

27. Appendix A – Preliminary Networks for Each Region

Mid-Atlantic Bight network input data.

Units for Biomass are in g m^{-2} ; units for Production, Bycatch, Targeted Fishery/Navigation Removals, Consumption and Respiration are in $\text{g m}^{-2} \text{yr}^{-1}$.

Taxa	Biomass	Production	P/B	Bycatch	Targeted Fishery/Navigation Removals	Consumption	C/B	Assimilation Efficiency	Unassimilated Consumption	Respiration	R/B	C/P	P/R	R/C	Living or Dead
Phytoplankton - Primary Producers	20.0455	4251.874	212.11	0	0	0	0	1	0	1062.968	53.03	0	4.00	0	L
Bacteria	4.47320	408.1799	91.25	0	0	1700.749	380.21	0.8	0.2	952.4196	212.92	4.17	0.43	0.56	L
Microzooplankton	3.14724	226.6013	72.00	0	0	762.9673	242.42	0.9	0.1	460.0693	146.18	3.37	0.49	0.60	L
Small Copepods	3.70002	246.16771	66.53	0	0	472.67710	127.75	0.75	0.25	230.43009	62.28	1.92	1.07	0.49	L
Large Copepods	5.22595	395.40245	75.66	0	0	572.24194	109.5	0.75	0.25	278.96794	53.38	1.45	1.42	0.49	L
Gelatinous Zooplankton	3.63489	145.39579	40	8.413E-07	0	530.69462	146	0.65	0.35	224.21848	61.69	3.65	0.65	0.42	L
Micronekton	5.88884	83.91603	14.25	0.00938	0	854.18267	145.05	0.75	0.25	416.41405	70.71	10.18	0.20	0.49	L
Mesopelagics	0.00230	0.00219	0.95	2.302E-10	0	0.00420	1.83	0.85	0.15	0.00232	1.01	1.92	0.94	0.55	L
Macrobenthos - polychaetes	12.39897	30.99743	2.5	0.0012	0	216.98203	17.5	0.5	0.5	70.51916	5.69	7	0.44	0.33	L
Macrobenthos - crustaceans	3.28887	9.86661	3	3.289E-05	0	69.06628	21	0.5	0.5	22.44654	6.83	7	0.44	0.33	L
Macrobenthos - molluscs	15.57963	31.15926	2	0.00066	0	218.11480	14	0.4	0.6	56.70985	3.64	7	0.55	0.26	L
Macrobenthos - other	94.51230	189.02460	2	0.00095	0	1701.22140	18	0.5	0.5	552.89695	5.85	9	0.34	0.33	L
Megabenthos - filterers	3.63356	30.58	8.42	0.90612	2.97168	36.33555	10	0.3	0.7	7.08543	1.95	1.19	4.32	0.20	L
Megabenthos - other	6.53196	13.04217	2.00	0.00876	0.01438	117.57522	18	0.7	0.3	53.49673	8.19	9.02	0.24	0.46	L
