Chapter VI: FISHERIES ECONOMICS

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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.
This can be expressed as:

$$TE= (L, F, I, Ba, Bf, Vf)*Tr$$

where *TE* is the estimated total expenditures, *L* is the average lodging expenditure, *F* is the average food expenditure, *I* is the average ice expenditure, *Ba* is the average bait expenditure, *Bf* is the average expenditure on fuel and oil for a boat, *Vf* is the average expenditure on fuel for a vehicle, and *Tr* is the total number of estimated trips. 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.

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CONTACTS

The socioeconomic program is administered by the North Carolina Division of Marine Fisheries, Morehead City Headquarters Office. For questions regarding the economic data presented, please contact:

North Carolina Division of Marine Fisheries
Economist
Jason Walsh
3441 Arendell St
P.O. Box 769
Morehead City, NC 28557
800-682-2632
Jason.Walsh@ncdenr.gov

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

Rank	2021		2020		2019	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Shrimp, White	$21,106,408	Blue Crabs, Hard	$19,094,331	Blue Crabs, Hard	$22,221,353
2	Blue Crabs, Hard	$20,553,681	Shrimp, White	$18,920,570	Shrimp, White	$19,049,181
3	Oysters	$6,904,735	Oysters	$4,553,647	Flounder, Summer	$7,292,375
4	Flounder, Summer	$5,775,613	Tunas	$4,092,785	Oysters	$4,889,462
5	Tunas	$5,578,932	Flounder, Summer	$3,753,777	Tunas	$3,440,754

Rank	2018		2017		2016	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$17,298,200	Shrimp, White	$20,628,755	Blue Crabs, Hard	$20,738,636
2	Shrimp, Brown	$11,199,482	Blue Crabs, Hard	$17,767,012	Shrimp, White	$19,744,034
3	Shrimp, White	$8,571,111	Shrimp, Brown	$8,544,145	Shrimp, Brown	$8,385,036
4	Flounder, Summer	$6,893,316	Flounder, Summer	$6,354,888	Flounder, Summer	$8,238,721
5	Tunas	$4,334,561	Flounder, Southern	$5,663,116	Oysters	$4,091,155

Rank	2015		2014		2013	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$29,607,384	Blue Crabs, Hard	$29,954,723	Blue Crabs, Hard	$26,465,523
2	Shrimp, Brown	$10,528,437	Shrimp, Brown	$10,326,997	Shrimp, White	$6,344,881
3	Flounder, Summer	$9,092,495	Flounder, Summer	$8,225,282	Shrimp, Brown	$6,021,373
4	Shrimp, White	$6,228,725	Flounder, Southern	$4,839,672	Flounder, Southern	$5,673,190
5	Clams, Hard	$5,038,973	Oysters	$4,544,236	Oysters	$3,353,126

Rank	2012	
	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$20,198,891
2	Shrimp, Brown	$7,721,355
3	Flounder, Southern	$4,451,482
4	Tunas	$4,413,829
5	Shrimp, White	$3,913,604

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

Rank	2021		2020		2019	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Shrimp, White	$21,106,408	Blue Crabs, Hard	$19,094,331	Blue Crabs, Hard	$22,221,353
2	Blue Crabs, Hard	$20,553,681	Shrimp, White	$18,920,570	Shrimp, White	$19,049,181
3	Oysters	$6,904,735	Oysters	$4,553,647	Oysters	$4,889,462
4	Shrimp, Brown	$3,485,222	Shrimp, Brown	$3,341,755	Shrimp, Brown	$2,970,105
5	Blue Crabs, Soft	$1,753,343	Clams, Hard	$901,974	Blue Crabs, Peeler	$1,237,065

Rank	2018		2017		2016	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$17,298,200	Shrimp, White	$20,628,755	Blue Crabs, Hard	$20,738,636
2	Shrimp, Brown	$11,199,482	Blue Crabs, Hard	$17,767,012	Shrimp, White	$19,744,034
3	Shrimp, White	$8,571,111	Shrimp, Brown	$8,544,145	Shrimp, Brown	$8,385,036
4	Oysters	$3,834,874	Oysters	$5,634,893	Oysters	$4,091,155
5	Clams, Hard	$1,628,664	Blue Crabs, Soft	$2,791,960	Clams, Hard	$2,578,120

Rank	2015		2014		2013	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$29,607,384	Blue Crabs, Hard	$29,954,723	Blue Crabs, Hard	$26,465,523
2	Shrimp, Brown	$10,528,437	Shrimp, Brown	$10,326,997	Shrimp, White	$6,344,881
3	Shrimp, White	$6,228,725	Oysters	$4,544,236	Shrimp, Brown	$6,021,373
4	Clams, Hard	$5,038,973	Shrimp, White	$3,483,015	Oysters	$3,353,126
5	Oysters	$3,936,572	Clams, Hard	$2,866,096	Clams, Hard	$2,295,366

Rank	2012	
	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$20,198,891
2	Shrimp, Brown	$7,721,355
3	Shrimp, White	$3,913,604
4	Oysters	$2,572,073
5	Clams, Hard	$2,091,067

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

Rank	2021		2020		2019	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	$5,775,613	Tunas	$4,092,785	Flounder, Summer	$7,292,375
2	Tunas	$5,578,932	Flounder, Summer	$3,753,777	Tunas	$3,440,754
3	Mackerel, Spanish	$1,846,682	Mackerel, Spanish	$1,479,165	Flounder, Southern	$3,078,601
4	Seatrout, Spotted	$1,755,558	Mackerel, King	$1,469,914	Mackerel, King	$1,570,680
5	Flounder, Southern	$1,431,225	Kingfishes	$1,445,430	Snappers	$1,566,839

Rank	2018		2017		2016	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	$6,893,316	Flounder, Summer	$6,354,888	Flounder, Summer	$8,238,721
2	Tunas	$4,334,561	Flounder, Southern	$5,663,116	Flounder, Southern	$3,618,196
3	Flounder, Southern	$3,823,734	Tunas	$5,092,398	Tunas	$3,220,820
4	Croaker, Atlantic	$1,631,506	Bass, Sea	$1,863,116	Croaker, Atlantic	$2,216,211
5	Bass, Sea	$1,518,224	Mackerel, Spanish	$1,384,682	Bass, Sea	$1,346,245

Rank	2015		2014		2013	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	$9,092,495	Flounder, Summer	$8,225,282	Flounder, Southern	$5,673,190
2	Flounder, Southern	$3,823,788	Flounder, Southern	$4,839,672	Tunas	$3,226,483
3	Tunas	$2,916,113	Tunas	$3,647,436	Swordfish	$2,935,940
4	Croaker, Atlantic	$1,646,361	Swordfish	$2,109,549	Croaker, Atlantic	$1,723,578
5	Bass, Sea	$1,366,822	Croaker, Atlantic	$1,865,595	Mullet, Striped	$1,402,914

Rank	2012	
	Species	Ex-Vessel Value
1	Flounder, Southern	$4,451,482
2	Tunas	$4,413,829
3	Swordfish	$3,009,107
4	Flounder, Summer	$2,969,370
5	Croaker, Atlantic	$2,135,458

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

Rank	2021		2020		2019	
	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	$24,774,180	Shrimp Trawl	$21,525,819	Crab Pot	$22,781,208
2	Crab Pot	$21,614,578	Crab Pot	$19,538,452	Shrimp Trawl	$21,736,744
3	Gill net (anchored)	$7,926,381	Gill net (anchored)	$7,299,905	Flounder Trawl	$8,234,946
4	Flounder Trawl	$6,376,097	Longline	$4,535,278	Gill net (anchored)	$7,206,328
5	Longline	$5,512,289	Flounder Trawl	$4,316,834	Longline	$4,126,437

