1	local
<i>Balistes Carolinensis</i>	1	local
<i>Diplodus cervinus</i>	1	local
<i>Echeneis naucrates</i>	1	local
<i>Epinephelus aeneus</i>	1	local
<i>Euthynnus alletteratus</i>	1	local
<i>Pempheris vanicolensis</i>	1	invasive
<i>Plotosus lineatus</i>	1	invasive
<i>Pseudocaranx dentex</i>	1	local
<i>Sargocentron rubrum</i>	1	invasive
<i>Sphyræna viridensis</i>	1	local
<i>Umbrina cirrosa</i>	1	local
Total	3350	

Table S2. Species identity and biomass as observed in the coastal surveys.

Species	Biomass (kg)	Origin
<i>Mugilidae</i>	24.330	*
<i>Siganus rivulatus</i>	24.021	invasive
<i>Diplodus sargus</i>	23.086	local
<i>Hemiramphus far</i>	12.883	invasive
<i>Caranx crysos</i>	8.027	local
<i>Lagocephalus sceleratus</i>	7.276	invasive
<i>Sparus aurata</i>	6.828	local
<i>Lithognathus mormyrus</i>	6.771	local
<i>Sillago sihama</i>	5.182	invasive
<i>Oblada melanura</i>	4.015	local
<i>Epinephelus marginatus</i>	3.510	local
<i>Pomatomus saltator</i>	3.440	local
<i>Diplodus vulgaris</i>	1.834	local
<i>Umbrina cirrosa</i>	1.582	local
<i>Argyrosomus regius</i>	1.112	local
<i>Trachinotus ovatus</i>	0.917	local
<i>Scomberomorus commerson</i>	0.620	invasive
<i>Sphyræna viridensis</i>	0.539	local
<i>Euthynnus alletteratus</i>	0.526	local
<i>Sarpa salpa</i>	0.437	local
<i>Dicentrarchus labrax</i>	0.405	local
<i>Epinephelus aeneus</i>	0.318	local
<i>Siganus luridus</i>	0.182	invasive
<i>Boops boops</i>	0.171	local
<i>Diplodus cervinus</i>	0.085	local
<i>Echeneis naucrates</i>	0.072	local
<i>Pomadasys incisus</i>	0.066	local
<i>Pseudocaranx dentex</i>	0.061	local
<i>Sargocentron rubrum</i>	0.053	invasive
<i>Atherina</i>	0.048	*
<i>Alepes djedaba</i>	0.033	invasive
<i>Platycephalus indicus</i>	0.020	invasive
<i>Balistes carolinensis</i>	0.013	local
<i>Saurida undosquamis</i>	0.006	invasive
<i>Pempheris vanicolensis</i>	0.003	invasive
Total	138	

File S1. Detailed protocols for the trawl and set nets and long-line surveys used for biomass estimates and species composition comparisons.

Commercial fishing data sets

Trawl data

(a) Obtaining the data

The trawl fishery data for relative species abundance was based on surveys performed by the Israeli Fisheries Department in the Ministry of Agriculture in the Mediterranean Sea continental shelf and upper slope of Israel, from May 2017 until December 2020. Data was collected on board trawlers using the same gear: either two or four panel nets (with and without sweeps, respectively), with a 40 mm diamond stretched mesh until June 2017, and then with 48 diamond stretched mesh until the end of the survey. Depth range was of 15–167 m between latitudes 31°43N and 33°05N. The data is composed by one box randomly sampled from each of the 279 nets documented (mean haul time was 4.6 ± 1.3 hours). In total 55,728 individuals belonging to 165 species were sampled during the time of the survey. Each individual was documented to species level and measured to the nearest mm. The total catch of each net was weighted (mean weight 68 ± 49 kg) a total of 18.9 ton was documented from which samples represented 1 ton.

(b) Calculating the proportion of each species in the catch

For the relative proportion of each species for the trawl fishing, an additional step was needed as species and size composition estimates were obtained from a standardized sample only. Thus, we multiplied the proportion of species and size bands by the total weight of the nets to receive the biomass of the species in a net. We then summed the total biomass of the species from all nets, calculated the proportion of the species from the total catch of the survey, and multiplied by the annual catch to receive the absolute yearly biomass.

Set nets and long-lines

The southern part of Israel is characterized by sandy beaches with scattered rocky elements. The central-northern coast of Israel is characterized by a rocky reef, with patches of sand in the center becoming continuously rocky reef as one heads northward. Ten fishing ports are located along the Israeli Mediterranean coastline. Of these, between two to three ports fishers predominately fish over sandy substrates and are characterized by professional fishers usually using large mesh sizes (> 70 mm diamond stretched mesh), composing about 30% of fishing vessels (Malamud et al., 2016). The center-northern part of the Israeli coast consists of a combination of professional and traditional fisheries, the latter comprising ~70% of all

fishing vessels (Malamud et al., 2016). These traditional fishers fish close to shore, with a variety of mesh sizes that seldom exceed 43 mm diamond stretched mesh.

Our study uses data collected during two surveys, the first was located in the central-north of Israel in a small traditional fishing port. The second was carried out mostly in the southern part of Israel and is based on land-based surveys in a variety of fishing ports. We elaborate below:

The first survey was carried out in at Giv'at Olga, Hadera, Israel (32°44N, 34°87E) at a shallow depth between 3 and 30 m. Data were collected from December 2013 to September 2015 and comprise a total of 347 set nets sampled during 89 fishing trips. Data were based on a single local fisher in order to avoid the variation associated with differences among fishers in experience, deployment method, net location and fishing gear. A total of 7,110 individuals, belonging to 69 species were sampled and measured on board to the nearest mm representing a catch of 1.7 ton (for further information please see Frid and Belmaker 2019).

The second survey was conducted between February 2015 – January 2017 and included 154 ground surveys in 12 of the Israeli fishing ports and marinas. The survey included the documentation of fishing pressure and catch by observing the number of active fishing boats in a port and their yield. Both fishers using set nets and long-lines were surveyed. When fishers arrived at port, they were asked for permission to document their catch. With the fisher permission, the catch abundance was documented and the size of the individuals was estimated. A total sum of 7,204 individuals was documented, belonging to 52 species representing a catch of 2.7 ton (Malamud et al 2018).

The data gathered during both surveys was combined to represent the commercial nets and long line fishery.

Table S3. Species identity and abundance and origin as documented in the trawl surveys.

Species	Abundance	Origin
<i>Nemipterus randalli</i>	6228	invasive
<i>Upeneus moluccensis</i>	5146	invasive
<i>Leiognathus klunzingeri</i>	3227	invasive
<i>Pagellus acarne</i>	2859	local
<i>Plotosus lineatus</i>	2592	invasive
<i>Engraulis encrasicolus</i>	1997	local
<i>Pagellus erythrinus</i>	1829	local
<i>Saurida undosquamis</i>	1801	invasive
<i>Boops boops</i>	1713	local
<i>Etrumeus golanii</i>	1212	invasive
<i>Trachurus trachurus</i>	1071	local

<i>Scomber colias</i>	966	local
<i>Apogon smithi</i>	836	invasive
<i>Mullus barbatus</i>	769	local
<i>Lepidotrigla cavillone</i>	692	local
<i>Ostorhinchus fasciatus</i>	586	invasive
<i>Lagocephalus suezensis</i>	532	invasive
<i>Pomadasys stridens</i>	498	invasive
<i>Decapterus russelli</i>	445	invasive
<i>Sphyraena chrysotaenia</i>	445	invasive
<i>Merluccius merluccius</i>	443	local
<i>Citharus linguatula</i>	302	local
<i>Upeneus pori</i>	292	invasive
<i>Sardinella aurita</i>	256	local
<i>Lagocephalus spadiceus</i>	249	invasive
<i>Callionymus filamentosus</i>	225	invasive
<i>Sardina pilchardus</i>	219	local
<i>Stephanolepis diaspros</i>	207	invasive
<i>Lagocephalus sceleratus</i>	171	invasive
<i>Spicara maena</i>	139	local
<i>Mullus surmuletus</i>	136	local
<i>Apogon fasciatus</i>	130	invasive
<i>Torquigener flavimaculosus</i>	122	invasive
<i>Spicara flexuosa</i>	120	local
<i>Pagrus coeruleostictus</i>	110	local
<i>Siganus rivulatus</i>	105	invasive
<i>Raja clavata</i>	93	local
<i>Macrorhamphosus scolopax</i>	87	local
<i>Dussumieria elopsoides</i>	84	invasive
<i>Scomberomorus commerson</i>	82	invasive
<i>Sillago sihama</i>	82	invasive
<i>Trachurus mediterraneus</i>	82	local
<i>Sphyraena sphyraena</i>	81	local
<i>Caranx crysos</i>	80	local
<i>Serranus hepatus</i>	77	local
<i>Dentex macrophtalmus</i>	74	local
<i>Lagocephalus suezensis</i>	73	invasive
<i>Fistularia commersonii</i>	62	invasive
<i>Parapenaeus longirostris</i>	57	local
<i>Argentina sphyraena</i>	56	local
<i>Raja miraletus</i>	54	local
<i>Rhinobatos rhinobatos</i>	47	local
<i>Spicara smaris</i>	45	local
<i>Lithognathus mormyrus</i>	44	local
<i>Sparus aurata</i>	44	local
<i>Bothus podas</i>	41	local
<i>Ariosoma balearicum</i>	38	local