Shrimp <i>et al.</i>	0.06177	0.06177	1	0.00938	0.03001	0.55589	9	0.7	0.3	0.25293	4.10	9	0.24	0.46	L
Larval and Juvenile Fish - all	0.51699	10.85677	21	5.315E-09	0	23.26451	45	0.85	0.15	12.85364	24.86	2.14	0.84	0.55	L
Small Pelagics - commercial	5.99848	2.21717	0.37	0.04882	0.18008	11.99695	2	0.85	0.15	6.62832	1.11	5.41	0.33	0.55	L
Small Pelagics - other	3.92701	3.73214	0.95	0.09290	0.91578	7.85402	2	0.65	0.35	3.31832	0.85	2.10	1.12	0.42	L
Small Pelagics - squid	1.42474	1.35404	0.95	0.00232	0.02303	3.91804	2.75	0.85	0.15	2.16472	1.52	2.89	0.63	0.55	L
Small Pelagics - anadromous	0.11205	0.04762	0.42	0.02252	0.20916	0.22409	2	0.85	0.15	0.12381	1.11	4.71	0.38	0.55	L
Medium Pelagics - piscivores & other	0.90758	0.40841	0.45	0.01849	0.05935	1.85147	2.04	0.85	0.15	1.02294	1.13	4.53	0.40	0.55	L
Demersals - benthivores	5.50998	2.47949	0.45	0.01228	0.03232	3.48782	0.63	0.7	0.3	1.58696	0.29	1.41	1.56	0.46	L
Demersals - omnivores	1.49980	0.67491	0.45	0.01840	0.02810	1.19984	0.8	0.65	0.35	0.50693	0.34	1.78	1.33	0.42	L
Demersals - piscivores	6.28162	2.82673	0.45	0.10683	0.35609	7.22387	1.15	0.85	0.15	3.99119	0.64	2.56	0.71	0.55	L
Sharks - coastal	0.01699	0.00170	0.1	0.00732	0.02441	0.02480	1.46	0.85	0.15	0.01370	0.81	14.6	0.12	0.55	L
Sharks - pelagics	0.01024	0.00102	0.1	0.00031	0.00104	0.01351	1.32	0.85	0.15	0.00747	0.73	13.20	0.14	0.55	L
Highly Migratory Species	0.00875	0.00437	0.50	0.00305	0.01015	0.07219	8.25	0.85	0.15	0.03989	4.56	16.53	0.11	0.55	L
Baleen Whales	0.16264	0.00619	0.04	8.814E-09	0.00085	0.67494	4.15	0.8	0.2	4.23712	26.05	109.07	0.00	6.28	L
Odontocetes	0.03289	0.00132	0.04	1.284E-08	0	0.57102	17.36	0.8	0.2	0.52920	16.09	434	0.00	0.93	L
Sea Birds	0.00363	0.00100	0.28	3.634E-05	0	0.06303	17.34	0.85	0.15	0.03482	9.58	63.06	0.03	0.55	L
Discards	1.26865	N/A	-	0	0	-	-	-	-	-	-	-	-	-	D
Detritus - POC	30	4251.87356	-	0	0	-	-	-	-	-	-	-	-	-	D