Rank	2018		2017		2016	
	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	$19,464,120	Shrimp Trawl	$28,611,977	Shrimp Trawl	$27,265,534
2	Crab Pot	$17,820,031	Crab Pot	$18,259,177	Crab Pot	$21,603,396
3	Flounder Trawl	$7,988,145	Gill net (anchored)	$9,256,330	Flounder Trawl	$9,096,175
4	Gill net (anchored)	$7,589,685	Flounder Trawl	$7,720,079	Gill net (anchored)	$8,680,345
5	Longline	$4,490,229	Longline	$5,404,919	Longline	$4,975,314

Rank	2015		2014		2013	
	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Crab Pot	$30,439,323	Crab Pot	$31,254,003	Crab Pot	$28,075,766
2	Shrimp Trawl	$16,231,808	Shrimp Trawl	$13,815,472	Shrimp Trawl	$12,001,423
3	Flounder Trawl	$10,047,329	Gill net (anchored)	$9,439,547	Gill net (anchored)	$10,334,496
4	Gill net (anchored)	$8,066,318	Flounder Trawl	$9,016,925	Longline	$6,414,836
5	Longline	$4,715,705	Longline	$6,706,582	Rod-N-Reel	$3,134,644

Rank	2012	
	Gear	Ex-Vessel Value
1	Crab Pot	$21,550,133
2	Shrimp Trawl	$12,525,239
3	Gill net (anchored)	$9,643,922
4	Longline	$7,600,518
5	Rod-N-Reel	$3,748,805

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

Rank	2021		2020		2019	
	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	$22,591,276	Dare	$18,790,354	Dare	$19,823,900
2	Carteret	$17,674,115	Carteret	$16,834,971	Carteret	$18,663,294
3	Pamlico	$11,050,579	Pamlico	$9,157,743	Hyde	$9,210,140
4	Hyde	$8,984,023	Hyde	$8,214,279	Pamlico	$9,040,913
5	Tyrrell	$4,201,310	Onslow	$3,536,819	Onslow	$5,369,638

Rank	2018		2017		2016	
	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	$19,282,376	Dare	$23,683,749	Dare	$21,279,105
2	Carteret	$16,597,862	Carteret	$20,669,552	Carteret	$18,219,584
3	Hyde	$10,817,966	Hyde	$12,818,311	Hyde	$12,864,331
4	Pamlico	$8,051,828	Pamlico	$9,919,977	Pamlico	$10,592,524
5	Onslow	$3,581,886	Onslow	$5,794,663	Onslow	$6,574,507

Rank	2015		2014		2013	
	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	$20,975,965	Dare	$26,596,445	Dare	$21,313,461
2	Carteret	$18,307,561	Carteret	$14,583,443	Carteret	$11,664,336
3	Hyde	$10,981,681	Hyde	$10,352,880	Hyde	$7,376,227
4	Pamlico	$8,503,740	Pamlico	$6,465,954	Camden	$5,870,489
5	Onslow	$6,034,700	Camden	$6,091,805	Tyrrell	$4,724,874

Rank	2012	
	County	Ex-Vessel Value
1	Dare	$21,073,926
2	Carteret	$11,228,715
3	Hyde	$7,977,500
4	Pamlico	$4,620,865
5	Onslow	$4,583,456

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

Rank	2021 Port	2021 Ex-Vessel Value	2020 Port	2020 Ex-Vessel Value	2019 Port	2019 Ex-Vessel Value
1	Wanchese	$14,628,035	Morehead City/Beaufort	$13,060,665	Morehead City/Beaufort	$14,317,421
2	Morehead City/Beaufort	$13,492,223	Wanchese	$12,106,319	Wanchese	$12,002,177
3	Oriental	$6,609,354	Oriental	$5,412,251	Engelhard	$5,175,234
4	Engelhard	$5,007,610	Engelhard	$4,966,954	Oriental	$5,008,613
5	Columbia	$4,201,310	Hatteras Island	$3,300,542	Sneads Ferry	$4,605,861

Rank	2018 Port	2018 Ex-Vessel Value	2017 Port	2017 Ex-Vessel Value	2016 Port	2016 Ex-Vessel Value
1	Morehead City/Beaufort	$13,043,235	Wanchese	$16,254,127	Wanchese	$14,724,895
2	Wanchese	$12,096,136	Morehead City/Beaufort	$15,951,459	Morehead City/Beaufort	$14,486,751
3	Engelhard	$5,823,851	Engelhard	$7,611,885	Engelhard	$7,507,651
4	Oriental	$4,676,438	Sneads Ferry	$4,798,496	Sneads Ferry	$5,259,819
5	Swan Quarter	$4,016,256	Oriental	$4,686,105	Hobucken/Lowland	$4,691,929

Rank	2015 Port	2015 Ex-Vessel Value	2014 Port	2014 Ex-Vessel Value	2013 Port	2013 Ex-Vessel Value
1	Morehead City/Beaufort	$14,187,831	Wanchese	$17,012,857	Wanchese	$13,391,895
2	Wanchese	$13,325,296	Morehead City/Beaufort	$10,721,496	Morehead City/Beaufort	$7,397,030
3	Engelhard	$6,711,463	Engelhard	$6,750,471	Shiloh	$5,870,240
4	Shiloh	$5,343,108	Shiloh	$6,079,732	Columbia	$4,724,874
5	Columbia	$4,922,453	Columbia	$4,727,104	Engelhard	$4,500,433

Rank	2012 Port	2012 Ex-Vessel Value
1	Wanchese	$14,869,154
2	Morehead City/Beaufort	$7,342,879
3	Engelhard	$4,742,988
4	Shiloh	$4,330,807
5	Hatteras Island	$3,475,569

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

	2021		2020	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	332	$75,936	355	$76,848
$500-$999	149	$107,818	154	$115,386
$1,000-$4,999	531	$1,353,534	531	$1,350,213
$5,000-$9,999	247	$1,780,093	292	$2,079,875
$10,000-$24,999	351	$5,735,091	371	$5,927,491
$25,000-$49,999	221	$7,977,725	252	$9,090,908
$50,000-$99,999	203	$14,197,091	187	$13,654,395
$100,000-$249,999	179	$27,492,474	149	$22,202,131
$250,000-$499,999	54	$18,221,505	43	$15,383,728
Over $500,000	19	$12,827,611	12	$7,714,601
Total	2,286	$89,768,878	2,346	$77,595,575

	2019		2018	
Range of Ex-Vessel Value	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	$1,487,112	575	$1,504,453
$5,000-$9,999	283	$2,042,088	313	$2,235,896
$10,000-$24,999	386	$6,232,953	403	$6,652,928
$25,000-$49,999	263	$9,406,250	236	$8,356,583
$50,000-$99,999	194	$14,251,425	257	$18,168,963
$100,000-$249,999	191	$29,039,356	154	$22,789,202
$250,000-$499,999	48	$16,267,157	44	$14,945,819
Over $500,000	12	$7,906,649	5	$2,938,785
Total	2,535	$86,842,139	2,652	$77,842,819

	2017		2016	
Range of Ex-Vessel Value	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	$2,478,499	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	$96,694,947	2,976	$94,171,994

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

	2015		2014	
Range of Ex-Vessel Value	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	$2,369,029	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	204	$30,555,946
$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	$94,765,892	3,174	$94,110,276

