

Supplementary data for the article:

Milićević, T.; Romanić, S. H.; Popović, A.; Mustać, B.; Đinović-Stojanović, J.; Jovanović, G.; Relić, D. Human Health Risks and Benefits Assessment Based on OCPs, PCBs, Toxic Elements and Fatty Acids in the Pelagic Fish Species from the Adriatic Sea. *Chemosphere* **2022**, 287, 132068. <https://doi.org/10.1016/j.chemosphere.2021.132068>.

## Supplementary material

Table S1 The fish samples, total fat (g), and marking for statistical analysis

Fish	Species	Sample number-Sampling year	Total fat (g)	No. for statistical observation
<b>HORSE MACKEREL</b>	<i>Trachurus trachurus</i>	HM1-14	0.02	1
		HM2-14	0.04	2
		HM3-14	0.03	3
		HM4-14	0.00	4
		HM5-15	0.11	5
		HM6-15	0.05	6
		HM7-15	0.00	7
		HM8-15	0.14	8
		HM9-15	0.02	9
		HM10-16	0.05	10
		HM11-16	0.01	11
		HM12-16	0.05	12
		HM13-16	0.05	13
		HM14-16	0.05	14
		HM15-16	0.01	15
<b>SARDINE</b>	<i>Sardina pilchardus</i>	S1-14	0.24	16
		S3-14	0.24	17
		S4-14	0.04	18
		S5-14	0.14	19
		S7-14	0.10	20
		S8-14	0.09	21
		S9-14	0.01	22
		S10-15	0.09	23
		S11-15	0.22	24
		S12-15	0.14	25
		S13-15	0.22	26
		S14-15	0.17	27
		S16-15	0.46	28
		S17-15	0.35	29
		S18-15	0.04	30
		S19-15	0.09	31
		S20-15	0.28	32
		S21-15	0.34	33
		S22-15	0.05	34
		S24-15	0.01	35
		S25-15	0.00	36
		S26-16	0.12	37
		S27-16	0.25	38
		S28-16	0.13	39
		S29-16	0.13	40
		S30-16	0.13	41
		S31-16	0.05	42
		S32-16	0.06	43
		S33-16	0.30	44
		S34-16	0.09	45
		S35-16	0.13	46
		S36-16	0.15	47
		S37-16	0.18	48
		S38-16	0.13	49
		S39-16	0.05	50
S40-16	0.06	51		
S42-16	0.01	52		
S43-16	0.08	53		
S44-16	0.05	54		
S45-16	0.13	55		
S46-16	0.19	56		
S47-16	0.11	57		
S48-16	0.12	58		
S50-16	0.11	59		

<b>ROUND SARDINELL A</b>	<i>Sardinella aurita</i>	S2-14	0.16	60
		S6-14	0.02	61
		S13-15	0.03	62
		S15-15	0.03	63
		S23-15	0.01	64
		S41-16	0.01	65
		S49-16	0.03	66
		A1-14	0.01	67
		A2-14	0.01	68
		A3-14	0.00	69
		A4-14	0.01	70
		A5-14	0.00	71
		A6-14	0.00	72
		A7-15	0.01	73
<b>ANCHOVY</b>	<i>Engraulis encrasicolus</i>	A8-15	0.00	74
		A9-15	0.00	75
		A10-15	0.02	76
		A11-15	0.01	77
		A12-15	0.01	78
		A13-16	0.01	79
		A14-16	0.03	80
		A15-16	0.00	81
		A16-16	0.00	82
		A17-16	0.08	83
		A18-16	0.02	84
		A19-16	0.01	85
		A20-16	0.01	86
		A21-16	0.01	87
<b>CHUB MACKEREL</b>	<i>Scomber japonicus</i>	A22-16	0.00	88
		A23-16	0.02	89
		A24-16	0.02	90
		CM1-14	0.01	91
		CM 2-14	0.04	92
		CM 3-14	0.01	93
		CM 4-14	0.04	94
		CM 5-15	0.03	95
		CM 6-15	0.04	96
		CM 7-15	0.01	97
		CM 8-15	0.05	98
		CM 9-15	0.02	99
		CM 10-15	0.03	100
		CM 11-15	0.02	101
CM 12-16	0.17	102		
<b>GARFISH</b>	<i>Belone belone</i>	CM 13-16	0.02	103
		CM 14-16	0.02	104
		CM 15-16	0.00	105
		NF1-15	0.10	106
		NF2-16	0.04	107

Table S2 The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of concentrations of OCPs (ng/kg), PCBs (ng/kg) and elements (mg/kg); and parameters of fishes length (cm), weight (g) and total fat (g)

	HORSE MACKEREL (n=15)		SARDINE (n=44)		ROUND SARDINELLA (n=7)		ANCHOVY (N=24)		CHUB MACKEREL (n=15)		GAREFISH (n=2)
	M	SD	M	SD	M	SD	M	SD	M	SD	M
Lenght (cm)	18.9	2.2	14.3	0.74	23.8	0.87	13.9	0.54	22.7	5.0	29.3
Weight (g)	54.9	18.3	21.6	4.12	100.7	7.28	17.6	2.7	93.9	72.2	24.6
Total fat (g)	0.045	0.039	0.126	0.100	0.025	0.061	0.009	0.017	0.024	0.040	0.071
α-HCH	0.005	0.006	0.032	0.023	0.005	0.011	0.010	0.008	0.005	0.007	0.005
β-HCH	0.020	0.015	0.073	0.041	0.014	0.016	0.020	0.024	0.022	0.016	0.029
γ-HCH	0.011	0.010	0.062	0.056	0.014	0.016	0.016	0.005	0.015	0.009	0.047
HCB	0.005	0.011	0.072	0.050	0.005	0.019	0.012	0.011	0.012	0.008	0.018
p,p'-DDE	0.094	0.130	0.660	0.602	0.051	0.102	0.061	0.087	0.075	0.091	0.554421
p,p'-DDD	0.014	0.017	0.104	0.346	0.015	0.010	0.005	0.007	0.018	0.014	0.034
p,p'-DDT	0.023	0.029	0.124	0.100	0.027	0.014	0.022	0.017	0.029	0.036	0.170
PCB-28	0.126	0.089	0.210	0.239	0.074	0.078	0.073	0.069	0.049	0.089	0.202
PCB-52	0.029	0.069	0.093	0.326	0.025	0.035	0.029	0.146	0.046	0.103	0.186
PCB-101	0.022	0.052	0.094	0.073	0.014	0.012	0.014	0.027	0.029	0.068	0.127
PCB-138	0.152	0.176	0.692	0.519	0.148	0.071	0.090	0.129	0.128	0.129	0.746
PCB-153	0.341	0.319	1.246	0.859	0.277	0.141	0.174	0.234	0.220	0.272	1.647
PCB-180	0.054	0.071	0.419	0.512	0.047	0.020	0.032	0.049	0.058	0.032	0.328
PCB-105	0.022	0.015	0.099	0.170	0.023	0.042	0.017	0.014	0.026	0.027	0.067
PCB-114	0.005	0.003	0.044	0.248	0.005	0.004	0.005	0.004	0.005	0.004	0.015
PCB-118	0.048	0.041	0.183	0.139	0.035	0.032	0.033	0.038	0.033	0.052	0.174
PCB-123	0.033	0.035	0.160	0.233	0.034	0.023	0.024	0.026	0.038	0.022	0.108
PCB-156	0.019	0.013	0.076	0.078	0.023	0.012	0.016	0.011	0.029	0.015	0.078
PCB-157	0.019	0.036	0.070	0.067	0.026	0.016	0.018	0.022	0.025	0.022	0.140
PCB-167	0.022	0.021	0.092	0.079	0.019	0.009	0.015	0.015	0.031	0.049	0.068
PCB-189	0.017	0.014	0.048	0.038	0.021	0.009	0.012	0.008	0.020	0.035	0.037
PCB-60	0.017	0.034	0.072	0.061	0.027	0.014	0.031	0.015	0.030	0.022	0.057
PCB-74	0.027	0.021	0.131	0.225	0.024	0.016	0.024	0.016	0.025	0.030	0.097
PCB-170	0.045	0.035	0.181	0.156	0.044	0.023	0.032	0.045	0.054	0.030	0.182
Na	1794	530	1787	544	1158	625	2030	663	1133	514	1767
Mg	609	86	648	73	580	92	672	94	584	82	680.
K	7162	1311	7972	1129	7906	833	7049	954	8009	812	6784
Ca	941	835	1691	909	1556	855	1450	758	687	269	1964
Cr	0.034	0.017	0.040	0.037	0.017	0.015	0.020	0.012	0.013	0.024	0.025
Mn	0.172	0.072	0.654	0.279	0.534	0.207	0.590	0.294	0.153	0.049	0.53
Fe	12.020	4.792	20.420	3.696	16.859	3.353	19.920	5.554	13.730	4.351	18.24
Co	0.011	0.005	0.013	0.003	0.012	0.004	0.016	0.009	0.010	0.003	0.014
Ni	0.025	0.000	0.025	0.000	0.025	0.000	0.025	0.000	0.025	0.000	0.025
Cu	0.915	0.449	1.562	0.282	1.205	0.341	1.992	0.487	1.309	0.327	1.525
Zn	14.500	4.639	25.045	4.506	16.210	6.780	25.120	4.983	11.710	3.368	25.17
As	4.212	4.293	6.507	1.958	7.871	2.572	5.800	2.830	3.381	1.590	5.489
Se	0.687	0.271	0.786	0.198	0.874	0.108	0.481	0.100	0.690	0.305	0.403
Cd	0.005	0.004	0.009	0.004	0.004	0.007	0.017	0.009	0.009	0.005	0.015
Hg	0.056	0.047	0.034	0.029	0.055	0.037	0.030	0.027	0.016	0.054	0.024
Pb	0.007	0.006	0.012	0.008	0.001	0.014	0.005	0.005	0.004	0.006	0.007

Table S3 The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of fatty acids (mg/g)

		HORSE MACKEREL (n=15)		SARDINE (n=44)		ROUND SARDINELLA (n=7)		ANCHOVY (N=24)		CHUB MACKEREL (n=15)		GARFISH (n=2)
		M	SD	M	SD	M	SD	M	SD	M	SD	M
Myristic	C14:0	3.36	1.39	7.73	3.14	5.08	3.24	3.63	2.06	4.13	2.28	6.30
Pentadecylic	C15:0	0.83	0.20	1.21	0.32	1.30	0.45	0.99	0.40	1.23	0.38	1.43
Palmitic	C16:0	32.38	5.37	36.76	5.31	36.52	6.74	41.03	6.62	29.49	5.44	43.04
Palmitoleic	C16:1	4.22	1.42	3.56	1.83	2.53	1.93	2.08	1.13	2.10	0.52	2.52
Margaric	C17:0	1.35	0.45	1.07	0.30	1.38	0.83	1.48	0.50	1.33	0.64	1.63
Stearic	C18:0	12.14	2.43	6.50	1.36	9.18	2.97	7.18	2.45	10.57	2.35	11.34
Oleic	C18:1n-9	21.17	5.21	13.90	2.77	11.27	2.78	12.68	3.63	14.27	4.76	15.47
Linoleic	C18:2n-6	1.46	0.43	2.04	0.47	1.83	0.26	1.63	0.73	2.17	0.51	2.10
Arachidic	C20:0	0.32	0.09	0.34	0.25	0.40	0.16	0.16	0.27	0.34	0.13	0.29
$\alpha$ -Linolenic	C18:3n-3	0.54	0.32	0.73	0.36	0.57	0.36	0.42	0.23	0.55	0.29	0.03
Paullinic	C20:1	0.61	0.23	1.09	0.46	0.58	0.25	0.51	0.15	1.42	0.72	0.55
Icosadienoic	C20:2n-6	0.43	0.20	0.40	0.38	0.35	0.18	0.45	0.13	0.52	0.55	0.57
Dihomo- $\gamma$ -linolenic	C20:3n-6	0.04	0.04	0.07	0.25	0.06	0.06	0.03	0.09	0.03	0.06	0.03
Eicosatrienoic	C20:3n-3	0.20	0.28	0.44	0.37	0.19	0.95	0.26	0.24	0.39	1.62	0.59
Erucic+Arahidonic	C22:1n-9+C20:4n-6	1.64	1.11	0.92	1.35	1.54	1.97	1.08	0.87	2.20	1.14	1.18
Eicosapentanoic	C20:5n-3	3.50	1.92	4.58	2.14	3.80	2.23	3.27	1.51	3.98	1.23	1.73
Docosapentaenoic	C22:5n-3	1.48	1.39	0.79	4.73	0.92	6.07	0.50	5.80	1.05	2.08	1.92
Docosahexaenoic	C22:6n-3	10.42	7.23	13.40	15.17	20.04	16.12	21.34	14.78	13.42	8.96	10.35
Saturated	SFA	48.64	18.09	52.87	18.20	53.15	22.12	52.41	17.01	48.28	12.48	64.01
Monounsaturated	MUFA	29.99	14.30	19.57	12.80	15.82	22.70	15.66	15.88	21.52	11.37	18.57
Polyunsaturated	PUFA	22.88	6.14	21.21	9.88	23.37	10.85	25.54	12.38	22.07	8.34	15.85
$\omega$ -6	n-6	2.10	8.32	2.70	10.15	2.52	8.17	2.14	10.07	2.83	14.24	2.63
$\omega$ -3	n-3	17.41	9.12	18.91	10.48	21.08	10.61	23.57	13.03	19.07	11.37	13.23
$\omega$ -3/ $\omega$ -6	n-3/n-6	11.16	6.10	7.88	8.47	9.18	4.71	13.22	8.64	8.10	11.41	5.08
$\omega$ -6/ $\omega$ -3	n-6/n-3	0.11	3.36	0.14	3.48	0.11	1.35	0.09	3.18	0.14	7.51	0.20
EFA		9.13	20.76	14.67	2.67	1.38	14.47	20.48	16.27	18.37	13.99	17.3

Table S4 The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of daily intake (DI) values of OCPs and PCBs (ng/kg/day) and elements (mg/kg/day)

	HORSE MACKEREL (n=15)				SARDINE (n=44)				ROUND SARDINELLA (n=7)				ANCHOVY (N=24)				CHUB MACKEREL (n=15)				GARFISH (n=2)		
	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max
α-HCH	1.69E-03	1.69E-03	7.16E-03	1.95E-03	1.08E-02	1.69E-03	3.69E-02	7.67E-03	1.69E-03	1.69E-03	9.95E-03	3.19E-03	3.47E-03	9.35E-04	8.76E-03	2.60E-03	1.69E-03	1.69E-03	7.95E-03	2.35E-03	1.69E-03	1.69E-03	1.69E-03
β-HCH	6.64E-03	1.69E-03	1.87E-02	5.21E-03	2.48E-02	1.69E-03	6.35E-02	1.39E-02	4.73E-03	1.69E-03	1.76E-02	6.18E-03	6.77E-03	1.69E-03	3.30E-02	8.16E-03	7.30E-03	1.69E-03	2.01E-02	5.24E-03	9.73E-03	6.56E-03	1.29E-02
γ-HCH	3.85E-03	1.69E-03	1.34E-02	3.51E-03	2.10E-02	1.69E-03	9.01E-02	1.88E-02	4.85E-03	1.69E-03	1.48E-02	4.41E-03	5.46E-03	1.69E-03	8.81E-03	1.82E-03	5.06E-03	1.69E-03	1.22E-02	2.90E-03	1.57E-02	1.44E-02	1.70E-02
HCB	1.69E-03	1.69E-03	1.55E-02	3.73E-03	2.43E-02	1.69E-03	7.32E-02	1.68E-02	1.69E-03	1.69E-03	1.59E-02	5.31E-03	3.94E-03	1.69E-03	1.55E-02	3.78E-03	3.91E-03	1.69E-03	9.66E-03	2.60E-03	6.01E-02	5.06E-03	6.96E-02
p,p'-DDE	3.18E-02	3.60E-03	1.70E-01	4.38E-02	2.23E-01	9.93E-03	1.08E+00	2.03E-01	2.53E-02	8.45E-03	9.15E-02	3.39E-02	2.06E-02	1.69E-03	1.17E-01	2.95E-02	2.53E-02	5.67E-03	1.21E-01	3.08E-03	1.87E-01	7.42E-02	3.00E-01
p,p'-DDD	4.81E-03	1.69E-03	2.27E-02	5.85E-03	3.51E-02	1.69E-03	7.93E-01	1.17E-01	3.39E-03	1.69E-03	9.93E-03	3.41E-03	1.69E-03	1.01E-02	2.39E-03	6.12E-03	1.69E-03	2.22E-02	4.81E-03	1.16E-02	4.39E-02	1.89E-02	
p,p'-DDT	7.87E-03	1.69E-03	3.75E-02	9.78E-03	4.17E-02	1.69E-03	1.57E-01	3.37E-02	9.07E-03	1.69E-03	1.59E-02	5.15E-03	7.41E-03	1.69E-03	2.41E-02	5.66E-03	9.91E-03	1.69E-03	5.01E-02	1.22E-02	5.75E-02	1.59E-02	9.92E-02
PCB-28	4.26E-02	5.91E-03	1.03E-01	2.99E-02	7.10E-02	1.69E-03	3.32E-01	8.06E-02	2.51E-02	7.24E-02	8.61E-02	2.97E-02	2.48E-02	1.69E-03	9.60E-02	2.32E-02	1.66E-02	1.69E-03	1.09E-01	2.99E-02	6.84E-02	2.38E-02	1.13E-01
PCB-52	9.76E-03	1.69E-03	8.52E-02	2.32E-02	3.14E-02	1.69E-03	4.88E-01	1.10E-01	8.40E-03	1.69E-03	8.67E-02	3.02E-02	9.95E-03	1.69E-03	2.39E-01	4.92E-02	1.56E-02	1.69E-03	1.18E-01	3.50E-02	6.28E-02	1.57E-01	1.10E-01
PCB-101	7.30E-03	1.69E-03	7.31E-02	1.77E-02	3.16E-02	1.69E-03	9.06E-02	2.45E-02	5.81E-03	1.69E-03	1.15E-02	3.95E-03	4.73E-03	1.69E-03	4.34E-02	9.13E-03	9.64E-03	1.69E-03	9.57E-02	2.30E-02	4.31E-02	1.40E-02	7.22E-02
PCB-138	5.14E-02	6.20E-03	2.58E-01	5.95E-02	2.34E-01	2.74E-02	8.98E-01	1.75E-01	5.01E-02	1.86E-02	7.88E-02	2.62E-02	3.03E-02	6.33E-03	2.25E-01	4.36E-02	4.32E-02	4.48E-03	1.67E-01	4.35E-02	2.52E-01	1.10E-01	3.93E-01
PCB-153	1.15E-01	1.68E-02	4.70E-01	1.08E-01	4.21E-01	6.36E-02	1.55E+00	2.90E-01	9.36E-02	3.41E-01	1.53E-01	4.83E-02	5.89E-02	1.53E-02	4.12E-01	7.91E-02	7.44E-02	1.25E-02	3.40E-01	9.20E-02	5.56E-01	2.55E-01	8.58E-01
PCB-180	1.81E-02	1.69E-03	1.01E-01	2.41E-02	1.42E-01	1.36E-02	1.10E+00	1.73E-01	1.58E-02	8.57E-03	3.26E-02	8.87E-03	1.09E-02	4.55E-03	8.55E-02	1.66E-02	1.95E-02	4.47E-03	3.94E-01	1.07E-02	1.11E-01	3.33E-02	1.88E-01
PCB-105	7.59E-03	1.69E-03	2.20E-02	4.96E-03	3.36E-02	1.69E-03	3.69E-01	5.76E-02	7.03E-03	4.06E-03	3.92E-02	1.23E-02	5.68E-03	1.69E-03	1.98E-02	4.89E-03	8.69E-03	1.69E-03	3.38E-02	9.13E-03	2.24E-02	1.08E-02	3.41E-02
PCB-114	1.69E-03	1.69E-03	5.45E-03	1.18E-03	1.50E-02	1.69E-03	5.52E-01	8.36E-02	1.69E-03	1.69E-03	4.48E-02	1.05E-02	1.69E-03	1.68E-02	7.12E-03	1.51E-03	1.69E-03	1.69E-03	5.79E-02	1.48E-03	4.97E-03	4.00E-03	5.95E-03
PCB-118	1.62E-02	1.69E-03	5.78E-02	1.37E-02	6.17E-02	8.58E-03	2.37E-01	4.68E-02	1.19E-02	4.85E-03	3.18E-02	8.97E-03	1.11E-02	3.44E-03	6.71E-02	1.30E-02	1.10E-02	1.69E-03	6.96E-02	1.75E-02	5.88E-02	4.19E-02	7.57E-02
PCB-123	1.10E-02	3.84E-03	4.19E-02	1.18E-02	5.40E-02	7.30E-03	5.10E-01	7.89E-02	1.03E-02	3.68E-03	2.37E-02	6.95E-03	8.07E-03	4.18E-03	4.89E-02	8.85E-03	1.27E-02	1.69E-03	2.91E-02	7.39E-03	3.64E-02	1.94E-02	5.35E-02
PCB-156	6.37E-03	1.69E-03	1.94E-02	4.43E-03	2.57E-02	4.88E-03	1.45E-01	2.65E-02	7.78E-03	1.69E-03	1.15E-02	4.20E-03	5.44E-03	1.69E-03	1.48E-02	3.76E-03	9.66E-03	1.69E-03	1.84E-02	4.98E-03	2.64E-02	1.12E-02	4.17E-02
PCB-157	6.46E-03	1.69E-03	4.87E-02	1.21E-02	2.38E-02	1.69E-03	9.59E-02	2.27E-02	8.68E-03	1.69E-03	1.49E-02	5.57E-03	6.03E-03	1.69E-03	3.72E-02	7.54E-03	8.51E-03	1.69E-03	2.49E-02	7.31E-03	4.73E-02	1.45E-02	8.00E-02
PCB-167	7.46E-03	1.69E-03	2.98E-02	7.00E-03	3.11E-02	1.69E-03	1.23E-01	2.67E-02	6.34E-03	1.69E-03	1.44E-02	4.52E-03	4.98E-03	1.69E-03	1.90E-02	5.00E-03	1.05E-02	1.69E-03	7.12E-02	1.66E-02	2.30E-02	7.45E-03	3.85E-02
PCB-189	5.85E-03	1.69E-03	1.63E-02	4.57E-03	1.63E-02	1.69E-03	6.65E-02	1.28E-02	7.07E-03	1.69E-03	8.64E-03	2.97E-03	4.11E-03	1.69E-03	9.97E-03	2.66E-03	6.74E-03	1.69E-03	4.86E-02	1.18E-02	1.26E-02	7.77E-03	1.75E-02
PCB-60	5.70E-03	1.69E-03	4.49E-02	1.13E-02	2.44E-02	1.69E-03	7.12E-02	2.07E-02	9.89E-03	1.69E-03	1.72E-02	5.07E-03	1.05E-02	1.69E-03	2.03E-02	5.15E-03	1.00E-02	1.69E-03	2.67E-02	7.49E-03	1.94E-02	1.49E-02	2.39E-02
PCB-74	9.19E-03	3.67E-03	2.95E-02	7.01E-03	4.43E-02	1.69E-03	3.25E-01	7.61E-02	8.18E-03	4.65E-03	1.82E-02	5.56E-03	8.28E-03	1.69E-03	2.16E-02	5.41E-03	8.30E-03	1.69E-03	4.53E-02	9.99E-03	3.27E-02	1.08E-02	5.47E-02
PCB-170	1.52E-02	4.25E-03	5.33E-02	1.19E-02	6.11E-02	1.22E-02	2.50E-01	5.26E-02	1.50E-02	5.52E-03	2.69E-02	7.85E-03	1.08E-02	5.23E-03	8.11E-02	1.53E-02	1.83E-02	1.69E-03	3.44E-02	1.02E-02	6.18E-02	2.33E-02	1.00E-01
Na	6.06E-01	2.49E-01	8.91E-01	1.79E-01	6.04E-01	2.90E-01	1.09E+00	1.84E-01	4.63E-01	2.43E-01	7.99E-01	1.91E-01	6.86E-01	4.18E-01	1.31E+00	2.24E-01	3.83E-01	1.61E-01	8.50E-01	1.74E-01	5.97E-01	5.51E-01	6.43E-01
Mg	2.06E-01	1.58E-01	2.59E-01	2.89E-01	2.19E-01	1.62E-01	2.63E-01	2.47E-01	2.19E-01	1.71E-01	2.52E-01	2.77E-01	2.27E-01	1.76E-01	3.03E-01	3.18E-01	1.97E-01	1.71E-01	2.75E-01	2.77E-01	2.30E-01	2.04E-01	2.56E-01
K	2.42E+00	1.76E+00	3.42E+00	4.43E+00	2.69E+00	1.60E+00	3.18E+00	3.81E+00	2.68E+00	2.20E+00	3.07E+00	2.90E+00	2.38E+00	1.63E+00	2.77E+00	3.22E+00	2.71E+00	2.15E+00	3.16E+00	2.74E+00	2.29E+00	1.87E+00	2.71E+00
Ca	3.18E-01	1.37E-01	1.09E+00	2.82E-01	5.71E-01	2.54E-01	1.56E+00	3.07E-01	5.26E-01	2.68E-01	9.45E-01	2.38E-01	4.90E-01	3.00E-01	1.45E+00	2.56E-01	2.32E-01	7.17E-01	3.77E-01	9.09E-01	6.64E-01	2.23E-01	1.10E+00
Cr	1.15E-05	2.70E-06	2.30E-05	5.70E-06	1.35E-05	2.36E-06	5.00E-05	1.23E-06	5.74E-06	1.69E-06	1.59E-05	5.63E-06	6.76E-06	2.03E-06	1.62E-05	4.05E-06	4.39E-06	3.04E-06	3.48E-05	8.00E-06	8.45E-06	4.05E-06	1.28E-05
Mn	5.81E-05	3.51E-05	1.24E-04	2.45E-05	2.21E-04	1.38E-04	5.44E-04	9.42E-05	1.80E-04	1.21E-04	3.10E-04	6.77E-05	1.99E-04	5.78E-05	5.72E-04	9.93E-05	5.17E-04	3.11E-04	8.41E-04	1.67E-04	1.79E-04	4.83E-04	3.10E-04
Fe	4.06E-03	1.60E-03	6.15E-03	1.62E-03	6.90E-03	3.73E-03	1.08E-02	1.25E-03	5.70E-03	3.83E-03	6.76E-03	1.06E-03	6.73E-03	3.13E-03	1.12E-02	1.88E-03	4.64E-03	2.95E-03	7.62E-03	1.47E-03	6.16E-03	4.24E-03	8.09E-03
Co	3.72E-06	2.03E-06	6.76E-06	1.72E-06	4.39E-06	1.69E-06	7.09E-06	1.09E-06	3.04E-06	2.03E-06	5.07E-06	1.09E-06	5.24E-06	3.38E-06	1.76E-05	3.12E-06	3.38E-06	2.03E-06	5.07E-06	9.93E-07	4.56E-06	2.70E-06	6.42E-06

