

Chapter VI: FISHERIES ECONOMICS

TABLE OF CONTENTS

PROGRAM NARRATIVE	VI-2
The Commercial Fishing Economic Impact Model	VI-2
The Coastal Recreational Fishing Economic Impact Model.....	VI-3
The Central Southern Management Area (CSMA) Recreational Fishing Impact Model.....	VI-3
Economic Relief Programs.....	VI-4
LITERATURE CITED	VI-5
CONTACTS	VI-7

LIST OF TABLES

Table VI.1	Top five commercial species ranked by ex-vessel value of landings.....	VI-8
Table VI.2	Top five commercial non-fish species ranked by ex-vessel value of landings.	VI-9
Table VI.3	Top five commercial finfish species ranked by ex-vessel value of landings.	VI-10
Table VI.4	Top five commercial gears ranked by ex-vessel value of landings.	VI-11
Table VI.5	Top five North Carolina counties ranked by ex-vessel value of commercial landings. ...	VI-12
Table VI.6	Top five North Carolina ports ranked by ex-vessel value of commercial landings.....	VI-13
Table VI.7	Number of commercial fishing participants by range of ex-vessel value of seafood landed.	VI-14
Table VI.8	Number of commercial seafood dealers by range of ex-vessel value of seafood.....	VI-16
Table VI.9	Economic impacts of commercial fishing in North Carolina over the last 10 years, 2014- 2023. Dollar values are reported in 2023 dollars.....	VI-18
Table VI.10	Top five recreational species by total directed and landed fishing trips.	VI-22
Table VI.11	Top five recreational species by total directed and landed fishing trips in estuarine waters.	VI-23
Table VI.12	Top five recreational species by total directed and landed fishing trips in ocean waters 0-3 miles from shore.	VI-24
Table VI.13	Top five recreational species by directed and landed fishing trips in ocean waters greater than 3 miles from shore.	VI-25
Table VI.14	Top five North Carolina counties ranked by the number of residents holding a Coastal Recreational Fishing License.	VI-26
Table VI.15	Economic impacts of coastal recreational fishing in North Carolina over the last 10 years, 2014-2023. Dollar values are reported in 2023 dollars.	VI-27
Table VI.16	Economic impacts of recreational fishing in coastal river systems of the Central Southern Management Area (CSMA) in North Carolina. Dollar values are reported in 2023 dollars.	VI-28

LIST OF FIGURES

Figure VI.1	Average price per pound of annual commercial landings, converted to 2023 dollars. ¹	VI-18
Figure VI.2	Commercial landings and ex-vessel value per fishing trip by year, 2001–2023. ¹	VI-19
Figure VI.3	Commercial landings and ex-vessel value per participant by year, 2001–2023. ¹	VI-20
Figure VI.4	Commercial landings and ex-vessel value per vessel by year, 2001–2023. ¹	VI-21
Figure VI.5	Average recreational per-trip expenditures across creel survey river systems.....	VI-30
Figure VI.6	Total estimated recreational fishing expenditures across creel survey river systems. .	VI-30

PROGRAM NARRATIVE

North Carolina's marine fishery resources are economically and socially important to many of the state's residents, visitors, and coastal communities. These resources support commercial and recreational fisheries that provide an important source of employment, income, recreation, and food. This chapter contains information showing the economic importance of coastal commercial and recreational fisheries in North Carolina, as well as indicators of how these industries are changing over time. This is not meant to be comprehensive of all economic data on state fisheries, but rather a summary of data available for some of the most economically important coastal fishery resources in the state.

Since 1999, the North Carolina Division of Marine Fisheries (NCDMF) has regularly initiated studies in response to the need for economic and social information on North Carolina's fisheries. These studies have included a series of economic and social analyses of the state's recreational fisheries for both marine and anadromous species as well as commercial fisheries occurring in the Atlantic Ocean, Albemarle Sound, Pamlico Sound, Core Sound, and the southern region of the state from Beaufort Inlet to the South Carolina state line. Results from the most recent versions of these studies are used in the socioeconomic sections of state fishery management plans as well as NCDMF's economic impact model for coastal commercial and recreational fishing. The economic impacts presented include output impacts, income impacts, and job impacts. Output impacts represent the total economic output of industry production and business sales while income impacts reflect wages, salaries, and self-employment income. Output impacts and income impacts should not be added, as this would result in double counting. Job estimates represent both full-time and part-time employment positions. All economic impacts represent effects taking place strictly within the state economy of North Carolina.

The NCDMF Fisheries Economics Program sources data from the NCDMF Trip Ticket Program, NCDMF Coastal Angling Program, the National Marine Fisheries Service (NMFS), North Carolina Wildlife Resources Commission Portal Access to Wildlife Systems (NCWRC PAWS) program, as well as survey responses collected from North Carolina recreational and commercial fishing participants and seafood dealers. Data for the tables on commercial fishing are derived from information provided by the NCDMF Trip Ticket Program and use ex-vessel value. Ex-vessel value is the estimated dollar value of commercial harvest during the original transfer of a seafood product from the harvester to the dealer. Data for the tables on recreational fishing are derived from information provided by the NCDMF Coastal Angling Program which includes data from the NMFS Marine Recreational Information Program (MRIP).

The Commercial Fishing Economic Impact Model

The economic impact estimates presented represent those of commercial seafood harvesters, dealers, wholesalers, and retailers and are calculated via the NCDMF commercial fishing economic impact model, last updated September 2022. These estimates are a product of IMPLAN economic impact modeling software, customized with data from NCDMF and economic multipliers originating from the National Oceanic and Atmospheric Administration (NOAA)

Fisheries Commercial Fishing and Seafood Industry Input/Output Model (NOAA 2019; IMPLAN 2018). Commercial landings data from the NCDMF Trip Ticket Program are used as the primary input along with data from North Carolina commercial fishermen and seafood dealers collected during surveys that have been carried out by the NCDMF Fisheries Economics Program (Crosson 2007, 2009, 2010a; Hadley and Crosson 2010; Hadley and Wiegand 2014; Stemle and Wiegand A&B 2017; Stemle and Wiegand 2018). Economic impact estimates for the commercial harvesting and seafood dealer sectors are derived from NCDMF data, while estimates for seafood wholesalers and retailers originate from multipliers found within the NMFS model.

The Coastal Recreational Fishing Economic Impact Model

The economic activity associated with the North Carolina coastal recreational fishing industry is calculated via the NCDMF coastal recreational fishing economic impact model as updated September 2022. The economic impact estimates presented for coastal recreational fishing represent the economic activity generated by both trip expenditures and durable goods expenditures. These estimates are a product of economic data originating from the NOAA Fisheries coastal recreational fishing economic impact estimates for durable goods expenditures and IMPLAN economic impact modeling software input with data from NCDMF for trip expenditures (Gentner and Steinback 2008; Lovell and Steinback 2013). To calculate recreational fishing trip expenditures, the NCDMF coastal recreational fishing economic impact model uses effort data by area (inshore, offshore, onshore) and by mode (i.e., shore, for-hire, private/rental vessel, and man-made) that are derived from the NOAA Fisheries MRIP. These data are combined with angler trip expenditure data collected from North Carolina recreational anglers during surveys that have been carried out by the NCDMF Fisheries Economics Program and North Carolina Sea Grant to provide estimated total coastal recreational fishing trip expenditures (Dumas et al. 2009; Crosson 2010b; Hadley 2012; Stemle 2018). Economic activity estimates for recreational fishing trip expenditures are derived from NCDMF data, while estimates for recreational fishing durable goods expenditures originate from the NMFS model.

The Central Southern Management Area (CSMA) Recreational Fishing Impact Model

The NCDMF has been surveying recreational anglers in several of the major coastal river basins of the central and southern portions of eastern North Carolina since 2004. The focus of these surveys has been gathering catch, effort, demographic, and economic information from anglers targeting anadromous species such as Striped Bass, American Shad, and Hickory Shad. This region, encompassing the Pamlico/Tar River Basin, Neuse River, and Cape Fear River, is referred to as the Central Southern Management Area (CSMA) by NCDMF. The CSMA creel survey was originally designed to gather data on the recreational Striped Bass fisheries occurring in the region; however, American Shad and Hickory Shad were included in the survey estimates beginning in 2012. In 2013, the Cape Fear River was added to the list of coastal river systems for this survey.