	2013		2012	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	604	$122,846	667	$135,093
$500-$999	266	$192,033	244	$180,865
$1,000-$4,999	710	$1,846,514	760	$1,927,886
$5,000-$9,999	364	$2,621,503	370	$2,673,233
$10,000-$24,999	437	$7,171,606	430	$6,995,774
$25,000-$49,999	337	$11,884,546	293	$10,533,771
$50,000-$99,999	229	$16,370,694	220	$15,222,066
$100,000-$249,999	167	$25,477,630	149	$21,644,741
$250,000-$499,999	35	$10,975,611	31	$9,770,831
Over $500,000	3	$2,440,694	5	$3,486,833
Total	3,152	$79,103,678	3,169	$72,571,092

	2011		2010	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	716	$145,068	856	$168,504
$500-$999	261	$189,378	309	$226,453
$1,000-$4,999	761	$1,955,307	768	$1,971,177
$5,000-$9,999	344	$2,419,812	396	$2,770,755
$10,000-$24,999	465	$7,448,284	475	$7,700,522
$25,000-$49,999	290	$10,215,529	323	$11,515,814
$50,000-$99,999	238	$17,033,726	281	$20,354,586
$100,000-$249,999	140	$20,797,393	160	$23,083,296
$250,000-$499,999	26	$9,078,159	25	$8,490,881
Over $500,000	3	$1,901,352	5	$3,584,743
Total	3,244	$71,184,008	3,598	$79,866,731

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

	2009		2008	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	894	$168,722	881	$165,245
$500-$999	343	$250,123	316	$228,299
$1,000-$4,999	857	$2,212,871	834	$2,126,719
$5,000-$9,999	414	$2,971,334	355	$2,559,749
$10,000-$24,999	524	$8,463,066	495	$7,901,800
$25,000-$49,999	308	$10,859,566	321	$11,462,835
$50,000-$99,999	224	$15,970,554	240	$17,103,112
$100,000-$249,999	162	$23,425,162	187	$29,339,526
$250,000-$499,999	23	$7,430,405	26	$8,841,946
Over $500,000	7	$5,444,176	9	$7,080,472
Total	3,756	$77,195,980	3,664	$86,809,702

	2007		2006	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	866	$167,992	776	$154,071
$500-$999	311	$223,218	329	$235,511
$1,000-$4,999	912	$2,246,134	883	$2,218,834
$5,000-$9,999	381	$2,723,610	402	$2,848,519
$10,000-$24,999	509	$8,097,533	542	$8,997,385
$25,000-$49,999	337	$11,855,081	329	$11,733,036
$50,000-$99,999	225	$16,014,561	196	$13,688,760
$100,000-$249,999	158	$23,632,671	113	$16,218,469
$250,000-$499,999	36	$12,257,611	29	$9,332,685
Over $500,000	7	$5,065,131	7	$4,658,049
Total	3,742	$82,283,541	3,606	$70,085,317

	2005		2004	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	844	$177,473	919	$176,687
$500-$999	361	$265,659	353	$255,791
$1,000-$4,999	977	$2,519,273	1,004	$2,575,185
$5,000-$9,999	454	$3,267,100	468	$3,301,378
$10,000-$24,999	582	$9,513,054	708	$11,496,057
$25,000-$49,999	348	$12,084,313	424	$14,840,589
$50,000-$99,999	215	$14,809,717	253	$17,008,833
$100,000-$249,999	93	$13,421,323	106	$15,818,767
$250,000-$499,999	16	$4,993,553	20	$6,526,428
Over $500,000	5	$3,836,941	7	$7,705,359
Total	3,895	$64,888,407	4,262	$79,705,074

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

	2003		2002	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	1,021	$189,284	1,121	$211,511
$500-$999	369	$264,132	387	$279,368
$1,000-$4,999	922	$2,334,153	1,045	$2,644,370
$5,000-$9,999	456	$3,319,208	483	$3,458,734
$10,000-$24,999	677	$11,112,276	689	$10,918,732
$25,000-$49,999	412	$14,764,643	444	$15,953,833
$50,000-$99,999	327	$22,330,859	338	$23,561,411
$100,000-$249,999	154	$22,757,594	160	$23,278,016
$250,000-$499,999	12	$3,928,698	22	$6,837,287
Over $500,000	5	$6,111,985	5	$7,604,274
Total	4,355	$87,112,832	4,694	$94,747,536

	2001		2000	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	1,242	$234,705	1,156	$219,488
$500-$999	444	$322,809	419	$301,087
$1,000-$4,999	1,140	$2,903,186	1,055	$2,697,402
$5,000-$9,999	559	$4,081,069	523	$3,781,356
$10,000-$24,999	726	$11,801,269	726	$11,971,672
$25,000-$49,999	508	$17,971,103	571	$20,071,918
$50,000-$99,999	312	$21,703,642	357	$24,705,031
$100,000-$249,999	133	$18,705,764	189	$26,971,373
$250,000-$499,999	12	$3,958,968	29	$9,203,909
Over $500,000	5	$6,459,596	8	$8,391,575
Total	5,081	$88,142,112	5,033	$108,314,811

	1999		1998	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	1,192	$221,506	1,042	$205,653
$500-$999	413	$303,051	405	$289,624
$1,000-$4,999	1,035	$2,582,817	993	$2,562,963
$5,000-$9,999	481	$3,478,108	490	$3,569,211
$10,000-$24,999	749	$12,375,048	738	$12,368,272
$25,000-$49,999	523	$18,535,308	524	$18,980,608
$50,000-$99,999	289	$19,815,391	347	$23,763,125
$100,000-$249,999	133	$18,427,855	138	$18,962,973
$250,000-$499,999	16	$5,306,893	8	$2,672,040
Over $500,000	4	$18,633,608	3	$17,644,065
Total	4,835	$99,679,585	4,688	$101,018,535

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

	1997		1996	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	1,208	$225,438	1,208	$227,526
$500-$999	414	$299,703	407	$296,571
$1,000-$4,999	1,115	$2,876,898	1,143	$2,874,043
$5,000-$9,999	548	$3,997,239	590	$4,338,034
$10,000-$24,999	856	$14,128,405	829	$13,736,283
$25,000-$49,999	576	$20,603,692	564	$19,815,555
$50,000-$99,999	305	$20,720,739	335	$23,189,361
$100,000-$249,999	118	$16,741,568	116	$16,547,993
$250,000-$499,999	14	$4,418,969	10	$2,975,607
Over $500,000	6	$24,975,456	5	$21,532,505
Total	5,160	$108,988,107	5,207	$105,533,477

	1995		1994	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	1,258	$246,059	1,346	$254,460
$500-$999	440	$326,253	445	$323,517
$1,000-$4,999	1,259	$3,252,145	1,322	$3,341,972
$5,000-$9,999	624	$4,619,448	635	$4,608,616
$10,000-$24,999	877	$14,378,075	784	$12,684,773
$25,000-$49,999	542	$19,472,751	443	$15,273,270
$50,000-$99,999	337	$23,271,903	244	$16,998,319
$100,000-$249,999	133	$18,905,145	75	$10,354,865
$250,000-$499,999	17	$5,803,214	16	$4,776,628
Over $500,000	7	$19,092,944	7	$22,659,401
Total	5,494	$109,367,936	5,317	$91,275,820

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

	2021		2020	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	42	$8,942	38	$8,357
$500-$999	21	$16,047	34	$24,850
$1,000-$4,999	99	$269,667	104	$277,443
$5,000-$9,999	62	$436,502	67	$480,742
$10,000-$24,999	97	$1,522,243	85	$1,271,162
$25,000-$49,999	33	$1,257,494	45	$1,616,193
$50,000-$99,999	31	$2,211,151	47	$3,367,638
$100,000-$249,999	55	$8,623,467	52	$8,455,466
$250,000-$499,999	34	$12,251,619	21	$7,295,552
$500,000-$999,999	18	$11,806,300	22	$15,366,216
Over $1,000,000	20	$51,365,445	16	$39,431,956
Total	512	$89,768,878	531	$77,595,575