Ni	<b>8.45E-06</b>	8.45E-06	8.45E-06	3.51E-21	<b>8.45E-06</b>	8.45E-06	8.45E-06	5.14E-21	<b>8.45E-06</b>	8.45E-06	8.45E-06	0.00E+00	<b>8.45E-06</b>	8.45E-06	8.45E-06	5.19E-21	<b>8.45E-06</b>	8.45E-06	8.45E-06	3.51E-21	<b>8.45E-06</b>	8.45E-06	8.45E-06
Cu	<b>3.09E-04</b>	2.26E-04	7.43E-04	1.52E-04	<b>5.27E-04</b>	3.29E-04	8.13E-04	9.52E-05	<b>4.07E-04</b>	2.46E-04	5.80E-04	1.14E-04	<b>6.73E-04</b>	3.31E-04	1.02E-03	1.64E-04	<b>4.42E-04</b>	2.84E-04	6.39E-04	1.11E-04	<b>5.15E-04</b>	3.61E-04	6.69E-04
Zn	<b>4.90E-03</b>	2.27E-03	6.86E-03	1.57E-03	<b>8.46E-03</b>	2.85E-03	1.12E-02	1.52E-03	<b>5.78E-03</b>	2.67E-03	8.36E-03	2.10E-03	<b>8.49E-03</b>	5.48E-03	1.25E-02	1.68E-03	<b>3.96E-03</b>	2.54E-03	6.49E-03	1.14E-03	<b>8.50E-03</b>	6.57E-03	1.04E-02
As	<b>9.25E-05</b>	6.12E-05	3.94E-04	9.43E-05	<b>1.43E-04</b>	8.45E-05	2.65E-04	4.30E-05	<b>1.73E-04</b>	1.12E-04	2.52E-04	5.42E-05	<b>1.27E-04</b>	6.39E-05	3.20E-04	6.21E-05	<b>7.42E-05</b>	3.39E-05	1.69E-04	3.49E-05	<b>1.21E-04</b>	6.69E-05	1.74E-04
Se	<b>2.32E-04</b>	1.11E-04	4.39E-04	9.14E-05	<b>2.65E-04</b>	1.36E-04	4.35E-04	6.70E-05	<b>2.95E-04</b>	1.79E-04	3.58E-04	5.97E-05	<b>1.62E-04</b>	7.97E-05	1.95E-04	3.38E-05	<b>2.33E-04</b>	1.07E-04	4.41E-04	1.03E-04	<b>1.36E-04</b>	1.21E-04	1.51E-04
Cd	<b>1.69E-06</b>	6.76E-08	4.73E-06	1.24E-06	<b>3.04E-06</b>	3.38E-07	6.08E-06	1.20E-06	<b>1.69E-06</b>	6.76E-07	6.42E-06	1.99E-06	<b>5.57E-06</b>	1.35E-06	1.22E-05	3.08E-06	<b>3.04E-06</b>	3.38E-07	6.42E-06	1.71E-06	<b>5.07E-06</b>	1.35E-06	8.78E-06
Hg	<b>1.89E-05</b>	2.70E-06	5.88E-05	1.58E-05	<b>1.15E-05</b>	6.76E-07	3.31E-05	9.74E-06	<b>1.22E-05</b>	6.76E-07	4.09E-05	1.36E-05	<b>9.97E-06</b>	1.35E-06	3.14E-05	9.26E-06	<b>5.40E-06</b>	1.01E-06	6.93E-05	1.83E-05	<b>7.94E-06</b>	4.73E-06	1.11E-05
Pb	<b>2.36E-06</b>	3.38E-07	8.78E-06	2.09E-06	<b>4.05E-06</b>	3.38E-07	1.18E-05	2.65E-06	<b>2.03E-06</b>	3.38E-07	1.08E-05	3.77E-06	<b>1.69E-06</b>	3.38E-07	6.08E-06	1.60E-06	<b>1.35E-06</b>	3.38E-07	6.76E-06	1.89E-06	<b>2.20E-06</b>	1.35E-06	3.04E-06

Table S5 Comparison of median values of DIs of investigated fishes with tolerable daily intake (TDI) obtained and presented in different studies (Varol et al., 2017. and references therein FAO/WHO; Cardoso et al., 2013a, 2013b; IOM, 200)

	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Cd	Hg
M Horse mackerel	1.15E-05	5.81E-05	4.06E-03	3.72E-06	8.45E-06	3.09E-04	4.90E-03	9.25E-05	2.32E-04	1.69E-06	1.89E-05
M Sardine	1.35E-05	2.21E-04	6.90E-03	4.39E-06	8.45E-06	5.27E-04	8.46E-03	1.43E-04	2.65E-04	3.04E-06	1.15E-05
M Round Sardinella	5.74E-06	1.80E-04	5.70E-03	3.04E-06	8.45E-06	4.07E-04	5.78E-03	1.73E-04	2.95E-04	1.69E-06	1.22E-05
M Anchovy	6.76E-06	1.99E-04	6.73E-03	5.24E-06	8.45E-06	6.73E-04	8.49E-03	1.27E-04	1.62E-04	5.57E-06	9.97E-06
M Chub Mackerel	4.39E-06	5.17E-05	4.64E-03	3.38E-06	8.45E-06	4.42E-04	3.96E-03	7.42E-05	2.33E-04	3.04E-06	5.40E-06
M Garfish	8.45E-06	1.79E-04	6.16E-03	4.56E-06	8.45E-06	5.15E-04	8.50E-03	1.21E-04	1.36E-04	5.07E-06	7.94E-06
TDI	3.00E-01	1.40E-01	8.00E-01	3.00E-02	1.20E-02	5.00E-01	3.00E-01	2.14E-03	5.50E-02	8.00E-04	1.50E-03

Table S6 The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of estimated weekly intake (EWI) of OCPs and PCBs (ng/kg/week) and elements (mg/kg/week)

EWI	HORSE MACKEREL (n=15)				SARDINE (n=44)				ROUND SARDINELLA (n=7)				ANCHOVY (N=24)				CHUB MACKEREL (n=15)				GARFISH (n=2)		
	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max
α-HCH	1.33E-05	1.33E-05	5.64E-05	1.54E-05	8.50E-05	1.33E-05	2.90E-04	6.04E-05	1.33E-05	1.33E-05	7.84E-05	2.51E-05	2.73E-05	7.36E-06	6.90E-05	2.05E-05	1.33E-05	1.33E-05	6.26E-05	1.85E-05	1.33E-05	1.33E-05	1.33E-05
β-HCH	5.23E-05	1.33E-05	1.47E-04	4.11E-05	1.96E-04	1.33E-05	5.00E-04	1.09E-04	3.73E-05	1.33E-05	1.39E-04	4.87E-05	5.33E-05	1.33E-05	2.60E-04	6.43E-05	5.75E-05	1.33E-05	1.59E-04	4.13E-05	7.66E-05	5.17E-05	1.02E-04
γ-HCH	3.03E-05	1.33E-05	1.06E-04	2.76E-05	1.65E-04	1.33E-05	7.10E-04	1.48E-04	3.82E-05	1.33E-05	1.16E-04	3.47E-05	4.30E-05	1.33E-05	6.93E-05	1.43E-05	3.98E-05	1.33E-05	9.63E-05	2.29E-05	1.24E-04	1.14E-04	1.34E-04
HCB	1.33E-05	1.33E-05	1.22E-04	2.94E-05	1.91E-04	1.33E-05	5.76E-04	1.32E-04	1.33E-05	1.33E-05	1.25E-04	4.18E-05	3.11E-05	1.33E-05	1.22E-04	2.98E-05	3.08E-05	1.33E-05	7.60E-05	2.04E-05	4.73E-05	3.98E-05	5.48E-05
p,p'-DDE	2.50E-04	2.84E-03	1.34E-03	3.45E-04	1.76E-03	7.82E-05	8.51E-03	1.60E-03	1.99E-04	6.66E-05	7.20E-04	2.67E-04	1.62E-04	1.33E-05	9.21E-04	2.32E-04	1.99E-04	4.47E-05	9.52E-04	2.43E-04	1.47E-04	5.84E-04	2.37E-04
p,p'-DDD	3.79E-05	1.33E-05	1.79E-04	4.60E-05	2.77E-04	1.33E-05	6.24E-03	9.20E-03	2.67E-04	1.33E-05	7.82E-05	2.69E-04	1.33E-05	1.33E-05	7.96E-05	1.88E-05	4.82E-05	1.33E-05	1.75E-04	3.79E-04	9.16E-05	3.45E-05	1.49E-04
p,p'-DDT	6.20E-05	1.33E-05	2.95E-04	7.70E-05	3.29E-04	1.33E-05	1.23E-03	2.65E-03	7.14E-05	1.33E-05	1.25E-04	4.06E-05	5.83E-05	1.33E-05	1.90E-04	4.46E-05	7.80E-05	1.33E-05	3.94E-04	9.57E-04	4.53E-04	1.25E-04	7.81E-04
PCB-28	3.35E-04	4.66E-04	8.13E-04	2.36E-04	5.59E-04	1.33E-05	2.62E-03	6.35E-04	1.97E-04	5.70E-04	6.78E-04	2.34E-04	1.95E-04	1.33E-05	7.56E-04	1.83E-04	1.30E-04	1.33E-05	8.57E-04	2.35E-04	5.38E-04	1.87E-04	8.89E-04
PCB-52	7.69E-05	1.33E-05	6.71E-04	1.83E-04	2.47E-04	1.33E-05	3.84E-03	8.67E-04	6.62E-05	1.33E-05	6.83E-04	2.38E-04	7.83E-05	1.33E-05	1.88E-03	3.87E-04	1.23E-04	1.33E-05	9.32E-04	2.75E-04	4.95E-04	1.24E-04	8.66E-04
PCB-101	5.75E-05	1.33E-05	5.75E-04	1.39E-04	2.49E-04	1.33E-05	7.13E-03	1.93E-04	4.58E-05	1.33E-05	9.04E-04	3.11E-05	3.73E-05	1.33E-05	3.42E-04	7.19E-05	7.59E-05	1.33E-05	7.54E-04	1.81E-04	3.39E-04	1.10E-04	5.68E-04
PCB-138	4.05E-04	4.88E-05	2.03E-03	4.69E-04	1.84E-03	2.15E-04	7.07E-03	1.38E-03	3.94E-04	1.47E-04	6.21E-04	2.07E-04	2.38E-04	4.99E-05	1.77E-03	3.44E-04	3.40E-04	3.53E-05	1.32E-03	3.43E-04	1.98E-04	8.68E-04	3.10E-03
PCB-153	9.06E-04	1.32E-04	3.70E-03	8.48E-04	3.31E-03	5.01E-04	1.22E-02	2.28E-03	7.37E-04	2.68E-04	1.20E-03	3.80E-04	4.64E-04	1.20E-03	3.24E-03	6.23E-04	5.86E-04	9.88E-05	2.68E-03	7.24E-04	4.38E-04	2.00E-03	6.76E-03
PCB-180	1.43E-04	1.33E-05	7.93E-04	1.90E-04	1.11E-03	1.07E-04	8.67E-03	1.36E-03	1.25E-04	6.75E-05	2.56E-04	6.98E-05	8.61E-05	3.58E-05	6.73E-04	1.31E-04	1.54E-04	3.52E-05	3.10E-04	8.46E-05	8.72E-04	2.63E-04	1.48E-03
PCB-105	5.98E-05	1.33E-05	1.73E-04	3.91E-05	2.64E-04	1.33E-05	2.91E-03	4.53E-04	5.53E-05	3.19E-05	3.08E-04	9.72E-05	4.47E-05	1.33E-05	1.56E-04	3.85E-05	6.84E-05	1.33E-05	2.66E-04	7.19E-05	1.77E-04	8.49E-05	2.68E-04
PCB-114	1.33E-05	1.33E-05	4.29E-05	9.29E-06	1.18E-05	1.33E-05	4.35E-04	6.59E-04	1.33E-05	1.33E-05	3.52E-04	8.29E-06	1.33E-05	1.33E-05	5.61E-05	1.19E-05	1.33E-05	1.33E-05	4.56E-05	1.16E-05	3.92E-05	3.15E-05	4.68E-05
PCB-118	1.27E-04	1.33E-05	4.55E-04	1.08E-04	4.86E-04	6.76E-05	1.86E-03	3.69E-04	9.38E-05	3.82E-05	2.50E-04	7.07E-05	8.71E-05	2.71E-05	5.28E-04	1.02E-04	8.65E-05	1.33E-05	5.48E-04	1.38E-04	4.63E-04	3.30E-04	5.96E-04
PCB-123	8.69E-05	3.02E-05	3.30E-04	9.29E-05	4.25E-04	5.75E-05	4.01E-03	6.21E-04	8.10E-05	2.90E-05	1.87E-04	5.47E-05	6.35E-05	3.29E-05	3.85E-04	6.97E-05	1.00E-04	1.33E-05	2.29E-04	5.82E-05	2.87E-04	1.53E-04	4.21E-04
PCB-156	5.02E-05	1.33E-05	1.53E-04	3.48E-05	2.03E-04	3.84E-05	1.14E-03	2.09E-04	6.13E-05	1.33E-05	9.07E-05	3.31E-05	4.28E-05	1.33E-05	1.17E-04	2.96E-05	7.61E-05	1.33E-05	1.45E-04	3.92E-05	2.08E-04	8.78E-05	3.29E-04
PCB-157	5.09E-05	1.33E-05	3.84E-04	9.54E-05	1.87E-04	1.33E-05	7.55E-04	1.78E-04	6.83E-05	1.33E-05	1.17E-04	4.39E-05	4.75E-05	1.33E-05	2.93E-04	5.94E-05	6.70E-05	1.33E-05	1.96E-04	5.75E-05	3.72E-04	1.14E-04	6.30E-04
PCB-167	5.87E-05	1.33E-05	2.34E-04	5.51E-05	2.45E-04	1.33E-05	9.66E-04	2.10E-04	5.00E-05	1.33E-05	1.13E-04	3.56E-05	3.92E-05	1.33E-05	1.49E-04	3.94E-05	8.24E-05	1.33E-05	5.60E-04	1.31E-04	1.81E-04	5.87E-04	3.03E-04
PCB-189	4.61E-05	1.33E-05	1.29E-04	3.60E-05	1.28E-04	1.33E-05	5.23E-04	1.01E-04	5.57E-05	1.33E-05	6.81E-04	2.34E-05	3.24E-05	1.33E-05	7.85E-05	2.09E-05	5.31E-05	1.33E-05	3.83E-04	9.30E-05	9.93E-05	6.12E-05	1.37E-04
PCB-60	4.49E-05	1.33E-05	3.54E-04	8.93E-05	1.92E-04	1.33E-05	5.61E-04	1.63E-04	7.79E-05	1.33E-05	1.35E-04	3.99E-05	8.28E-05	1.33E-05	1.60E-04	4.05E-05	7.88E-05	1.33E-05	2.10E-04	5.90E-05	1.53E-04	1.17E-04	1.88E-04
PCB-74	7.23E-05	2.89E-05	2.32E-04	5.52E-05	3.49E-04	1.33E-05	2.56E-03	6.00E-04	6.44E-05	3.66E-05	1.43E-04	4.38E-05	6.52E-05	1.33E-05	1.70E-04	4.26E-05	6.54E-05	1.33E-05	3.57E-04	7.87E-05	2.58E-04	8.47E-05	4.31E-04
PCB-170	1.20E-04	3.35E-05	4.20E-04	9.39E-05	4.81E-04	9.60E-05	1.97E-03	4.15E-04	1.18E-04	4.35E-05	2.12E-04	6.18E-05	8.50E-05	4.11E-05	6.39E-04	1.20E-04	1.44E-04	1.33E-05	2.71E-04	8.05E-05	4.86E-04	1.83E-04	7.89E-04
Na	4.77E+03	1.96E+03	7.01E+03	1.41E+03	4.75E+03	2.28E+03	8.61E+03	1.45E+03	3.65E+03	1.92E+03	6.29E+03	1.50E+03	5.40E+03	3.29E+03	1.03E+04	1.76E+03	3.01E+03	1.27E+03	6.69E+03	1.37E+03	4.70E+03	4.34E+03	5.06E+03
Mg	1.62E+03	1.24E+03	2.04E+03	2.28E+02	1.72E+03	1.27E+03	2.07E+03	1.95E+02	1.72E+03	1.35E+03	1.98E+03	2.18E+03	1.79E+03	1.39E+03	2.38E+03	2.50E+02	1.55E+03	1.35E+03	2.16E+03	2.18E+03	1.81E+03	1.61E+03	2.01E+03
K	1.90E+04	1.39E+04	2.69E+04	3.49E+03	2.12E+04	1.26E+04	2.51E+04	3.00E+03	2.11E+04	1.73E+04	2.42E+04	2.28E+03	1.88E+04	1.29E+04	2.18E+04	2.54E+03	2.13E+04	1.70E+04	2.49E+04	2.16E+04	1.80E+04	1.48E+04	2.13E+04
Ca	2.50E+03	1.08E+03	8.56E+03	2.22E+03	4.50E+03	2.00E+03	1.23E+04	2.42E+03	4.14E+03	2.11E+03	7.44E+03	1.87E+03	3.86E+03	2.37E+03	1.14E+04	2.02E+03	1.83E+03	5.65E+02	2.97E+03	7.16E+03	5.23E+03	1.76E+03	8.69E+03
Cr	9.04E-02	2.13E-02	1.81E-01	4.49E-02	1.06E-01	1.86E-02	3.94E-02	9.72E-02	4.52E-02	1.33E-02	1.25E-01	4.44E-02	5.32E-02	1.60E-02	1.28E-01	3.19E-02	3.46E-02	2.39E-02	2.74E-01	6.30E-02	6.65E-02	3.19E-02	1.01E-01
Mn	4.58E-01	2.77E-01	9.79E-01	1.93E-01	1.74E+00	1.09E+00	4.28E+00	7.42E-01	1.42E+00	9.50E-01	2.44E+00	5.33E-01	1.57E+00	4.55E-01	4.50E+00	7.82E-01	4.07E-01	2.45E-01	6.62E-01	1.32E-01	1.41E+00	3.80E-01	2.44E+00
Fe	3.20E+01	1.26E+01	4.85E+01	1.27E+01	5.43E+01	2.94E+01	8.52E+01	9.83E+01	4.48E+01	3.01E+01	5.33E+01	8.32E+01	5.30E+01	2.47E+01	8.83E+01	1.48E+01	3.65E+01	2.32E+01	6.00E+01	1.16E+01	4.85E+01	3.34E+01	6.37E+01
Co	2.93E-02	1.60E-02	5.32E-02	1.35E-02	3.46E-02	1.33E-02	5.59E-02	8.61E-03	2.39E-02	1.60E-02	3.99E-02	8.61E-03	4.12E-02	2.66E-02	1.38E-02	2.45E-02	2.66E-02	1.60E-02	3.99E-02	7.82E-03	3.59E-02	2.13E-02	5.05E-02



