

## INTRODUCTION

For the first time this year Fisheries of the United States includes a section dedicated to aquaculture. Aquaculture is of increasing importance globally, and plays an important role in global food security. While the U.S. is not a major aquaculture producer (ranking 15th), over half of the seafood that the U.S. imports comes from aquaculture. Additionally, aquaculture plays an important role in producing many popular seafood products, including salmon, oysters, and clams in the U.S. as well as imported shrimp. Some of the information presented in this new aquaculture section was previously reported in the Commercial and World sections of Fisheries of the United States, but this section consolidates this information and adds more detail. The data in this section are current through 2012, thus lagging one year behind the rest of Fisheries of the United States.

## SOURCES OF DATA

Aquaculture is defined as the propagation and rearing of aquatic species in controlled or selected environments (National Aquaculture Act of 1980). Accurate statistics about the state of the U.S. marine aquaculture industry are essential for quantitatively demonstrating the contribution of aquaculture to coastal economies and to U.S. seafood production. Regular, periodic data are necessary to assess industry trends. Currently, the United States does not conduct an annual national data collection for aquaculture production. To derive the estimates reported here, NMFS compiles data from a number of sources including state agencies, industry groups, the United States Department of Agriculture (USDA) and specialized surveys. Round weight is reported for most species, but oysters, clams, and mussels are reported as meat weight (i.e. without the shell). For a few species, such as ornamental fish, only value is reported. The values reported are at the farm-gate level. More detailed data on United States aquaculture is available in 2014 with the release of results from the USDA Census of Aquaculture for 2013. This will be the first Census of Aquaculture since the 2005 Census. The Census of Aquaculture is a follow-up to the 2012 Census of Agriculture, where USDA identified 5,533 aquaculture producers to include in the aquaculture census.

World data are compiled by the Food and Agriculture Organization of the United Nations (FAO) and are available on their website ([www.fao.org/fishery/statistics/global-aquaculture-production](http://www.fao.org/fishery/statistics/global-aquaculture-production)) and through their FishStatJ software (<http://www.fao.org/fishery/statistics/software/fishstatj/en>). For the global data, all species are reported in live weight, so U.S. aquaculture totals in world tables will not match those reported in tables that only have data for the United States.

## DATA HIGHLIGHTS

In 2012, estimated freshwater plus marine U.S. aquaculture production was 594 million pounds with a value of \$1.23 billion. This volume of production reflects a decrease from the totals of recent years, mostly reflecting a decline in domestic catfish production. While freshwater aquaculture production has been declining, marine production has increased in both volume and value since 2007. Freshwater production is primarily composed of catfish (340 million pounds), crawfish (96 million pounds), and trout (36 million pounds). Atlantic salmon is the leading species for marine finfish aquaculture (43 million pounds), while oysters have the highest volume (37 million pounds) for marine shellfish production. While thriving shellfish industries can be found in all coastal regions of the United States, The Pacific Coast states produce more shellfish by volume (23.5 million pounds) and by value (\$108.5 million).

FAO estimates that nearly half of the world's consumption of seafood comes from aquaculture. By far, Asia is the leading continent for aquaculture production volume with 88 percent of the global total of 66.6 million metric tons. The top five producing countries are in Asia: China, India, Viet Nam, Indonesia, and Bangladesh. The United States ranks fifteenth in production. Globally, carps (25.4 million metric tons), miscellaneous fish (10.5 million metric tons), salmon (4.5 million metric tons), and tilapias (3.2 million metric tons) are the finfish species groups with the greatest production, while clams (5.0 million metric tons), oysters (4.7 million metric tons), and shrimp (4.3 million metric tons) are the shellfish species groups with the most production.