<i>Dentex maroccanus</i>	31	local
<i>Seriola dumerili</i>	31	local
<i>Apogon nigripinnis</i>	30	invasive
<i>Diplodus sargus</i>	29	local
<i>Pagrus pagrus</i>	26	local
<i>Bregmasceros atlanticus</i>	23	local
<i>Champsodon nudivittatus</i>	23	invasive
<i>Cynoglossus sinusarabici</i>	22	invasive
<i>Balistes capriscus</i>	21	local
<i>Alepes djedaba</i>	19	invasive
<i>Trigloporus lastovitzai</i>	19	local
<i>Atherinomorus lacunosus</i>	18	invasive
<i>Synodus saurus</i>	17	local
<i>Diplodus vulgaris</i>	15	local
<i>Fistularia petimba</i>	14	invasive
<i>Echelus myrus</i>	13	local
<i>Echeneis naucrates</i>	11	local
<i>Lagocephalus spadiceus</i>	11	invasive
<i>Priacanthus saggittarius</i>	11	invasive
<i>Diplodus annularis</i>	9	local
<i>Oblada melanura</i>	9	local
<i>Terapon puta</i>	9	invasive
<i>Torpedo torpedo</i>	9	local
<i>Microchirus ocellatus</i>	8	local
<i>Pomadasys incisus</i>	8	local
<i>Torpedo marmorata</i>	7	local
<i>Zeus faber</i>	7	local
<i>Lagocephalus sceleratus</i>	6	invasive
<i>Sardinella gibbosa</i>	6	invasive
<i>Ophidion barbatum</i>	5	local
<i>Solea solea</i>	5	local
<i>Alectis alexandrinus</i>	4	local
<i>Dasyatis tortonesei</i>	4	local
<i>Lophius budegassa</i>	4	local
<i>Siganus luridus</i>	4	invasive
<i>Trichiurus lepturus</i>	4	local
<i>Trigla lucerna</i>	4	local
<i>Uranoscopus scaber</i>	4	local
<i>Serranus cabrilla</i>	3	local
<i>Blennius ocellaris</i>	2	local
<i>Capros aper</i>	2	local
<i>Centrophorus granulosus</i>	2	local
<i>Conger conger</i>	2	local
<i>Dactylopterus volitans</i>	2	local
<i>Dasyatis pastinaca</i>	2	local
<i>Dipturus oxyrinchus</i>	2	local

<i>Platycephalus indicus</i>	2	invasive
<i>Pterois miles</i>	2	invasive
<i>Uranuscopus scaber</i>	2	local
<i>Anthias anthias</i>	1	local
<i>Dentex gibbosus</i>	1	local
<i>Diplodus puntazzo</i>	1	local
<i>Epinephelus aeneus</i>	1	local
<i>Equulites poppei</i>	1	invasive
<i>Gobius niger</i>	1	local
<i>Himantura uarnak</i>	1	invasive
<i>Lophius piscatorius</i>	1	local
<i>Mustelus mustelus</i>	1	local
<i>Mycteroperca rubra</i>	1	local
<i>Nettastoma melanurum</i>	1	local
<i>Parupeneus forskali</i>	1	invasive
<i>Sargocentron rubrum</i>	1	invasive
<i>Scorpaena scrofa</i>	1	local
<i>Sparus auriga</i>	1	local
<i>Torpedo nobiliana</i>	1	local
Total	41330	

Table S4. Species identity, abundance, and origin as documented in the set nets surveys.

Species	Abundance	Origin
<i>Siganus rivulatus</i>	2081	invasive
<i>Lithognathus mormyrus</i>	2061	local
<i>Mugilidae</i>	1578	local
<i>Oblada melanura</i>	1470	local
<i>Diplodus sargus</i>	1378	local
<i>Pelates quadrilineatus</i>	800	invasive
<i>Sardinella aurita</i>	605	local
<i>Trachinotus ovatus</i>	451	local
<i>Alepes djedaba</i>	295	invasive
<i>Scomberomorus commerson</i>	293	invasive
<i>Pagrus coeruleostictus</i>	244	local
<i>Caranx rhonchus</i>	200	local
<i>Seriola dumerili</i>	194	local
<i>Sparus aurata</i>	175	local
<i>Siganus luridus</i>	156	invasive
<i>Sphyræna chrysotaenia</i>	152	invasive
<i>Euthynnus alletteratus</i>	151	local
<i>Atherinomorus lacunosus</i>	120	local
<i>Pempheris vanicolensis</i>	118	invasive
<i>Sphyræna viridensis</i>	111	local

<i>Diplodus vulgaris</i>	110	local
<i>Rhinobatos rhinobatos</i>	108	local
<i>Boops boops</i>	101	local
<i>Mullus barbatus</i>	100	local
<i>Scomber Japonicus</i>	100	local
<i>Hemiramphus far</i>	89	invasive
<i>Pseudocaranx dentex</i>	85	local
<i>Caranx crysos</i>	83	local
<i>Pomatomus saltator</i>	80	local
<i>Umbrina cirrosa</i>	76	local
<i>Sargocentron rubrum</i>	69	invasive
<i>Decapterus russelli</i>	59	invasive
<i>Epinephelus aeneus</i>	50	local
<i>Epinephelus marginatus</i>	45	local
<i>Diplodus cervinus</i>	43	local
<i>Lagocephalus sceleratus</i>	39	local
<i>Mycteroperca rubra</i>	37	local
<i>Dasyatis pastinaca</i>	29	local
<i>Pampheris vanicolensis</i>	24	invasive
<i>Epinephelus costae</i>	23	local
<i>Lichia amia</i>	21	local
<i>Sarda sarda</i>	20	local
<i>Trachurus mediterraneus</i>	20	local
<i>Echeneis naucrates</i>	19	local
<i>Solea solea</i>	16	local
<i>Auxis rochei</i>	15	local
<i>Diplodus puntazzo</i>	15	local
<i>Sciaena umbra</i>	15	local
<i>Balistes carolinensis</i>	14	local
<i>Dentex gibbosus</i>	12	local
<i>Pomadasys incisus</i>	12	local
<i>Lagocephalus spadiceus</i>	11	invasive
<i>Sarpa salpa</i>	9	local
<i>Saurida undosquamis</i>	8	invasive
<i>Sillago sihama</i>	8	invasive
<i>Argyrosomus regius</i>	6	local
<i>Alectis alaxandrinus</i>	4	local
<i>Fistularia commersonii</i>	4	invasive
<i>Platycephalus indicus</i>	4	invasive
<i>Sardinella maderensis</i>	4	local
<i>Symphodus tinca</i>	4	local
<i>Torepedo torpedo</i>	4	local
<i>Dentex dentex</i>	3	local
<i>Engraulis encrasicolus</i>	3	local
<i>Nemipterus randalli</i>	3	invasive
<i>Sparisoma cretense</i>	3	local

<i>Torpedo marmorata</i>	3	local
<i>Tylosurus acus</i>	6	local
<i>Dicentrarchus labrax</i>	2	local
<i>Mullus surmuletus</i>	2	local
<i>Pagellus erythrinus</i>	2	local
<i>Pagrus auriga</i>	2	local
<i>Upeneus moluccensis</i>	2	invasive
<i>Coryphaena hippurus</i>	1	local
<i>Dicentrarchus punctatus</i>	1	invasive
<i>Pagrus pagrus</i>	1	local
<i>Raja clavata</i>	1	local
<i>Rhinobatos cemiculus</i>	1	local
<i>Scorpaena porcus</i>	1	local
<i>Stephanolepis diaspros</i>	1	invasive
<i>Trachinus draco</i>	1	local
Total	14267	

Table S5. Summary of the GAM fitted for the number of fishers per km. The response variable was number of fishers/km and the predictors were the day of the week (weekend or weekday) and month, which were treated as fixed effects, and fishing site which was treated as a random effect.

Number of fishers model				
A. parametric coefficients	Estimate	Std. Error	t-value	p-value
Day in the week	0.6565	0.1192	5.506	<0.001
B. smooth terms	Edf	Ref.df	F-value	p-value
Month	3.792	10	28.27	<0.001
Site	31.818	42	163.68	<0.001
Deviance explained	48%			
N	274			

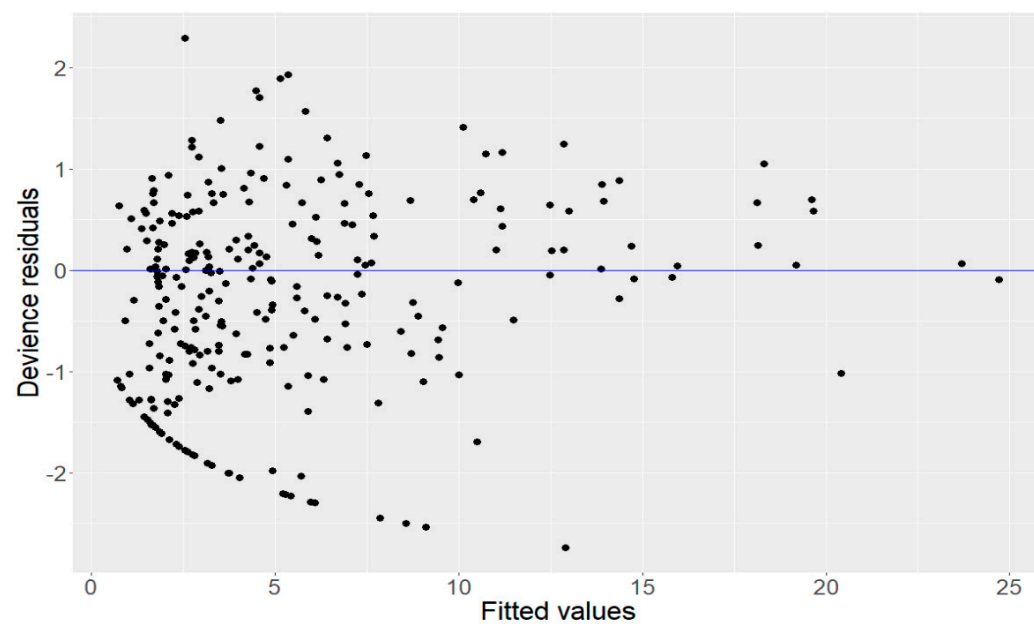


Figure S1. Number of fisher model: deviance vs. fitted values.