To estimate the economic impacts of fishing activity occurring in these coastal river basins, IMPLAN software was used and input with total estimated angler trip expenditures that were calculated based on data collected from anglers in each river basin respectively each year during the CSMA Creel Survey. These expenditures are grouped into categories for lodging, food, ice, bait, boat fuel and oil, and vehicle fuel. Trip expenditures for angling parties were broken down into overall mean expenses per angler hour. Mean trip expenditures were then multiplied by the total estimated angler hours in each river system to provide the estimated total expense per expenditure category.

Once total expenditures were estimated, they were input into IMPLAN software under the appropriate sector to provide the estimated economic impacts generated by the recreational fishing activity examined. These impacts demonstrated large variability annually, which was primarily attributed to changes in survey responses regarding lodging. As lodging constitutes a higher per-trip expenditure than other categories, years that more respondents claim lodging costs, as well as years that fewer respondents specifically note “zero” lodging costs, correlated to higher economic impacts. This variability may be a valid indicator of expenditures annually but may also be a result of implicit survey bias.

Economic Relief Programs

Fisheries in North Carolina provide large annual benefits and services to the state. Each sector relies on the health of North Carolina’s marine and estuarine resources, which is variable over time. The health of the natural resources is vulnerable to biological and environmental changes that can result in unexpected losses in all fishing sectors. In the face of industry shocks, the Division works with federal and state resources to administer funds that support fishing communities. Historically, relief programs have supported communities after large storm events, during industry shocks, and during health emergencies. Since 2018, the Division has received and administered over twenty-five million dollars in relief funds to stakeholders. The Division continues to monitor, seek out resources, and work with state and federal partners to best support the state’s natural resources and all stakeholders that rely on them.

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Table VI.1 Top five commercial species ranked by ex-vessel value of landings.

2023			2022		2021	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$18,176,907	Blue Crabs, Hard	\$13,476,343	Shrimp, White	\$21,106,430
2	Shrimp, White	\$9,356,589	Tunas	\$7,181,432	Blue Crabs, Hard	\$20,553,734
3	Oysters	\$7,044,819	Oysters	\$6,686,923	Oysters	\$6,904,315
4	Tunas	\$6,335,141	Shrimp, White	\$5,635,855	Flounder, Summer	\$5,775,613
5	Shrimp, Brown	\$4,572,195	Flounder, Summer	\$4,785,310	Tunas	\$5,570,357

2020			2019		2018	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$19,093,928	Blue Crabs, Hard	\$22,221,353	Blue Crabs, Hard	\$17,298,274
2	Shrimp, White	\$18,855,745	Shrimp, White	\$19,049,181	Shrimp, Brown	\$11,199,482
3	Oysters	\$4,553,647	Flounder, Summer	\$7,292,375	Shrimp, White	\$8,571,111
4	Tunas	\$4,092,785	Oysters	\$4,889,462	Flounder, Summer	\$6,893,316
5	Flounder, Summer	\$3,753,777	Tunas	\$3,440,754	Tunas	\$4,334,561

2017			2016		2015	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Shrimp, White	\$20,628,755	Blue Crabs, Hard	\$20,738,636	Blue Crabs, Hard	\$29,607,419
2	Blue Crabs, Hard	\$17,767,075	Shrimp, White	\$19,744,034	Shrimp, Brown	\$10,528,437
3	Shrimp, Brown	\$8,544,145	Shrimp, Brown	\$8,385,036	Flounder, Summer	\$9,092,495
4	Flounder, Summer	\$6,354,888	Flounder, Summer	\$8,238,721	Shrimp, White	\$6,228,725
5	Flounder, Southern	\$5,663,116	Oysters	\$4,091,155	Clams, Hard	\$5,038,973

2014		
Rank	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$29,954,723
2	Shrimp, Brown	\$10,326,997
3	Flounder, Summer	\$8,225,282
4	Flounder, Southern	\$4,839,672
5	Oysters	\$4,544,236

Table VI.2 Top five commercial non-fish species ranked by ex-vessel value of landings.

2023			2022		2021	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$18,176,907	Blue Crabs, Hard	\$13,476,343	Shrimp, White	\$21,106,430
2	Shrimp, White	\$9,356,589	Oysters	\$6,686,923	Blue Crabs, Hard	\$20,553,734
3	Oysters	\$7,044,819	Shrimp, White	\$5,635,855	Oysters	\$6,904,315
4	Shrimp, Brown	\$4,572,195	Shrimp, Brown	\$4,350,692	Shrimp, Brown	\$3,485,781
5	Blue Crabs, Peeler	\$1,479,474	Blue Crabs, Soft	\$1,210,514	Blue Crabs, Soft	\$1,753,965

2020			2019		2018	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$19,093,928	Blue Crabs, Hard	\$22,221,353	Blue Crabs, Hard	\$17,298,274
2	Shrimp, White	\$18,855,745	Shrimp, White	\$19,049,181	Shrimp, Brown	\$11,199,482
3	Oysters	\$4,553,647	Oysters	\$4,889,462	Shrimp, White	\$8,571,111
4	Shrimp, Brown	\$3,341,642	Shrimp, Brown	\$2,970,105	Oysters	\$3,834,874
5	Clams, Hard	\$901,525	Blue Crabs, Peeler	\$1,237,065	Clams, Hard	\$1,627,998

2017			2016		2015	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Shrimp, White	\$20,628,755	Blue Crabs, Hard	\$20,738,636	Blue Crabs, Hard	\$29,607,419
2	Blue Crabs, Hard	\$17,767,075	Shrimp, White	\$19,744,034	Shrimp, Brown	\$10,528,437
3	Shrimp, Brown	\$8,544,145	Shrimp, Brown	\$8,385,036	Shrimp, White	\$6,228,725
4	Oysters	\$5,634,893	Oysters	\$4,091,155	Clams, Hard	\$5,038,973
5	Blue Crabs, Soft	\$2,791,960	Clams, Hard	\$2,578,120	Oysters	\$3,936,572

2014		
Rank	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$29,954,723
2	Shrimp, Brown	\$10,326,997
3	Oysters	\$4,544,236
4	Shrimp, White	\$3,483,015
5	Clams, Hard	\$2,866,096

Table VI.3 Top five commercial finfish species ranked by ex-vessel value of landings.

2023			2022		2021	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Tunas	\$6,335,141	Tunas	\$7,181,432	Flounder, Summer	\$5,775,613
2	Flounder, Summer	\$3,462,012	Flounder, Summer	\$4,785,310	Tunas	\$5,570,357
3	Mackerel, King	\$1,697,230	Mullet, Striped	\$2,119,221	Mackerel, Spanish	\$1,846,682
4	Mackerel, Spanish	\$1,452,310	Seatrout, Spotted	\$1,712,414	Seatrout, Spotted	\$1,758,261
5	Kingfishes	\$1,408,415	Mackerel, Spanish	\$1,584,313	Flounder, Southern	\$1,446,558

2020			2019		2018	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Tunas	\$4,092,785	Flounder, Summer	\$7,292,375	Flounder, Summer	\$6,893,316
2	Flounder, Summer	\$3,753,777	Tunas	\$3,440,754	Tunas	\$4,334,561
3	Mackerel, Spanish	\$1,479,165	Flounder, Southern	\$3,078,601	Flounder, Southern	\$3,823,767
4	Mackerel, King	\$1,469,914	Mackerel, King	\$1,570,680	Croaker, Atlantic	\$1,638,449
5	Kingfishes	\$1,445,430	Snappers	\$1,566,839	Bass, Black Sea	\$1,518,224

2017			2016		2015	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	\$6,354,888	Flounder, Summer	\$8,238,721	Flounder, Summer	\$9,092,495
2	Flounder, Southern	\$5,663,116	Flounder, Southern	\$3,618,196	Flounder, Southern	\$3,823,788
3	Tunas	\$5,092,398	Tunas	\$3,220,820	Tunas	\$2,916,113
4	Bass, Black Sea	\$1,863,116	Croaker, Atlantic	\$2,216,211	Croaker, Atlantic	\$1,646,361
5	Mackerel, Spanish	\$1,384,682	Bass, Black Sea	\$1,346,245	Bass, Black Sea	\$1,366,822

2014		
Rank	Species	Ex-Vessel Value
1	Flounder, Summer	\$8,225,282
2	Flounder, Southern	\$4,839,672
3	Tunas	\$3,647,436
4	Swordfish	\$2,109,549
5	Croaker, Atlantic	\$1,865,595

Table VI.4 Top five commercial gears ranked by ex-vessel value of landings.