	2019		2018	
Range of Ex-Vessel Value	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	123	$334,613
$5,000-$9,999	68	$508,412	79	$584,979
$10,000-$24,999	91	$1,490,259	85	$1,356,216
$25,000-$49,999	39	$1,308,977	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	$7,191,819
$250,000-$499,999	23	$7,674,384	24	$8,389,180
$500,000-$999,999	23	$16,677,233	17	$11,852,608
Over $1,000,000	20	$47,328,214	19	$44,072,034
Total	532	$86,842,139	547	$77,842,819

	2017		2016	
Range of Ex-Vessel Value	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	$9,637,790	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
Total	532	$96,694,947	575	$94,171,994

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

	2015		2014	
Range of Ex-Vessel Value	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	$7,875,471	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	$57,275,012
Total	610	$94,765,892	606	$94,110,276

	2013		2012	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	62	$12,864	65	$16,186
$500-$999	42	$31,582	50	$36,539
$1,000-$4,999	140	$377,346	135	$339,651
$5,000-$9,999	68	$496,801	86	$624,914
$10,000-$24,999	103	$1,693,114	108	$1,777,895
$25,000-$49,999	56	$2,040,555	46	$1,579,102
$50,000-$99,999	26	$1,893,795	35	$2,625,885
$100,000-$249,999	53	$9,119,956	44	$7,597,981
$250,000-$499,999	24	$8,596,165	25	$9,222,944
$500,000-$999,999	18	$12,687,877	18	$12,885,904
Over $1,000,000	20	$42,153,622	17	$35,864,089
Total	612	$79,103,678	629	$72,571,092

	2011		2010	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	84	$20,508	83	$18,058
$500-$999	36	$27,660	41	$30,342
$1,000-$4,999	154	$386,944	141	$366,850
$5,000-$9,999	79	$577,880	84	$627,673
$10,000-$24,999	104	$1,703,113	106	$1,707,961
$25,000-$49,999	49	$1,633,912	55	$1,961,107
$50,000-$99,999	36	$2,561,811	44	$3,037,290
$100,000-$249,999	36	$5,530,747	36	$5,487,224
$250,000-$499,999	25	$8,958,433	31	$11,133,355
$500,000-$999,999	21	$14,533,737	25	$17,348,494
Over $1,000,000	18	$35,249,265	17	$38,148,378
Total	642	$71,184,008	663	$79,866,731

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

	2009		2008	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	82	$18,276	67	$14,614
$500-$999	51	$36,571	39	$29,073
$1,000-$4,999	168	$411,392	144	$383,600
$5,000-$9,999	84	$628,715	61	$432,423
$10,000-$24,999	95	$1,505,021	98	$1,589,894
$25,000-$49,999	50	$1,738,346	44	$1,590,093
$50,000-$99,999	37	$2,660,711	36	$2,561,874
$100,000-$249,999	46	$7,864,114	45	$7,203,828
$250,000-$499,999	34	$12,404,263	29	$10,495,107
$500,000-$999,999	16	$10,667,814	26	$18,524,021
Over $1,000,000	20	$39,260,757	20	$43,985,176
Total	683	$77,195,980	609	$86,809,702

	2007		2006	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	63	$14,338	54	$11,992
$500-$999	48	$34,759	46	$34,228
$1,000-$4,999	123	$309,363	126	$334,759
$5,000-$9,999	68	$492,135	60	$409,937
$10,000-$24,999	95	$1,560,621	107	$1,769,478
$25,000-$49,999	52	$1,868,251	65	$2,352,645
$50,000-$99,999	42	$2,862,363	42	$2,984,498
$100,000-$249,999	42	$6,830,952	33	$5,489,874
$250,000-$499,999	30	$10,937,353	36	$12,365,749
$500,000-$999,999	24	$15,421,256	20	$13,191,023
Over $1,000,000	19	$41,952,149	14	$31,141,133
Total	606	$82,283,541	603	$70,085,317

	2005		2004	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	74	$17,215	83	$18,051
$500-$999	47	$34,752	36	$26,008
$1,000-$4,999	136	$342,364	160	$426,929
$5,000-$9,999	77	$568,141	76	$554,507
$10,000-$24,999	90	$1,466,394	115	$1,866,119
$25,000-$49,999	55	$1,871,706	57	$1,983,520
$50,000-$99,999	51	$3,459,194	44	$2,989,955
$100,000-$249,999	40	$6,904,704	51	$8,780,408
$250,000-$499,999	36	$12,135,554	41	$14,335,665
$500,000-$999,999	23	$16,345,574	23	$16,025,280
Over $1,000,000	11	$21,742,810	15	$32,698,633
Total	640	$64,888,407	701	$79,705,074

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

	2003		2002	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	74	$15,760	81	$16,810
$500-$999	37	$27,208	49	$36,215
$1,000-$4,999	155	$399,175	164	$416,709
$5,000-$9,999	94	$707,812	84	$597,629
$10,000-$24,999	94	$1,547,430	89	$1,460,870
$25,000-$49,999	72	$2,525,650	77	$2,720,825
$50,000-$99,999	49	$3,640,869	41	$2,845,825
$100,000-$249,999	60	$9,950,339	49	$7,748,864
$250,000-$499,999	31	$10,595,848	35	$12,403,209
$500,000-$999,999	32	$22,723,602	36	$24,161,971
Over $1,000,000	18	$34,979,137	21	$42,338,608
Total	716	$87,112,832	726	$94,747,536

	2001		2000	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	86	$18,277	71	$17,377
$500-$999	48	$36,258	52	$38,983
$1,000-$4,999	143	$326,253	130	$332,049
$5,000-$9,999	82	$601,736	86	$616,049
$10,000-$24,999	85	$1,466,458	87	$1,385,585
$25,000-$49,999	72	$2,502,610	61	$2,190,950
$50,000-$99,999	42	$2,898,177	50	$3,430,948
$100,000-$249,999	56	$9,218,425	66	$11,105,969
$250,000-$499,999	44	$15,013,452	28	$10,073,021
$500,000-$999,999	28	$20,175,082	38	$26,037,241
Over $1,000,000	20	$35,885,384	28	$53,086,638
Total	706	$88,142,112	697	$108,314,811

	1999		1998	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	94	$21,477	93	$18,281
$500-$999	43	$31,480	47	$35,556
$1,000-$4,999	151	$394,619	154	$401,895
$5,000-$9,999	91	$667,243	64	$461,241
$10,000-$24,999	85	$1,442,144	95	$1,620,619
$25,000-$49,999	71	$2,570,882	61	$2,191,822
$50,000-$99,999	54	$3,899,416	59	$4,154,979
$100,000-$249,999	62	$9,849,972	56	$9,064,737
$250,000-$499,999	48	$17,356,410	48	$17,512,993
$500,000-$999,999	39	$27,071,032	34	$24,710,336
Over $1,000,000	22	$36,374,909	26	$40,846,077
Total	760	$99,679,585	737	$101,018,535