Southern New England network input data.

Units for Biomass are in g m⁻²; units for Production, Bycatch, Targeted Fishery/Navigation Removals, Consumption and Respiration are in g m⁻² yr⁻¹.

Taxa	Biomass	Production	P/B	Bycatch	Targeted Fishery/Navigation Removals	Consumption	C/B	Assimilation Efficiency	Unassimilated Consumption	Respiration	R/B	C/P	P/R	R/C	Living or Dead
Phytoplankton - Primary Producers	20.47293	3743.666	182.86	0	0	0	0	1	0	935.9165	45.71	0	4	0	L
Bacteria	3.93854	359.392	91.25	0	0	1497.466	380.21	0.8	0.2	838.5813	212.92	4.17	0.43	0.56	L
Microzooplankton	3.21435	231.433	72.00	0	0	779.2358	242.42	0.9	0.1	469.8792	146.18	3.37	0.49	0.60	L
Small Copepods	7.60227	345.38738	45.43	0	0	971.19054	127.75	0.75	0.25	473.45539	62.28	2.81	0.73	0.49	L
Large Copepods	11.53543	715.03955	61.99	0	0	1263.12976	109.5	0.75	0.25	615.77576	53.38	1.77	1.16	0.49	L
Gelatinous Zooplankton	3.88780	155.51200	40	6.359E-07	0	567.61880	146	0.65	0.35	239.81894	61.69	3.65	0.65	0.42	L
Micronekton	8.46559	120.63467	14.25	0.01	0	1179.14155	139.29	0.75	0.25	574.83151	67.90	9.77	0.21	0.49	L
Mesopelagics	0.00131	0.00125	0.95	1.314E-10	0	0.00240	1.83	0.85	0.15	0.00133	1.01	1.92	0.94	0.55	L
Macrobenthos - polychaetes	35.43624	88.59059	2.5	0.00	0	620.13416	17.5	0.5	0.5	201.54360	5.69	7	0.44	0.33	L
Macrobenthos - crustaceans	6.14084	18.42251	3	6.141E-05	0	128.95758	21	0.5	0.5	41.91122	6.83	7	0.44	0.33	L
Macrobenthos - molluscs	10.26354	20.52707	2	0.00	0	143.68949	14	0.4	0.6	37.35927	3.64	7	0.55	0.26	L
Macrobenthos - other	39.04129	78.08258	2	0.00	1.66837	702.74326	18	0.5	0.5	228.39156	5.85	9	0.34	0.33	L
Megabenthos - filterers	3.70247	31.16	8.42	0.52	0.15280	37.02471	10	0.3	0.7	7.21982	1.95	1.19	4.32	0.20	L
Megabenthos - other	4.49719	8.99438	2	0.05	0	80.94938	18	0.7	0.3	36.83197	8.19	9	0.24	0.46	L
Shrimp <i>et al.</i>	0.06782	0.06782	1	0.01	0.03076	0.61039	9	0.7	0.3	0.27773	4.10	9	0.24	0.46	L