2023			2022		2021	
Rank	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Crab Pot	\$19,157,853	Crab Pot	\$14,033,446	Shrimp Trawl	\$24,774,617
2	Shrimp Trawl	\$13,421,795	Shrimp Trawl	\$9,722,311	Crab Pot	\$21,615,731
3	Longline	\$5,931,738	Longline	\$7,283,332	Gill net (anchored)	\$7,920,218
4	Gill net (anchored)	\$5,258,477	Gill net (anchored)	\$6,250,357	Flounder Trawl	\$6,376,097
5	Gill net (runaround)	\$4,460,468	Flounder Trawl	\$4,985,985	Longline	\$5,503,229

2020			2019		2018	
Rank	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	\$21,525,000	Crab Pot	\$22,781,208	Shrimp Trawl	\$19,464,120
2	Crab Pot	\$19,538,099	Shrimp Trawl	\$21,736,744	Crab Pot	\$17,820,105
3	Gill net (anchored)	\$7,293,220	Flounder Trawl	\$8,234,946	Flounder Trawl	\$7,988,145
4	Longline	\$4,535,268	Gill net (anchored)	\$7,206,321	Gill net (anchored)	\$7,578,891
5	Flounder Trawl	\$4,316,834	Longline	\$4,126,437	Longline	\$4,490,229

2017			2016		2015	
Rank	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	\$28,611,977	Shrimp Trawl	\$27,265,534	Crab Pot	\$30,439,358
2	Crab Pot	\$18,259,040	Crab Pot	\$21,603,396	Shrimp Trawl	\$16,231,808
3	Gill net (anchored)	\$9,256,529	Flounder Trawl	\$9,096,175	Flounder Trawl	\$10,047,329
4	Flounder Trawl	\$7,720,079	Gill net (anchored)	\$8,680,345	Gill net (anchored)	\$8,066,377
5	Longline	\$5,404,919	Longline	\$4,975,314	Longline	\$4,715,705

2014		
Rank	Gear	Ex-Vessel Value
1	Crab Pot	\$31,254,003
2	Shrimp Trawl	\$13,918,366
3	Gill net (anchored)	\$9,439,547
4	Flounder Trawl	\$9,016,925
5	Longline	\$6,706,582

Table VI.5 Top five North Carolina counties ranked by ex-vessel value of commercial landings.

2023			2022		2021	
Rank	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	\$20,273,193	Dare	\$21,000,573	Dare	\$22,593,918
2	Carteret	\$14,556,960	Carteret	\$13,482,026	Carteret	\$17,674,285
3	Hyde	\$7,618,659	Hyde	\$6,719,026	Pamlico	\$11,050,579
4	Tyrrell	\$5,151,507	Pamlico	\$4,591,467	Hyde	\$8,984,023
5	Pamlico	\$4,385,129	New Hanover	\$3,027,112	Tyrrell	\$4,201,310

2020			2019		2018	
Rank	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	\$18,790,150	Dare	\$19,823,927	Dare	\$19,271,530
2	Carteret	\$16,770,078	Carteret	\$18,663,688	Carteret	\$16,597,862
3	Pamlico	\$9,157,743	Hyde	\$9,210,140	Hyde	\$10,817,966
4	Hyde	\$8,214,279	Pamlico	\$9,040,913	Pamlico	\$8,051,828
5	Onslow	\$3,536,792	Onslow	\$5,369,638	Onslow	\$3,582,051

2017			2016		2015	
Rank	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	\$23,683,749	Dare	\$21,279,105	Dare	\$20,975,965
2	Carteret	\$20,669,552	Carteret	\$18,219,584	Carteret	\$18,307,561
3	Hyde	\$12,818,311	Hyde	\$12,864,331	Hyde	\$10,981,681
4	Pamlico	\$9,919,977	Pamlico	\$10,592,524	Pamlico	\$8,503,740
5	Onslow	\$5,794,726	Onslow	\$6,574,507	Onslow	\$6,034,795

2014		
Rank	County	Ex-Vessel Value
1	Dare	\$26,596,445
2	Carteret	\$14,583,443
3	Hyde	\$10,352,880
4	Pamlico	\$6,568,849
5	Camden	\$6,091,805

Table VI.6 Top five North Carolina ports ranked by ex-vessel value of commercial landings.

2023			2022		2021	
Rank	Port	Ex-Vessel Value	Port	Ex-Vessel Value	Port	Ex-Vessel Value
1	Wanchese	\$13,646,290	Wanchese	\$14,472,133	Wanchese	\$14,615,111
2	Morehead City/Beaufort	\$10,612,606	Morehead City/Beaufort	\$9,877,005	Morehead City/Beaufort	\$13,492,394
3	Columbia	\$5,150,957	Engelhard	\$3,786,679	Oriental	\$6,609,354
4	Engelhard	\$4,261,468	Hatteras Island	\$3,291,323	Engelhard	\$5,007,610
5	Wilmington Area	\$3,313,237	Wilmington Area	\$3,016,808	Columbia	\$4,201,310

2020			2019		2018	
Rank	Port	Ex-Vessel Value	Port	Ex-Vessel Value	Port	Ex-Vessel Value
1	Morehead City/Beaufort	\$12,995,772	Morehead City/Beaufort	\$14,317,421	Morehead City/Beaufort	\$13,043,235
2	Wanchese	\$12,106,221	Wanchese	\$12,002,204	Wanchese	\$12,085,306
3	Oriental	\$5,412,251	Engelhard	\$5,175,234	Engelhard	\$5,823,851
4	Engelhard	\$4,966,954	Oriental	\$5,008,613	Oriental	\$4,676,438
5	Hatteras Island	\$3,300,542	Sneads Ferry	\$4,605,861	Swan Quarter	\$4,016,256

2017			2016		2015	
Rank	Port	Ex-Vessel Value	Port	Ex-Vessel Value	Port	Ex-Vessel Value
1	Wanchese	\$16,254,127	Wanchese	\$14,724,895	Morehead City/Beaufort	\$14,187,831
2	Morehead City/Beaufort	\$15,951,459	Morehead City/Beaufort	\$14,486,751	Wanchese	\$13,325,296
3	Engelhard	\$7,611,885	Engelhard	\$7,507,651	Engelhard	\$6,711,463
4	Sneads Ferry	\$4,798,496	Sneads Ferry	\$5,259,819	Shiloh	\$5,343,108
5	Oriental	\$4,686,105	Hobucken/Lowland	\$4,691,929	Columbia	\$4,922,453

2014		
Rank	Port	Ex-Vessel Value
1	Wanchese	\$17,012,857
2	Morehead City/Beaufort	\$10,721,496
3	Engelhard	\$6,750,471
4	Shiloh	\$6,079,732
5	Columbia	\$4,727,104

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed.

Range of Ex-Vessel Value	2023		2022	
	Participants	Total Value	Participants	Total Value
\$1-\$499	312	\$69,383	315	\$71,461
\$500-\$999	154	\$111,359	156	\$109,304
\$1,000-\$4,999	467	\$1,228,736	480	\$1,229,256
\$5,000-\$9,999	229	\$1,639,941	244	\$1,750,791
\$10,000-\$24,999	326	\$5,320,676	356	\$5,847,918
\$25,000-\$49,999	207	\$7,432,323	242	\$8,824,968
\$50,000-\$99,999	183	\$13,037,878	186	\$13,272,807
\$100,000-\$249,999	151	\$23,621,522	148	\$21,698,910
\$250,000-\$499,999	45	\$15,834,884	25	\$8,575,734
Over \$500,000	8	\$5,644,329	11	\$7,231,187
Total	2,082	\$73,941,032	2,163	\$68,612,336

Range of Ex-Vessel Value	2021		2020	
	Participants	Total Value	Participants	Total Value
\$1-\$499	331	\$75,683	355	\$76,848
\$500-\$999	151	\$108,979	154	\$115,386
\$1,000-\$4,999	528	\$1,342,847	531	\$1,351,537
\$5,000-\$9,999	249	\$1,794,123	293	\$2,089,010
\$10,000-\$24,999	351	\$5,750,343	370	\$5,916,460
\$25,000-\$49,999	221	\$7,983,095	252	\$9,090,899
\$50,000-\$99,999	203	\$14,195,009	187	\$13,655,387
\$100,000-\$249,999	179	\$27,530,966	149	\$22,202,037
\$250,000-\$499,999	54	\$18,190,477	43	\$15,317,966
Over \$500,000	19	\$12,818,078	12	\$7,714,601
Total	2,286	\$89,789,601	2,346	\$77,530,131

Range of Ex-Vessel Value	2019		2018	
	Participants	Total Value	Participants	Total Value
\$1-\$499	405	\$86,514	447	\$92,054
\$500-\$999	170	\$122,635	218	\$158,134
\$1,000-\$4,999	583	\$1,487,181	575	\$1,502,280
\$5,000-\$9,999	283	\$2,041,983	313	\$2,235,893
\$10,000-\$24,999	386	\$6,232,568	402	\$6,638,205
\$25,000-\$49,999	263	\$9,406,250	237	\$8,385,610
\$50,000-\$99,999	194	\$14,251,722	257	\$18,169,669
\$100,000-\$249,999	191	\$29,039,727	154	\$22,778,382
\$250,000-\$499,999	48	\$16,267,178	44	\$14,946,100
Over \$500,000	12	\$7,906,661	5	\$2,938,785
Total	2,535	\$86,842,419	2,652	\$77,845,113

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed. (continued).