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

	1997		1996	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	73	$15,316	82	$16,595
$500-$999	39	$28,463	49	$36,150
$1,000-$4,999	145	$376,363	151	$409,797
$5,000-$9,999	75	$552,589	72	$502,989
$10,000-$24,999	88	$1,476,779	95	$1,489,305
$25,000-$49,999	72	$2,474,940	60	$2,161,251
$50,000-$99,999	55	$3,935,810	46	$3,228,174
$100,000-$249,999	48	$7,598,762	55	$9,111,449
$250,000-$499,999	50	$18,194,258	37	$13,773,847
$500,000-$999,999	36	$24,425,557	36	$26,776,574
Over $1,000,000	27	$49,909,271	30	$48,027,346
Total	708	$108,988,107	713	$105,533,477

	1995		1994	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	112	$21,974	89	$18,397
$500-$999	42	$30,196	50	$35,522
$1,000-$4,999	157	$435,433	137	$330,770
$5,000-$9,999	73	$521,146	53	$385,533
$10,000-$24,999	61	$1,000,105	49	$837,156
$25,000-$49,999	65	$2,258,478	44	$1,471,274
$50,000-$99,999	43	$3,033,036	36	$2,459,653
$100,000-$249,999	59	$10,048,164	57	$9,333,833
$250,000-$499,999	42	$15,213,635	45	$16,431,141
$500,000-$999,999	37	$27,826,869	30	$21,127,089
Over $1,000,000	26	$48,978,901	23	$38,845,452
Total	717	$109,367,936	613	$91,275,820

Table VI.9 Economic impacts of commercial fishing in North Carolina over last 10 years, 2012-2021.

Year	Commercial Fishing Output[1]				Economic Impacts[2]		
	Commercial Fishermen	Dealers	Pounds	Ex-Vessel Value	Estimated Jobs[3]	Income Impacts	Sales Impacts
2021	2,286	512	42,363,762	$89,768,878	5,951	$122,830,602	$325,354,859
2020	2,346	531	42,997,841	$77,595,575	5,166	$99,370,052	$302,433,388
2019	2,535	532	53,099,309	$86,842,139	6,196	$128,922,446	$371,244,645
2018	2,652	547	45,765,904	$77,842,819	5,188	$94,855,409	$295,793,088
2017	2,945	532	54,424,502	$96,694,947	8,070	$157,105,900	$400,249,890
2016	2,976	575	59,995,783	$94,171,994	7,730	$150,173,442	$387,765,705
2015	3,137	610	65,969,484	$94,765,892	7,866	$149,352,113	$384,101,698
2014	3,174	606	61,975,412	$94,110,276	8,282	$146,588,121	$386,775,793
2013	3,152	612	50,197,234	$79,103,678	6,218	$100,165,308	$311,647,939
2012	3,169	629	56,690,935	$72,571,092	5,446	$86,940,350	$292,950,421

[1]As reported by the NCDMF Trip Ticket Program.
[2]Economic 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.
[3]Represents both full-time and part-time jobs.

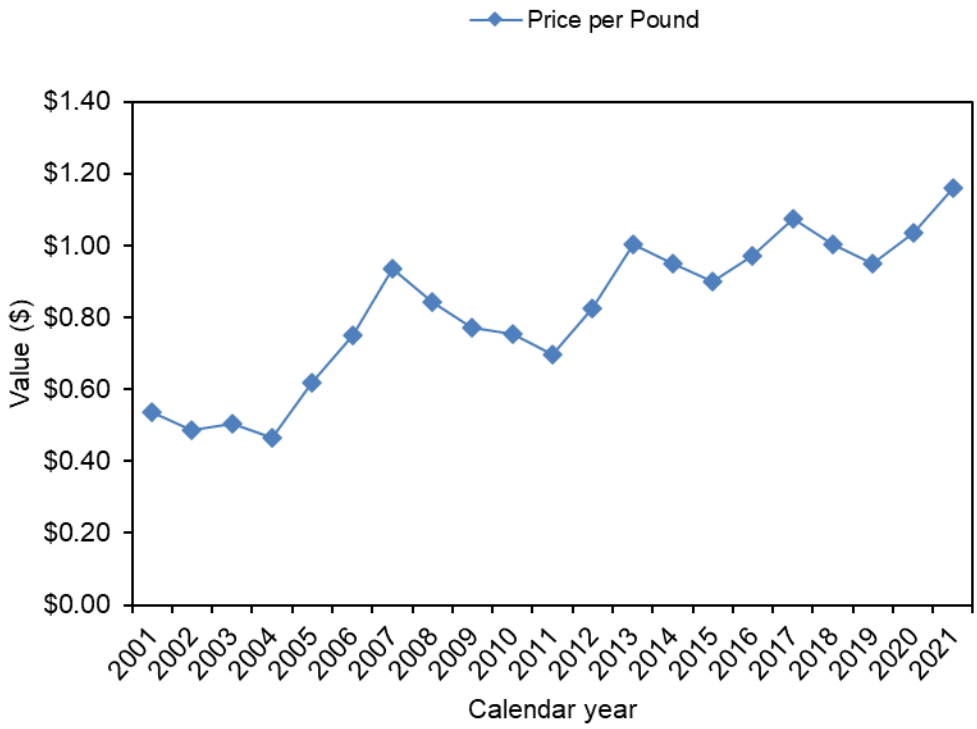


Figure VI.1 Average price per pound of annual commercial landings, converted to 2021 dollars.[1]

[1]Annual prices converted to 2021 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

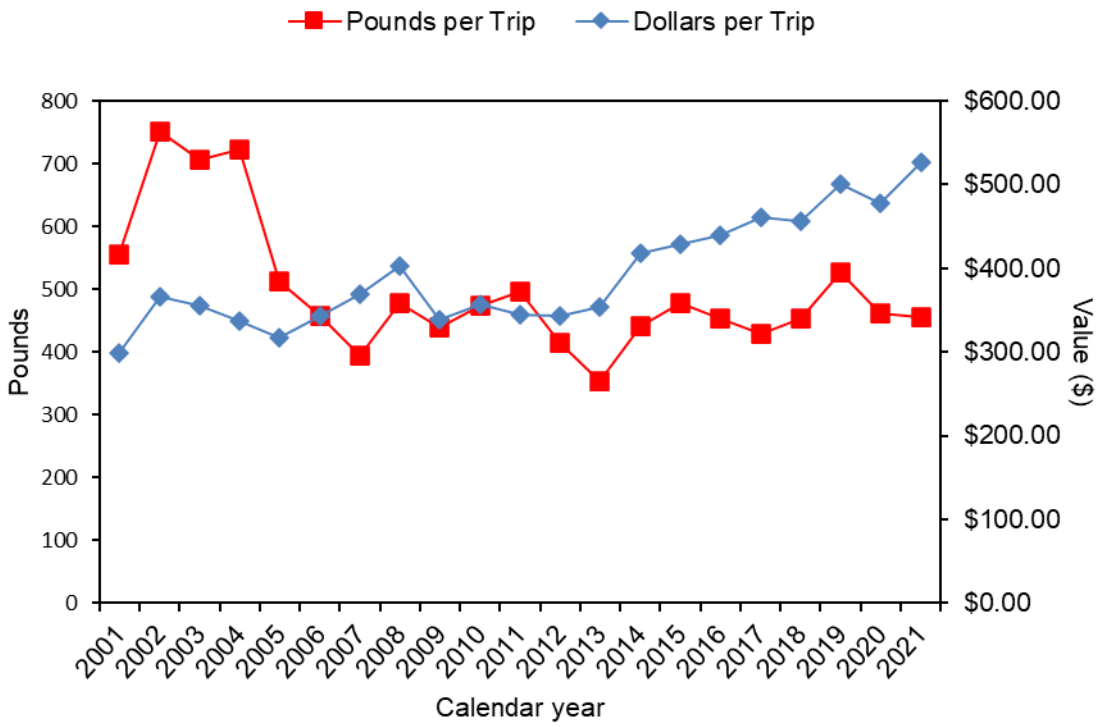


Figure VI.2 Commercial landings and ex-vessel value per fishing trip by year, 2001–2021.[1]