Table S6. Summary of the GAM fitted for the angling annual biomass. The response variable was biomass (kg) and the predictors were fishing duration (h), month, fisher experience (year), and fishing site that was treated as a random effect.

Biomass model				
A. parametric coefficients	Estimate	Std. Error	t-value	p-value
B. smooth terms	Edf	Ref.df	F-value	p-value
Fishing duration	6.294	7.750	17.932	<0.001
Month	3.429	10	3.529	<0.001
Fisher experience (years)	2.873	3.582	6.237	<0.001
Site	23.244	42	0.953	<0.001
Deviance explained	30.9%			
N	1034			

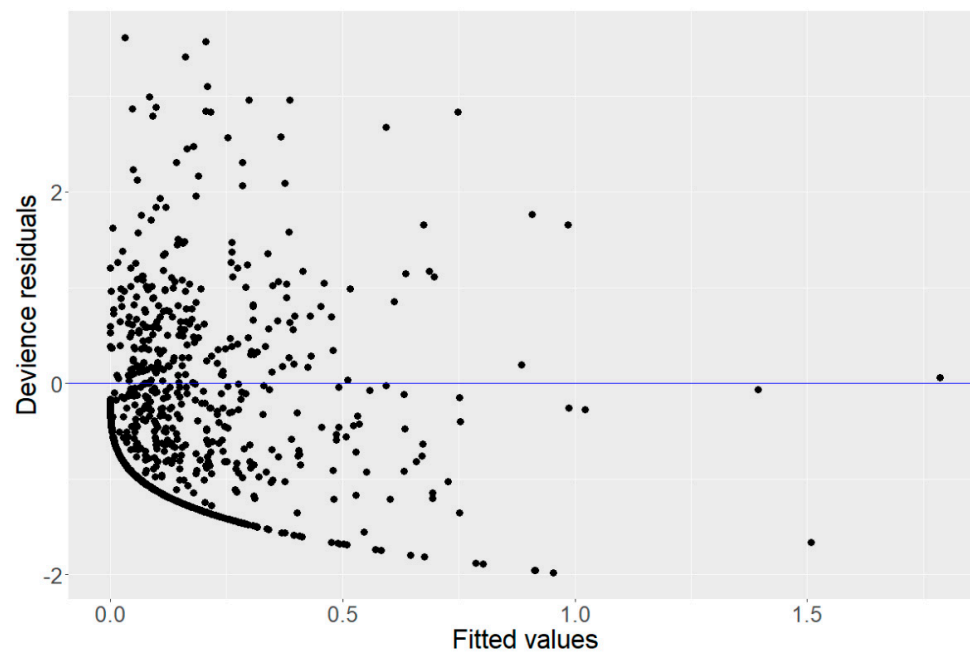


Figure S2. Biomass model: deviance vs. fitted values.

Table S7. Fisher model - AIC model selection results.

Fishermen model	df	AICc	delta	weight
<i>month + site + day of the week</i>	40	1440.857	0	2.33E-01
<i>month + weather condition + site + day of the week</i>	41	1440.883	0.0251457	2.30E-01
<i>fishing time + region + month + weather condition + site + day of the week</i>	44	1440.985	0.1279656	2.18E-01
<i>fishing time + month + weather condition + site + day of the week</i>	45	1442.19	1.3320652	1.20E-01
<i>fishing time + month + weather condition + site + day of the week</i>	45	1442.19	1.3320652	1.20E-01
<i>fishing time + month + site + day of the week</i>	44	1442.999	2.1411045	7.98E-02
<i>Region + month + day of the week + hot spot</i>	11	1463.725	22.8676594	2.52E-06
<i>fishing time + region + month + weather condition + day of the week</i>	15	1468.805	27.9477217	1.99E-07

Table S8. Biomass model - AIC model selection results.

Biomass model	df	AICc	ΔAICc	Weight
<i>fishing time + month + years fishing + interview time + site</i>	44	1039.79	0	7.03E-01
<i>fishing time + month + years fishing + region + interview time + site</i>	45	1041.518	1.7279	2.96E-01
<i>fishing time + month + years fishing + site</i>	40	1053.75	13.96	6.54E-04
<i>fishing time + month + years fishing + region + reserve + interview time</i>	24	1067.262	27.472	7.61E-07
<i>fishing time + month + years fishing + region + interview time</i>	24	1069.004	29.215	3.18E-07
<i>fishing time + month + years fishing + region + interview time + rod type + substrate + weather condition</i>	31	1070.395	30.606	1.59E-07
<i>fishing time + month + years fishing + region + reserve + weather condition</i>	22	1077.53	37.741	4.48E-09
<i>fishing time + month + years fishing + region</i>	20	1077.691	37.902	4.14E-09
<i>fishing time + month + years fishing</i>	17	1086.285	46.495	5.63E-11
<i>fishing time + month + years fishing + reserve</i>	18	1088.337	48.547	2.02E-11
<i>fishing time + month</i>	13	1116.14	76.351	1.85E-17
<i>fishing time + interview time + rod type + substrate + weather condition</i>	23	1127.861	88.071	5.28E-20
<i>fishing time</i>	9	1147.223	107.43	3.30E-24

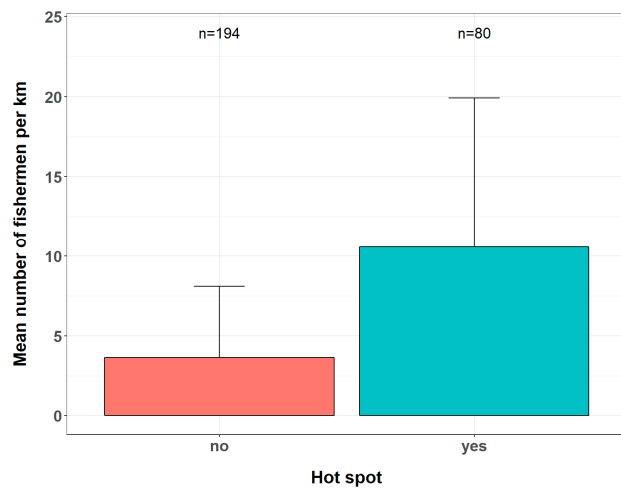


Figure S3. The mean number of fishers in a hotspot compared to a non-hotspot site. Error bars represent standard error.

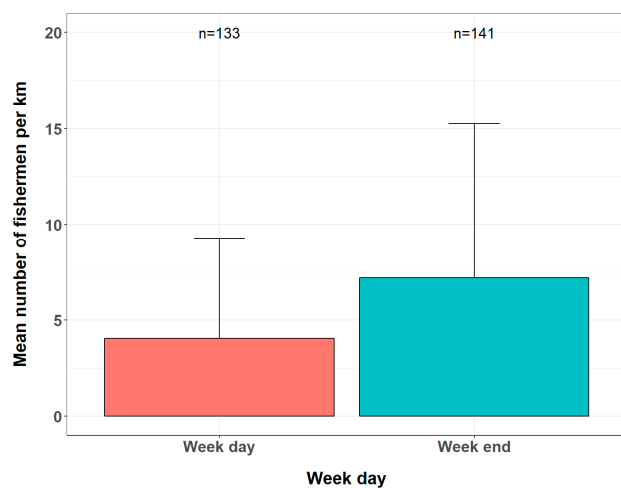


Figure S4. The mean number of fishers on a weekday and weekends. Error bars represent standard error.

Table S9. Species identity, abundance, and origin as documented in the phone surveys.

Species	Abundance	Origin
<i>Nemipterus randalli</i>	283	invasive
<i>Scomberomorus commerson</i>	70	invasive

<i>lagocephalus sceleratus</i>	67	local
<i>Pagellus erythrinus</i>	65	local
<i>Diplodus sargus</i>	62	local
<i>Pagrus coeruleostictus</i>	57	local
<i>Dentex gibbosus</i>	51	local
<i>Spicara smaris</i>	40	local
<i>Mugilidae</i>	34	local
<i>Seriola dumerili</i>	29	local
<i>Mycteroperca rubra</i>	28	local
<i>Serranus scriba</i>	25	local
<i>Euthynnus alletteratus</i>	21	local
<i>Coryphaena hippurus</i>	18	local
<i>Epinephelus marginatus</i>	17	local
<i>Epinephelus aeneus</i>	15	local
<i>Thunnus alalunga</i>	12	local
<i>Sargocentron rubrum</i>	11	invasive
<i>Alepes djedaba</i>	10	invasive
<i>Caranx crysos</i>	10	local
<i>Diplodus cervinus</i>	10	local
<i>Epinephelus costae</i>	8	local
<i>Scomber japonicus</i>	8	local
<i>Balistes carolinensis</i>	7	local
<i>Trachurus mediterraneus</i>	7	local
<i>Sparus aurata</i>	5	local
<i>Trachinotus ovatus</i>	5	local
<i>Pomatomus saltator</i>	4	local
<i>Siganus rivulatus</i>	4	invasive
<i>Rhinobatos rhinobatos</i>	3	local
<i>Schedophilus ovalis</i>	3	local
<i>Argyrosomus regius</i>	2	local
<i>Merluccius merluccius</i>	2	local
<i>Sarda sarda</i>	2	local
<i>Dicentrarchus labrax</i>	1	local
<i>Diplodus vulgaris</i>	1	local
<i>Lithognathus mormyrus</i>	1	local
<i>Naucrates ductor</i>	1	local
<i>Saurida undosquamis</i>	1	invasive
Grand Total	1010	