Range of Ex-Vessel Value	2017		2016	
	Participants	Total Value	Participants	Total Value
\$1-\$499	470	\$98,601	475	\$102,098
\$500-\$999	227	\$166,305	221	\$158,178
\$1,000-\$4,999	648	\$1,692,765	664	\$1,722,376
\$5,000-\$9,999	338	\$2,478,561	364	\$2,612,970
\$10,000-\$24,999	472	\$7,708,117	456	\$7,277,852
\$25,000-\$49,999	294	\$10,528,184	317	\$11,255,107
\$50,000-\$99,999	249	\$18,126,355	233	\$16,915,232
\$100,000-\$249,999	178	\$26,565,050	191	\$28,507,577
\$250,000-\$499,999	52	\$17,588,765	39	\$13,339,345
Over \$500,000	17	\$11,742,306	16	\$12,281,260
Total	2,945	\$96,695,009	2,976	\$94,171,994

Range of Ex-Vessel Value	2015		2014	
	Participants	Total Value	Participants	Total Value
\$1-\$499	528	\$113,804	601	\$122,308
\$500-\$999	279	\$202,711	242	\$174,569
\$1,000-\$4,999	701	\$1,782,319	732	\$1,859,946
\$5,000-\$9,999	326	\$2,369,123	351	\$2,555,145
\$10,000-\$24,999	461	\$7,615,440	439	\$7,204,381
\$25,000-\$49,999	315	\$11,190,382	308	\$10,999,495
\$50,000-\$99,999	256	\$17,822,811	240	\$17,372,562
\$100,000-\$249,999	217	\$32,280,659	205	\$30,658,841
\$250,000-\$499,999	42	\$13,422,428	46	\$15,461,200
Over \$500,000	12	\$7,966,309	11	\$7,804,722
Total	3,137	\$94,765,987	3,175	\$94,213,171

Table VI.8 Number of commercial seafood dealers by range of ex-vessel value of seafood.

Range of Ex-Vessel Value	2023		2022	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	52	\$11,748	54	\$12,722
\$500-\$999	28	\$19,243	34	\$24,751
\$1,000-\$4,999	107	\$285,215	94	\$240,981
\$5,000-\$9,999	57	\$410,555	62	\$449,578
\$10,000-\$24,999	77	\$1,179,421	79	\$1,253,820
\$25,000-\$49,999	48	\$1,744,834	42	\$1,511,576
\$50,000-\$99,999	44	\$3,244,460	38	\$2,755,486
\$100,000-\$249,999	46	\$7,230,910	53	\$8,872,052
\$250,000-\$499,999	36	\$12,512,500	26	\$8,701,580
\$500,000-\$999,999	12	\$8,933,302	15	\$9,950,333
Over \$1,000,000	15	\$38,368,842	15	\$34,839,456

Range of Ex-Vessel Value	2021		2020	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	42	\$8,965	38	\$8,357
\$500-\$999	22	\$16,638	34	\$24,850
\$1,000-\$4,999	98	\$267,336	104	\$277,443
\$5,000-\$9,999	62	\$436,502	68	\$490,702
\$10,000-\$24,999	97	\$1,530,426	84	\$1,261,073
\$25,000-\$49,999	32	\$1,223,415	45	\$1,616,244
\$50,000-\$99,999	32	\$2,262,359	47	\$3,367,271
\$100,000-\$249,999	55	\$8,633,132	53	\$8,663,107
\$250,000-\$499,999	34	\$12,251,895	20	\$7,023,050
\$500,000-\$999,999	18	\$11,806,412	22	\$15,366,216
Over \$1,000,000	20	\$51,352,522	16	\$39,431,818

Range of Ex-Vessel Value	2019		2018	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	44	\$10,278	53	\$13,149
\$500-\$999	25	\$18,678	27	\$20,362
\$1,000-\$4,999	103	\$282,767	122	\$331,898
\$5,000-\$9,999	68	\$508,412	79	\$584,979
\$10,000-\$24,999	91	\$1,489,773	86	\$1,371,239
\$25,000-\$49,999	39	\$1,309,346	37	\$1,376,051
\$50,000-\$99,999	43	\$3,093,125	38	\$2,651,808
\$100,000-\$249,999	53	\$8,449,811	45	\$7,192,482
\$250,000-\$499,999	23	\$7,674,359	24	\$8,389,345
\$500,000-\$999,999	23	\$16,677,233	17	\$11,852,620
Over \$1,000,000	20	\$47,328,636	19	\$44,061,180

**Table VI.8 Number of commercial seafood dealers by range of ex-vessel value of seafood.
(continued).**

Range of Ex-Vessel Value	2017		2016	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	40	\$8,196	54	\$12,224
\$500-\$999	24	\$17,061	26	\$18,847
\$1,000-\$4,999	106	\$274,775	110	\$291,129
\$5,000-\$9,999	60	\$438,442	73	\$516,675
\$10,000-\$24,999	103	\$1,688,552	102	\$1,693,237
\$25,000-\$49,999	43	\$1,555,528	62	\$2,280,214
\$50,000-\$99,999	42	\$2,985,671	36	\$2,554,458
\$100,000-\$249,999	44	\$6,967,214	47	\$7,245,656
\$250,000-\$499,999	27	\$9,637,853	23	\$8,442,666
\$500,000-\$999,999	20	\$14,511,606	22	\$15,907,157
Over \$1,000,000	23	\$58,610,112	20	\$55,209,731

Range of Ex-Vessel Value	2015		2014	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	53	\$11,104	65	\$11,755
\$500-\$999	44	\$32,034	45	\$32,562
\$1,000-\$4,999	114	\$291,595	124	\$324,035
\$5,000-\$9,999	69	\$490,788	68	\$506,777
\$10,000-\$24,999	101	\$1,633,383	94	\$1,528,615
\$25,000-\$49,999	64	\$2,163,205	60	\$2,221,634
\$50,000-\$99,999	48	\$3,169,827	40	\$2,928,728
\$100,000-\$249,999	49	\$7,951,339	39	\$6,252,184
\$250,000-\$499,999	22	\$7,875,565	29	\$10,007,367
\$500,000-\$999,999	23	\$16,071,222	18	\$13,021,607
Over \$1,000,000	23	\$55,075,925	24	\$57,377,907

Table VI.9 Economic impacts of commercial fishing in North Carolina over the last 10 years, 2014-2023. Dollar values are reported in 2023 dollars.

Year	Commercial Fishing Output ¹				Economic Impacts ²		
	Commercial Fishermen	Dealers	Pounds	Ex-Vessel Value (thousands of dollars)	Estimated Jobs ³	Income Impacts (thousands of dollars)	Sales Impacts (thousands of dollars)
2023	2,082	522	42,686,480	\$73,941	4,611	\$93,179	\$229,502
2022	2,163	512	34,969,340	\$71,445	4,848	\$92,552	\$233,572
2021	2,286	512	42,371,956	\$100,968	6,253	\$113,536	\$313,799
2020	2,346	531	42,979,680	\$91,265	5,906	\$95,142	\$268,762
2019	2,535	532	53,101,147	\$103,504	6,762	\$117,224	\$362,446
2018	2,652	547	45,766,379	\$94,462	6,316	\$94,799	\$286,058
2017	2,945	532	54,424,558	\$120,198	7,909	\$127,054	\$406,932
2016	2,976	575	59,995,783	\$119,557	7,779	\$116,817	\$384,166
2015	3,137	610	65,969,598	\$121,836	7,866	\$112,505	\$382,557
2014	3,175	606	62,005,230	\$121,272	8,359	\$114,267	\$405,059

¹As reported by the NCDMF Trip Ticket Program.