[1]Annual prices converted to 2021 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

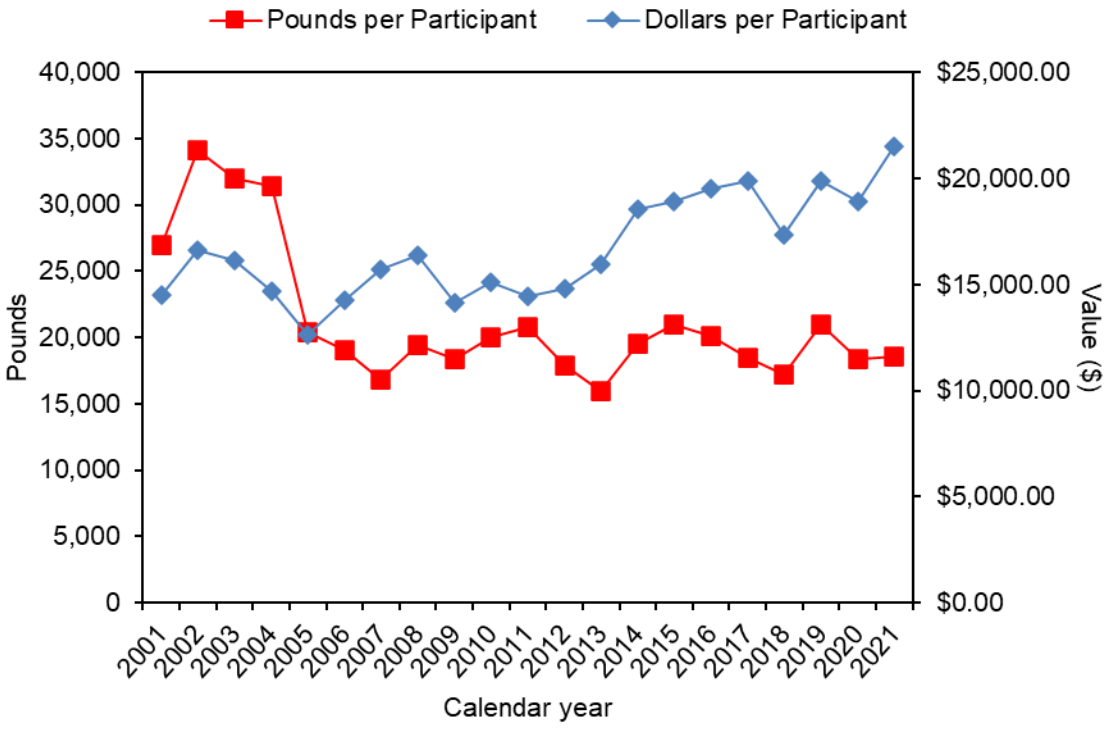


Figure VI.3 Commercial landings and ex-vessel value per participant by year, 2001–2021.[1]

[1]Annual prices converted to 2021 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

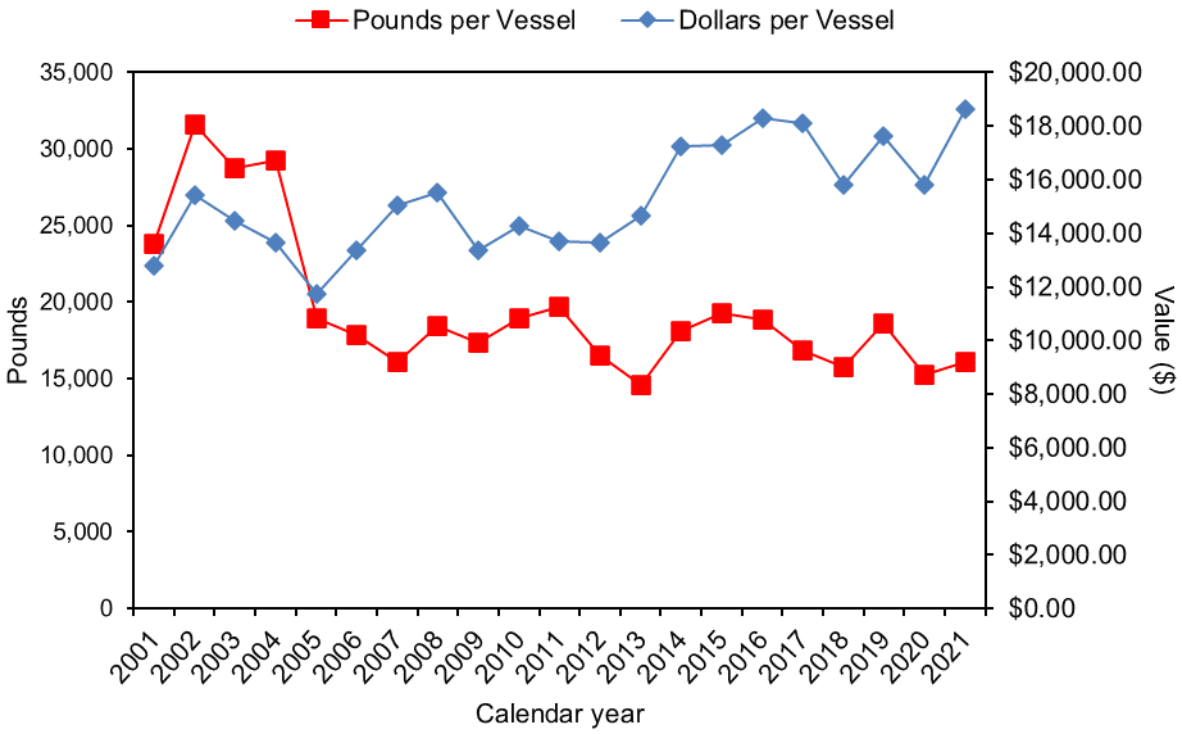


Figure VI.4 Commercial landings and ex-vessel value per vessel by year, 2001–2021.[1]

[1]Annual prices converted to 2021 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.

Rank	2021		2020		2019	
	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Drum, Red	3,120,360	Drum, Red	3,263,904	Seatrout, Spotted	2,867,512
2	Seatrout, Spotted	2,778,386	Seatrout, Spotted	3,169,996	Bluefish	2,699,198
3	Kingfish	2,416,564	Bluefish	2,024,699	Drum, Red	2,687,752
4	Croaker, Atlantic	2,167,915	Kingfish	1,771,176	Kingfish	2,280,088
5	Bluefish	1,803,957	Flounder	1,675,588	Flounder	1,828,756

Rank	2018		2017		2016	
	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Drum, Red	3,478,377	Drum, Red	3,674,352	Drum, Red	3,686,799
2	Bluefish	3,031,288	Bluefish	3,390,236	Bluefish	3,194,322
3	Flounder	1,711,066	Seatrout, Spotted	2,851,053	Kingfish	2,741,476
4	Kingfish	1,660,341	Kingfish	2,361,137	Flounder	2,420,326
5	Seatrout, Spotted	1,606,853	Flounder	2,107,301	Seatrout, Spotted	2,322,627

Rank	2015		2014		2013	
	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Bluefish	3,126,972	Drum, Red	2,995,433	Kingfish	2,910,094
2	Kingfish	2,842,692	Bluefish	2,871,661	Bluefish	2,769,469
3	Drum, Red	2,758,226	Flounder	2,685,072	Flounder	2,623,584
4	Seatrout, Spotted	2,537,677	Kingfish	2,538,697	Drum, Red	2,542,714
5	Flounder	2,536,854	Seatrout, Spotted	2,154,879	Spot	2,385,900

Rank	2012	
	Species[2,3]	Directed Trips[1]
1	Flounder	2,715,416
2	Kingfish	2,713,816
3	Drum, Red	2,557,094
4	Seatrout, Spotted	2,365,291
5	Bluefish	2,355,827

[1]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).
[2]Pinfish have been removed from these rankings as they are a non-target recreational species.
[3]Lefteye-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.