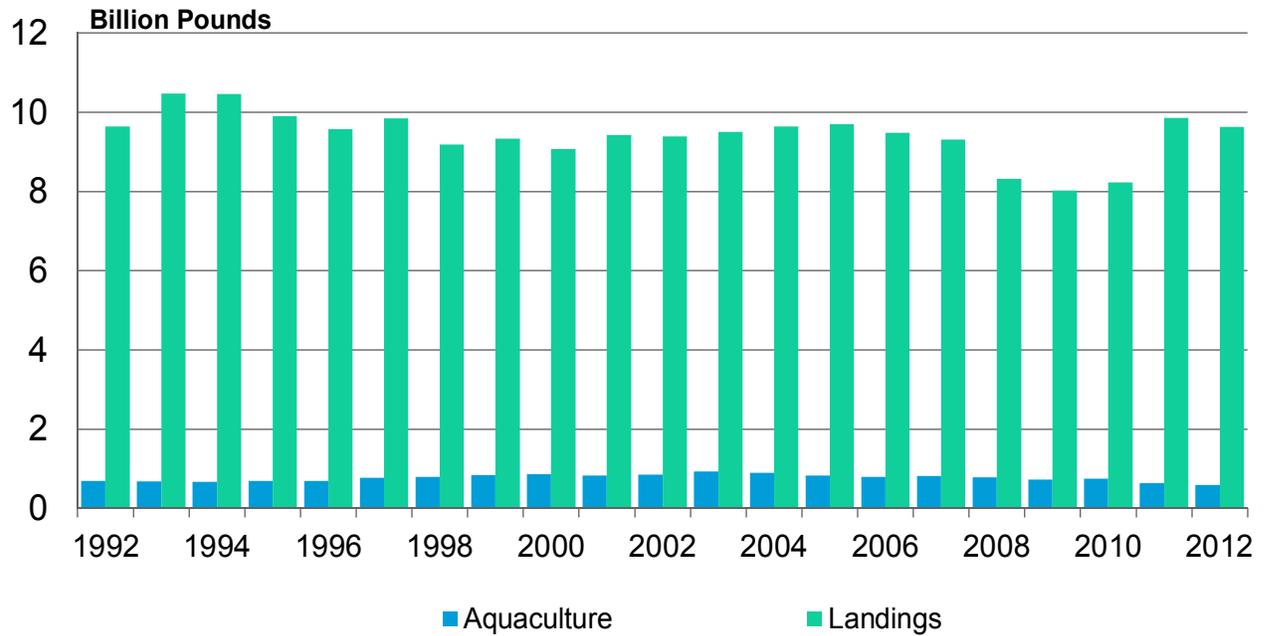
## ESTIMATED U.S. AQUACULTURE PRODUCTION, 2007 - 2012

Species	2007			2008		
	Thousand pounds	Metric tons	Thousand dollars	Thousand pounds	Metric tons	Thousand dollars
<b>Freshwater:</b>						
Catfish	563,900	255,781	424,596	568,900	233,564	389,290
Striped bass	11,239	5,098	31,455	11,925	5,434	30,430
Tilapia	20,000	9,072	34,383	20,000	9,072	34,383
Trout	49,051	22,249	58,960	49,659	16,213	49,774
Crawfish	114,623	51,992	88,906	83,714	53,285	127,351
<b>Total Freshwater</b>	<b>758,813</b>	<b>344,192</b>	<b>638,300</b>	<b>734,198</b>	<b>317,568</b>	<b>631,228</b>
<b>Marine:</b>						
Salmon	24,253	11,001	40,814	23,115	16,714	68,206
Clams	10,743	4,873	65,754	11,307	4,140	86,587
Mussels	853	387	4,474	1,008	327	6,879
Oysters	20,944	9,500	81,536	22,046	14,748	88,716
Shrimp	6,001	2,722	12,004	7,800	1,932	8,520
<b>Total Marine</b>	<b>62,794</b>	<b>28,483</b>	<b>204,582</b>	<b>65,277</b>	<b>37,861</b>	<b>258,908</b>
Miscellaneous	-	-	358,988	-	-	336,793
<b>Totals</b>	<b>821,607</b>	<b>372,675</b>	<b>1,201,870</b>	<b>799,475</b>	<b>355,429</b>	<b>1,226,929</b>
Species	2009			2010		
	Thousand pounds	Metric tons	Thousand dollars	Thousand pounds	Metric tons	Thousand dollars
<b>Freshwater:</b>						
Catfish	475,950	215,888	352,013	478,854	217,205	375,078
Striped bass	8,534	3,871	26,623	8,531	3,870	28,837
Tilapia	22,000	9,979	52,988	22,000	9,979	52,988
Trout	36,685	16,640	51,562	33,953	15,401	47,745
Crawfish	102,993	46,717	121,464	116,716	52,942	177,406
<b>Total Freshwater</b>	<b>646,162</b>	<b>293,095</b>	<b>604,650</b>	<b>660,054</b>	<b>299,396</b>	<b>682,054</b>
<b>Marine:</b>						
Salmon	31,028	14,074	61,219	43,066	19,535	98,986
Clams	10,203	4,628	87,043	9,182	4,165	95,458
Mussels	733	333	6,730	886	402	6,633
Oysters	32,046	14,536	88,434	36,864	16,721	111,778
Shrimp	3,801	1,724	7,603	2,974	1,349	5,949
<b>Total Marine</b>	<b>77,811</b>	<b>35,295</b>	<b>251,029</b>	<b>92,973</b>	<b>42,172</b>	<b>318,804</b>
Miscellaneous	-	-	311,041	-	-	282,114
<b>Totals</b>	<b>723,973</b>	<b>328,389</b>	<b>1,166,720</b>	<b>753,027</b>	<b>341,568</b>	<b>1,282,972</b>
Species	2011			2012		
	Thousand pounds	Metric tons	Thousand dollars	Thousand pounds	Metric tons	Thousand dollars
<b>Freshwater:</b>						
Catfish	348,202	157,942	390,977	340,161	154,296	318,784
Striped bass	7,751	3,516	29,256	7,915	3,590	29,438
Tilapia	22,000	9,979	53,900	23,000	10,433	56,350
Trout	33,316	15,112	51,532	36,226	16,432	55,388
Crawfish	117,804	53,435	205,725	95,762	43,437	160,717
<b>Total Freshwater</b>	<b>529,074</b>	<b>239,984</b>	<b>731,390</b>	<b>503,064</b>	<b>228,188</b>	<b>620,677</b>
<b>Marine:</b>						
Salmon	40,995	18,595	104,038	42,538	19,295	77,064
Clams	10,324	4,683	104,337	10,262	4,655	98,797
Mussels	880	399	7,254	739	335	9,451
Oysters	26,592	12,062	98,444	34,802	15,786	135,718
Shrimp	3,554	1,612	6,145	2,846	1,291	6,029
<b>Total Marine</b>	<b>82,345</b>	<b>37,351</b>	<b>320,218</b>	<b>91,187</b>	<b>41,362</b>	<b>327,059</b>
Miscellaneous	-	-	285,359	-	-	286,087
<b>Totals</b>	<b>611,418</b>	<b>277,335</b>	<b>1,336,967</b>	<b>594,250</b>	<b>269,550</b>	<b>1,233,823</b>