²Economic impacts calculated using the NCDMF commercial fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.

³Represents both full-time and part-time jobs.

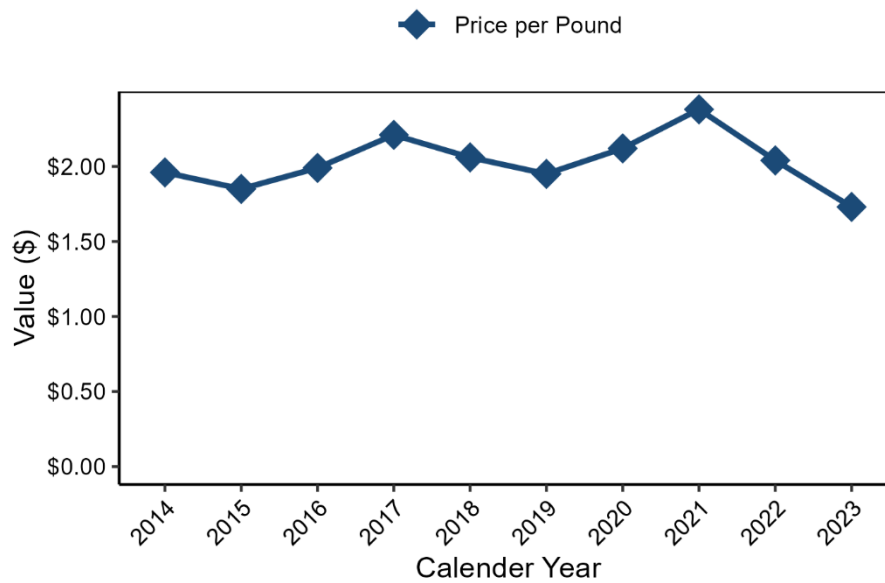


Figure VI.1 Average price per pound of annual commercial landings, converted to 2023 dollars.¹

¹Annual prices converted to 2022 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

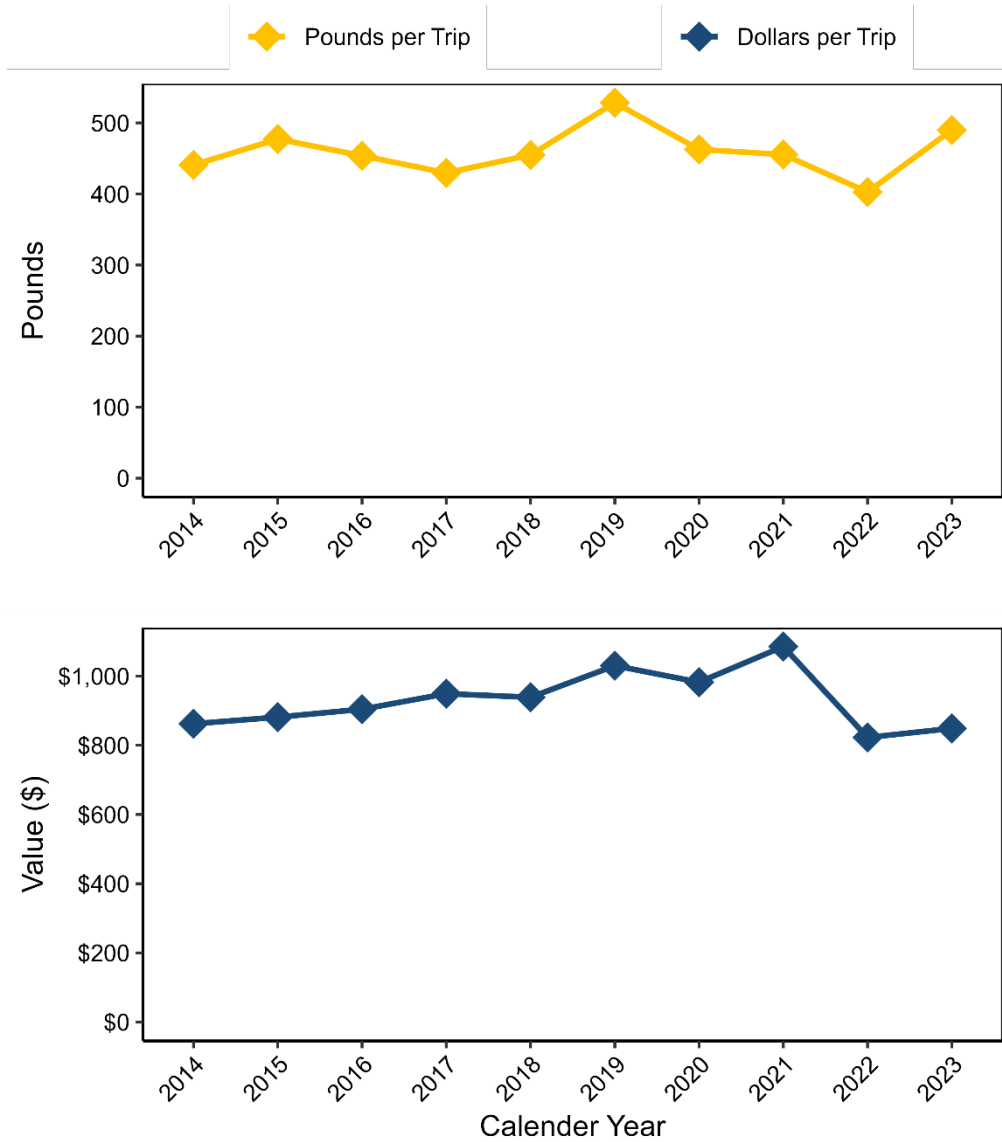


Figure VI.2 Commercial landings per fishing trip by year, 2014–2023.¹

¹Annual prices converted to 2023 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