	2021		2020		2019	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Seatrout, Spotted	2,260,368	Seatrout, Spotted	2,723,059	Seatrout, Spotted	2,498,240
2	Drum, Red	1,873,846	Drum, Red	1,750,967	Drum, Red	1,364,573
3	Flounder	1,038,055	Flounder	1,078,300	Flounder	1,163,976
4	Croaker, Atlantic	855,958	Croaker, Atlantic	570,255	Bluefish	707,534
5	Sea Bass, Black	396,834	Bluefish	485,945	Croaker, Atlantic	643,412

	2018		2017		2016	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Seatrout, Spotted	1,050,588	Seatrout, Spotted	1,926,134	Seatrout, Spotted	1,668,906
2	Drum, Red	1.048,725	Drum, Red	1,391,701	Flounder	1,326,640
3	Flounder	989,030	Flounder	1,093,787	Drum, Red	1,080,444
4	Bluefish	588,800	Sea Bass, Black	678,956	Croaker, Atlantic	746,234
5	Croaker, Atlantic	525,942	Croaker, Atlantic	614,956	Pigfish	598,902

	2015		2014		2013	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Flounder	1,305,922	Seatrout, Spotted	1,298,948	Seatrout, Spotted	1,758,243
2	Croaker, Atlantic	1,078,329	Flounder	1,259,600	Flounder	1,355,349
3	Seatrout, Spotted	934,595	Drum, Red	1,121,028	Drum, Red	1,180,553
4	Drum, Red	877,726	Croaker, Atlantic	874,868	Croaker, Atlantic	643,229
5	Pigfish	643,935	Pigfish	522,315	Bluefish	446,427

	2012	
Rank	Species[2,3]	Directed Trips[1]
1	Seatrout, Spotted	1,707,492
2	Flounder	1,612,512
3	Drum, Red	1,215,535
4	Atlantic Croaker	660,990
5	Black Sea Bass	550,245

[1]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).
[2]Pinfish have been removed from these rankings as they are a non-target recreational species.
[3]Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

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

Rank	2021		2020		2019	
	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Kingfish	2,046,200	Bluefish	1,519,840	Bluefish	1,951,179
2	Bluefish	1,432,924	Drum, Red	1,502,058	Kingfish	1,879,740
3	Croaker, Atlantic	1,303,885	Kingfish	1,483,294	Drum, Red	1,316,760
4	Drum, Red	1,236,521	Mackerel, Spanish	861,138	Mackerel, Spanish	1,058,290
5	Mackerel, Spanish	1,008,173	Flounder	561,501	Spot	685,267

Rank	2018		2017		2016	
	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Drum, Red	2,426,857	Bluefish	2,893,889	Bluefish	2,721,663
2	Bluefish	2,426,040	Drum, Red	2,278,515	Drum, Red	2,605,528
3	Kingfish	1,430,778	Kingfish	2,064,896	Kingfish	2,312,446
4	Mackerel, Spanish	845,544	Spot	1,024,099	Flounder	1,079,109
5	Flounder	711,406	Flounder	996,260	Puffers	989,121

Rank	2015		2014		2013	
	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Bluefish	2,462,803	Bluefish	2,374,908	Kingfish	2,589,022
2	Kingfish	2,457,751	Kingfish	2,055,200	Bluefish	2,297,866
3	Drum, Red	1,868,742	Drum, Red	1,785,654	Spot	2,036,197
4	Seatrout, Spotted	1,597,333	Flounder	1,079,109	Drum, Red	1,359,939
5	Spot	1,354,339	Puffers	989,121	Flounder	1,245,327

Rank	2012	
	Species[2,3]	Directed Trips[1]
1	Kingfish	2,381,008
2	Bluefish	1,769,961
3	Drum, Red	1,340,027
4	Spot	1,268,511
5	Flounder	1,076,949

[1]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).
[2]Pinfish have been removed from these rankings as they are a non-target recreational species.
[3]Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

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

Rank	2021		2020		2019	
	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]
1	Dolphin	136,179	Mackerel, King	204,219	Dolphin	166,429
2	Mackerel, King	119,931	Dolphin	132,578	Mackerel, King	145,351
3	Sea Bass, Black	100,933	Sea Bass, Black	122,504	Sea Bass, Black	79,181
4	Mackerel, Spanish	76,316	Wahoo	73,107	Mackerel, Spanish	51,855
5	Sharks	63,811	Tuna, Yellowfin	68,502	Sharks	49,804

Rank	2018		2017		2016	
	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]
1	Dolphin	238,032	Dolphin	192,004	Dolphin	271,904
2	Mackerel, King	138,980	Sea Bass, Black	183,341	Tuna, Yellowfin	119,950
3	Sea Bass, Black	106,091	Mackerel. King	118,079	Sea Bass, Black	116,229
4	Mackerel, Spanish	66,025	Tuna, Yellowfin	88,727	Wahoo	83,613
5	Tuna, Yellowfin	54,138	Wahoo	74,721	Mackerel, King	81,702

Rank	2015		2014		2013	
	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]
1	Dolphin	304,978	Dolphin	167,903	Dolphin	189,628
2	Sea Bass, Black	175,695	Sea Bass, Black	141,025	Sea Bass, Black	113,512
3	Mackerel, King	110,792	Wahoo	70,998	Mackerel, King	109,099
4	Wahoo	95,921	Mackerel, King	69,677	Sharks	60,086
5	Mackerel, Spanish	72,406	Sharks	49,052	Wahoo	47,999

Rank	2012	
	Species[2,3]	Directed Trips[1]
1	Dolphin	219,449
2	Sea Bass, Black	119,911
3	King Mackerel	84,693
4	Wahoo	62,680
5	Spanish Mackerel	52,968

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

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

Rank	2021		2020		2019	
	County	License Holders	County	License Holders	County	License Holders
1	Wake	25,191	Wake	27,403	Wake	22,700
2	Onslow	25,191	Onslow	19,308	Onslow	16,782
3	New Hanover	14,758	New Hanover	16,154	New Hanover	14,115
4	Brunswick	11,797	Brunswick	11,573	Brunswick	10,646
5	Carteret	10,494	Johnston	10,520	Carteret	9,811

Rank	2018		2017		2016	
	County	License Holders	County	License Holders	County	License Holders
1	Wake	21,346	Wake	23,636	Wake	24,030
2	Onslow	14,938	Onslow	17,202	Onslow	17,633
3	New Hanover	13,203	New Hanover	15,090	New Hanover	15,036
4	Brunswick	9,677	Brunswick	10,791	Brunswick	10,643
5	Carteret	8,389	Carteret	9,943	Carteret	10,109

Rank	2015		2014		2013	
	County	License Holders	County	License Holders	County	License Holders
1	Wake	23,979	Wake	24,443	Wake	24,094
2	Onslow	18,497	Onslow	18,766	Onslow	18,661
3	New Hanover	16,042	New Hanover	16,455	New Hanover	16,407
4	Brunswick	11,050	Brunswick	11,489	Brunswick	11,268
5	Carteret	10,665	Carteret	11,187	Carteret	10,995

Rank	2012	
	County	License Holders
1	Wake	22,123
2	New Hanover	16,682
3	Onslow	16,576
4	Carteret	11,381
5	Brunswick	11,040

Table VI.15 Economic impacts of coastal recreational fishing in North Carolina over the last 10 years, 2012-2021.