Table S10. Species identity, biomass, and origin as documented in the phone surveys.

species	Biomass (kg)	Origin
<i>Lagocephalus sceleratus</i>	147.48	invasive
<i>Scomberomorus commerson</i>	136.65	invasive
<i>Seriola dumerili</i>	130.35	local
<i>Thunnus alalunga</i>	103.50	local

<i>Euthynnus alletteratus</i>	47.44	local
<i>Mycteroperca rubra</i>	43.75	local
<i>Epinephelus marginatus</i>	27.25	local
<i>Pagrus coeruleostictus</i>	25.07	local
<i>Mugilidae</i>	24.12	local
<i>Nemipterus randalli</i>	20.63	invasive
<i>Epinephelus aeneus</i>	19.64	local
<i>Coryphaena hippurus</i>	19.00	local
<i>Diplodus sargus</i>	13.52	local
<i>Pagellus erythrinus</i>	12.12	local
<i>Dentex gibbosus</i>	10.35	local
<i>Epinephelus costae</i>	8.85	local
<i>Caranx crysos</i>	7.15	local
<i>Argyrosomus regius</i>	7.00	local
<i>Balistes carolinensis</i>	6.20	local
<i>Rhinobatos rhinobatos</i>	6.06	local
<i>Diplodus cervinus</i>	5.25	local
<i>Serranus scriba</i>	5.00	local
<i>Trachurus mediterraneus</i>	4.73	local
<i>Sarda sarda</i>	2.14	local
<i>Sparus aurata</i>	1.90	local
<i>Schedophilus ovalis</i>	1.55	local
<i>Trachinotus ovatus</i>	1.50	local
<i>Sargocentron rubrum</i>	1.24	invasive
<i>Dicentrarchus labrax</i>	1.20	local
<i>Scomber japonicus</i>	1.05	local
<i>Loligo vulgaris</i>	0.86	local
<i>Spicara smaris</i>	0.81	local
<i>Naucrates ductor</i>	0.75	local
<i>Pomatomus saltator</i>	0.62	local
<i>Alepes djedaba</i>	0.42	invasive
<i>Sepia officinalis</i>	0.40	local
<i>Siganus rivulatus</i>	0.40	local
<i>Merluccius merluccius</i>	0.25	local
<i>Lithognathus mormyrus</i>	0.11	local
<i>Diplodus vulgaris</i>	0.06	local
<i>Saurida undosquamis</i>	0.00	invasive
Total	846.39	

Table S11. The common species among recreational and commercial methods.

Species	Recreational angling from the coast	Set nets & long-lines	Trawl	Fishing at sea
<i>Alepes djedaba</i>	v	v	v	v
<i>Boops boops</i>	v	v	v	v
<i>Caranx crysos</i>	v	v	v	v
<i>Dentex gibbosus</i>		v	v	v
<i>Diplodus sargus</i>	v	v	v	v
<i>Diplodus vulgaris</i>	v	v	v	v
<i>Echeneis naucrates</i>	v	v	v	v
<i>Epinephelus aeneus</i>	v	v	v	v
<i>Lagocephalus sceleratus</i>	v	v	v	v
<i>Lithognathus mormyrus</i>	v	v	v	v
<i>Mycteroperca rubra</i>		v	v	v
<i>Nemipterus randalli</i>		v	v	v
<i>Pagellus erythrinus</i>		v	v	v
<i>Pagrus coeruleostictus</i>		v	v	v
<i>Pomadasys incisus</i>	v	v	v	v
<i>Rhinobatos rhinobatos</i>		v	v	v
<i>Sargocentron rubrum</i>	v	v	v	v
<i>Scomberomorus commerson</i>	v	v	v	v
<i>Seriola dumerili</i>		v	v	v
<i>Siganus luridus</i>	v	v	v	v
<i>Siganus rivulatus</i>	v	v	v	v
<i>Sparus aurata</i>	v	v	v	v
<i>Trachurus mediterraneus</i>		v	v	v

Table S12. Annual biomass estimates in tons for the species caught in recreational angling from the coast compared to the commercial set nets and long lines and the trawl industry. Only the species common for all methods are shown.

Species	Angling from the coast	Sent nets & long line	Trawl
<i>Alepes djedaba</i>	0.044	0.782	0.857
<i>Boops boops</i>	0.224	0.453	41.311
<i>Caranx crysos</i>	10.668	1.421	5.581
<i>Diplodus sargus</i>	30.676	95.334	2.214
<i>Diplodus vulgaris</i>	2.436	0.901	0.619
<i>Echeneis naucrates</i>	0.096	0.139	0.670
<i>Epinephelus aeneus</i>	0.423	2.939	2.510
<i>Lagocephalus sceleratus</i>	9.666	1.239	56.745
<i>Lithognathus mormyrus</i>	8.996	73.026	4.965
<i>Platycephalus indicus</i>	0.026	0.021	0.600
<i>Pomadasys incisus</i>	0.086	0.020	1.278
<i>Sargocentron rubrum</i>	0.070	0.606	0.175
<i>Saurida undosquamis</i>	0.007	0.010	122.455
<i>Scomberomorus commerson</i>	0.822	34.996	25.356
<i>Siganus luridus</i>	0.243	1.284	0.185
<i>Siganus rivulatus</i>	31.920	104.273	3.174
<i>Sparus aurata</i>	9.075	2.785	3.234

Table S13. Annual abundance estimates for the species caught in recreational angling from the coast compared to the commercial set nets and long lines and the trawl industry Only the species common for all methods are shown.

Species	Angling from the coast	Sent nets & long line	Trawl
<i>Alepes djedaba</i>	2791	5170	14490
<i>Boops boops</i>	11769	7593	1668514
<i>Caranx crysos</i>	30737	4200	53978
<i>Diplodus sargus</i>	500654	1072503	36875
<i>Diplodus vulgaris</i>	42880	12264	13128
<i>Echeneis naucrates</i>	1326	198	3996
<i>Epinephelus aeneus</i>	1331	1464	649
<i>Lagocephalus sceleratus</i>	9546	970	125637
<i>Lithognathus mormyrus</i>	232767	991999	55732
<i>Platycephalus indicus</i>	3915	37	446
<i>Pomadasys incisus</i>	3799	125	13664
<i>Sargocentron rubrum</i>	1318	5540	2442
<i>Saurida undosquamis</i>	5004	70	1529038
<i>Scomberomorus commerson</i>	7956	17696	59936
<i>Siganus luridus</i>	13346	13483	3879
<i>Siganus rivulatus</i>	1837150	1821392	83838
<i>Sparus aurata</i>	54868	18412	33169

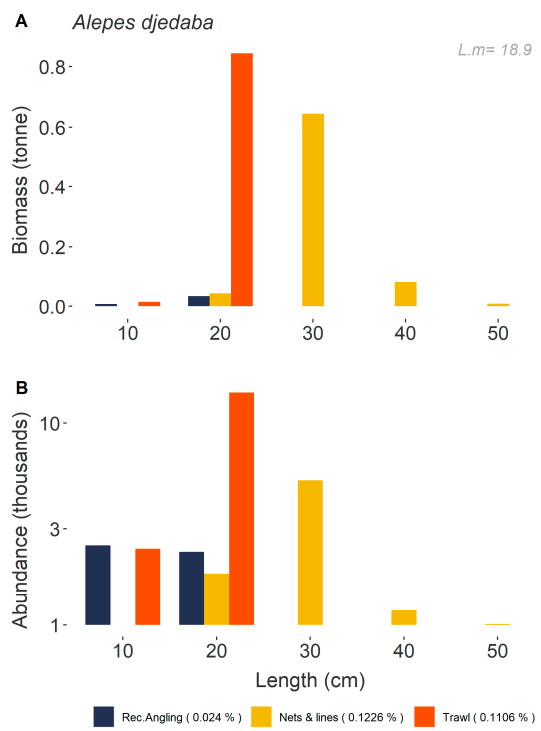
Table S14. Annual biomass estimates for the species caught in recreational fishing at sea compared to the commercial set nets and long lines and the trawl industry. Only the species common for all methods are shown.