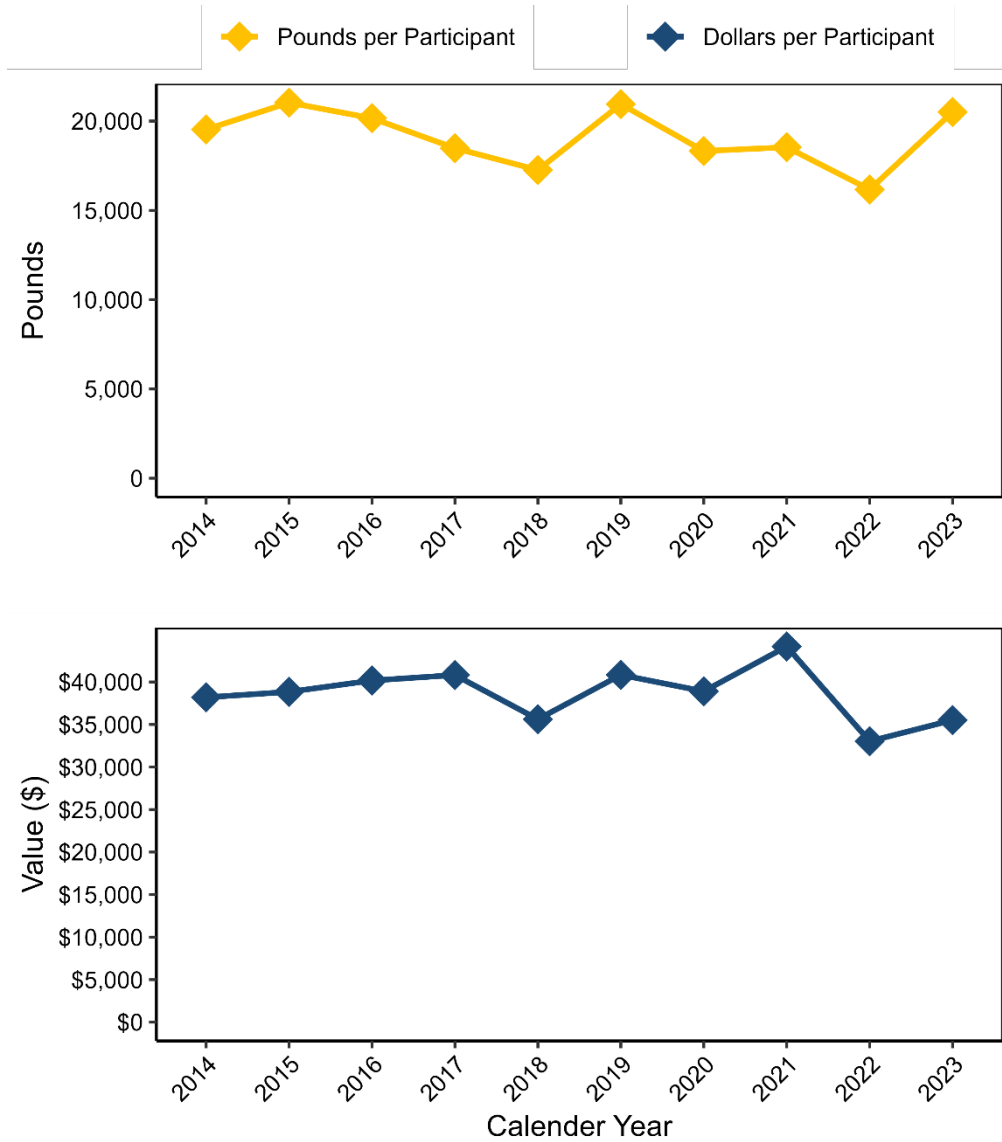


Figure VI.3 Commercial ex-vessel value per participant and vessel by year, 2014–2023.¹

¹Annual prices converted to 2023 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

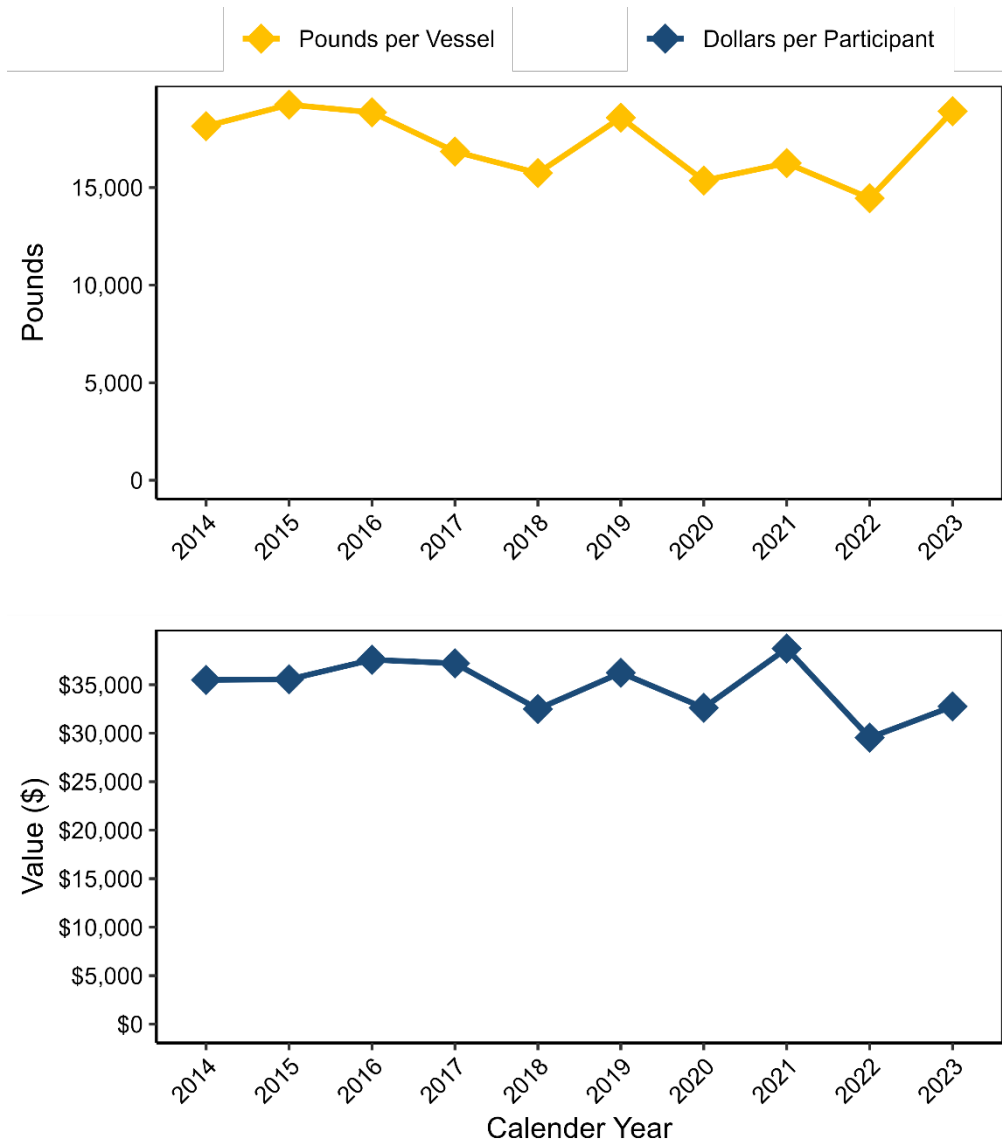


Figure VI.4 Commercial landings per participant and vessel by year, 2004–2023.¹

¹Annual prices converted to 2023 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

Table VI.10 Top five recreational species by total directed and landed fishing trips.

2023			2022		2021	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³
1	Drum, Red	2,337,167	Drum, Red	3,549,392	Drum, Red	3,120,360
2	Bluefish	2,190,836	Seatrout, Spotted	3,484,759	Seatrout, Spotted	2,778,386
3	Seatrout, Spotted	2,169,753	Bluefish	3,051,267	Kingfish	2,416,602
4	Kingfish	1,471,614	Kingfish	2,362,388	Croaker, Atlantic	2,167,915
5	Mackerel, Spanish	1,269,590	Croaker, Atlantic	2,096,344	Bluefish	1,803,957

2020			2019		2018	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³
1	Drum, Red	3,282,914	Seatrout, Spotted	2,867,512	Drum, Red	3,478,377
2	Seatrout, Spotted	3,215,043	Bluefish	2,699,198	Bluefish	3,031,288
3	Bluefish	2,413,181	Drum, Red	2,687,752	Kingfish	1,660,806
4	Kingfish	2,081,293	Kingfish	2,208,273	Seatrout, Spotted	1,606,853
5	Croaker, Atlantic	1,232,119	Mackerel, Spanish	1,320,690	Croaker, Atlantic	1,093,754

2017			2016		2015	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³
1	Drum, Red	4,177,390	Drum, Red	3,591,001	Drum, Red	3,338,696
2	Bluefish	3,607,642	Bluefish	3,215,530	Bluefish	3,304,015
3	Seatrout, Spotted	2,587,553	Kingfishes	2,769,147	Kingfish	2,634,029
4	Kingfish	2,295,765	Seatrout, Spotted	2,397,634	Croaker, Atlantic	2,164,315
5	Croaker, Atlantic	1,529,511	Croaker, Atlantic	1,538,692	Spot	1,694,669

2014		
Rank	Species ^{1,2}	Directed Trips ³
1	Bluefish	2,975,448
2	Drum, Red	2,812,586
3	Kingfish	2,596,146
4	Spot	2,269,868
5	Seatrout, Spotted	2,216,556

¹ Pinfish have been removed from these rankings as they are a non-target recreational species.

² Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

³ Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards). flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

Table VI.11 Top five recreational species by total directed and landed fishing trips in estuarine waters.