Ni	6.65E-02	6.65E-02	6.65E-02	0.00E+00	6.65E-02	6.65E-02	6.65E-02	0.00E+00	6.65E-02	6.65E-02	6.65E-02	0.00E+00	6.65E-02	6.65E-02	6.65E-02	0.00E+00	6.65E-02	6.65E-02	0.00E+00	6.65E-02	6.65E-02	6.65E-02	
Cu	2.43E+00	1.78E+00	5.85E+00	1.19E+00	4.15E+00	2.59E+00	6.41E+00	7.50E+00	3.21E+00	1.94E+00	4.56E+00	8.95E+00	5.30E+00	2.60E+00	8.05E+00	1.29E+00	3.48E+00	2.24E+00	5.04E+00	8.71E+00	4.06E+00	2.85E+00	5.26E+00
Zn	3.86E+01	1.79E+01	5.40E+01	1.23E+01	6.66E+01	2.25E+01	8.81E+01	1.20E+01	4.55E+01	2.10E+01	6.58E+01	1.66E+01	6.68E+01	4.32E+01	9.81E+01	1.33E+01	3.11E+01	2.00E+01	5.11E+01	8.96E+01	6.70E+01	5.18E+01	8.21E+01
As	7.28E-01	4.82E-01	3.10E+00	7.42E-01	1.12E+00	6.65E-01	2.09E+00	3.39E-01	1.36E+00	8.84E-01	1.98E+00	4.27E-01	1.00E+00	5.03E-01	2.52E+00	4.89E-01	5.85E-01	2.67E-01	1.33E+00	2.75E-01	9.49E-01	5.27E-01	1.37E+00
Se	1.83E+00	8.75E-01	3.46E+00	7.20E-01	2.09E+00	1.07E+00	3.42E+00	5.28E-01	2.32E+00	1.41E+00	2.82E+00	4.70E-01	1.28E+00	6.28E-01	1.54E+00	2.66E-01	1.84E+00	8.41E-01	3.47E+00	8.12E-01	1.07E+00	9.50E-01	1.19E+00
Cd	1.33E-02	5.32E-04	3.72E-02	9.78E-03	2.39E-02	2.66E-03	4.79E-02	9.42E-03	1.33E-02	5.32E-03	5.05E-02	1.56E-02	4.39E-02	1.06E-02	9.58E-02	2.43E-02	2.39E-02	2.66E-03	5.05E-02	1.34E-02	3.99E-02	1.06E-02	6.92E-02
Hg	1.49E-01	2.13E-02	4.63E-01	1.24E-01	9.04E-02	5.32E-03	2.61E-01	7.67E-02	9.58E-02	5.32E-03	3.22E-01	1.07E-02	7.85E-02	1.06E-02	2.47E-01	7.29E-02	4.26E-02	7.98E-03	5.45E-01	1.44E-01	6.25E-02	3.72E-02	8.78E-02
Pb	1.86E-02	2.66E-03	6.92E-02	1.65E-02	3.19E-02	2.66E-03	9.31E-02	2.09E-02	1.60E-02	2.66E-03	8.51E-02	2.97E-02	1.33E-02	2.66E-03	4.79E-02	1.26E-02	1.06E-02	2.66E-03	5.32E-02	1.49E-02	1.73E-02	1.06E-02	2.39E-02

**Table S7** The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of fatty acid daily intake (DI) (g/kg/day)

		HORSE MACKEREL (n=15)				SARDINE (n=44)				ROUND SARDINELLA (n=7)				ANCHOVY (N=24)				CHUB MACKEREL (n=15)				GARFISH (n=2)	
		M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min
C14:0	Myristic acid	1.135	0.547	2.186	0.468	2.611	0.598	5.638	1.061	1.716	0.497	4.128	1.096	1.225	0.328	3.466	0.695	1.395	0.892	3.800	0.769	2.128	1.520
C15:0	Pentadecylic acid	0.280	0.209	0.439	0.068	0.407	0.199	0.703	0.109	0.439	0.199	0.578	0.151	0.334	0.122	0.733	0.134	0.416	0.267	0.676	0.128	0.483	0.375
C16:0	Palmitic acid	10.94	9.79	16.00	1.81	12.42	9.67	17.87	1.79	12.34	11.60	17.90	2.28	13.86	9.01	17.57	2.24	9.96	8.59	14.38	1.839	14.54	13.14
C17:0	Margaric acid	0.456	0.301	0.845	0.151	0.360	0.226	0.686	0.100	0.466	0.334	1.135	0.282	0.498	0.351	1.054	0.168	0.449	0.318	1.192	0.218	0.549	0.510
C18:0	Stearic acid	4.101	2.199	4.959	0.821	2.196	1.574	4.182	0.461	3.101	2.074	4.479	1.003	2.424	1.594	5.064	0.826	3.571	2.939	5.712	0.794	3.829	3.682
C18:1n-9	Oleic acid	7.151	3.091	9.300	1.760	4.694	2.490	7.121	0.934	3.807	2.729	5.783	0.938	4.282	2.067	6.726	1.227	4.821	3.223	8.567	1.608	5.226	5.185
C20:0	Arachidic acid	0.101	0.000	0.155	0.040	0.113	0.024	0.368	0.085	0.135	0.108	0.247	0.054	0.054	0.008	0.449	0.092	0.115	0.078	0.243	0.044	0.097	0.008
C16:1	Palmitoleic acid	1.426	0.524	2.105	0.478	1.203	0.554	3.628	0.620	0.855	0.618	2.432	0.652	0.703	0.314	1.632	0.381	0.709	0.466	1.088	0.176	0.851	0.726
C18:2n-6	Linolenic acid (LA)	0.493	0.294	0.760	0.144	0.689	0.132	0.915	0.158	0.618	0.507	0.736	0.088	0.549	0.382	1.642	0.248	0.733	0.382	1.013	0.173	0.709	0.696
C18:3n-3	alpha-linolenic acid (ALA)	0.169	0.000	0.324	0.113	0.235	0.000	0.456	0.129	0.193	0.008	0.351	0.122	0.142	0.008	0.247	0.077	0.184	0.008	0.247	0.097	0.008	0.008
C20:1	Eicosapentaenoic acid (EPA)	0.206	0.108	0.405	0.077	0.368	0.008	0.568	0.155	0.196	0.098	0.338	0.083	0.172	0.074	0.301	0.050	0.480	0.125	0.834	0.244	0.184	0.128
C20:2n-6	Eicosadienoic acid (EDA)	0.145	0.074	0.318	0.067	0.135	0.008	0.537	0.128	0.118	0.008	0.159	0.060	0.150	0.008	0.230	0.045	0.176	0.139	0.770	0.185	0.193	0.159
C20:3n-6	Dihomo-γ-linolenic acid (DGLA)	0.011	0.000	0.044	0.014	0.024	0.008	0.345	0.083	0.019	0.008	0.064	0.021	0.008	0.008	0.101	0.030	0.011	0.008	0.078	0.019	0.008	0.008
C20:3n-3	Eicosatrienoic acid (ETE)	0.068	0.008	0.341	0.094	0.149	0.008	0.395	0.123	0.064	0.008	0.787	0.321	0.088	0.008	0.331	0.082	0.130	0.008	1.594	0.546	0.200	0.008
C22:1n-9+C20:4n-6	Palmitoleic acid+Arachidonic acid	0.554	0.135	1.615	0.374	0.311	0.024	1.824	0.455	0.520	0.108	1.858	0.664	0.365	0.105	1.176	0.294	0.743	0.145	1.142	0.386	0.399	0.128
C20:5n-3	Eicosapentaenoic acid (EPA)	1.182	0.318	2.324	0.648	1.547	0.189	2.963	0.722	1.284	0.372	2.246	0.755	1.103	0.091	1.980	0.510	1.344	0.861	2.277	0.416	0.584	0.466
C22:5n-3	Docosapentaenoic acid (DPA)	0.500	0.152	1.746	0.469	0.265	0.105	5.391	1.596	0.311	0.186	5.716	2.052	0.169	0.068	9.283	1.960	0.355	0.182	2.371	0.701	0.649	0.649
C22:6n-3	Docosahexaenoic acid (DHA)	3.520	0.149	8.243	2.444	4.527	0.196	19.052	5.123	6.770	0.008	17.596	5.447	7.207	0.054	20.191	4.992	4.53	0.43	10.41	3.026	3.496	3.466
SFA	Saturated fatty acids	16.43	0.86	21.76	6.11	17.86	2.19	25.43	6.15	17.95	1.50	20.95	7.47	17.70	1.44	22.39	5.74	16.31	8.41	22.37	4.216	21.62	21.14

MUFA	Monosaturated fatty acids	<b>10.13</b>	3.72	21.92	4.83	<b>6.61</b>	3.40	22.12	4.32	<b>5.34</b>	4.25	25.68	7.67	<b>5.29</b>	3.19	25.00	5.36	<b>7.270</b>	3.868	15.434	3.841	<b>6.27</b>	6.15
PUFA	Polyunsaturated fatty acids	<b>7.729</b>	2.172	10.594	2.075	<b>7.165</b>	0.284	14.820	3.337	<b>7.895</b>	0.865	11.631	3.664	<b>8.628</b>	0.578	17.904	4.182	<b>7.455</b>	4.290	13.908	2.818	<b>5.354</b>	4.854
n-6	Omega-3	<b>0.709</b>	0.402	9.560	2.809	<b>0.912</b>	0.426	12.050	3.430	<b>0.851</b>	0.703	8.124	2.761	<b>0.723</b>	0.510	11.918	3.402	<b>0.956</b>	0.713	13.063	4.811	<b>0.887</b>	0.851
n-3	Omega-6	<b>5.881</b>	0.611	10.053	3.081	<b>6.388</b>	0.699	14.185	3.539	<b>7.121</b>	0.726	10.779	3.585	<b>7.962</b>	0.649	17.394	4.400	<b>6.442</b>	0.554	13.019	3.843	<b>4.468</b>	3.932
n-3/n-6	Ratio omega-3/omega-6	<b>3.770</b>	1.429	8.675	2.059	<b>2.662</b>	0.008	11.350	2.862	<b>3.101</b>	0.037	4.392	1.591	<b>4.466</b>	0.017	11.499	2.918	<b>2.736</b>	1.770	12.512	3.854	<b>1.714</b>	1.439
n-6/n-3	Ratio omega-6/omega-3	<b>0.037</b>	0.017	3.314	1.133	<b>0.047</b>	0.008	5.476	1.175	<b>0.037</b>	0.027	1.057	0.456	<b>0.029</b>	0.008	4.540	1.075	<b>0.047</b>	0.020	7.645	2.536	<b>0.068</b>	0.057
EFA	EPA+DHA	<b>4.956</b>	0.466	9.425	2.794	<b>6.403</b>	0.500	19.242	5.039	<b>8.621</b>	0.454	17.968	5.317	<b>8.275</b>	0.291	20.282	5.130	<b>5.817</b>	1.405	12.431	3.338	<b>4.081</b>	3.932

Table S8 The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of target hazard quotients (THQ) for POPs and elements and Hazard Index for POP and elements ( $HI_{\text{organic}}$  and  $HI_{\text{elements}}$ ) and total Hazard Index ( $\Sigma HI$ )

	HORSE MACKEREL (n=15)				SARDINE (n=44)				ROUND SARDINELLA (n=7)				ANCHOVY (N=24)				CHUB MACKEREL (n=15)				GARFISH (n=2)		
	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max
$\alpha$ -HCH	2.11E-07	2.11E-07	8.96E-07	2.44E-07	1.35E-06	2.11E-07	4.61E-06	9.59E-07	2.11E-07	2.11E-07	1.24E-06	3.98E-07	4.34E-07	1.17E-07	1.10E-06	3.25E-07	2.11E-07	2.11E-07	9.94E-07	2.93E-07	2.11E-07	2.11E-07	2.11E-07
$\gamma$ -HCH	1.28E-05	5.63E-06	4.47E-05	1.17E-05	6.99E-05	5.63E-06	3.00E-04	6.25E-05	1.62E-05	5.63E-06	4.92E-05	1.47E-05	1.82E-05	5.63E-06	2.94E-05	6.07E-06	1.69E-05	5.63E-06	4.08E-05	9.67E-06	5.25E-05	4.81E-05	5.68E-05
HCB	2.11E-06	2.11E-06	1.94E-05	4.67E-06	3.03E-05	2.11E-06	9.15E-05	2.10E-05	2.11E-06	2.11E-06	1.99E-05	6.64E-06	4.93E-06	2.11E-06	1.94E-05	4.73E-06	4.89E-06	2.11E-06	1.21E-05	3.24E-06	7.51E-06	6.32E-06	8.70E-06
p,p'-DDT	1.57E-05	3.38E-06	7.50E-05	1.96E-05	8.34E-05	3.38E-06	3.13E-04	6.73E-05	1.81E-05	3.38E-06	3.17E-05	1.03E-05	1.48E-05	3.38E-06	4.82E-05	1.13E-05	1.98E-05	3.38E-06	1.00E-04	2.43E-05	1.15E-04	3.17E-05	1.98E-04
PCB-105	3.30E-04	7.34E-05	9.57E-04	2.16E-04	1.46E-03	7.34E-05	1.61E-02	2.50E-03	3.06E-04	1.76E-04	1.70E-03	5.36E-04	2.47E-04	7.34E-05	8.61E-04	2.13E-04	3.78E-04	7.34E-05	1.47E-03	3.97E-04	9.75E-04	4.69E-04	1.48E-03
PCB-114	7.34E-05	7.34E-05	2.37E-04	5.13E-05	6.50E-04	7.34E-05	2.40E-02	3.64E-03	7.34E-05	7.34E-05	1.95E-04	4.58E-05	7.34E-05	7.32E-05	3.10E-04	6.57E-05	7.34E-05	7.34E-05	2.52E-04	6.43E-05	2.16E-04	1.74E-04	2.59E-04
PCB-118	7.03E-04	7.34E-05	2.51E-03	5.95E-04	2.68E-03	3.73E-04	1.03E-02	2.04E-03	5.18E-04	2.11E-04	1.38E-03	3.90E-04	4.81E-04	1.50E-04	2.92E-03	5.64E-04	4.78E-04	7.34E-05	3.02E-03	7.61E-04	2.56E-03	1.82E-03	3.29E-03
PCB-123	4.80E-04	1.67E-04	1.82E-03	5.13E-04	2.35E-03	3.17E-04	2.22E-02	3.43E-03	4.47E-04	1.60E-03	1.03E-03	3.02E-04	3.51E-04	1.82E-04	2.13E-03	3.85E-04	5.52E-04	7.34E-05	1.27E-03	3.21E-04	1.58E-03	8.42E-04	2.33E-03
PCB-156	2.77E-04	7.34E-05	8.45E-04	1.92E-04	1.12E-03	2.12E-04	6.30E-03	1.15E-03	3.38E-04	7.34E-05	5.01E-04	1.83E-04	2.36E-04	7.34E-05	6.46E-04	1.64E-04	4.20E-04	7.34E-05	7.99E-04	2.17E-04	1.15E-03	4.85E-04	1.81E-03
PCB-157	2.81E-04	7.34E-05	2.12E-03	5.27E-04	1.03E-03	7.34E-05	4.17E-03	9.86E-04	3.77E-04	7.34E-05	6.46E-04	2.42E-04	2.62E-04	7.34E-05	1.62E-03	3.28E-04	3.70E-04	7.34E-05	1.08E-03	3.18E-04	2.06E-03	6.30E-04	3.48E-03
PCB-167	3.24E-04	7.34E-05	1.29E-03	3.04E-04	1.35E-03	7.34E-05	5.33E-03	1.16E-03	2.76E-04	7.34E-05	6.25E-04	1.97E-04	2.17E-04	7.34E-05	8.25E-04	2.17E-04	4.55E-04	7.34E-05	3.09E-03	7.23E-04	9.99E-04	3.24E-04	1.67E-03
PCB-189	2.54E-04	7.34E-05	7.11E-04	1.99E-04	7.07E-04	7.34E-05	2.89E-03	5.55E-04	3.07E-04	7.34E-05	3.76E-04	1.29E-04	1.79E-04	7.34E-05	4.34E-04	1.15E-04	2.93E-04	7.34E-05	2.11E-03	5.13E-04	5.49E-04	3.38E-04	7.59E-04
Cr	3.83E-03	9.01E-04	7.66E-03	1.90E-03	4.50E-03	7.88E-04	1.67E-02	4.11E-03	1.91E-03	5.63E-04	5.29E-03	1.88E-03	2.25E-03	6.76E-04	5.40E-03	1.35E-03	1.46E-03	1.01E-03	1.16E-02	2.67E-03	2.82E-03	1.35E-03	4.28E-03
Mn	4.15E-04	2.51E-04	8.88E-04	1.75E-04	1.58E-03	9.87E-04	3.88E-03	6.73E-04	1.29E-03	8.61E-04	2.22E-03	4.83E-04	1.42E-03	4.13E-04	4.08E-03	7.09E-04	3.69E-04	2.22E-04	6.01E-04	1.19E-04	1.28E-03	3.45E-04	2.21E-03
Fe	5.80E-03	2.29E-03	8.79E-03	2.31E-03	9.85E-03	5.33E-03	1.55E-02	1.78E-03	8.14E-03	5.47E-03	9.66E-03	1.51E-03	9.61E-03	4.48E-03	1.60E-02	2.68E-03	6.63E-03	4.21E-03	1.09E-02	2.10E-03	8.80E-03	6.05E-03	1.16E-02
Co	1.24E-02	6.76E-03	2.25E-02	5.73E-03	1.46E-02	5.63E-03	2.36E-02	3.64E-03	1.01E-02	6.76E-03	1.69E-02	3.64E-03	1.75E-02	1.13E-02	5.86E-02	1.04E-02	1.13E-02	6.76E-03	1.69E-02	3.31E-02	1.52E-02	9.01E-03	2.14E-02
Ni	4.22E-04	4.22E-04	4.22E-04	1.68E-19	4.22E-04	4.22E-04	4.22E-04	1.65E-19	4.22E-04	4.22E-04	4.22E-04	0.00E+00	4.22E-04	4.22E-04	4.22E-04	0.00E+00	4.22E-04	4.22E-04	4.22E-04	1.68E-19	4.22E-04	4.22E-04	4.22E-04
Cu	7.73E-03	5.65E-03	1.86E-02	3.79E-03	1.32E-02	8.23E-03	2.03E-02	2.38E-03	1.02E-02	6.16E-03	1.45E-02	2.84E-03	1.68E-02	8.27E-03	2.55E-02	4.11E-03	1.11E-02	7.10E-03	1.60E-02	2.76E-03	1.29E-02	9.04E-03	1.67E-02
Zn	1.63E-02	7.57E-03	2.29E-02	5.22E-03	2.82E-02	9.50E-03	3.73E-02	5.07E-03	1.93E-02	8.90E-03	2.79E-02	7.01E-03	2.83E-02	1.83E-02	4.15E-02	5.61E-03	1.32E-02	8.46E-03	2.16E-02	3.79E-03	2.83E-02	2.19E-02	3.48E-02
As	3.08E-01	2.04E-01	1.31E+00	3.14E-01	4.76E-01	2.82E-01	8.83E-01	1.43E-01	5.76E-01	3.74E-01	8.40E-01	1.81E-01	4.25E-01	2.13E-01	1.07E+00	2.07E-01	2.47E-01	1.13E-01	5.64E-01	1.16E-01	4.02E-01	2.23E-01	5.80E-01
Se	4.64E-02	2.22E-02	8.78E-02	1.83E-02	5.31E-02	2.72E-02	8.70E-02	1.34E-02	5.90E-02	3.58E-02	7.15E-02	1.19E-02	3.25E-02	1.59E-02	3.91E-02	6.77E-03	4.66E-02	2.13E-02	8.81E-02	2.06E-02	2.72E-02	2.41E-02	3.03E-02
Cd	1.69E-03	6.76E-05	4.73E-03	1.24E-03	3.04E-03	3.38E-04	6.08E-03	1.20E-03	1.69E-03	6.76E-04	6.42E-03	1.99E-03	5.57E-03	1.35E-03	1.22E-02	3.08E-03	3.04E-03	3.38E-04	6.42E-03	1.71E-03	5.07E-03	1.35E-03	8.78E-03