Species	Recreational fishing at sea	Sent nets & long line	Trawl
<i>Alepes djedaba</i>	0.110	0.782	0.855
<i>Caranx crysos</i>	1.863	1.421	5.563
<i>Dentex gibbosus</i>	2.696	0.043	0.074
<i>Diplodus sargus</i>	3.523	95.334	2.206
<i>Diplodus vulgaris</i>	0.015	0.901	0.617
<i>Epinephelus aeneus</i>	5.118	2.939	2.502
<i>Lagocephalus sceleratus</i>	38.430	1.239	56.560
<i>Lithognathus mormyrus</i>	0.030	73.026	4.948
<i>Mycteroperca rubra</i>	11.400	0.456	0.361
<i>Nemipterus randalli</i>	5.377	0.001	218.087
<i>Pagellus erythrinus</i>	3.158	0.001	25.124
<i>Pagrus coeruleostictus</i>	6.533	9.902	11.592
<i>Rhinobatos rhinobatos</i>	1.580	7.807	10.694
<i>Sargocentron rubrum</i>	0.323	0.606	0.175
<i>Scomberomorus commerson</i>	35.607	34.996	25.274
<i>Seriola dumerili</i>	33.966	20.556	9.412
<i>Siganus rivulatus</i>	0.104	104.273	3.164
<i>Sparus aurata</i>	0.495	2.785	3.223
<i>Trachurus mediterraneus</i>	1.234	0.034	2.742

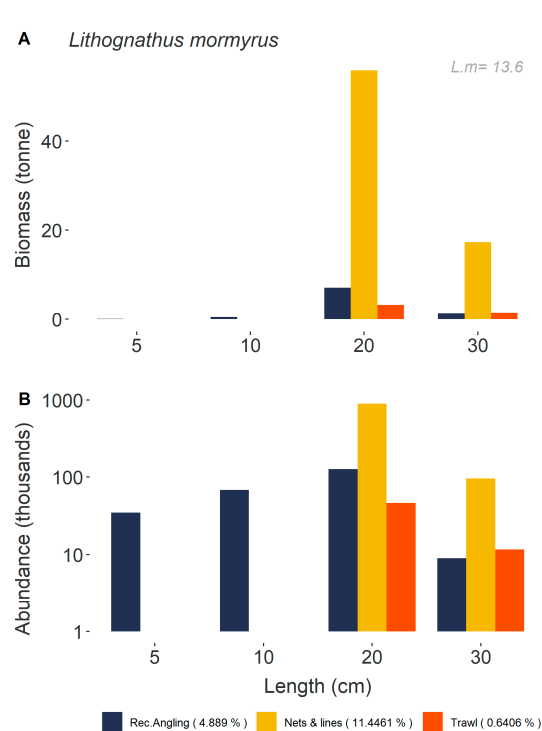
Table S15. Annual abundance estimates for the species caught in fishing at sea compared to the commercial set nets and long lines and the trawl industry. Only the species common to all methods are shown.

Species	Recreational fishing at sea	Sent nets & long line	Trawl
<i>Alepes djedaba</i>	2605	5170	14454
<i>Caranx crysos</i>	2606	4200	53817
<i>Dentex gibbosus</i>	13290	196	398
<i>Diplodus sargus</i>	14134	1072503	36749
<i>Diplodus vulgaris</i>	262	12264	13079
<i>Epinephelus aeneus</i>	2867	1464	647
<i>Lagocephalus sceleratus</i>	17734	970	125250
<i>Lithognathus mormyrus</i>	260	991999	55550
<i>Mycteroperca rubra</i>	6039	479	486
<i>Nemipterus randalli</i>	57757	13	5593839
<i>Pagellus erythrinus</i>	16365	18	1317567
<i>Pagrus coeruleostictus</i>	14397	20876	85005
<i>Rhinobatos rhinobatos</i>	782	1911	46183
<i>Sargocentron rubrum</i>	2566	5540	2442
<i>Scomberomorus commerson</i>	18433	17696	59745
<i>Seriola dumerili</i>	7573	12702	17907
<i>Siganus rivulatus</i>	1043	1821392	83582

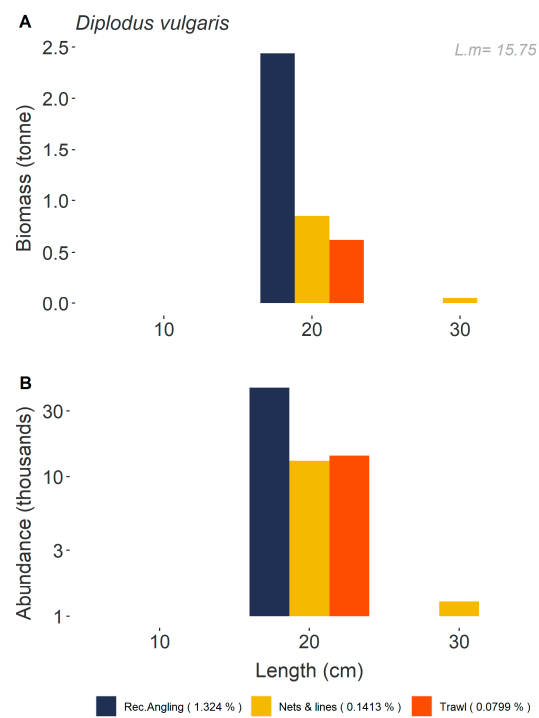
<i>Sparus aurata</i>	1302	18412	33055
<i>Trachurus mediterraneus</i>	1829	248	57947



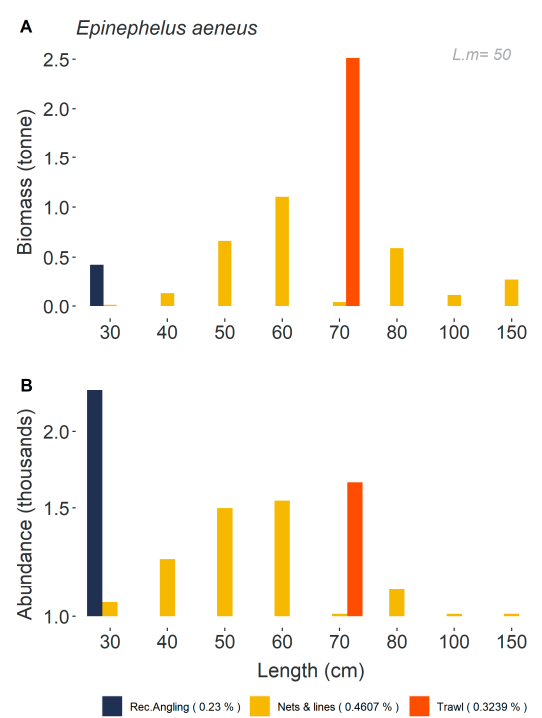
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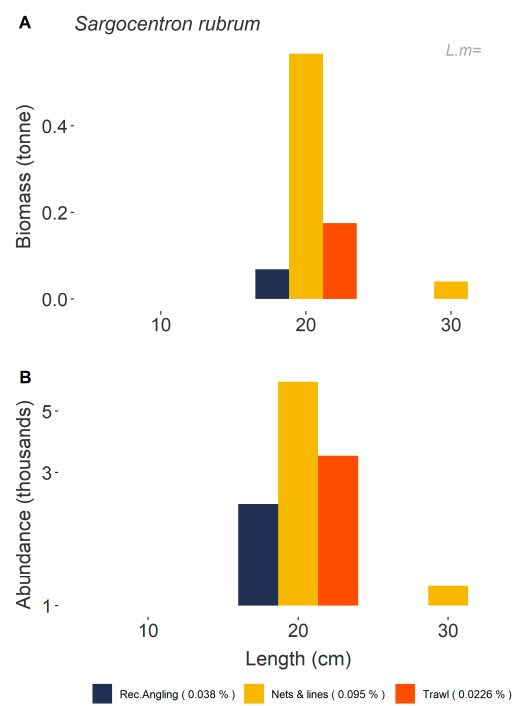
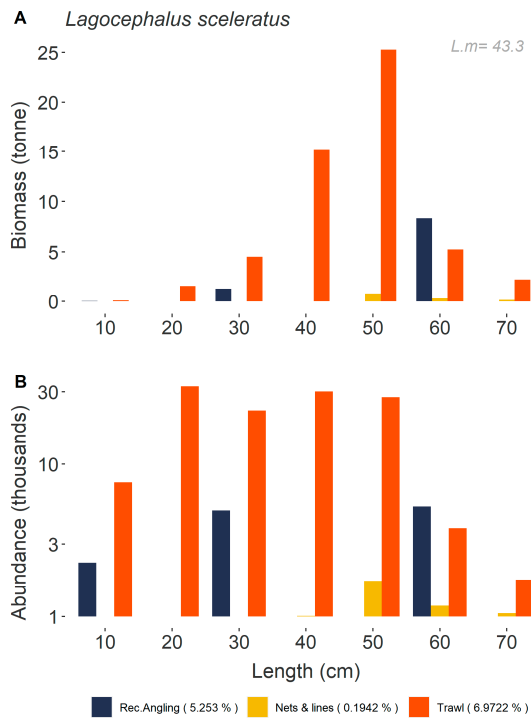
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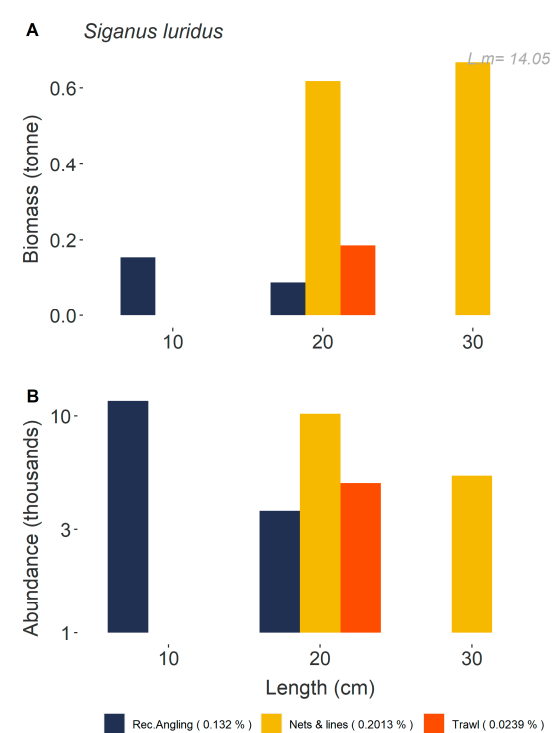
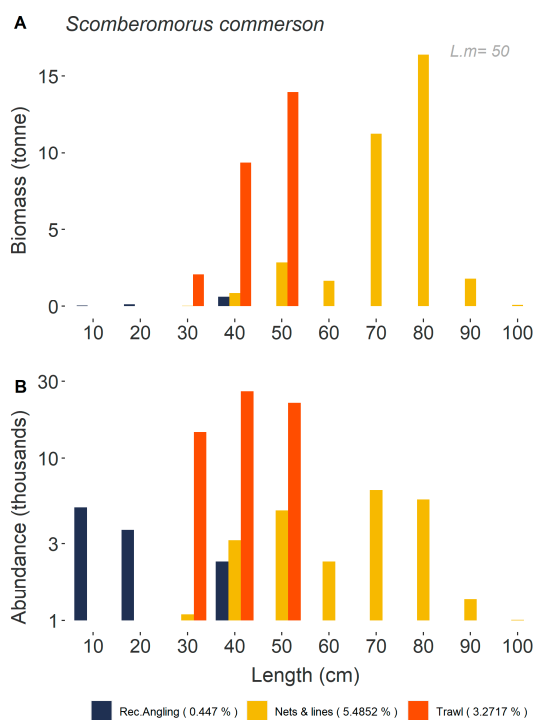