Year	Recreational Fishing Output	Economic Impacts		
	Estimated Direct Expenditures (thousands of dollars)[3]	Estimated Jobs[2]	Income Impacts (thousands of dollars)[1]	Output Impacts (thousands of dollars)[1]
2021	$4,553,304	39,814	$1,666,638	$4,197,110
2020	$4,151,178	33,129	$1,453,430	$3,642,213
2019	$3,127,676	34,010	$1,417,400	$4,286,699
2018	$4,191,618	33,775	$1,282,873	$3,288,305
2017	$4,816,819	41,743	$1,486,882	$3,923,324
2016	$4,752,353	44,427	$1,532,898	$4,100,599
2015	$4,451,375	42,070	$1,437,513	$3,907,343
2014	$4,369,497	41,232	$1,409,580	$3,695,889
2013	$4,384,281	40,969	$1,379,945	$3,691,008
2012	$4,634,579	44,384	$1,472,235	$4,018,561

[1]Economic 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.
[2]Includes full time and part time jobs.
[3]Estimated 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.

2021			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)[4]	Output Impacts (thousands of dollars)[4]
Neuse River	194,139	$3,979	48	$2,129	$5,177
Tar/Pamlico Rivers	239,880	$4,781	48	$2,151	$5,277
Cape Fear River	28,001	$184	1	$57	$153
Total	462,021	$8,944	97	$4,338	$10,606

2020			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	153,744	$2,542	30	$1,357	$3,302
Tar/Pamlico Rivers	278,144	$6,285	75	$3,363	$8,194
Cape Fear River	4,974	$48	1	$8	$23
Total	436,862	$8,875	106	$4,729	$11,519

2019			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	257,484	$3,244	31	$1,288	$3,693
Tar/Pamlico Rivers	237,830	$3,395	30	$1,259	$3,617
Cape Fear River	7,956	$66	1	$13	$37
Total	503,270	$6,705	62	$2,560	$7,347

2018			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	162,742	$2,465	23	$874	$2,573
Tar/Pamlico Rivers	196,883	$2,557	20	$762	$2,203
Cape Fear River	24,642	$171	1	$28	$72
Total	384,267	$5,193	44	$16,663	$4,848

[1]Includes full time and part time jobs.
[2]Effort 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.
[3]Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.

Table VI.16 Economic impacts of recreational fishing in coastal river systems of the Central Southern Management Area (CSMA) in North Carolina. (*continued*).

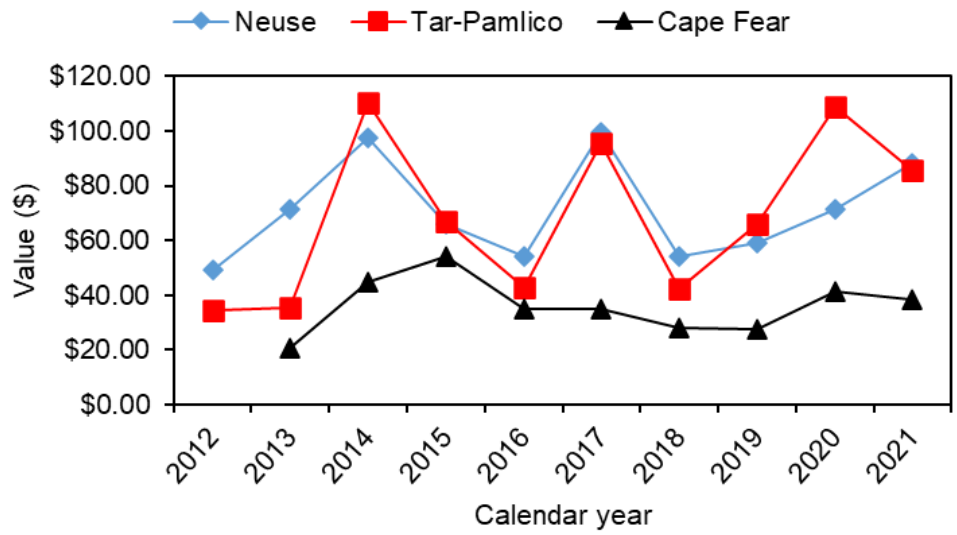
2017			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	270,485	$6,051	75	$2,665	$8,400
Tar/Pamlico Rivers	182,534	$4,674	51	$1,814	$5,616
Cape Fear River	11,057	$76	1	$12	$31
Total	464,076	$10,800	127	$4,491	$14,047

2016			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	210,111	$1,176	17	$639	$1,954
Tar/Pamlico Rivers	245,998	$1,938	27	$1,033	$3,204
Cape Fear River	43,226	$346	5	$190	$578
Total	499,335	$3,460	49	$1,862	$5,736

2015			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	252,140	$1,004	6	$259	$592
Tar/Pamlico Rivers	184,333	$1,056	11	$450	$1,018
Cape Fear River	55,463	$275	3	$105	$249
Total	491,936	$2,335	20	$814	$1,859

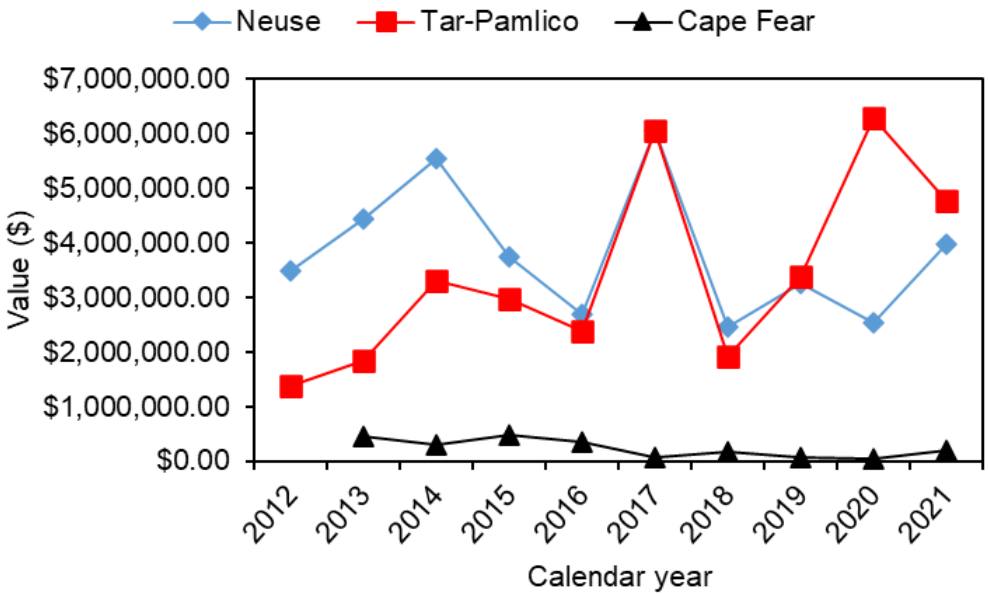
2014			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	215,956	$1,398	13	$522	$1,183
Tar/Pamlico Rivers	136,083	$956	8	$325	$742
Cape Fear River	28,852	$148	2	$69	$156
Total	380,892	$2,502	23	$916	$2,082

[1]Includes full time and part time jobs.
[2]Effort 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.
[3]Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.



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.



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.