HI <sub>org</sub>	2.80E-03	1.09E-03	1.03E-02	2.20E-03	1.27E-02	2.78E-03	5.92E-02	1.15E-02	2.83E-03	1.43E-03	4.43E-03	9.80E-04	2.31E-03	1.08E-03	8.72E-03	1.54E-03	4.05E-03	9.38E-04	7.82E-03	2.05E-03	1.03E-02	5.18E-03	1.53E-02
HI <sub>elem</sub>	3.87E-01	3.24E-01	1.37E+00	3.15E-01	6.10E-01	4.03E-01	1.01E+00	1.47E-01	6.74E-01	4.65E-01	9.50E-01	1.86E-01	5.50E-01	2.92E-01	1.21E+00	2.15E-01	3.67E-01	2.04E-01	6.91E-01	1.27E-01	5.04E-01	2.97E-01	7.11E-01
ΣHI	3.89E-01	3.26E-01	1.37E+00	3.15E-01	6.21E-01	4.06E-01	1.03E+00	1.49E-01	6.76E-01	4.68E-01	9.53E-01	1.86E-01	5.52E-01	2.95E-01	1.22E+00	2.16E-01	3.70E-01	2.06E-01	6.94E-01	1.26E-01	5.14E-01	3.12E-01	7.16E-01

Table S9 The descriptive statistics (M-median; Min-minimum; Max-maximum; SD-standard deviation) of target carcinogenic risks for POP and elements (CR; R<sub>organic</sub> and R<sub>elements</sub>) and total carcinogenic risk (ΣR)

	HORSE MACKEREL (n=15)				SARDINE (n=44)				ROUND SARDINELLA (n=7)				ANCHOVY (N=24)				CHUB MACKEREL (n=15)				GARFISH (n=2)			
	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD
α-HCH	3.84E-12	3.84E-12	1.63E-11	4.44E-12	2.46E-11	3.84E-12	8.38E-11	1.75E-11	3.84E-12	3.84E-12	2.26E-11	7.25E-12	7.90E-12	2.13E-12	1.99E-11	5.91E-12	3.84E-12	3.84E-12	1.81E-11	5.34E-12	3.84E-12	3.84E-12	3.84E-12	
β-HCH	4.32E-12	1.10E-12	1.21E-11	3.39E-12	1.61E-11	1.10E-12	4.13E-11	9.03E-12	3.08E-12	1.10E-12	1.15E-11	4.02E-12	4.40E-12	1.10E-12	2.14E-11	5.31E-12	4.75E-12	1.10E-12	1.31E-11	3.41E-12	6.32E-12	4.27E-12	8.38E-12	
γ-HCH	1.53E-12	6.71E-13	5.33E-12	1.39E-12	8.33E-13	6.71E-13	3.58E-12	7.45E-13	1.93E-12	6.71E-13	5.87E-12	1.75E-13	2.17E-12	6.71E-13	3.50E-12	7.23E-13	2.01E-12	6.71E-13	4.86E-12	1.15E-12	6.25E-12	5.73E-12	6.77E-12	
HCB	9.76E-13	9.76E-13	8.94E-12	2.16E-12	1.40E-11	9.76E-13	4.23E-12	9.70E-13	9.76E-13	9.76E-13	9.20E-12	3.07E-12	2.28E-12	9.76E-13	8.94E-12	2.18E-12	2.26E-12	9.76E-13	5.58E-12	1.50E-12	3.47E-12	2.92E-12	4.02E-12	
p,p'-DDE	3.90E-12	4.42E-13	2.09E-11	5.37E-12	2.74E-12	1.22E-12	1.33E-11	2.50E-12	3.11E-12	1.04E-12	1.12E-11	4.16E-12	2.53E-12	2.07E-13	1.44E-11	3.62E-12	3.11E-12	6.97E-13	1.48E-11	3.78E-12	2.30E-12	9.11E-12	3.69E-12	
p,p'-DDD	4.17E-13	1.46E-13	1.97E-12	5.07E-13	3.04E-13	1.46E-13	6.87E-12	1.01E-13	2.94E-13	1.46E-13	8.60E-12	2.96E-13	1.46E-13	8.76E-13	2.07E-12	5.31E-13	1.46E-13	1.92E-12	4.17E-13	1.01E-12	3.80E-13	1.64E-12		
p,p'-DDT	9.67E-13	2.07E-13	4.60E-12	1.20E-12	5.12E-13	2.07E-13	1.92E-12	4.13E-13	1.11E-12	2.07E-13	1.95E-12	6.32E-13	9.10E-13	2.07E-13	2.96E-12	6.95E-13	1.22E-12	2.07E-13	6.15E-12	1.49E-12	7.06E-13	1.95E-12	1.22E-12	
PCB-105	1.07E-11	2.38E-12	3.10E-11	6.99E-12	4.73E-12	2.38E-12	5.20E-11	8.11E-12	9.90E-12	5.71E-12	5.52E-11	1.74E-12	8.00E-12	2.38E-12	2.79E-11	6.88E-12	1.22E-12	2.38E-12	4.76E-11	1.29E-11	3.16E-11	1.52E-11	4.80E-11	
PCB-114	2.38E-12	2.38E-12	7.67E-12	1.66E-12	2.11E-12	2.38E-12	7.78E-12	1.18E-12	2.38E-12	6.30E-12	1.48E-12	2.38E-12	2.37E-12	1.00E-12	2.13E-12	2.38E-12	8.15E-12	2.08E-12	7.00E-11	5.63E-12	8.38E-12			
PCB-118	2.28E-11	2.38E-12	8.14E-11	1.93E-12	8.70E-12	1.21E-12	3.33E-11	6.60E-12	1.68E-12	6.83E-12	4.47E-12	1.26E-12	1.56E-12	4.84E-12	9.45E-12	1.83E-12	1.55E-12	2.38E-12	9.80E-12	2.47E-12	8.28E-12	5.91E-12	1.07E-11	
PCB-123	1.55E-11	5.41E-12	5.89E-11	1.66E-12	7.61E-12	1.03E-12	7.18E-12	1.11E-12	1.45E-12	5.18E-12	3.34E-12	9.79E-12	1.14E-12	5.89E-12	6.89E-12	1.25E-12	1.79E-12	2.38E-12	4.10E-12	1.04E-12	5.13E-12	2.73E-12	7.53E-12	
PCB-156	8.97E-12	2.38E-12	2.74E-12	6.23E-12	3.62E-12	6.87E-12	2.04E-12	3.73E-12	1.10E-12	2.38E-12	1.62E-12	5.91E-12	7.66E-12	2.38E-12	2.09E-12	5.30E-12	1.36E-12	2.38E-12	2.59E-12	7.01E-12	3.72E-12	1.57E-12	5.88E-12	
PCB-157	9.10E-12	2.38E-12	6.86E-12	1.71E-12	3.35E-12	2.38E-12	1.35E-12	3.19E-12	1.22E-12	2.38E-12	2.09E-12	7.85E-12	8.50E-12	2.38E-12	5.24E-12	1.06E-12	1.20E-12	2.38E-12	3.50E-12	1.03E-12	6.66E-12	2.04E-12	1.13E-12	
PCB-167	1.05E-11	2.38E-12	4.19E-12	9.86E-12	4.37E-12	2.38E-12	1.73E-12	3.75E-12	8.94E-12	2.38E-12	2.02E-12	6.37E-12	7.02E-12	2.38E-12	2.67E-12	7.04E-12	1.47E-12	2.38E-12	1.00E-12	2.34E-12	3.23E-12	1.05E-12	5.42E-12	
PCB-189	8.24E-12	2.38E-12	2.30E-12	6.44E-12	2.29E-12	2.38E-12	9.36E-12	1.80E-12	9.95E-12	2.38E-12	1.22E-12	4.18E-12	5.79E-12	2.38E-12	1.40E-12	3.74E-12	9.49E-12	2.38E-12	6.84E-12	1.66E-12	1.78E-12	1.09E-12	2.46E-12	
Cr6+	3.46E-07	8.13E-08	6.91E-07	1.72E-07	4.07E-07	7.12E-08	1.50E-06	3.71E-07	1.73E-07	5.08E-07	4.78E-07	1.70E-07	2.03E-07	6.10E-08	4.88E-07	1.22E-07	1.32E-07	9.15E-08	1.05E-07	2.41E-07	2.54E-07	1.22E-07	3.86E-07	
As	5.01E-05	3.32E-05	2.13E-04	5.11E-05	7.74E-05	4.58E-05	1.44E-04	2.33E-05	9.36E-05	6.08E-05	1.37E-04	2.94E-05	6.90E-05	3.46E-05	1.73E-04	3.37E-05	4.02E-05	1.84E-05	9.16E-05	1.89E-05	6.53E-05	3.62E-05	9.43E-05	
Pb	7.26E-09	1.04E-09	2.70E-08	6.43E-09	1.24E-08	1.04E-09	3.63E-08	8.13E-09	6.22E-09	1.04E-09	3.32E-08	1.16E-08	5.18E-09	1.04E-09	1.87E-08	4.93E-09	4.15E-09	1.04E-09	2.07E-08	5.81E-09	6.74E-09	4.15E-09	9.33E-09	
R <sub>orgcomp</sub>	1.06E-10	4.67E-11	3.77E-10	8.04E-11	5.08E-10	1.00E-10	2.16E-09	4.17E-10	1.09E-10	7.56E-11	1.94E-10	4.02E-11	9.86E-11	4.27E-11	3.20E-10	5.71E-11	1.45E-10	4.73E-11	2.84E-10	6.91E-11	3.77E-10	1.94E-10	5.60E-10	
R <sub>element</sub>	5.03E-05	3.33E-05	2.14E-04	5.10E-05	7.80E-05	4.62E-05	1.44E-04	2.34E-05	9.39E-05	6.10E-05	1.37E-04	2.94E-05	6.93E-05	3.48E-05	1.74E-04	3.37E-05	4.05E-05	1.86E-05	9.17E-05	1.89E-05	6.55E-05	3.64E-05	9.47E-05	
ΣR	5.03E-05	3.33E-05	2.14E-04	5.10E-05	7.80E-05	4.62E-05	1.44E-04	2.34E-05	9.39E-05	6.10E-05	1.37E-04	2.94E-05	6.93E-05	3.48E-05	1.74E-04	3.37E-05	4.05E-05	1.86E-05	9.17E-05	1.89E-05	6.55E-05	3.64E-05	9.47E-05	

Table S10 Specific non-carcinogenic and carcinogenic risks for human organs' diseases (cardiovascular, endocrine, hepatic, nervous, reproductive, urinary and total-from table S8 and S9)

	Specific risks for human organs' illnesses							Specific risks for human organs' carcinogenic illnesses					
	$\Sigma$ HI cardiovascular	$\Sigma$ HI endocrine	$\Sigma$ HI hepatic	$\Sigma$ HI nervous	$\Sigma$ HI reproductive	$\Sigma$ HI urinary	$\Sigma$ HI total	$\Sigma$ R endocrine	$\Sigma$ R hepatic	$\Sigma$ R nervous	$\Sigma$ R reproductive	$\Sigma$ R total	
HORSE MACKEREL	B3/M1-14	3.07E-01	1.43E-03	4.93E-02	2.63E-01	2.65E-01	3.51E-04	3.32E-01	1.46E-08	1.16E-11	4.16E-05	4.16E-05	4.23E-05
	B3/M2-14	3.82E-01	3.13E-03	3.08E-02	3.63E-01	3.64E-01	3.49E-04	4.06E-01	7.36E-09	1.03E-11	5.78E-05	5.78E-05	5.79E-05
	E2/M3-14	1.34E+00	4.09E-03	3.23E-02	1.32E+00	1.32E+00	8.00E-05	1.37E+00	1.18E-09	1.28E-11	2.13E-04	2.13E-04	2.14E-04
	E5/M4-14	3.60E-01	3.04E-03	5.46E-02	3.14E-01	3.20E-01	1.69E-03	3.85E-01	4.20E-09	6.41E-12	5.00E-05	5.00E-05	5.01E-05
	A3/M5-15	3.35E-01	1.16E-02	3.64E-02	3.06E-01	3.15E-01	1.40E-03	3.75E-01	8.67E-09	4.61E-11	4.87E-05	4.87E-05	4.91E-05
	B2/M6-15	2.71E-01	7.57E-03	5.61E-02	2.39E-01	2.49E-01	3.07E-03	3.29E-01	2.71E-08	2.44E-11	3.62E-05	3.62E-05	3.66E-05
	E7/M7-15	3.55E-01	2.80E-03	4.90E-02	3.15E-01	3.25E-01	1.02E-03	3.89E-01	1.04E-08	1.18E-11	5.01E-05	5.01E-05	5.03E-05
	D3/M8-15	8.77E-01	5.93E-03	1.15E-01	7.97E-01	7.97E-01	1.72E-03	9.36E-01	4.34E-09	4.90E-11	1.26E-04	1.26E-04	1.27E-04
	F1/M9-15	3.60E-01	4.49E-03	5.04E-02	3.24E-01	3.33E-01	1.70E-03	4.01E-01	1.05E-08	1.61E-11	5.11E-05	5.11E-05	5.13E-05
	B3/M10-16	9.35E-01	6.15E-03	7.74E-02	8.72E-01	8.75E-01	2.71E-03	9.78E-01	1.05E-08	1.99E-11	1.40E-04	1.40E-04	1.40E-04
	B2/M11-16	3.18E-01	5.30E-03	7.44E-02	2.50E-01	2.65E-01	2.71E-03	3.68E-01	1.15E-08	1.29E-11	3.95E-05	3.95E-05	3.98E-05
	B2/M12-16	2.74E-01	3.34E-03	7.55E-02	2.14E-01	2.24E-01	1.69E-03	3.26E-01	1.11E-09	1.72E-11	3.32E-05	3.32E-05	3.33E-05
	B2/M13-16	6.77E-01	6.94E-03	8.07E-02	6.06E-01	6.24E-01	4.76E-03	7.21E-01	4.25E-09	2.81E-11	9.69E-05	9.69E-05	9.73E-05
	B3/M14-16	2.96E-01	6.02E-03	6.94E-02	2.37E-01	2.49E-01	2.38E-03	3.48E-01	7.41E-09	2.68E-11	3.71E-05	3.71E-05	3.75E-05
	B3/M15-16	6.16E-01	6.64E-03	7.52E-02	5.49E-01	5.67E-01	3.06E-03	6.68E-01	5.32E-09	1.87E-11	8.79E-05	8.79E-05	8.83E-05
	C1/S1-14	5.71E-01	4.16E-02	6.42E-02	5.26E-01	5.34E-01	1.57E-03	6.63E-01	8.66E-09	9.74E-11	8.29E-05	8.29E-05	8.37E-05
	F2/S3-14	7.12E-01	3.12E-03	8.93E-02	6.48E-01	6.63E-01	3.51E-04	7.74E-01	1.46E-08	1.13E-11	1.03E-04	1.03E-04	1.03E-04
	B3/S4-14	4.98E-01	4.50E-03	7.17E-02	4.48E-01	4.59E-01	1.04E-03	5.47E-01	1.26E-08	1.39E-11	7.06E-05	7.06E-05	7.08E-05
B3/S5-14	4.43E-01	8.74E-03	7.64E-02	4.05E-01	4.11E-01	2.07E-03	5.08E-01	1.17E-08	3.24E-11	6.22E-05	6.22E-05	6.24E-05	
B3/S7-14	4.76E-01	1.17E-02	7.41E-02	4.22E-01	4.31E-01	1.37E-03	5.39E-01	1.41E-09	2.99E-11	6.58E-05	6.58E-05	6.67E-05	
E2/S8-14	6.88E-01	6.32E-03	7.87E-02	6.33E-01	6.49E-01	1.38E-03	7.56E-01	1.22E-09	1.79E-11	1.00E-04	1.00E-04	1.01E-04	
SARDINE	E5/S9-14	3.78E-01	4.30E-03	7.60E-02	3.18E-01	3.19E-01	1.03E-03	4.06E-01	1.16E-09	1.65E-11	5.00E-05	5.00E-05	5.02E-05
	E7/S10-15	5.92E-01	4.92E-03	8.23E-02	5.29E-01	5.44E-01	2.04E-03	6.46E-01	7.39E-09	3.57E-11	8.40E-05	8.40E-05	8.41E-05
	C4/S11-15	7.36E-01	1.41E-02	6.80E-02	6.90E-01	7.03E-01	4.11E-03	7.96E-01	1.18E-08	9.04E-11	1.10E-04	1.10E-04	1.10E-04
	A3/S12-15	3.90E-01	2.26E-02	6.67E-02	3.46E-01	3.71E-01	4.43E-03	4.80E-01	2.04E-08	8.03E-11	5.35E-05	5.35E-05	5.37E-05
	B3/S13-15	4.44E-01	2.03E-02	6.79E-02	3.99E-01	4.16E-01	3.77E-03	5.16E-01	1.31E-08	1.00E-10	6.24E-05	6.24E-05	6.26E-05
	C1/S14-15	5.53E-01	1.67E-02	7.10E-02	5.11E-01	5.33E-01	3.41E-03	6.32E-01	1.92E-08	6.61E-11	8.00E-05	8.00E-05	8.02E-05
	F1/S16-15	4.77E-01	1.11E-02	7.15E-02	4.27E-01	4.42E-01	2.05E-03	5.41E-01	1.80E-08	4.66E-11	6.72E-05	6.72E-05	6.73E-05
	F1/S17-15	4.72E-01	2.14E-02	8.45E-02	4.11E-01	4.33E-01	3.78E-03	5.58E-01	1.52E-08	6.92E-11	6.40E-05	6.40E-05	6.45E-05
F1/S18-15	7.65E-01	6.96E-03	1.00E-01	6.86E-01	7.12E-01	4.08E-03	8.44E-01	2.91E-08	1.86E-11	1.09E-04	1.09E-04	1.09E-04	