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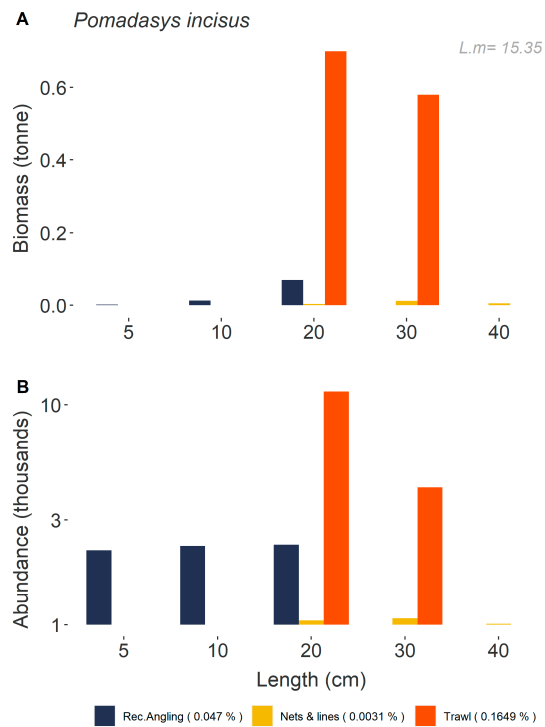
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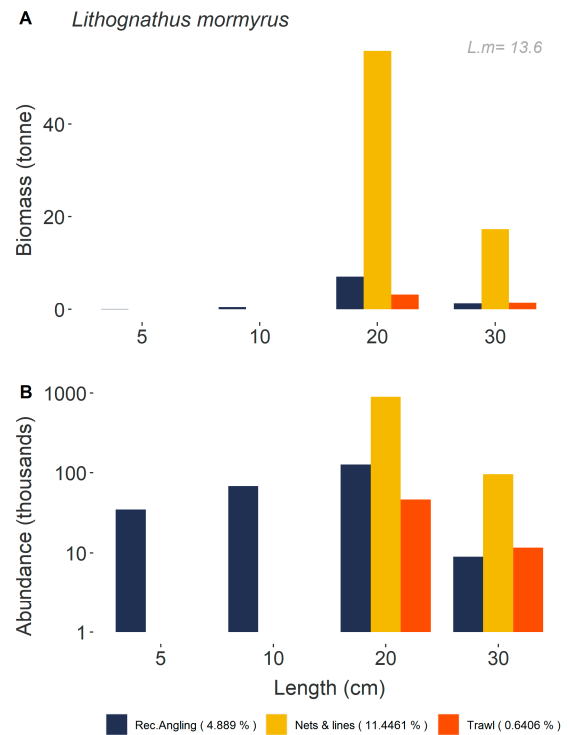


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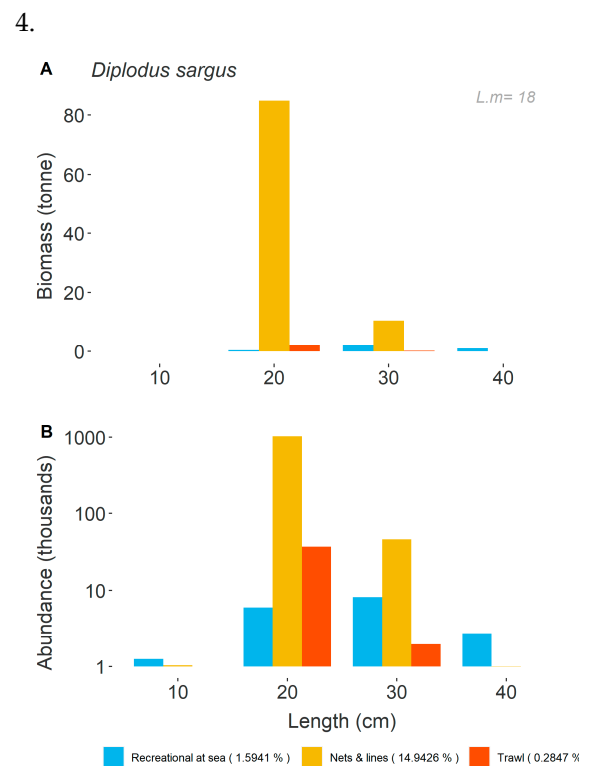
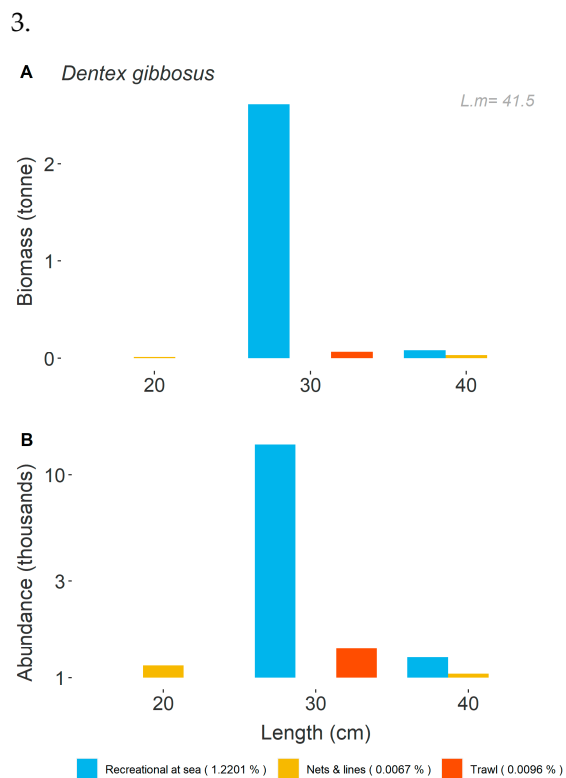
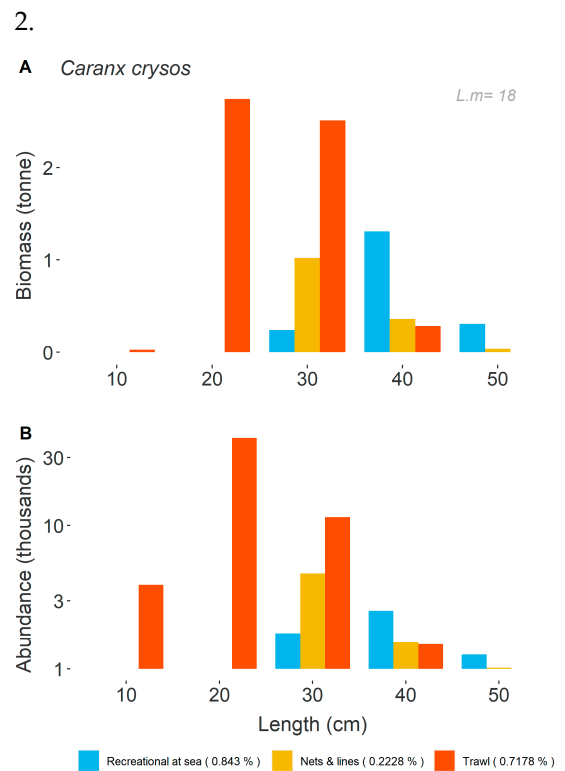
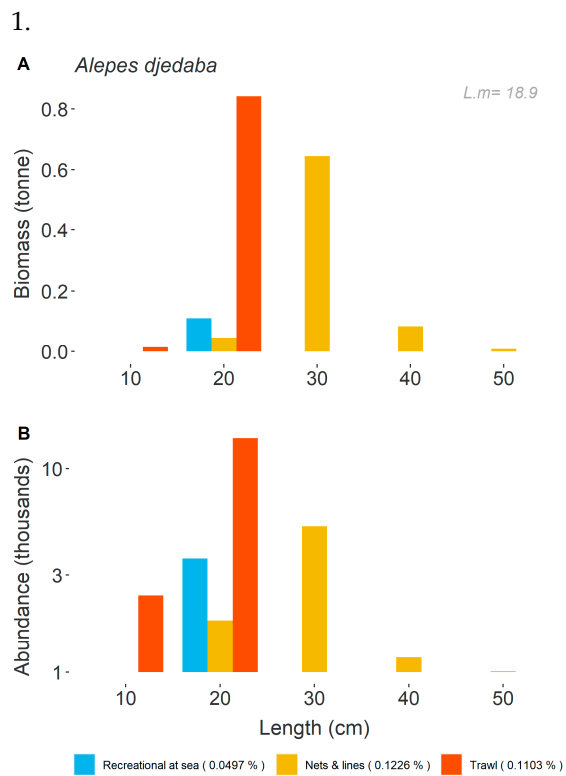