2023			2022		2021	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³
1	Seatrout, Spotted	1,846,581	Seatrout, Spotted	2,894,492	Seatrout, Spotted	2,260,368
2	Drum, Red	1,332,426	Drum, Red	2,094,559	Drum, Red	1,873,846
3	Bluefish	724,850	Bass, Black Sea	886,583	Croaker, Atlantic	855,958
4	Bass, Black Sea	589,016	Croaker, Atlantic	860,321	Bass, Black Sea	445,403
5	Croaker, Atlantic	574,208	Bluefish	856,896	Kingfish	367,602

2020			2019		2018	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³
1	Seatrout, Spotted	2,755,577	Seatrout, Spotted	2,498,240	Seatrout, Spotted	1,050,588
2	Drum, Red	1,757,781	Drum, Red	1,364,573	Drum, Red	1,048,725
3	Croaker, Atlantic	619,576	Bluefish	707,534	Bluefish	588,800
4	Bluefish	585,001	Croaker, Atlantic	643,412	Croaker, Atlantic	525,942
5	Bass, Black Sea	374,615	Spot	376,419	Bass, Striped	444,517

2017			2016		2015	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³
1	Seatrout, Spotted	1,941,152	Seatrout, Spotted	1,701,735	Croaker, Atlantic	1,084,200
2	Drum, Red	1,420,593	Drum, Red	1,041,528	Seatrout, Spotted	925,218
3	Bass, Striped	1,052,003	Croaker, Atlantic	725,966	Drum, Red	894,092
4	Bass, Black Sea	704,566	Bass, Black Sea	603,104	Bluefish	685,336
5	Croaker, Atlantic	595,911	Pigfish	599,850	Pigfish	671,730

2014		
Rank	Species ^{1,2}	Directed Trips ³
1	Seatrout, Spotted	1,313,384
2	Drum, Red	1,090,185
3	Croaker, Atlantic	879,970
4	Pigfish	523,608
5	Kingfish	491,588

¹Pinfish have been removed from these rankings as they are a non-target recreational species.

²Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

³Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).

Table VI.12 Top five recreational species by total directed and landed fishing trips in ocean waters 0-3 miles from shore.

2023			2022			2021	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	
1	Bluefish	1,438,457	Bluefish	2,160,771	Kingfish	2,046,200	
2	Kingfish	1,243,785	Kingfish	1,948,724	Bluefish	1,432,924	
3	Drum, Red	998,391	Drum, Red	1,450,922	Croaker, Atlantic	1,303,885	
4	Mackerel, Spanish	894,159	Mackerel, Spanish	1,254,087	Drum, Red	1,236,531	
5	Puffers	753,070	Croaker, Atlantic	1,215,467	Mackerel, Spanish	1,008,173	

2020			2019			2018	
Rank	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	
1	Bluefish	1,807,521	Bluefish	1,951,179	Drum, Red	2,426,857	
2	Kingfish	1,759,122	Kingfish	1,879,740	Bluefish	2,426,040	
3	Drum, Red	1,514,255	Drum, Red	1,316,760	Kingfish	1,430,778	
4	Mackerel, Spanish	879,261	Mackerel, Spanish	1,058,290	Mackerel, Spanish	845,544	
5	Croaker, Atlantic	584,251	Puffers	767,708	Spot	640,020	

2017			2016			2015	
Rank	Species ^{1,2}	Directed Trips	Species ^{1,2}	Directed Trips ³	Species ^{1,2}	Directed Trips ³	
1	Bluefish	3,087,887	Bluefish	2,739,459	Bluefish	2,588,961	
2	Drum, Red	2,752,670	Drum, Red	2,548,646	Drum, Red	2,432,846	
3	Kingfish	1,998,516	Kingfish	2,355,395	Kingfish	2,248,833	
4	Croaker, Atlantic	930,314	Puffers	1,006,934	Spot	1,255,275	
5	Mackerel, Spanish	912,791	Croaker, Atlantic	806,394	Puffers	1,165,173	

2014		
Rank	Species ^{1,2}	Directed Trips ³
1	Bluefish	2,492,082
2	Kingfish	2,104,559
3	Spot	1,834,193
4	Drum, Red	1,704,599
5	Croaker, Atlantic	1,169,286

¹Pinfish have been removed from these rankings as they are a non-target recreational species.

²Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

³Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).

Table VI.13 Top five recreational species by directed and landed fishing trips in ocean waters greater than 3 miles from shore.

2023			2022		2021	
Rank	Species ¹	Directed Trips ²	Species ¹	Directed Trips ²	Species ¹	Directed Trips ²
1	Dolphin	163,907	Bass, Black Sea	93,718	Dolphin	136,179
2	Bass, Black Sea	117,906	Dolphin	74,347	Mackerel, King	119,931
3	Snappers	73,002	Mackerel, King	72,547	Bass, Black Sea	103,681
4	Mackerel, King	71,397	Mackerel, Spanish	52,120	Mackerel, Spanish	76,316
5	Grunts	64,020	Grunts	41,066	Sharks	63,074

2020			2019		2018	
Rank	Species ¹	Directed Trips ²	Species ¹	Directed Trips ²	Species ¹	Directed Trips ²
1	Mackerel, King	210,505	Dolphin	166,429	Dolphin	238,032
2	Dolphin	136,945	Mackerel, King	145,351	Mackerel, King	138,980
3	Bass, Black Sea	134,046	Bass, Black Sea	79,414	Bass, Black Sea	108,812
4	Sharks	78,623	Mackerel, Spanish	51,855	Mackerel, Spanish	66,025
5	Mackerel, Spanish	75,643	Sharks	49,804	Tuna, Yellowfin	54,138

2017			2016		2015	
Rank	Species ¹	Directed Trips ²	Species ¹	Directed Trips ²	Species ¹	Directed Trips ²
1	Dolphin	192,020	Dolphin	271,904	Dolphin	304,978
2	Bass, Black Sea	187,885	Tuna, Yellowfin	119,950	Bass, Black Sea	175,705
3	Mackerel, King	118,047	Bass, Black Sea	116,553	Mackerel, King	110,792
4	Tuna, Yellowfin	88,785	Wahoo	83,613	Wahoo	95,921
5	Wahoo	74,666	Mackerel, King	81,702	Mackerel, Spanish	72,406

2014		
Rank	Species ¹	Directed Trips ²
1	Dolphin	167,903
2	Bass, Black Sea	141,084
3	Wahoo	70,998
4	Mackerel, King	69,677
5	Tunny, Little	65,629

¹Shark management groups (small coastal, large coastal, pelagic) have been combined for this ranking.

²Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).

Table VI.14 Top five North Carolina counties ranked by the number of residents holding a Coastal Recreational Fishing License.

2023			2022		2021	
Rank	County	License Holders	County	License Holders	County	License Holders
1	Wake	21,767	Wake	23,146	Wake	25,191
2	Onslow	16,415	Onslow	16,427	Onslow	17,309
3	New Hanover	13,796	New Hanover	14,168	New Hanover	14,758
4	Brunswick	11,939	Brunswick	11,660	Brunswick	11,797
5	Carteret	9,917	Carteret	10,422	Carteret	10,494

2020			2019		2018	
Rank	County	License Holders	County	License Holders	County	License Holders
1	Wake	27,403	Wake	22,700	Wake	21,346
2	Onslow	19,308	Onslow	16,782	Onslow	14,938
3	New Hanover	16,154	New Hanover	14,115	New Hanover	13,203
4	Brunswick	11,573	Brunswick	10,646	Brunswick	9,677
5	Johnston	10,520	Carteret	9,811	Carteret	8,389

2017			2016		2015	
Rank	County	License Holders	County	License Holders	County	License Holders
1	Wake	23,636	Wake	24,030	Wake	23,979
2	Onslow	17,202	Onslow	17,633	Onslow	18,497
3	New Hanover	15,090	New Hanover	15,036	New Hanover	16,042
4	Brunswick	10,791	Brunswick	10,643	Brunswick	11,050
5	Carteret	9,943	Carteret	10,109	Carteret	10,665

2014		
Rank	County	License Holders
1	Wake	24,443
2	Onslow	18,766
3	New Hanover	16,455
4	Brunswick	11,489
5	Carteret	11,187

Table VI.15 Economic impacts of coastal recreational fishing in North Carolina over the last 10 years, 2014-2023. Dollar values are reported in 2023 dollars.

Year	Recreational Fishing Output		Economic Impacts		
	Estimate Direct Expenditures (thousands of dollars) ¹	Estimated Jobs ²	Income Impacts (thousands of dollars) ³	Output Impacts (thousands of dollars) ³	
2023	\$3,910,335	28,898	\$1,422,359	\$3,708,580	
2022	\$4,273,080	30,803	\$1,441,129	\$3,892,937	
2021	\$3,617,469	39,234	\$1,482,117	\$3,732,427	
2020	\$3,334,541	33,009	\$1,234,713	\$3,094,122	
2019	\$3,392,750	32,173	\$1,107,642	\$3,007,455	
2018	\$3,134,149	30,316	\$1,023,675	\$2,755,607	
2017	\$3,769,421	37,972	\$1,200,242	\$3,299,753	
2016	\$3,652,073	39,151	\$1,202,546	\$3,207,869	
2015	\$3,606,367	36,406	\$1,084,800	\$2,911,362	
2014	\$3,430,858	40,709	\$1,155,401	\$3,024,840	

¹Economic impacts calculated using the NCDMF coastal recreational fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.