**ROUND SARDINELLA**

G4/S19-15	3.67E-01	1.02E-02	8.67E-02	3.11E-01	3.33E-01	5.76E-03	4.45E-01	5.37E-09	3.76E-11	4.72E-05	4.72E-05	4.74E-05
F2/S20-15	5.51E-01	1.20E-02	6.51E-02	4.98E-01	5.19E-01	2.39E-03	6.11E-01	7.64E-09	6.58E-11	7.93E-05	7.93E-05	7.96E-05
G4/S21-15	4.77E-01	1.63E-02	8.98E-02	4.06E-01	4.25E-01	3.79E-03	5.44E-01	1.40E-08	6.24E-11	6.39E-05	6.39E-05	6.40E-05
F1/S22-15	6.39E-01	1.41E-02	6.83E-02	5.96E-01	6.09E-01	1.71E-03	7.08E-01	1.60E-08	6.08E-11	9.43E-05	9.43E-05	9.45E-05
E7/S24-15	5.43E-01	1.01E-02	1.02E-01	4.61E-01	4.78E-01	3.07E-03	6.07E-01	3.55E-08	4.75E-11	7.26E-05	7.26E-05	7.29E-05
C4/S25-15	5.35E-01	7.07E-03	5.54E-02	5.11E-01	5.18E-01	4.06E-03	5.94E-01	2.09E-08	2.94E-11	7.99E-05	7.99E-05	8.01E-05
B2/S26-16	5.27E-01	1.70E-02	9.98E-02	4.37E-01	4.54E-01	3.45E-03	6.06E-01	1.30E-08	1.12E-10	6.87E-05	6.87E-05	7.00E-05
B3/S27-16	9.37E-01	2.75E-02	9.56E-02	8.66E-01	8.87E-01	4.18E-03	1.03E+00	2.89E-08	1.42E-10	1.38E-04	1.38E-04	1.38E-04
B2/S28-16	6.23E-01	2.31E-02	7.27E-02	5.78E-01	5.87E-01	1.81E-03	7.01E-01	8.13E-09	1.61E-10	9.09E-05	9.09E-05	9.14E-05
F1/S29-16	5.30E-01	1.61E-02	9.22E-02	4.59E-01	4.72E-01	2.11E-03	6.03E-01	1.41E-08	1.20E-10	7.18E-05	7.18E-05	7.25E-05
B2/S30-16	4.67E-01	1.76E-02	6.99E-02	4.17E-01	4.28E-01	2.48E-03	5.41E-01	1.21E-08	1.38E-10	6.53E-05	6.53E-05	6.59E-05
B2/S31-16	7.22E-01	2.65E-02	1.09E-01	6.33E-01	6.51E-01	3.17E-03	8.05E-01	1.13E-08	1.42E-10	1.00E-04	1.00E-04	1.01E-04
F1/S32-16	5.62E-01	1.34E-02	9.75E-02	4.86E-01	5.06E-01	2.77E-03	6.38E-01	1.49E-08	7.97E-11	7.64E-05	7.64E-05	7.69E-05
B3/S33-16	7.77E-01	9.26E-03	9.07E-02	7.01E-01	7.13E-01	2.74E-03	8.43E-01	1.37E-08	5.19E-11	1.11E-04	1.11E-04	1.13E-04
B2/S34-16	7.73E-01	1.47E-02	6.43E-02	7.23E-01	7.41E-01	3.79E-03	8.42E-01	2.54E-08	1.03E-10	1.15E-04	1.15E-04	1.16E-04
B3/S35-16	5.49E-01	2.81E-02	8.13E-02	4.83E-01	5.03E-01	4.58E-03	6.41E-01	1.55E-08	2.04E-10	7.59E-05	7.59E-05	7.68E-05
B2/S36-16	5.56E-01	1.55E-02	7.81E-02	4.99E-01	5.14E-01	3.54E-03	6.31E-01	8.81E-09	1.10E-10	7.84E-05	7.84E-05	7.91E-05
F1/S37-16	5.79E-01	1.51E-02	9.10E-02	5.03E-01	5.13E-01	2.10E-03	6.42E-01	1.19E-08	7.54E-11	7.96E-05	7.96E-05	8.02E-05
B3/S38-16	6.50E-01	1.86E-02	8.88E-02	5.83E-01	5.99E-01	3.51E-03	7.21E-01	2.03E-08	1.39E-10	9.22E-05	9.22E-05	9.26E-05
F2/S39-16	8.85E-01	6.22E-02	1.00E-01	8.04E-01	8.22E-01	3.19E-03	1.01E+00	9.43E-09	2.53E-10	1.28E-04	1.28E-04	1.29E-04
F1/S40-16	5.73E-01	1.58E-02	8.58E-02	4.99E-01	5.20E-01	3.13E-03	6.51E-01	2.85E-08	1.09E-10	7.85E-05	7.85E-05	7.99E-05
B3/S42-16	7.88E-01	1.72E-02	4.90E-02	7.56E-01	7.75E-01	6.17E-03	8.57E-01	9.78E-09	8.52E-11	1.20E-04	1.20E-04	1.21E-04
B2/S43-16	5.04E-01	1.12E-02	7.63E-02	4.51E-01	4.69E-01	3.45E-03	5.74E-01	8.63E-09	7.25E-11	7.04E-05	7.04E-05	7.10E-05
B3/S44-16	5.15E-01	2.18E-02	9.19E-02	4.42E-01	4.56E-01	2.48E-03	5.92E-01	1.32E-08	1.25E-10	6.93E-05	6.93E-05	7.01E-05
B2/S45-16	4.80E-01	2.62E-02	8.30E-02	4.29E-01	4.44E-01	3.51E-03	5.72E-01	1.23E-08	1.69E-10	6.65E-05	6.65E-05	6.68E-05
A1/S46-16	3.44E-01	2.62E-02	6.86E-02	2.96E-01	3.14E-01	2.49E-03	4.34E-01	1.44E-08	1.71E-10	4.58E-05	4.58E-05	4.62E-05
B3/S47-16	5.30E-01	1.72E-02	8.44E-02	4.72E-01	4.88E-01	2.49E-03	6.06E-01	9.94E-09	1.13E-10	7.39E-05	7.39E-05	7.43E-05
B3/S48-16	9.51E-01	1.81E-02	6.94E-02	8.98E-01	9.17E-01	3.50E-03	1.02E+00	8.89E-09	1.14E-10	1.44E-04	1.44E-04	1.44E-04
E7/S50-16	5.04E-01	5.15E-02	7.90E-02	4.32E-01	4.52E-01	3.00E-03	6.11E-01	3.81E-08	2.21E-10	6.79E-05	6.79E-05	6.95E-05
E5/S2-14	4.45E-01	3.54E-03	8.26E-02	3.90E-01	4.03E-01	1.02E-03	5.05E-01	1.13E-09	1.00E-11	6.08E-05	6.08E-05	6.10E-05
B3/S6-14	6.11E-01	3.50E-03	7.47E-02	5.56E-01	5.54E-01	6.95E-04	6.41E-01	1.15E-09	1.91E-11	8.84E-05	8.84E-05	8.85E-05
B2/S13-15	9.15E-01	6.52E-03	8.11E-02	8.52E-01	8.58E-01	3.38E-03	9.53E-01	1.15E-09	1.61E-11	1.37E-04	1.37E-04	1.37E-04
A3/S15-15	4.22E-01	5.31E-03	5.54E-02	3.88E-01	3.97E-01	1.71E-03	4.68E-01	1.26E-08	2.47E-11	6.10E-05	6.10E-05	6.11E-05
F1/S23-15	6.33E-01	3.52E-03	5.87E-02	5.84E-01	5.96E-01	1.37E-03	6.76E-01	3.33E-08	1.87E-11	9.36E-05	9.36E-05	9.39E-05
B2/S41-16	7.29E-01	4.14E-03	8.39E-02	6.50E-01	6.73E-01	2.72E-03	7.74E-01	6.30E-09	2.75E-11	1.04E-04	1.04E-04	1.05E-04
B2/S49-16	8.47E-01	1.09E-02	6.64E-02	7.90E-01	8.10E-01	6.47E-03	9.04E-01	1.26E-08	4.44E-11	1.26E-04	1.26E-04	1.27E-04

ANCHOVY

C1/A1-14	5.15E-01	6.81E-03	5.52E-02	4.77E-01	4.87E-01	5.08E-03	5.63E-01	1.10E-09	8.62E-12	7.53E-05	7.53E-05	7.56E-05
B3/A2-14	7.93E-01	4.67E-03	5.95E-02	7.66E-01	7.72E-01	3.05E-03	8.50E-01	1.10E-09	8.54E-12	1.21E-04	1.21E-04	1.22E-04
E5/A3-14	3.34E-01	5.14E-03	4.98E-02	3.10E-01	3.22E-01	4.07E-03	3.91E-01	1.08E-09	7.62E-12	4.78E-05	4.78E-05	4.79E-05
B3/A4-14	3.78E-01	4.08E-03	5.20E-02	3.62E-01	3.68E-01	2.38E-03	4.40E-01	1.10E-09	9.32E-12	5.54E-05	5.54E-05	5.56E-05
F2/A5-14	7.75E-01	6.03E-03	5.67E-02	7.45E-01	7.58E-01	4.42E-03	8.36E-01	1.10E-09	9.23E-12	1.18E-04	1.18E-04	1.18E-04
B3/A6-14	4.91E-01	5.05E-03	4.14E-02	4.77E-01	4.92E-01	2.73E-03	5.51E-01	1.14E-09	3.11E-11	7.48E-05	7.48E-05	7.49E-05
C1/A7-15	3.97E-01	6.33E-03	4.53E-02	3.82E-01	3.90E-01	4.08E-03	4.55E-01	5.31E-09	4.63E-11	5.90E-05	5.90E-05	5.91E-05
B3/A8-15	3.39E-01	1.54E-02	4.67E-02	3.15E-01	3.34E-01	1.08E-02	4.02E-01	5.36E-09	2.60E-11	4.83E-05	4.83E-05	4.84E-05
F1/A9-15	4.41E-01	7.56E-03	5.66E-02	4.09E-01	4.27E-01	5.43E-03	5.10E-01	7.34E-09	1.51E-11	6.36E-05	6.36E-05	6.38E-05
F1/A10-15	4.83E-01	9.49E-03	5.28E-02	4.54E-01	4.71E-01	5.76E-03	5.56E-01	5.34E-09	3.58E-11	7.10E-05	7.10E-05	7.13E-05
D3/A11-15	6.63E-01	7.15E-03	6.84E-02	6.42E-01	6.40E-01	4.07E-03	7.29E-01	4.28E-09	3.51E-11	9.98E-05	9.98E-05	9.99E-05
F1/A12-15	4.17E-01	6.39E-03	3.54E-02	4.01E-01	4.19E-01	4.07E-03	4.74E-01	1.14E-09	2.61E-11	6.30E-05	6.30E-05	6.31E-05
B3/A13-16	6.40E-01	7.94E-03	6.35E-02	6.01E-01	6.18E-01	6.09E-03	7.45E-01	4.22E-09	1.20E-11	9.49E-05	9.49E-05	9.51E-05
B2/A14-16	4.60E-01	1.11E-02	5.37E-02	4.32E-01	4.52E-01	8.79E-03	5.53E-01	9.42E-09	1.69E-11	6.70E-05	6.70E-05	6.72E-05
B2/A15-16	5.86E-01	1.02E-02	6.60E-02	5.52E-01	5.67E-01	7.45E-03	6.62E-01	1.77E-08	2.65E-11	8.60E-05	8.60E-05	8.63E-05
B2/A16-16	4.42E-01	1.32E-02	6.76E-02	4.01E-01	4.33E-01	1.12E-02	5.37E-01	9.42E-09	2.11E-11	6.17E-05	6.17E-05	6.19E-05
B3/A17-16	2.51E-01	4.17E-03	4.26E-02	2.22E-01	2.36E-01	1.37E-03	2.95E-01	4.26E-09	1.98E-11	3.46E-05	3.46E-05	3.48E-05
B3/A18-16	9.23E-01	8.51E-03	6.53E-02	8.94E-01	9.07E-01	6.10E-03	9.98E-01	4.25E-09	2.28E-11	1.41E-04	1.41E-04	1.42E-04
B2/A19-16	5.31E-01	7.12E-03	5.32E-02	4.93E-01	5.16E-01	5.76E-03	5.91E-01	5.25E-09	2.10E-11	7.82E-05	7.82E-05	7.84E-05
B2/A20-16	4.34E-01	1.23E-02	6.72E-02	3.90E-01	4.15E-01	1.05E-02	5.16E-01	1.87E-08	1.93E-11	6.02E-05	6.02E-05	6.05E-05
B3/A21-16	4.07E-01	1.31E-02	6.61E-02	3.69E-01	3.91E-01	1.08E-02	4.88E-01	1.25E-08	2.09E-11	5.62E-05	5.62E-05	5.67E-05
B3/A22-16	3.49E-01	1.05E-02	5.07E-02	3.25E-01	3.48E-01	8.12E-03	4.30E-01	7.36E-09	2.17E-11	4.96E-05	4.96E-05	4.99E-05
B3/A23-16	1.13E+00	1.62E-02	6.62E-02	1.09E+00	1.12E+00	1.22E-02	1.22E+00	8.47E-09	3.43E-11	1.73E-04	1.73E-04	1.74E-04
B3/A24-16	7.78E-01	1.38E-02	6.23E-02	7.58E-01	7.67E-01	5.09E-03	8.60E-01	7.58E-09	3.36E-11	1.19E-04	1.19E-04	1.19E-04
B3/L1-14	2.41E-01	1.09E-02	6.42E-02	1.99E-01	1.99E-01	3.06E-03	2.80E-01	9.59E-09	9.70E-12	3.02E-05	3.02E-05	3.03E-05
F2/L2-14	2.39E-01	4.74E-03	5.44E-02	1.89E-01	1.90E-01	6.95E-04	2.68E-01	1.18E-09	1.41E-11	2.93E-05	2.93E-05	3.04E-05
B3/L3-14	1.77E-01	1.93E-03	7.24E-02	1.25E-01	1.22E-01	3.50E-04	2.06E-01	1.10E-09	8.31E-12	1.84E-05	1.84E-05	1.86E-05
E2/L4-14	2.32E-01	4.91E-03	7.38E-02	1.78E-01	1.78E-01	6.97E-04	2.67E-01	1.19E-09	1.33E-11	2.71E-05	2.71E-05	2.73E-05
B3/L5-15	1.69E-01	1.18E-02	5.26E-02	1.42E-01	1.45E-01	6.45E-03	2.14E-01	1.25E-09	3.63E-11	2.03E-05	2.03E-05	2.04E-05
A3/L6-15	3.22E-01	9.67E-03	4.53E-02	2.86E-01	2.97E-01	4.74E-03	3.59E-01	5.37E-09	2.29E-11	4.52E-05	4.52E-05	4.53E-05
C4/L7-15	4.70E-01	7.19E-03	9.25E-02	3.96E-01	4.04E-01	4.08E-03	5.18E-01	1.17E-09	3.18E-11	6.23E-05	6.23E-05	6.24E-05
B2/L8-15	2.79E-01	8.15E-03	6.90E-02	2.33E-01	2.36E-01	4.08E-03	3.27E-01	8.46E-09	2.62E-11	3.55E-05	3.55E-05	3.56E-05
E7/L9-15	3.31E-01	4.63E-03	3.79E-02	3.07E-01	3.14E-01	1.71E-03	3.70E-01	2.09E-08	3.37E-11	4.83E-05	4.83E-05	4.87E-05

CHUB MACKEREL

GA RFI SH	E7/L10-15	4.01E-01	4.43E-03	4.96E-02	3.63E-01	3.69E-01	2.04E-03	4.35E-01	1.14E-09	2.60E-11	5.77E-05	5.77E-05	5.78E-05
	D3/L11-15	6.45E-01	5.20E-03	9.23E-02	5.80E-01	5.83E-01	3.05E-03	6.94E-01	4.24E-09	2.18E-11	9.16E-05	9.16E-05	9.17E-05
	B3/L12-16	3.79E-01	9.08E-03	4.82E-02	3.49E-01	3.51E-01	1.36E-03	4.19E-01	1.48E-08	3.53E-11	5.48E-05	5.48E-05	5.51E-05
	B2/L13-16	3.97E-01	5.17E-03	8.35E-02	3.30E-01	3.42E-01	3.38E-03	4.48E-01	8.36E-09	1.19E-11	5.17E-05	5.17E-05	5.20E-05
	B4/L14-16	3.41E-01	6.08E-03	1.06E-01	2.51E-01	2.57E-01	2.07E-03	3.84E-01	4.31E-09	3.25E-11	3.89E-05	3.89E-05	3.93E-05
	B2/L15-16	3.52E-01	4.65E-03	1.13E-01	2.63E-01	2.73E-01	3.73E-03	4.02E-01	3.16E-09	1.68E-11	4.02E-05	4.02E-05	4.05E-05
	B3/G1-15	2.56E-01	1.67E-02	3.95E-02	2.33E-01	2.47E-01	1.40E-03	3.12E-01	4.71E-09	6.87E-11	3.62E-05	3.62E-05	3.64E-05
	B3/G2-16	6.35E-01	1.40E-02	5.86E-02	6.00E-01	6.24E-01	8.84E-03	7.16E-01	9.53E-09	2.63E-11	9.43E-05	9.43E-05	9.47E-05

Table S11 Benefit-risk for fish consumers obtained for POPs and elements and total benefit-risk for each fish species from Adriatic Sea