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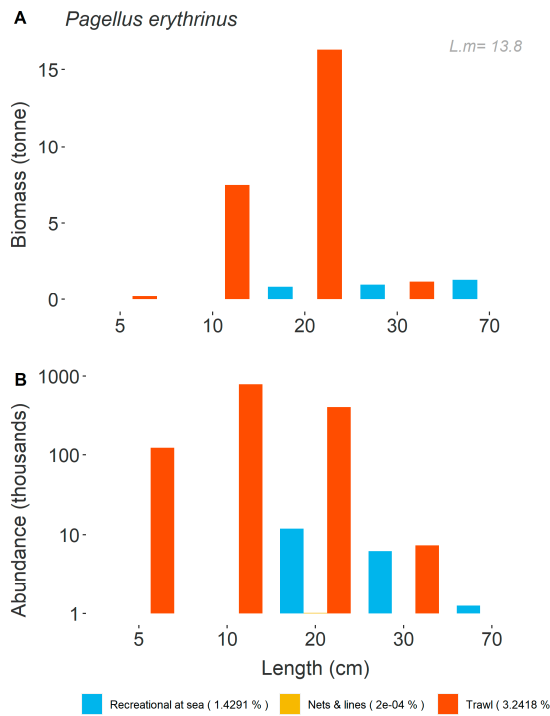


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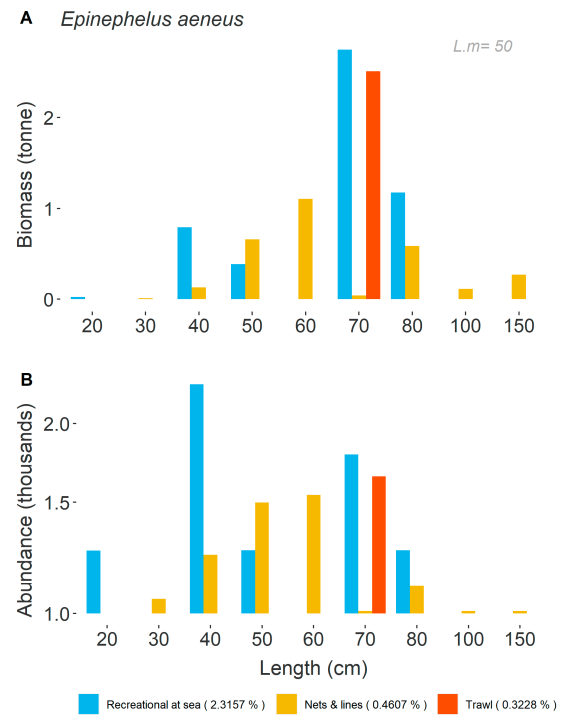
Figure S5. Common species of recreational angling from the cost (blue), nets and long-lines (yellow), and trawl fishing (orange). Figures are divided to **(A)** biomass and **(B)** abundance for each individual species. Species were divided by length into size bins represented in the X axis. Length at first maturity (cm) of the species appears at the right upper corner of the figure ($L.m$). The bottom key shows the proportion each species represents from the total catch of the method (in %).



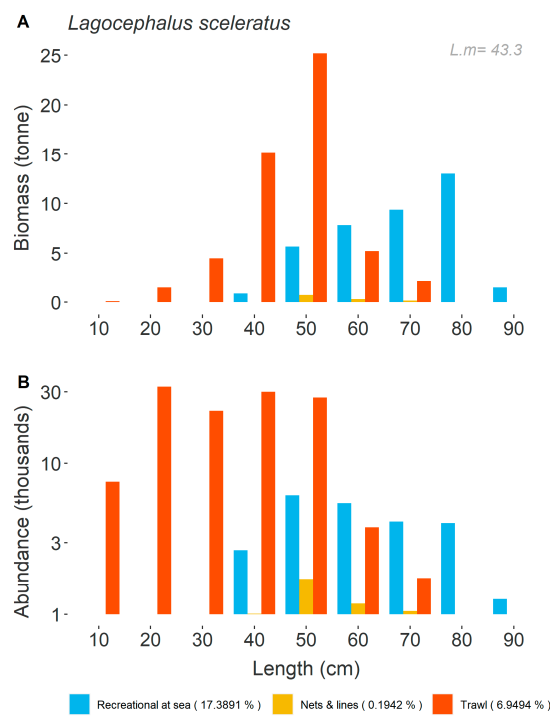
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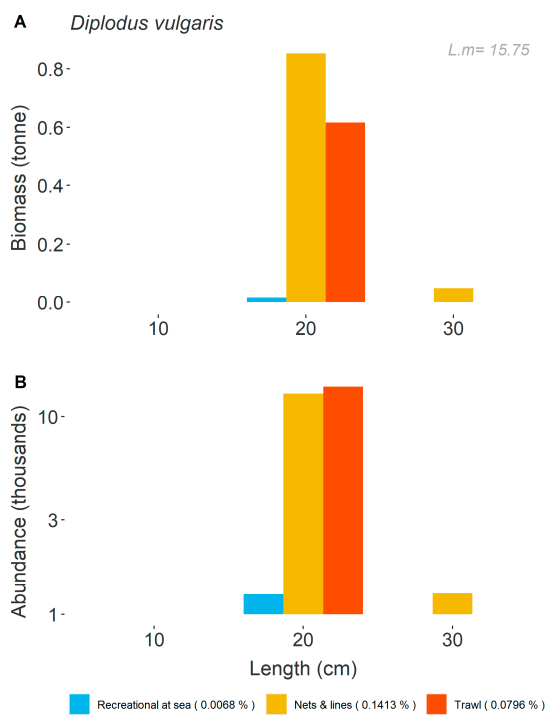
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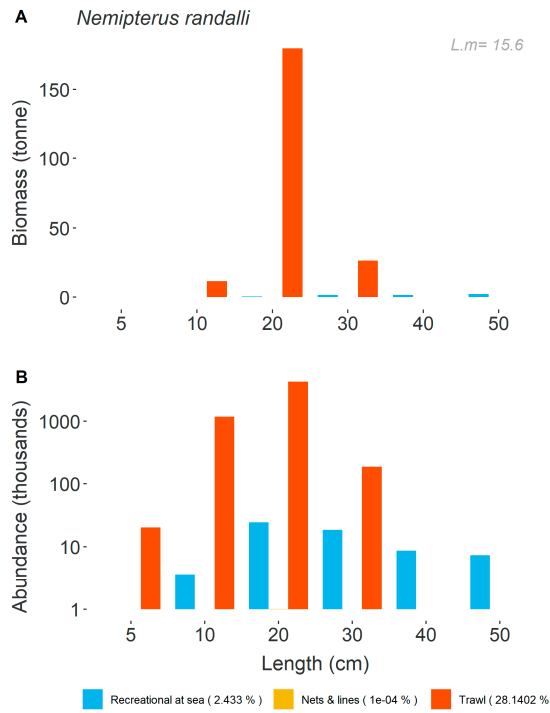
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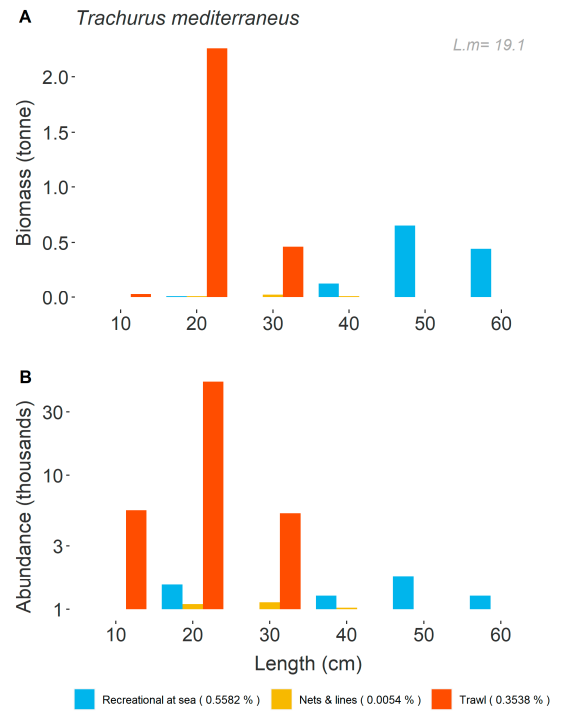
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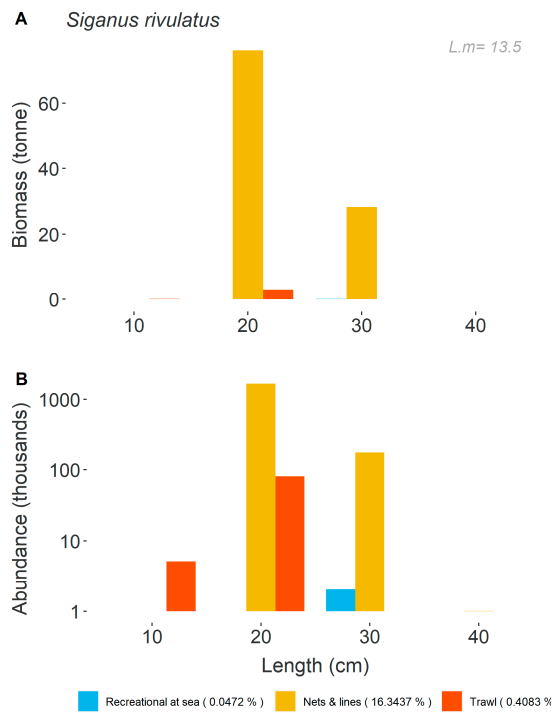
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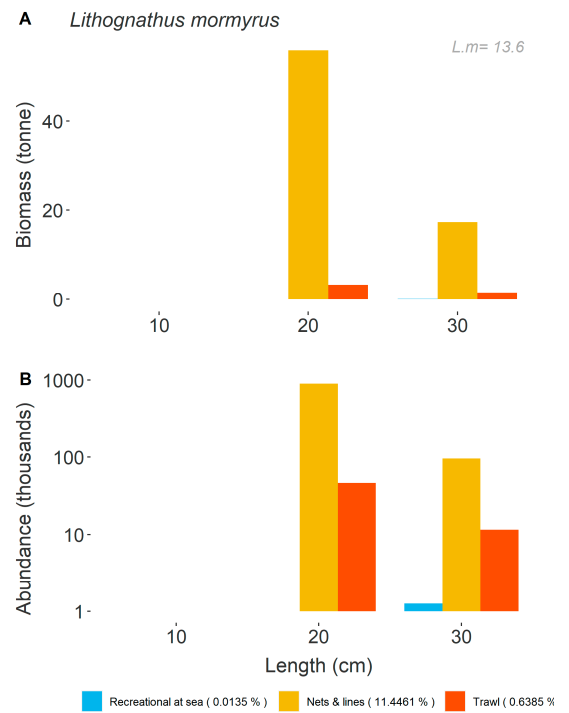
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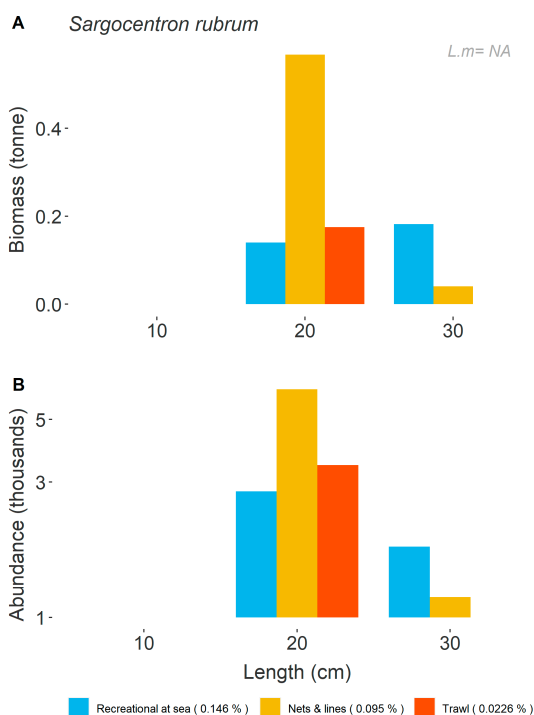
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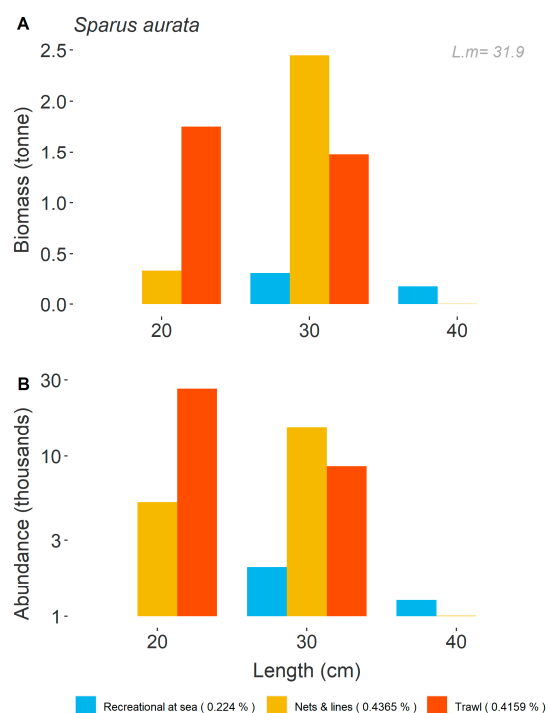
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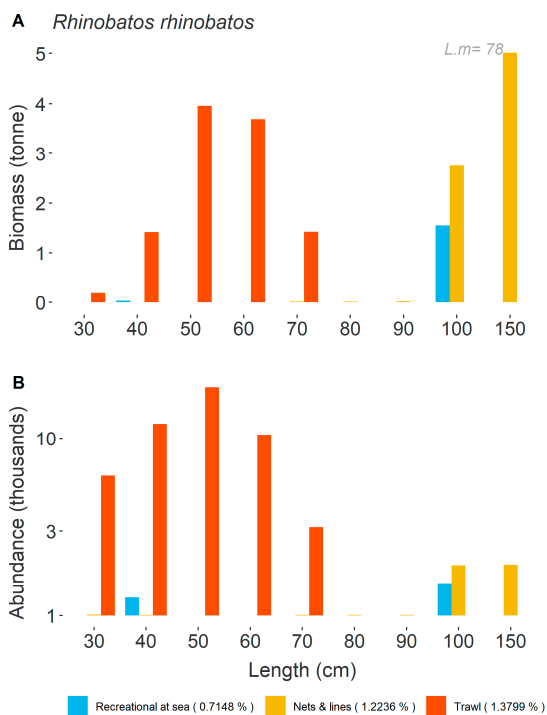