Larval and Juvenile Fish - all	0.84448	17.73400	21	8.681E-09	0.44049	38.00143	45	0.85	0.15	20.99579	24.86	2.14	0.84	0.55	L
Small Pelagics - commercial	13.88781	5.04278	0.36	0.16	0.03046	27.77561	2	0.85	0.15	15.34603	1.11	5.51	0.33	0.55	L
Small Pelagics - other	1.15134	1.09421	0.95	0.03	0.00694	2.30268	2	0.65	0.35	0.97288	.85	2.10	1.12	0.42	L
Small Pelagics - squid	2.72805	2.59268	0.95	0.00	0.24766	7.50214	2.75	0.85	0.15	4.14493	1.52	2.89	0.63	0.55	L
Small Pelagics - anadromous	0.16034	0.06814	0.42	0.04	0.06459	0.32067	2	0.85	0.15	0.17717	1.11	4.71	0.38	0.55	L
Medium Pelagics - piscivores & other	0.20684	0.09308	0.45	0.02	0.08330	0.42195	2.04	0.85	0.15	0.23313	1.13	4.53	0.40	0.55	L
Demersals - benthivores	1.38310	0.62239	0.45	0.03	0.01460	0.87550	0.63	0.7	0.3	0.39835	0.29	1.41	1.56	0.46	L
Demersals - omnivores	2.48951	1.12028	0.45	0.01	0.29123	1.99161	0.8	0.65	0.35	0.84145	0.34	1.78	1.33	0.42	L
Demersals - piscivores	6.80530	3.06238	0.45	0.09	0.01214	7.82609	1.15	0.85	0.15	4.32392	0.64	2.56	0.71	0.55	L
Sharks - coastal	0.01586	0.00159	0.1	0.00	0.00115	0.02315	1.46	0.85	0.15	0.01279	0.81	14.6	0.12	0.55	L
Sharks - pelagics	0.01987	0.00199	0.1	0.00	0.00760	0.01351	0.68	0.85	0.15	0.00747	0.38	6.80	0.27	0.55	L
Highly Migratory Species	0.00990	0.00578	0.58	0.00	0	0.07219	7.29	0.85	0.15	0.03989	4.03	12.49	0.14	0.55	L
Pinnipeds	0.018	0.0019	.11	3.168E-11	0	0.158	8.78	0.8	0.2	1.17049	65.03	83.16	0.002	3.30	L
Baleen Whales	0.28580	0.01158	0.04	1.707E-08	0.00049	1.28326	4.49	0.8	0.2	4.23712	14.83	110.81	0.003	3.30	L
Odontocetes	0.05787	0.00231	0.04	1.306E-08	0	0.92360	15.96	0.8	0.2	0.52920	9.14	399	0.004	0.57	L
Sea Birds	0.00633	0.00174	0.28	6.334E-05	0	0.06303	9.95	0.85	0.15	0.03482	5.50	36.19	0.05	0.55	L
Discards	0.97425	N/A	-	0	0	-	-	-	-	-	-	-	-	-	D
Detritus - POC	40	3743.66606	-	0	0	-	-	-	-	-	-	-	-	-	D

Georges Bank network input data.