Benefit-Risk (BR)	HORSE MACKEREL				SARDINE				ROUND SARDINELLA				ANCHOVY				CHUB MACKEREL				GARFISH		
	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max	SD	M	Min	Max
α-HCH	9.78	4.30	1.19	3.11	3.02	3.70	2.96	6.07	5.29	2.94	2.02	7.41	5.64	1.13	4.23	9.81	6.46	2.43	6.10	1.79	7.40	7.13	7.67
	E-07	E-07	E-05	E-06	E-06	E-07	E-05	E-06	E-07	E-07	E-05	E-06	E-07	E-07	E-05	E-06	E-07	E-07	E-06	E-06	E-07	E-07	E-07
γ-HCH	5.64	1.15	5.01	1.61	1.34	2.52	2.03	3.21	3.48	7.84	5.09	1.82	3.09	7.99	6.80	1.69	5.05	1.40	1.57	3.67	1.84	1.63	2.06
	E-05	E-05	E-04	E-04	E-04	E-05	E-03	E-04	E-05	E-06	E-04	E-04	E-05	E-06	E-04	E-04	E-05	E-05	E-04	E-05	E-04	E-04	E-04
HCB	1.08	4.30	3.07	7.69	6.60	4.86	8.62	1.48	4.74	2.94	6.64	2.42	6.91	1.77	1.96	4.46	1.51	2.43	6.37	1.72	2.62	2.30	2.94
	E-05	E-06	E-04	E-05	E-05	E-06	E-04	E-04	E-06	E-06	E-05	E-05	E-06	E-06	E-04	E-05	E-06	E-05	E-05	E-05	E-05	E-05	E-05
p,p'-DDT	4.40	6.88	1.19	3.06	2.28	8.69	1.80	3.47	4.06	2.69	3.41	1.18	2.57	4.81	1.07	2.73	5.55	6.91	1.02	2.50	3.93	1.15	6.70
	E-05	E-06	E-03	E-04	E-04	E-06	E-03	E-04	E-05	E-06	E-04	E-04	E-05	E-06	E-03	E-04	E-05	E-06	E-03	E-04	E-04	E-04	E-04
PCB-105	9.66	2.15	6.74	2.00	3.84	1.89	3.46	6.84	7.57	1.40	7.52	2.79	4.76	1.04	9.45	2.57	9.95	1.50	6.62	1.70	3.35	1.70	5.01
	E-04	E-04	E-03	E-03	E-03	E-04	E-02	E-03	E-04	E-04	E-03	E-03	E-04	E-04	E-03	E-03	E-04	E-04	E-03	E-03	E-03	E-03	E-03
PCB-114	2.15	1.39	3.75	1.07	1.45	1.29	1.86	3.30	1.22	5.84	6.12	2.27	1.57	5.17	3.61	1.00	2.23	8.44	1.16	3.08	7.53	6.32	8.74
	E-04	E-04	E-03	E-03	E-03	E-04	E-02	E-03	E-04	E-05	E-03	E-03	E-04	E-05	E-03	E-03	E-04	E-05	E-03	E-04	E-04	E-04	E-04
PCB-118	2.07	1.50	1.32	4.32	6.71	1.17	8.58	1.70	1.03	3.79	7.63	2.56	6.76	1.90	1.94	5.52	1.36	1.50	3.08	7.66	8.87	6.62	1.11
	E-03	E-04	E-02	E-03	E-03	E-03	E-02	E-02	E-03	E-04	E-03	E-03	E-04	E-04	E-02	E-03	E-03	E-04	E-02	E-03	E-03	E-03	E-03
PCB-123	1.28	3.50	1.08	3.10	5.72	9.05	6.77	1.53	1.17	1.66	5.03	1.66	6.39	2.25	1.51	4.03	1.11	5.35	1.29	3.08	5.46	3.06	7.85
	E-03	E-04	E-02	E-03	E-03	E-04	E-02	E-02	E-03	E-04	E-03	E-03	E-04	E-04	E-02	E-03	E-03	E-04	E-02	E-03	E-03	E-03	E-03
PCB-156	6.64	1.50	8.49	2.61	2.79	4.50	2.68	5.49	6.88	5.84	1.06	3.85	4.56	6.82	1.53	3.91	8.71	1.50	7.44	1.79	3.95	1.76	6.13
	E-04	E-04	E-03	E-03	E-03	E-04	E-02	E-03	E-04	E-05	E-02	E-03	E-04	E-05	E-02	E-03	E-04	E-04	E-03	E-03	E-03	E-03	E-03
PCB-157	6.32	1.50	1.41	4.16	2.06	1.56	7.35	1.48	7.21	1.36	1.19	4.30	5.03	6.82	1.73	4.94	7.47	1.50	9.08	2.22	7.02	2.29	1.18
	E-04	E-04	E-02	E-03	E-03	E-04	E-02	E-02	E-04	E-04	E-02	E-03	E-04	E-05	E-02	E-03	E-04	E-04	E-03	E-03	E-03	E-03	E-03
PCB-167	7.66	3.40	1.26	3.60	2.96	1.58	4.56	9.01	5.65	5.84	8.67	3.11	4.20	6.15	2.38	5.70	8.65	1.80	7.64	2.37	3.41	1.18	5.65
	E-04	E-04	E-02	E-03	E-03	E-04	E-02	E-03	E-04	E-05	E-03	E-03	E-04	E-05	E-02	E-03	E-04	E-04	E-03	E-03	E-03	E-03	E-03
PCB-189	5.44	1.50	1.81	4.81	1.44	1.45	2.84	5.06	4.55	1.24	9.66	3.53	3.53	9.08	9.33	1.93	5.50	8.61	4.18	1.37	1.90	1.23	2.56
	E-04	E-04	E-02	E-03	E-03	E-04	E-02	E-03	E-04	E-04	E-03	E-03	E-04	E-05	E-03	E-03	E-04	E-05	E-03	E-03	E-03	E-03	E-03
Cr	8.84	2.20	5.95	1.74	1.05	1.77	9.00	1.64	4.21	7.84	9.21	3.35	4.70	7.65	6.25	1.67	6.08	1.55	3.55	9.57	1.01	4.56	1.55
	E-03	E-03	E-02	E-02	E-02	E-03	E-02	E-02	E-03	E-04	E-02	E-02	E-03	E-04	E-02	E-02	E-03	E-03	E-02	E-03	E-02	E-02	E-02
Mn	1.21	5.19	1.39	4.13	4.07	9.51	7.43	1.77	2.88	6.85	4.05	1.44	2.21	9.43	6.11	1.65	7.08	3.48	5.58	1.53	4.60	1.17	8.04
	E-03	E-04	E-02	E-03	E-03	E-04	E-02	E-02	E-03	E-04	E-02	E-02	E-03	E-04	E-02	E-02	E-04	E-04	E-03	E-03	E-03	E-03	E-03
Fe	1.36	4.66	1.39	4.42	2.11	6.45	3.01	8.02	1.42	4.92	2.20	7.85	1.82	6.22	3.96	9.44	1.60	5.34	6.97	2.00	3.12	2.04	4.20
	E-02	E-03	E-01	E-02	E-02	E-03	E-01	E-02	E-02	E-03	E-01	E-02	E-02	E-03	E-01	E-02	E-02	E-03	E-02	E-02	E-02	E-02	E-02
Co	3.65	1.38	3.80	1.07	3.22	9.99	5.10	1.15	1.69	7.16	4.60	1.67	3.97	1.13	7.75	1.76	2.50	1.16	1.15	3.49	5.41	3.04	7.77
	E-02	E-02	E-01	E-01	E-02	E-03	E-01	E-01	E-02	E-03	E-01	E-01	E-02	E-02	E-01	E-01	E-02	E-02	E-01	E-02	E-02	E-02	E-02
Ni	1.22	6.40	1.29	3.38	9.42	3.14	1.21	3.05	7.00	3.36	1.33	4.75	7.31	2.97	2.08	4.67	1.04	4.85	4.29	1.23	1.48	1.43	1.53
	E-03	E-04	E-02	E-03	E-04	E-04	E-02	E-03	E-04	E-04	E-02	E-03	E-04	E-04	E-02	E-03	E-03	E-04	E-03	E-03	E-03	E-03	E-03
Cu	1.82	1.17	2.94	8.94	2.73	1.00	3.55	8.50	1.79	4.89	2.04	7.07	2.79	1.01	6.74	1.71	2.71	8.34	1.14	3.24	4.56	3.05	6.07
	E-02	E-02	E-01	E-02	E-02	E-02	E-01	E-02	E-02	E-03	E-01	E-02	E-02	E-02	E-01	E-01	E-02	E-03	E-01	E-02	E-02	E-02	E-02
Zn	4.02	1.85	5.00	1.33	6.13	2.01	8.07	2.21	3.17	2.01	5.74	2.05	5.24	1.84	1.30	2.83	3.17	1.64	1.23	3.74	1.00	7.40	1.26
	E-02	E-02	E-01	E-01	E-02	E-02	E-01	E-01	E-02	E-02	E-01	E-01	E-02	E-02	E+00	E-01	E-02	E-02	E-01	E-02	E-01	E-02	E-01

As 6%	8.70 E-01	4.33 E-01	1.23 E+0 1	3.95 E+0 0	1.24 E+0 0	3.17 E-01	1.45 E+0 1	3.54 E+0 0	1.17 E+0 0	5.11 E-01	1.81 E+0 1	6.49 E+0 0	8.31 E-01	2.88 E-01	1.91 E+0 1	4.93 E+0 0	4.85 E-01	2.78 E-01	4.10 E+0 0	1.32 E+0 0	1.43 E+0 0	7.53 E-01	2.11 E+0 0
Se	1.28 E-01	5.43 E-02	1.39 E+0 0	4.23 E-01	1.22 E-01	2.18 E-02	1.97 E+0 0	4.67 E-01	8.45 E-02	5.69 E-02	1.42 E+0 0	5.03 E-01	5.35 E-02	2.00 E-02	9.01 E-01	2.36 E-01	1.36 E-01	3.48 E-02	4.88 E-01	1.26 E-01	9.57 E-02	8.15 E-02	1.10 E-01
Cd	4.94 E-03	1.98 E-04	5.18 E-02	1.41 E-02	5.70 E-03	7.78 E-04	1.12 E-01	2.69 E-02	2.78 E-03	1.69 E-03	4.25 E-02	1.49 E-02	1.12 E-02	2.54 E-03	1.99 E-01	4.56 E-02	5.43 E-03	8.30 E-04	2.21 E-02	6.64 E-03	1.82 E-02	4.56 E-03	3.19 E-02
<b>ΣBRo</b>	<b>6.93</b>	<b>2.74</b>	<b>8.57</b>	<b>2.51</b>	<b>3.12</b>	<b>6.30</b>	<b>3.59</b>	<b>7.08</b>	<b>5.96</b>	<b>1.14</b>	<b>6.81</b>	<b>2.38</b>	<b>4.32</b>	<b>1.28</b>	<b>1.15</b>	<b>2.94</b>	<b>1.01</b>	<b>1.92</b>	<b>7.86</b>	<b>1.87</b>	<b>3.53</b>	<b>1.88</b>	<b>5.18</b>
<b>ΣBRe</b>	<b>1.05</b>	<b>6.54</b>	<b>1.48</b>	<b>4.71</b>	<b>1.61</b>	<b>4.25</b>	<b>1.81</b>	<b>4.51</b>	<b>1.32</b>	<b>6.14</b>	<b>2.12</b>	<b>7.58</b>	<b>1.04</b>	<b>3.85</b>	<b>2.32</b>	<b>5.93</b>	<b>7.68</b>	<b>4.07</b>	<b>5.03</b>	<b>1.57</b>	<b>1.79</b>	<b>1.00</b>	<b>2.58</b>
<b>ΣBR</b>	<b>1.08</b>	<b>6.60</b>	<b>1.48</b>	<b>4.73</b>	<b>1.65</b>	<b>4.39</b>	<b>1.82</b>	<b>4.57</b>	<b>1.33</b>	<b>6.15</b>	<b>2.12</b>	<b>7.60</b>	<b>1.04</b>	<b>3.90</b>	<b>2.33</b>	<b>5.96</b>	<b>7.76</b>	<b>4.13</b>	<b>5.05</b>	<b>1.58</b>	<b>1.83</b>	<b>1.05</b>	<b>2.60</b>
	0	E-01	1	0	0	E-01	1	0	0	E-01	1	0	0	E-01	1	0	E-01	E-01	0	0	0	0	0



# FIGURES

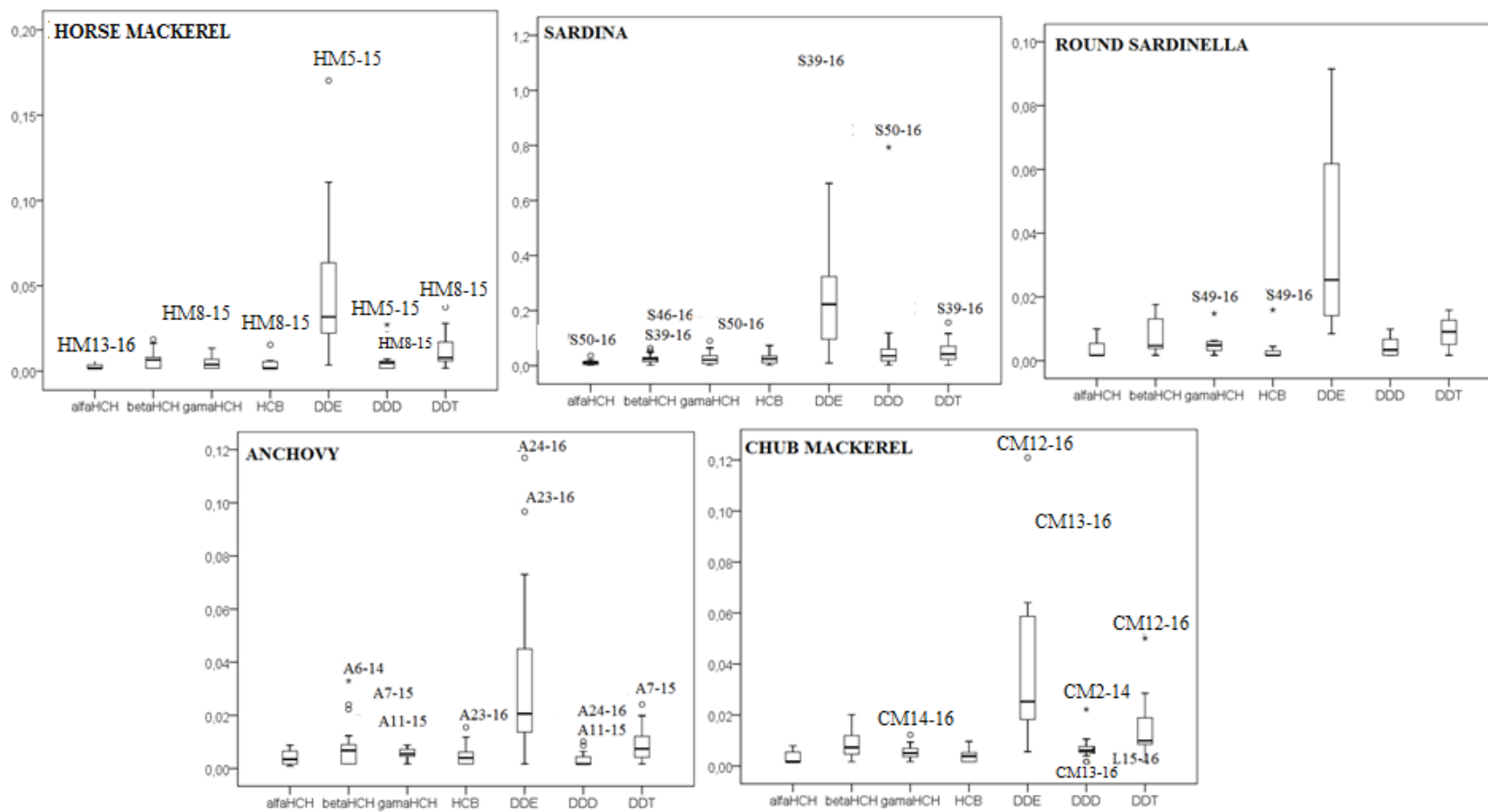


Figure S1 DI values of OCPs (ng/kg/day) in investigated fishes' consumption

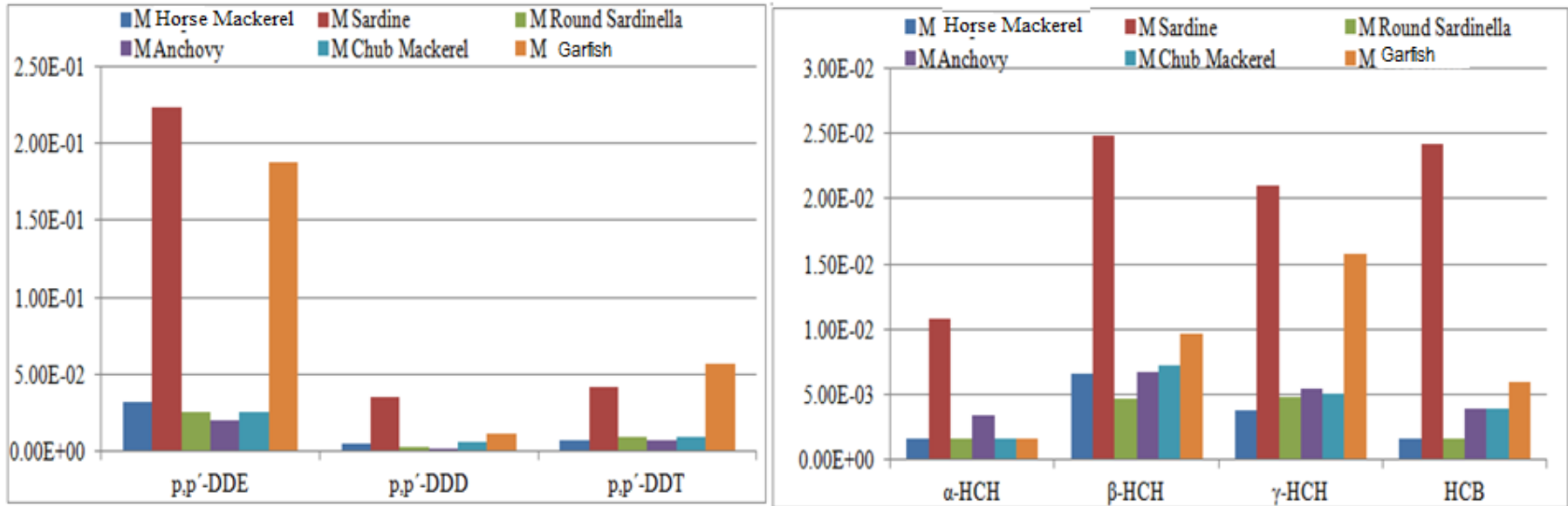


Figure S2 Median DI values for OCPs investigated fishes' consumption

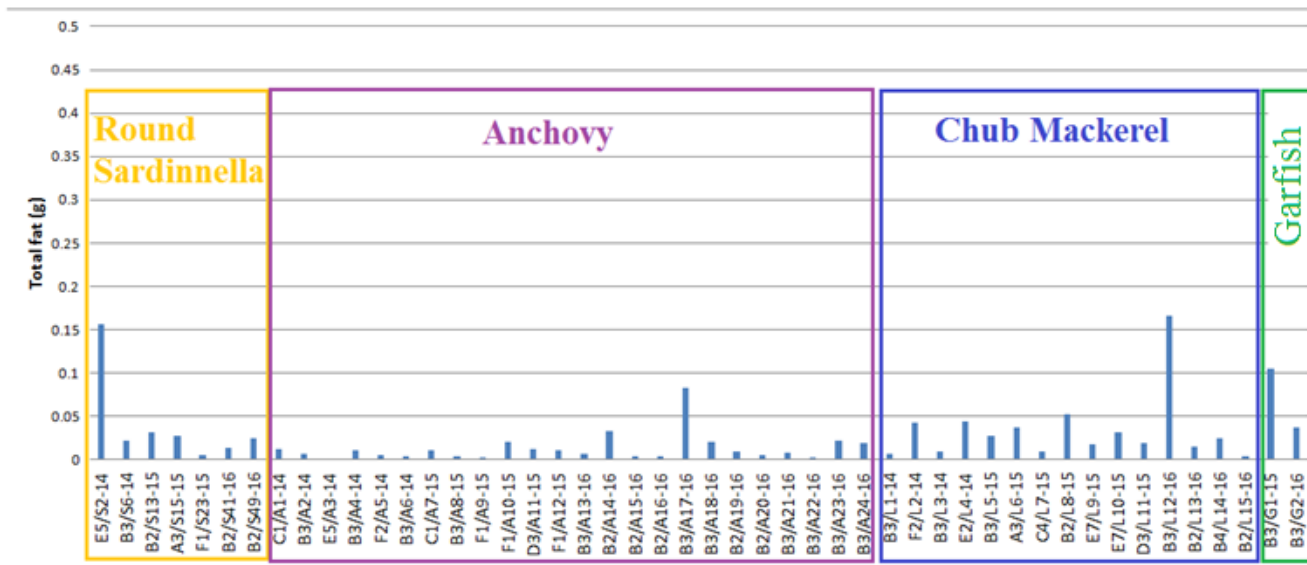
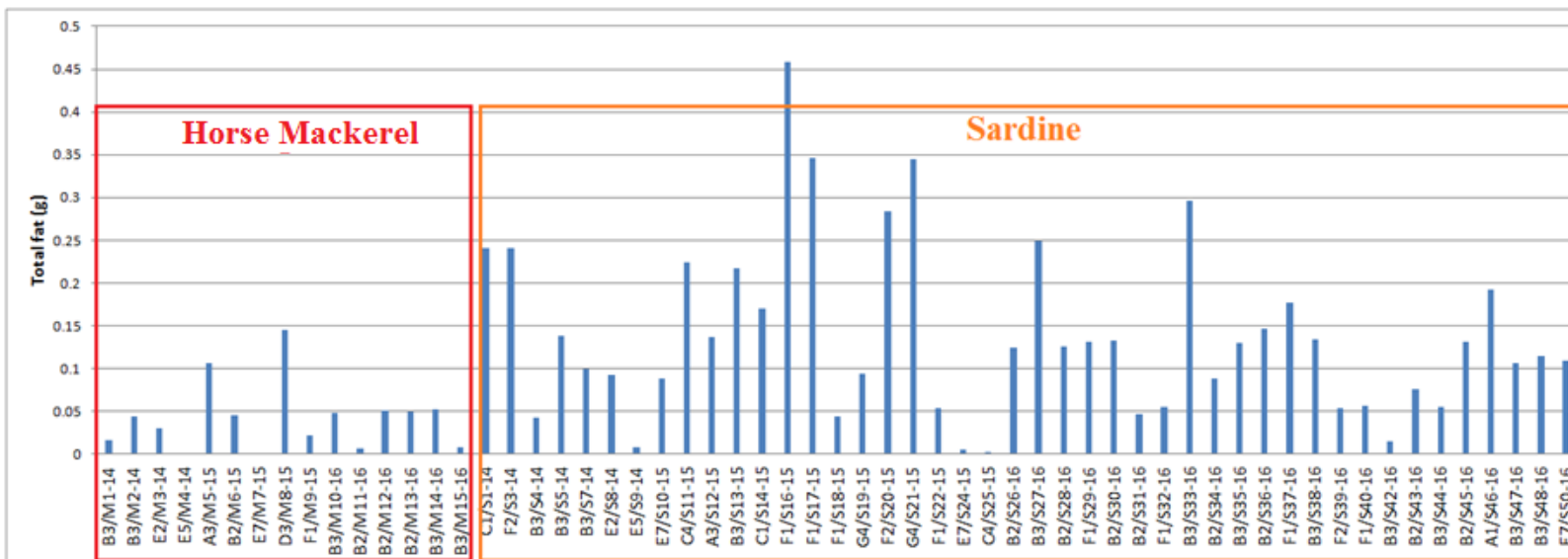