Figure S6. Common species of recreational fishing at sea (blue), nets and long-lines (yellow), and trawl fishing (orange). Figures are divided to **(A)** biomass and **(B)** abundance for each individual species. Species were divided by length into size bins

represented in the X axis. Length at first maturity (cm) of the species appears at the right upper corner of the figure (*L.m*). The bottom key shows the proportion each species represents from the total catch of the method (in %).

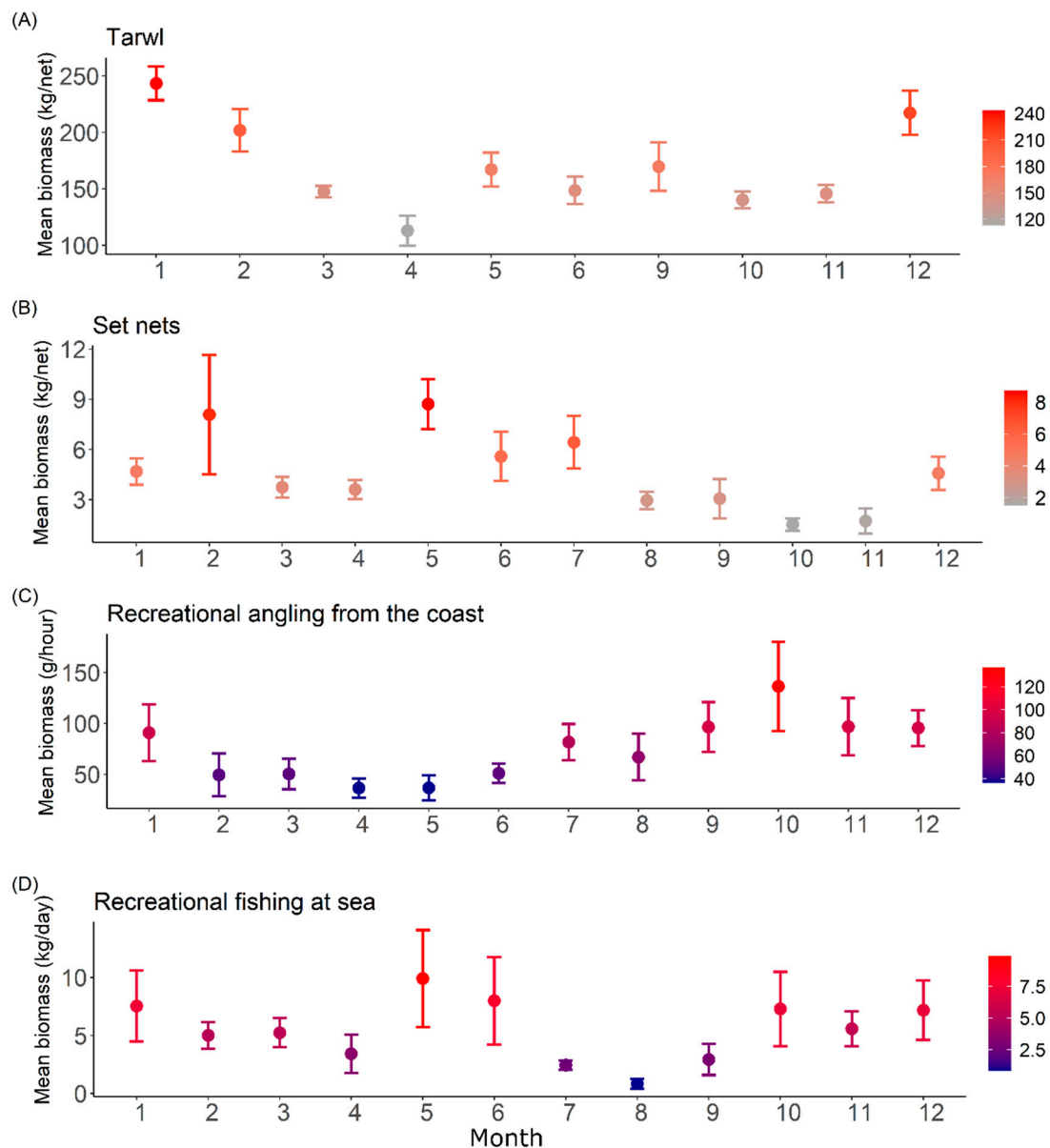


Figure S7. Mean catch biomass per day across months for (A) trawling (B) set nets and long-lines (C) recreational angling from the coast (D) recreational fishing at sea. Error bars represent standard error. We find that the biomass in all fishing methods reaches high values in winter (December-February). The recreational methods (angling from the coast and fishing at sea) both peak in fall (October-November). Recreational fishing at sea peak in the end of spring beginning of summer (May-June) is compatible with a peak in the set nets fishery at the same time.