Units for Biomass are in $g\ m^{-2}$; units for Production, Bycatch, Targeted Fishery/Navigation Removals, Consumption and Respiration are in $g\ m^{-2}\ yr^{-1}$.

Taxa	Biomass	Production	P/B	Bycatch	Targeted Fishery/Navigation Removals	Consumption	C/B	Assimilation Efficiency	Unassimilated Consumption	Respiration	R/B	C/P	P/R	R/C	Living or Dead
Phytoplankton - Primary Producers	19.77286	3284.948	166.13	0	0	0	0	1	0	821.2371	41.53	0	4.00	0	L
Bacteria	3.455946	315.355	91.25	0	0	1313.979	380.21	0.8	0.2	735.8284	212.92	4.17	0.43	0.56	L
Microzooplankton	3.104434	223.5193	72.00	0	0	752.5901	242.42	0.9	0.1	453.8118	146.18	3.37	0.49	0.60	L
Small Copepods	9.98857	416.17423	41.67	0	0	1276.04001	127.75	0.75	0.25	622.06950	62.28	3.07	0.67	0.49	L
Large Copepods	14.24652	778.37084	54.64	0	0	1559.99396	109.5	0.75	0.25	760.49705	53.38	2.00	1.02	0.49	L
Gelatinous Zooplankton	5.24931	209.97247	40	6.359E-07	0	766.39951	146	0.65	0.35	323.80379	61.69	3.65	0.65	0.42	L
Micronekton	7.61025	108.44609	14.25	0	0	277.77419	36.5	0.75	0.25	135.41492	17.79	2.56	0.80	0.49	L
Mesopelagics	0.00004	0.00003	0.95	3.664E-12	0	6.687E-05	1.83	0.85	0.15	3.695E-05	1.01	1.92	0.94	0.55	L
Macrobenthos - polychaetes	5.16706	12.91766	2.5	0.0	0	90.42362	17.5	0.5	0.5	29.38768	5.69	7	0.44	0.33	L
Macrobenthos - crustaceans	16.46480	49.39439	3	0.0	0	345.76073	21	0.5	0.5	112.37224	6.83	7	0.44	0.33	L
Macrobenthos - molluscs	2.57672	5.15343	2	0.0	0	36.07402	14	0.4	0.6	9.37925	3.64	7	0.55	0.26	L
Macrobenthos - other	81.67872	163.35744	2	0.0	0.64780	1470.21698	18	0.5	0.5	477.82052	5.85	9	0.34	0.33	L
Megabenthos - filterers	4.14449	34.88	8.42	0.2	0.03305	41.44487	10	0.3	0.7	8.08175	1.95	1.19	4.32	0.20	L
Megabenthos - other	4.36	8.72	2	0.0	0	78.48	18	0.7	0.3	35.7084	8.19	9	0.24	0.46	L
Shrimp <i>et al.</i>	0.00010	0.0001	1	0.0	0.00023	0.0009	9	0.7	0.3	0.00041	4.10	9	0.24	0.46	L
Larval and Juvenile Fish - all	0.46715	7.00728	15	4.802E-09	0.29900	21.02185	45	0.85	0.15	11.61457	24.86	3	0.60	0.55	L
Small Pelagics - commercial	9.94662	3.43428	0.35	0.02990	0	19.89325	2	0.85	0.15	10.99102	1.11	5.79	0.31	0.55	L
Small Pelagics - other	1.05437	1.00205	0.95	0	0.00339	2.10874	2	0.65	0.35	0.89094	0.85	2.10	1.12	0.42	L
Small Pelagics - squid	0.96230	0.91455	0.95	0.00034	0.03276	2.64633	2.75	0.85	0.15	1.46210	1.52	2.89	0.63	0.55	L
Small Pelagics - anadromous	0.03775	0.01604	0.42	0.00328	0.01015	0.07551	2	0.85	0.15	0.04172	1.11	4.71	0.38	0.55	L
Medium Pelagics- piscivores & other	0.19284	0.08678	0.45	0.00305	0.26416	0.46861	2.43	0.85	0.15	0.25891	1.34	5.4	0.34	0.55	L
Demersals - benthivores	5.01958	2.25881	0.45	0.07925	0.00531	4.61801	0.92	0.7	0.3	2.10120	0.42	2.04	1.08	0.46	L
Demersals - omnivores	3.77876	1.70044	0.45	0.00159	0.53144	3.13637	0.83	0.65	0.35	1.32512	0.35	1.84	1.28	0.42	L
Demersals - piscivores	4.25437	1.91447	0.45	0.15943	0	10.38066	2.44	0.85	0.15	5.73532	1.35	5.42	0.33	0.55	L
Sharks - pelagics	0.02436	0.00244	0.1	0.00024	0.00341	0.01351	0.55	0.85	0.15	0.00747	0.31	5.55	0.33	0.55	L
Highly Migratory Species	0.03516	0.02400	0.68	0.00102	0	0.07219	2.05	0.85	0.15	0.03989	1.13	3.01	0.60	0.55	L
Baleen Whales	0.41672	0.01584	0.04	1.247E-08	0.00011	1.87523	4.5	0.8	0.2	0.97512	2.34	118.36	0.02	0.52	L
Odontocetes	0.12200	0.00488	0.04	1.019E-08	0	1.75675	14.4	0.8	0.2	0.91351	7.49	360	0.01	0.52	L
Sea Birds	0.01439	0.00396	0.28	0.00014	0	0.06303	4.38	0.85	0.15	0.03482	2.42	15.92	0.11	0.55	L
Discards	0.48364	N/A	-	-	-	-	-	-	-	-	-	-	-	-	D
Detritus - POC	50	821.23707	-	-	-	-	-	-	-	-	-	-	-	-	D