Figure S3 Total fat content (g) in all investigated samples

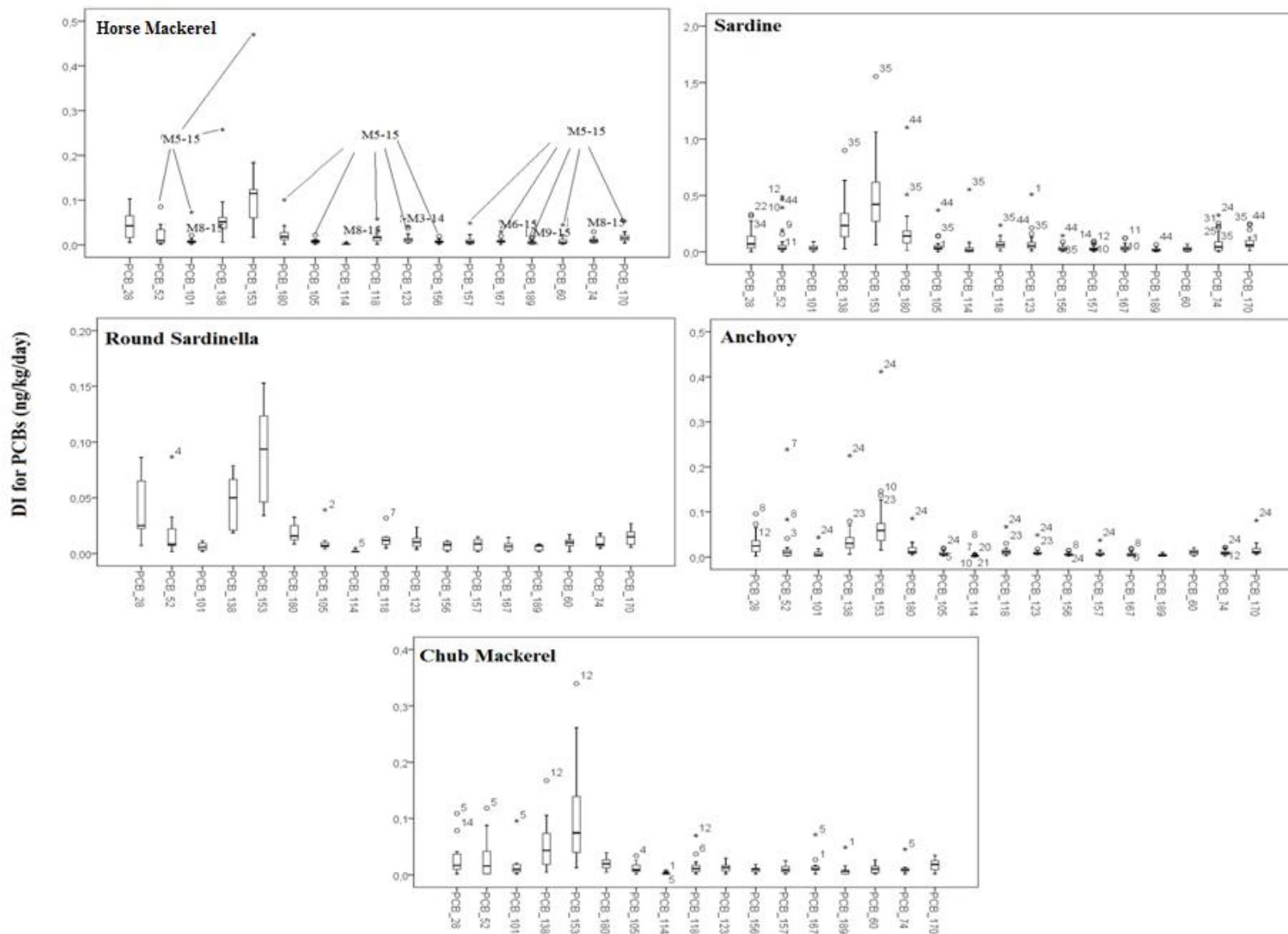


Figure S4 DI values for PCBs (ng/kg/day) observed for investigated fish species

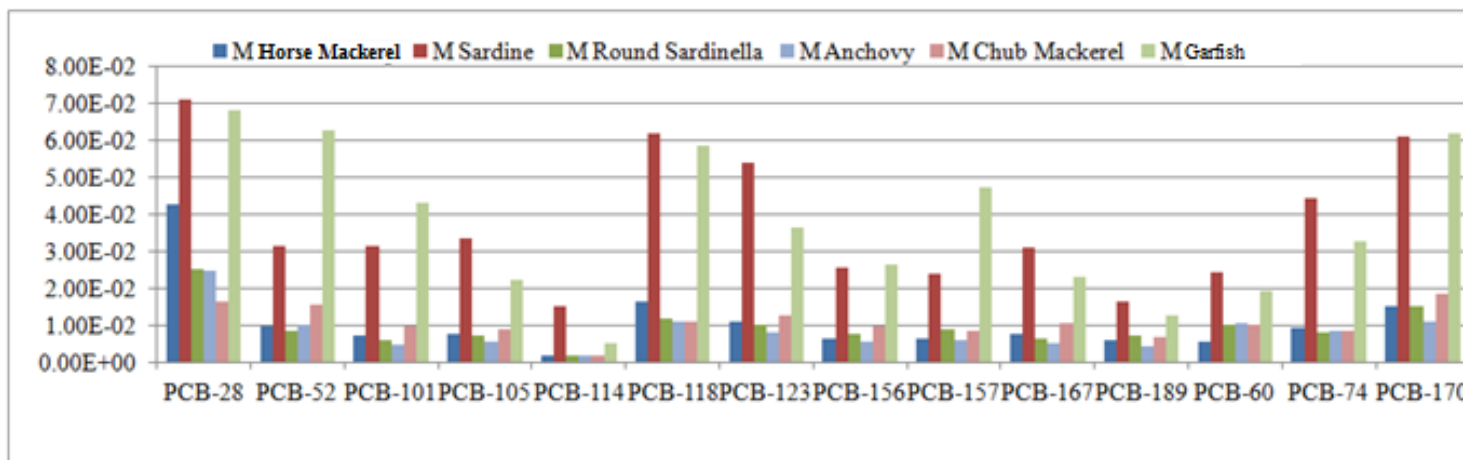
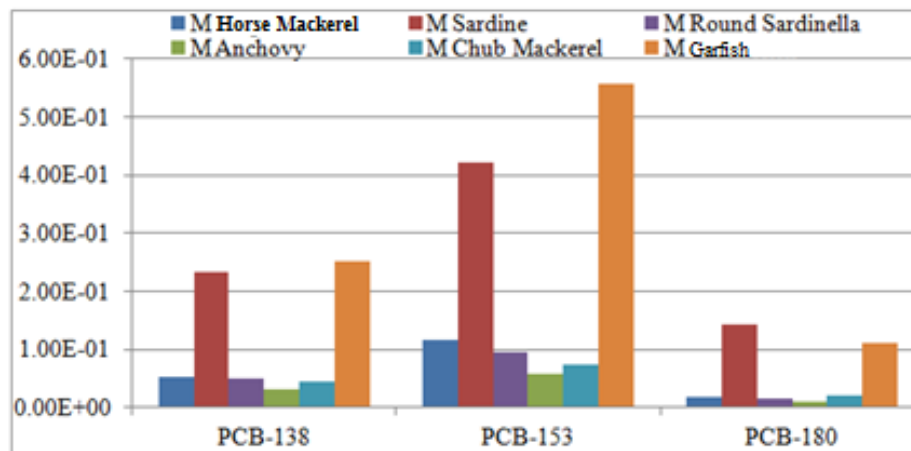


Figure S5 Median DI (ng/kg/day) of PCBs for investigated fishes' consumption

Medians of DI in fish species (mg/kg/day)

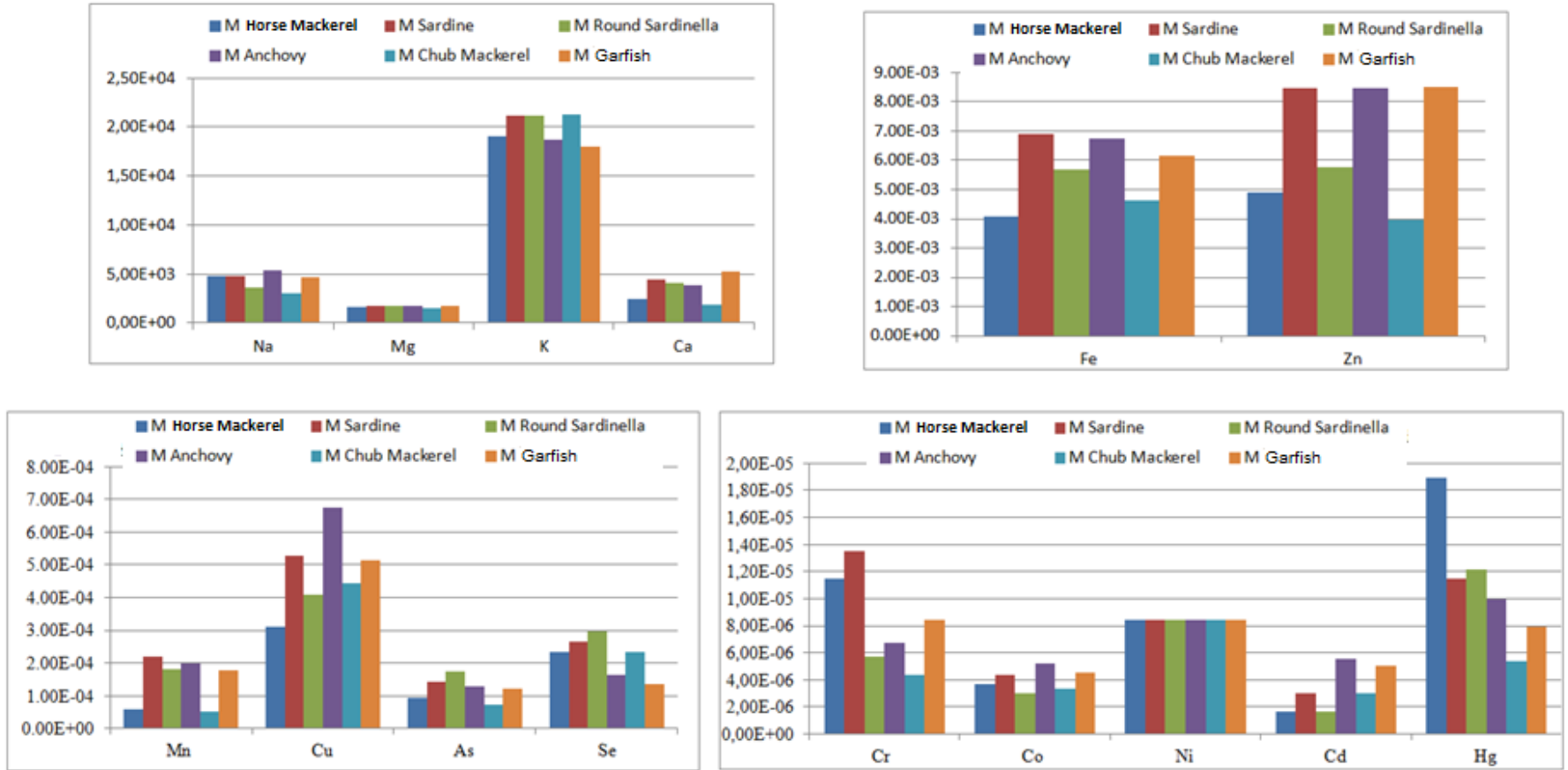


Figure S6 Median values of DI (mg/kg/day) of elements for investigated fishes' consumption

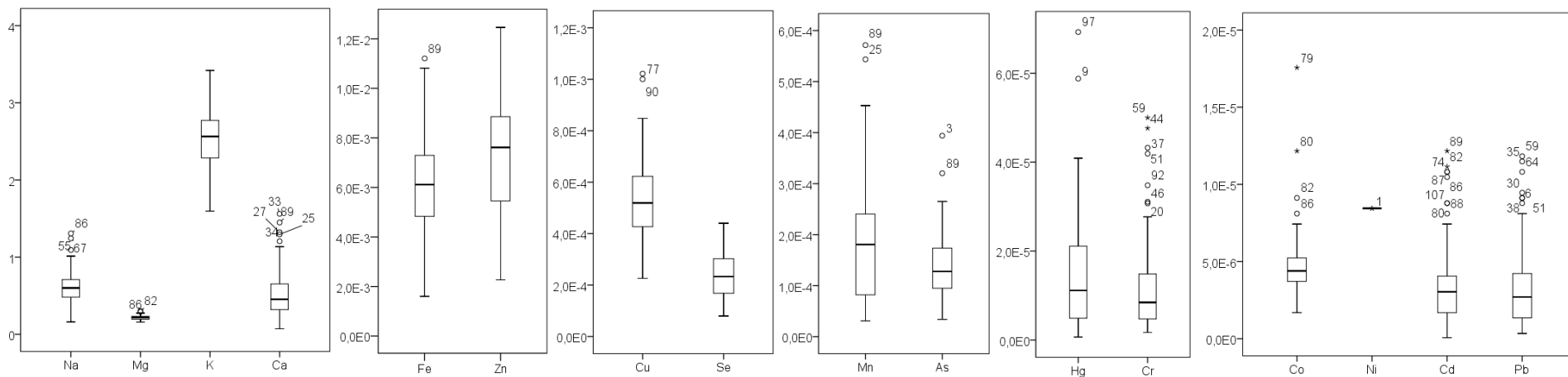


Figure S7 DI values (mg/kg/day) for elements in investigated fish species

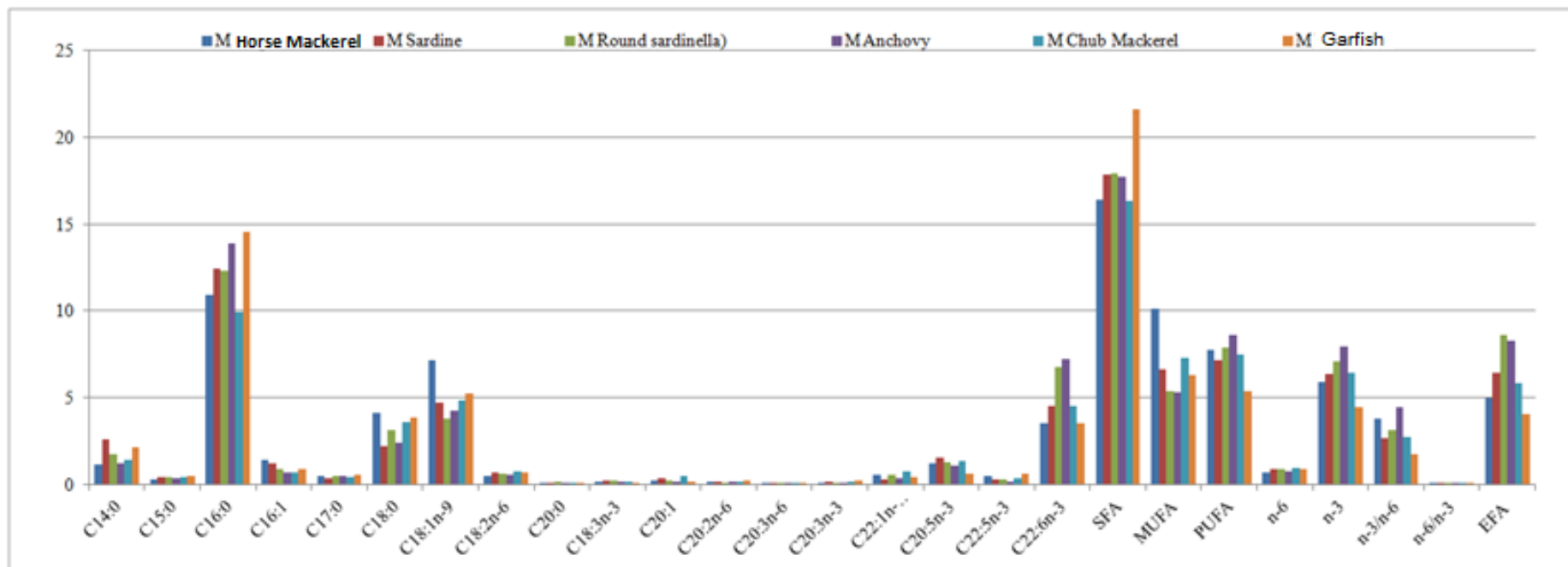


Figure S8 Median values of DIs for fatty acids (g/kg/day)

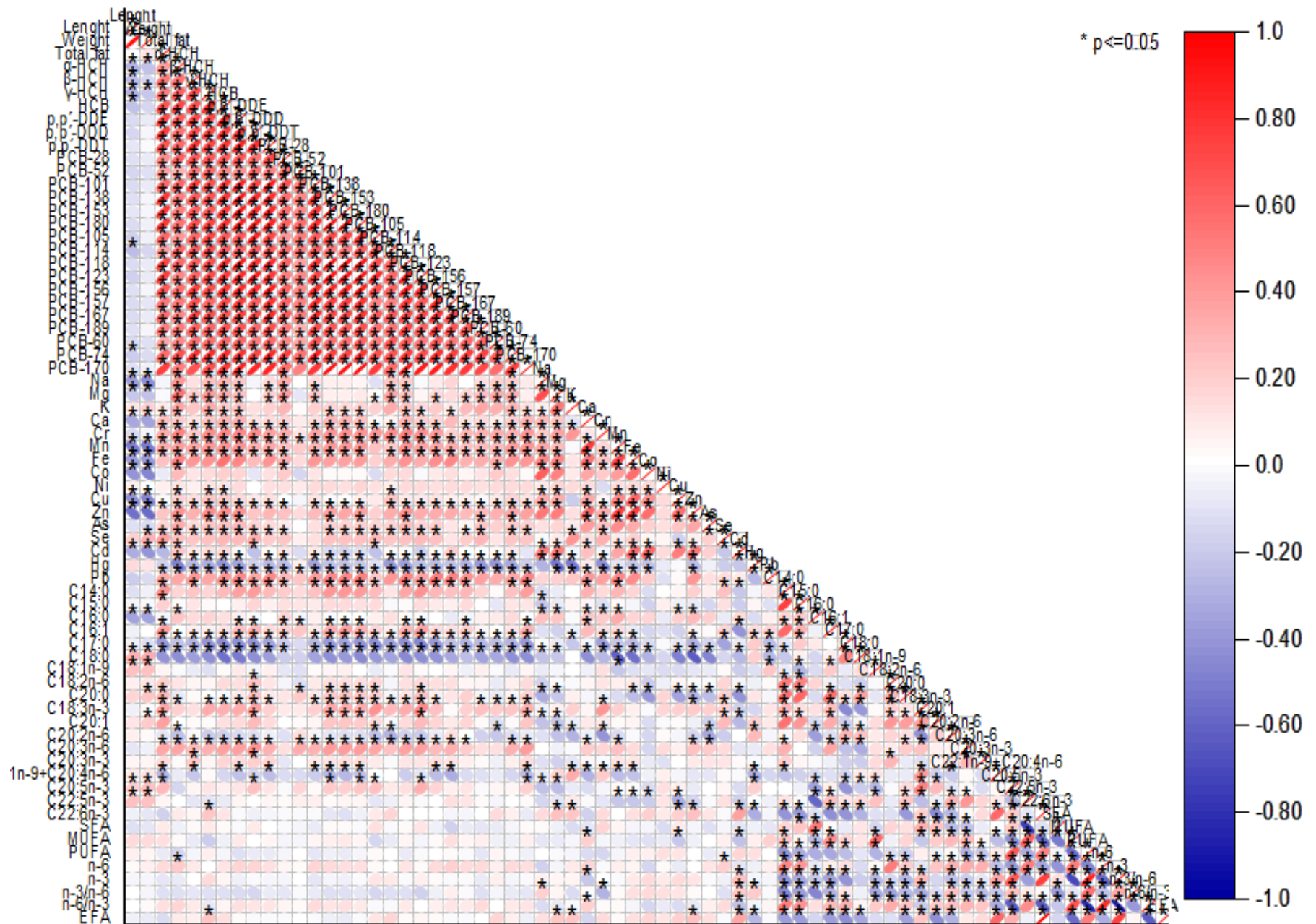


Figure S9 Correlogram of all investigated variables of the six fish species from the Adriatic Sea; the significant correlations are marked „\*“.