²Includes full time and part time jobs.

³Estimated expenditures include both durable good expenditures and fishing trip expenditures.

Table VI.16 Economic impacts of recreational fishing in coastal river systems of the Central Southern Management Area (CSMA) in North Carolina. Dollar values are reported in 2023 dollars.

2023			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	194,139	\$5,746	53	\$2,595	\$7,800
Tar/Pamlico Rivers	239,880	\$5,438	32	\$1,623	\$4,935
Cape Fear River	28,001	\$368	1	\$64	\$196
Total	462,021	\$11,552	87	\$4,282	\$12,931

2022			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	259,587	\$6,933	60	\$3,024	\$8,936
Tar/Pamlico Rivers	236,038	\$7,540	58	\$2,951	\$8,748
Cape Fear River	18,240	\$354	1	\$64	\$194
Total	513,865	\$14,827	119	\$6,038	17,878

2021			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	194,139	\$4,474	48	\$2,394	\$5,822
Tar/Pamlico Rivers	239,880	\$5,376	48	\$2,419	\$5,934
Cape Fear River	28,001	\$207	1	\$64	\$172
Total	462,020	\$10,058	97	\$4,877	\$11,928

2020			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	153,744	\$2,992	30	\$1,597	\$3,887
Tar/Pamlico Rivers	278,144	\$7,398	75	\$3,959	\$9,646
Cape Fear River	4,974	\$57	1	\$9	\$27
Total	436,862	\$10,447	106	\$5,566	\$13,560

2019			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	257,484	\$3,866	31	\$1,535	\$4,402
Tar/Pamlico Rivers	237,830	\$4,046	30	\$1,501	\$4,311
Cape Fear River	7,956	\$79	1	\$15	\$44
Total	503,270	\$7,991	62	\$3,051	\$8,757

¹Effort estimates as reported by the NCDMF Coastal Angling Program. Neuse and Tar/Pamlico River estimates include a full 12 months of effort, while effort estimates on the Cape Fear River are only available for March through May.

²Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.

³Includes full time and part time jobs.

Table VI.16 Economic impacts of recreational fishing in coastal river systems of the Central Southern Management Area (CSMA) in North Carolina. Dollar values are reported in 2023 dollars. (continued).

2018			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	162,742	\$2,991	23	\$1,061	\$3,122
Tar/Pamlico Rivers	198,883	\$3,103	20	\$925	\$2,673
Cape Fear River	24,642	\$208	1	\$34	\$87
Total	386,267	\$6,302	44	\$2,019	\$5,883

2017			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	270,485	\$7,522	75	\$3,313	\$10,442
Tar/Pamlico Rivers	182,534	\$5,810	51	\$2,255	\$6,981
Cape Fear River	11,057	\$94	1	\$15	\$39
Total	464,076	\$13,426	127	\$5,583	\$17,461

2016			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	210,111	\$1,493	17	\$811	\$2,481
Tar/Pamlico Rivers	245,998	\$2,460	27	\$1,311	\$4,068
Cape Fear River	43,226	\$439	5	\$241	\$734
Total	499,335	\$4,393	49	\$2,364	\$7,282

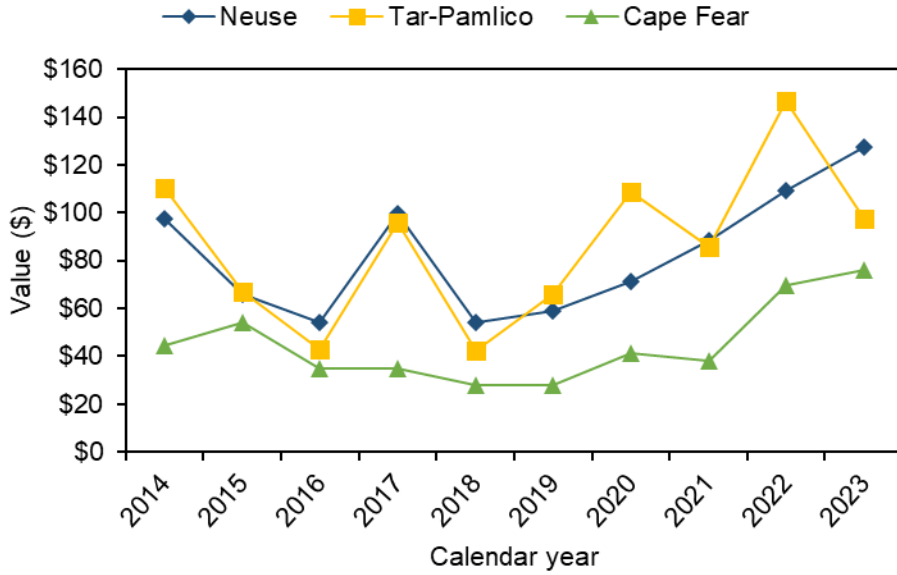
2015			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	252,140	\$1,291	6	\$333	\$761
Tar/Pamlico Rivers	184,333	\$1,358	11	\$579	\$1,309
Cape Fear River	55,463	\$354	3	\$135	\$320
Total	491,936	\$3,002	20	\$1,047	\$2,390

2014			Economic Impacts		
System	Estimated Angler Hours ¹	Estimated Expenditures (thousands of dollars) ²	Estimated Job ³	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	215,956	\$1,800	13	\$672	\$1,523
Tar/Pamlico Rivers	136,083	\$1,231	8	\$418	\$955
Cape Fear River	28,852	\$191	2	\$89	\$201
Total	380,891	\$3,221	23	\$1,179	\$2,679

¹Effort estimates as reported by the NCDMF Coastal Angling Program. Neuse and Tar/Pamlico River estimates include a full 12 months of effort, while effort estimates on the Cape Fear River are only available for March through May.

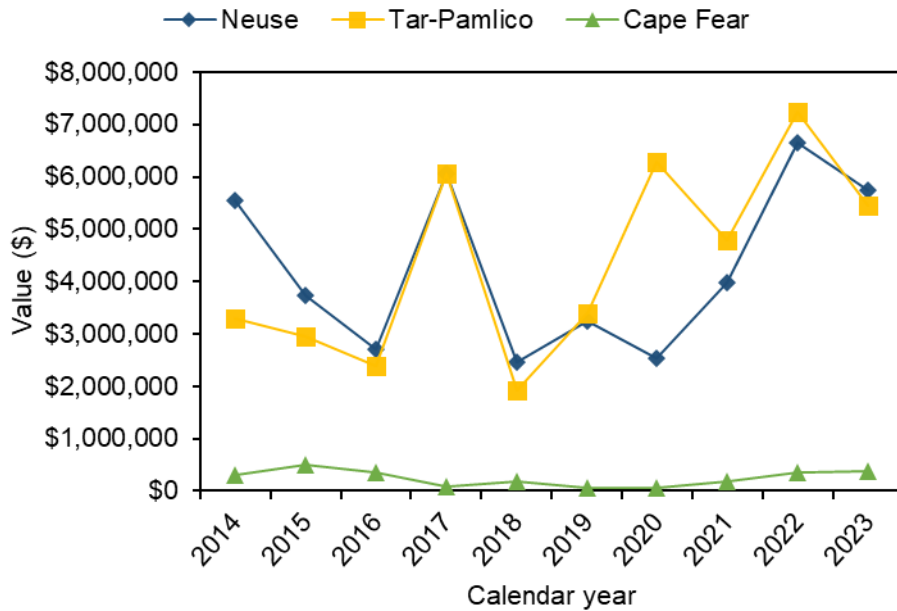
²Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.

³Includes full time and part time jobs.



Note: Estimated fishing trip expenditures based on NCWRC CSMA creel surveys. Expenditure estimates as reported by the NCDMF Coastal Angling Program. Average Neuse and Tar/Pamlico River expenditure estimates include a full 12 months of effort, while estimates on the Cape Fear River are only available for March through May.

Figure VI.5 Average recreational per-trip expenditures across creel survey river systems reported in 2023 dollars.



Note: Estimated fishing trip expenditures based on NCWRC CSMA creel surveys. Expenditure estimates as reported by the NCDMF Coastal Angling Program. Average Neuse and Tar/Pamlico River expenditure estimates include a full 12 months of effort, while estimates on the Cape Fear River are only available for March through May.

Figure VI.6 Total estimated recreational fishing expenditures across creel survey river systems reported in 2023 dollars.