Gulf of Maine network input data.

Units for Biomass are in $g\ m^{-2}$; units for Production, Bycatch, Targeted Fishery/Navigation Removals, Consumption and Respiration are in $g\ m^{-2}\ yr^{-1}$.

Taxa	Biomass	Production	P/B	Bycatch	Targeted Fishery/Navigation Removals	Consumption	C/B	Assimilation Efficiency	Unassimilated Consumption	Respiration	R/B	C/P	P/R	R/C	Living or Dead
Phytoplankton - Primary Producers	20.11436	3281.52067	163.14	0	0	0	0	1	0	820.3375	40.78	0	4.00	0	L
Bacteria	3.45234	315.026	91.25	0	0	1312.608	380.21	0.8	0.2	735.0607	212.92	4.17	0.43	0.56	L
Microzooplankton	3.15805	227.37972	72	0	0	765.58815	242.42	0.9	0.1	461.6497	146.18	3.37	0.49	0.60	L
Small Copepods	9.87932	305.44967	30.92	0	0	1262.08309	127.75	0.75	0.25	615.26550	62.28	4.13	0.50	0.49	L
Large Copepods	34.85446	1410.16647	40.46	0	0	3816.56345	109.5	0.75	0.25	1860.57469	53.38	2.71	0.76	0.49	L
Gelatinous Zooplankton	11	440	40	6.359E-07	6.359E-07	1610.14239	146	0.65	0.35	680.28516	61.84	3.66	0.65	0.42	L
Micronekton	8.35650	119.08006	14.25	0	0	305.01207	36.5	0.75	0.25	148.69338	17.79	2.56	0.80	0.49	L
Macrobenthos - polychaetes	13.49161	33.72902	2.5	6.824E-12	0.00013	236.10311	17.5	0.5	0.5	76.73351	5.69	7	0.44	0.33	L
Macrobenthos - crustaceans	1.83497	5.50491	3	0.00013	1.835E-05	38.53436	21	0.5	0.5	12.52367	6.83	7	0.44	0.33	L
Macrobenthos - molluscs	4.49067	2.13435	0.48	1.835E-05	0.00019	62.86944	14	0.4	0.6	16.34605	3.64	29.46	0.13	0.26	L
Macrobenthos - other	72.39182	144.78364	2	0.00019	0.00072	1303.05273	18	0.5	0.5	423.49214	5.85	9	0.34	0.33	L
Megabenthos - filterers	1.31060	4.412	3.37	0.00072	0.12186	13.10599	10	0.3	0.7	2.55567	1.95	2.97	1.73	0.20	L
Megabenthos - other	3.03683	4.03734	1.33	0.03017	0.44889	40.99723	13.5	0.7	0.3	18.65374	6.14	10.15	0.22	0.46	L
Shrimp <i>et al.</i>	0.16948	0.16948	1	0.10362	0.08168	1.52528	9	0.7	0.3	0.69400	4.10	9	0.24	0.46	L
Larval and Juvenile Fish - all	0.25817	3.87258	15	0.01946	2.654E-09	11.61774	45	0.85	0.15	6.41880	24.86	3	0.60	0.55	L
Small Pelagics - commercial	4.54507	1.89210	0.42	2.654E-09	1.00520	9.09014	2	0.85	0.15	5.02230	1.11	4.80	0.38	0.55	L
Small Pelagics - other	1.06021	0.44529	0.42	0.13104	0.00017	2.12043	2	0.65	0.35	0.89588	0.85	4.76	0.50	0.42	L
Small Pelagics - squid	0.13457	0.20185	1.5	0.00016	0.01440	0.37007	2.75	0.85	0.15	0.20446	1.52	1.83	0.99	0.55	L
Small Pelagics - anadromous	0.07724	0.03244	0.42	0.00056	0.02231	0.15449	2	0.85	0.15	0.08536	1.11	4.76	0.38	0.55	L
Medium Pelagics - piscivores & other	0.01131	0.00622	0.55	0.01670	0.01314	0.02306	2.04	0.85	0.15	0.01274	1.13	3.71	0.49	0.55	L
Demersals - benthivores	3.31208	1.49044	0.45	0.00303	0.18545	2.09655	0.63	0.7	0.3	0.95393	0.29	1.41	1.56	0.46	L
Demersals - omnivores	0.30028	0.13513	0.45	0.04298	0.00946	0.24023	0.8	0.65	0.35	0.10150	0.34	1.78	1.33	0.42	L
Demersals - piscivores	6.22812	3.42547	0.55	0.00228	0.39153	7.16234	1.15	0.85	0.15	3.95719	0.64	2.09	0.87	0.55	L
Sharks - pelagics	0.01301	0.00195	0.15	0.09035	0.00031	0.01351	1.04	0.85	0.15	0.00747	0.57	6.92	0.26	0.55	L
Highly Migratory Species	0.01834	0.00917	0.5	0	0.00236	0.07219	3.94	0.85	0.15	0.03989	2.17	7.87	0.23	0.55	L
Pinnipeds	0.09394	0.00633	0.07	7.206E-05	0.00115	0.91121	9.7	0.8	0.2	0.47383	5.04	144.05	0.01	0.52	L
Baleen Whales	0.86075	0.03616	0.04	0.00054	0.00059	3.95944	4.6	0.8	0.2	2.05891	2.39	109.50	0.02	0.52	L
Odontocetes	0.04887	0.00195	0.04	0.00115	0.00014	0.83084	17	0.8	0.2	0.43204	8.84	425	0.00	0.52	L
Sea Birds	0.00588	0.00162	0.275	0.00041	5.878E-05	0.06303	10.72	0.85	0.15	0.03482	5.92	39.00	0.05	0.55	L
Discards	0.44208	0.44208	-	0.00014	-	-	-	-	-	-	-	-	-	-	D
Detritus - POC	81.33333	820.38017	-	5.878E-05	-	-	-	-	-	-	-	-	-	-	D