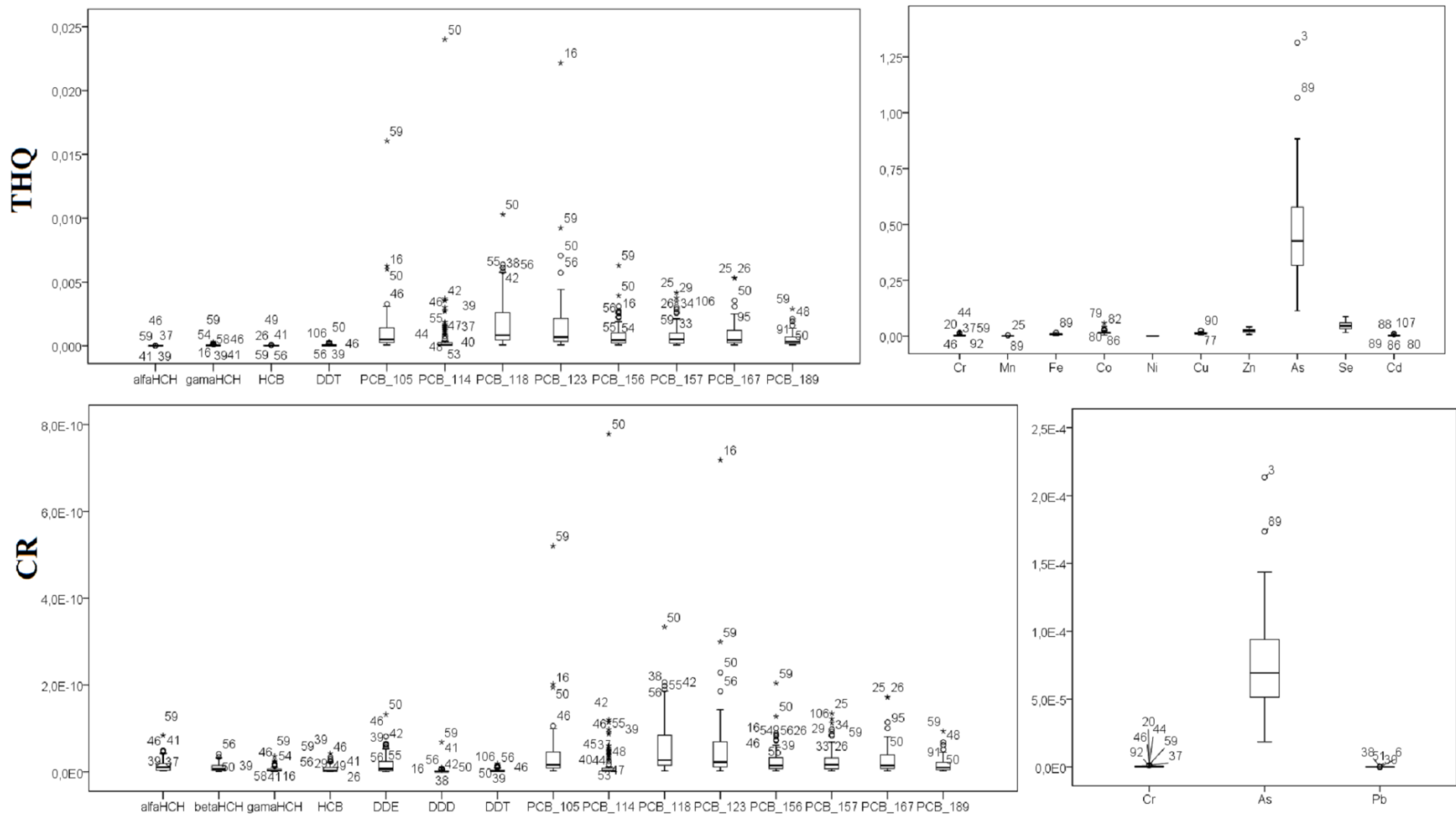
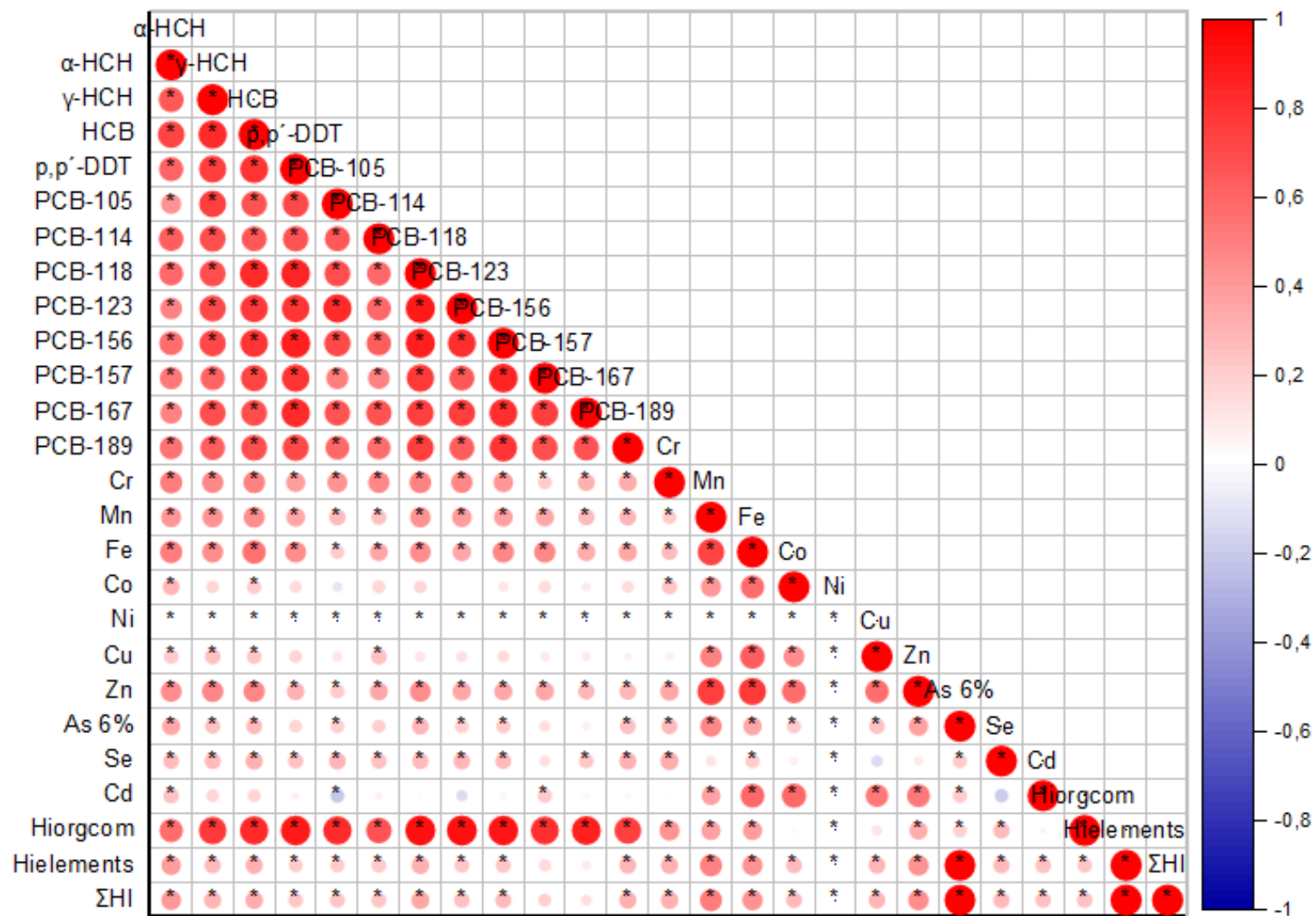


Figure S10 The non-carcinogenic (THQ) and carcinogenic (CR) established for each POP and element risks for fish consumers



\* p <= 0.05

Figure S11 Correlation of THQ values of OCPs, PCBs and elements; the significant correlations are marked „\*“.

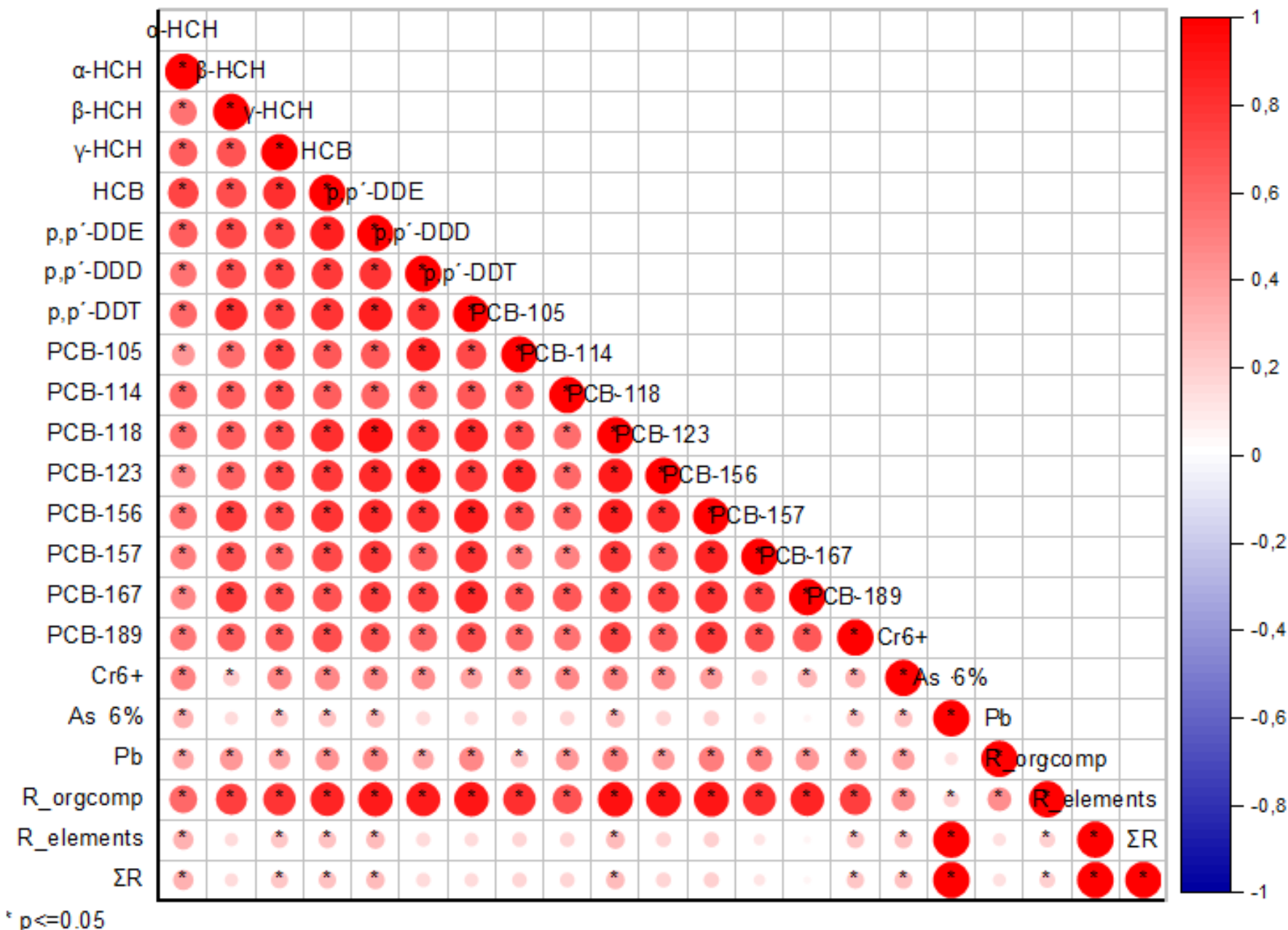


Figure S12 Carcinogenic risk (CR and R, ΣR) correlations; the significant correlations are marked „\*“.

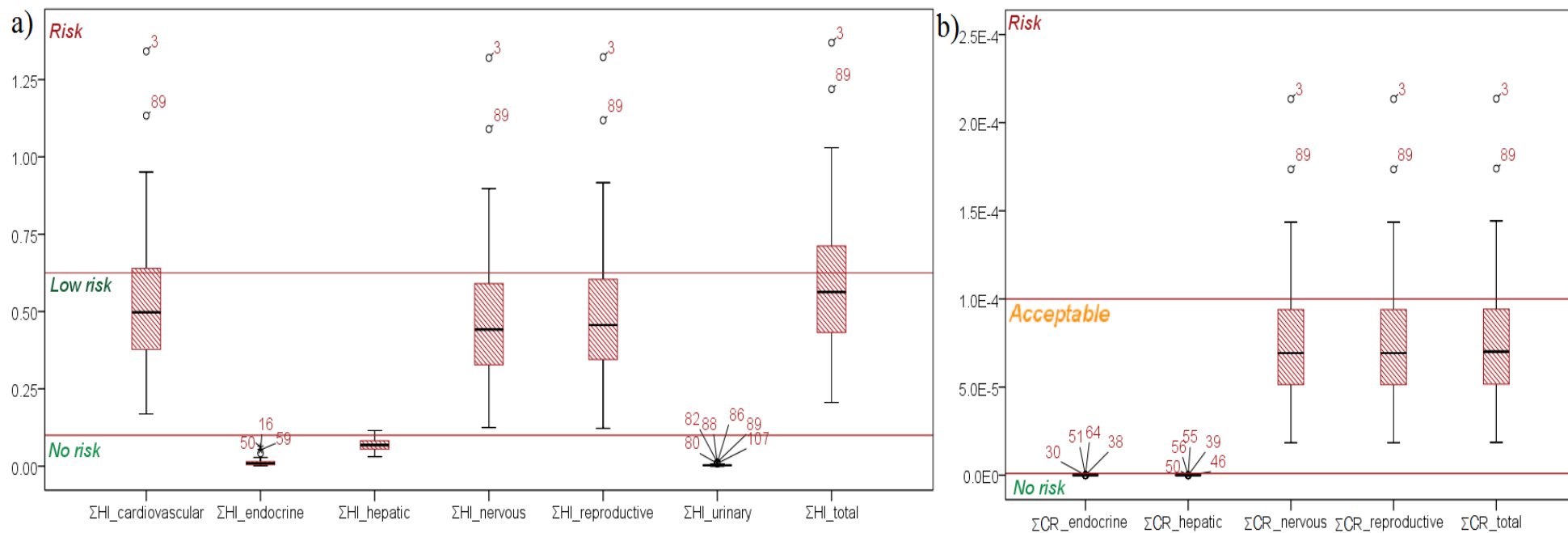


Figure S13 Box and whisker describing the descriptive statistics (median, minimum and maximum) and outliers of a) non-carcinogenic risk (HI) and b) carcinogenic risk (CR) for the human organs/part of organism diseases development by the long-lasting monotonous fish diet.

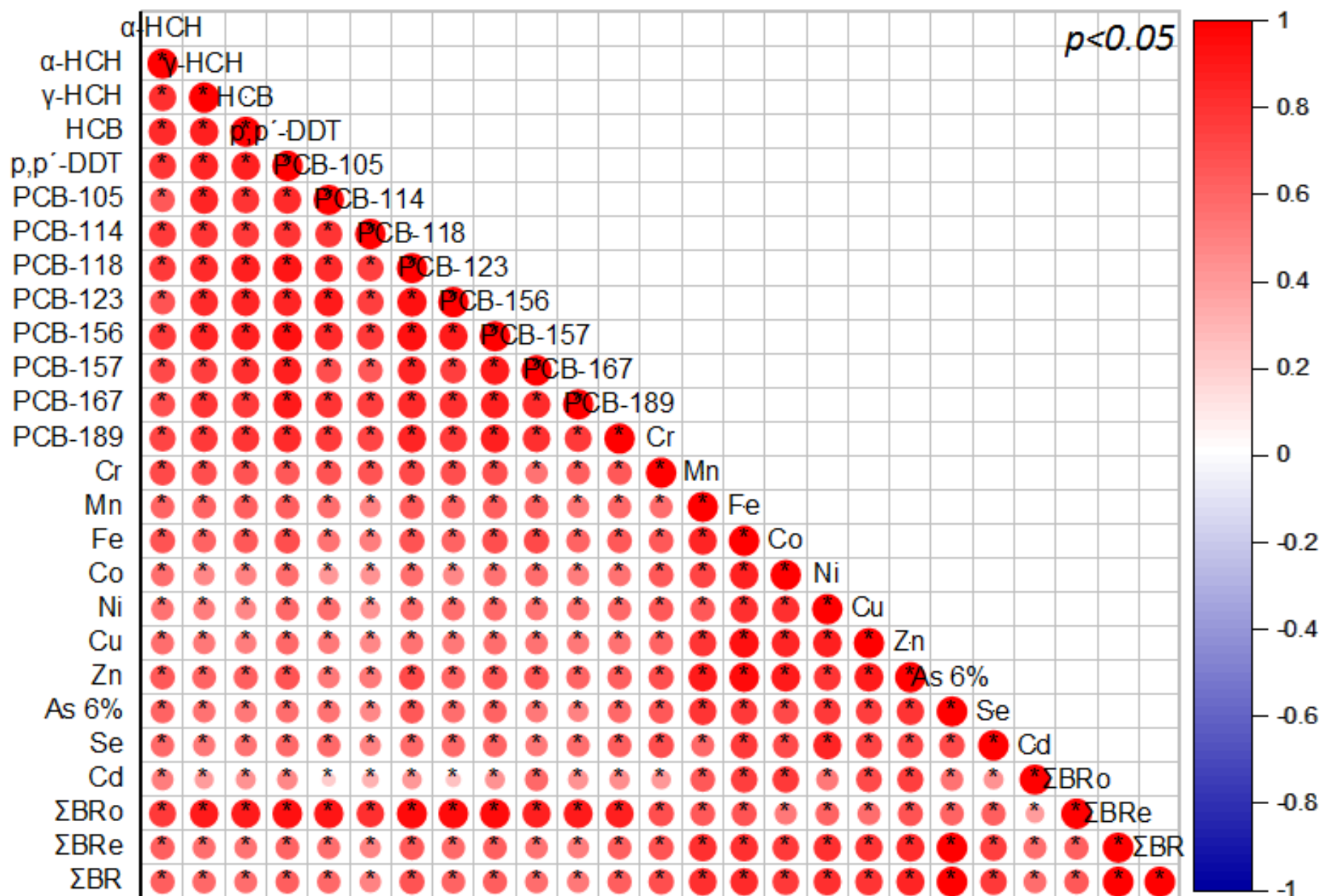


Figure S 14 Correlations of BR for OCPs, PCBs, elements and BR<sub>organic compounds</sub>, BR<sub>elements</sub> and ΣBR describing the significant (\*) correlations between BR values.