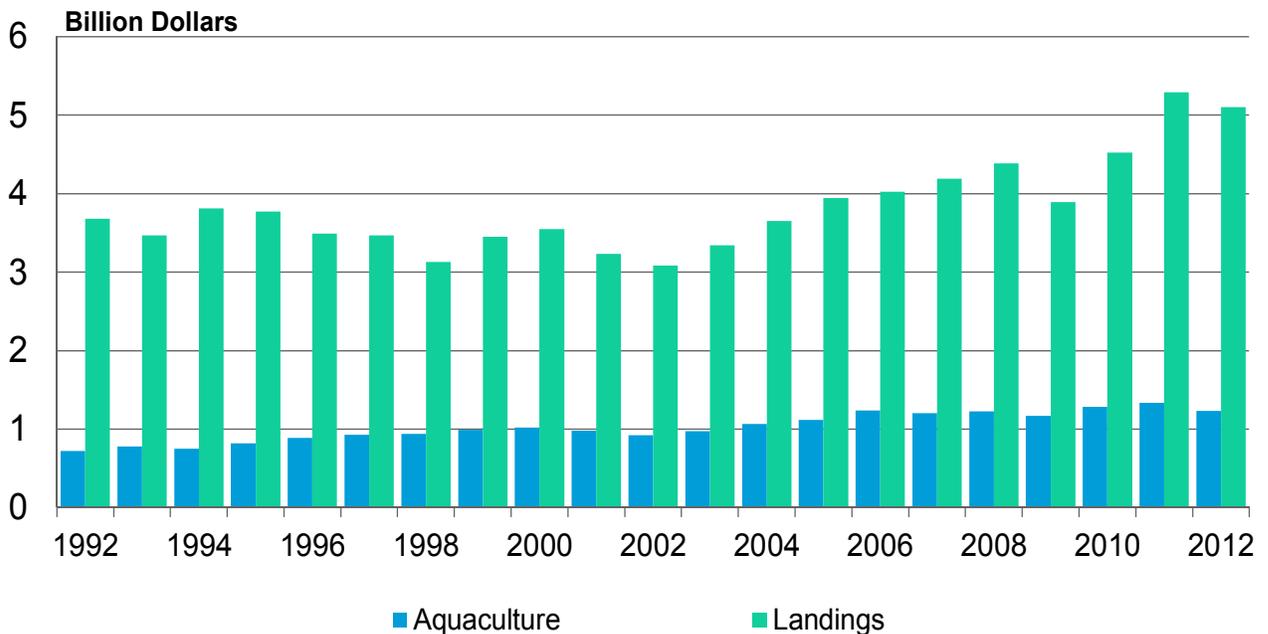
Note: Table may not add due to rounding. Clams, oysters and mussels are reported as meat weights (excludes shell), while all other species such as shrimp and finfishes are reported as whole (live) weights. Some clam and oyster production are reported with U.S. commercial landings. Weights and values represent the final sales of products to processors and dealers. The "Miscellaneous" category includes baitfish, ornamental/tropical fish, alligators, algae, aquatic plants, eels, scallops, crabs, and others. The production volume of "Miscellaneous" is not reported because production value, but not weight, are reported for many species such as ornamental fishes.

Source: Fisheries Statistics Division, F/ST1, State Data, NMFS and Census of Aquaculture, USDA

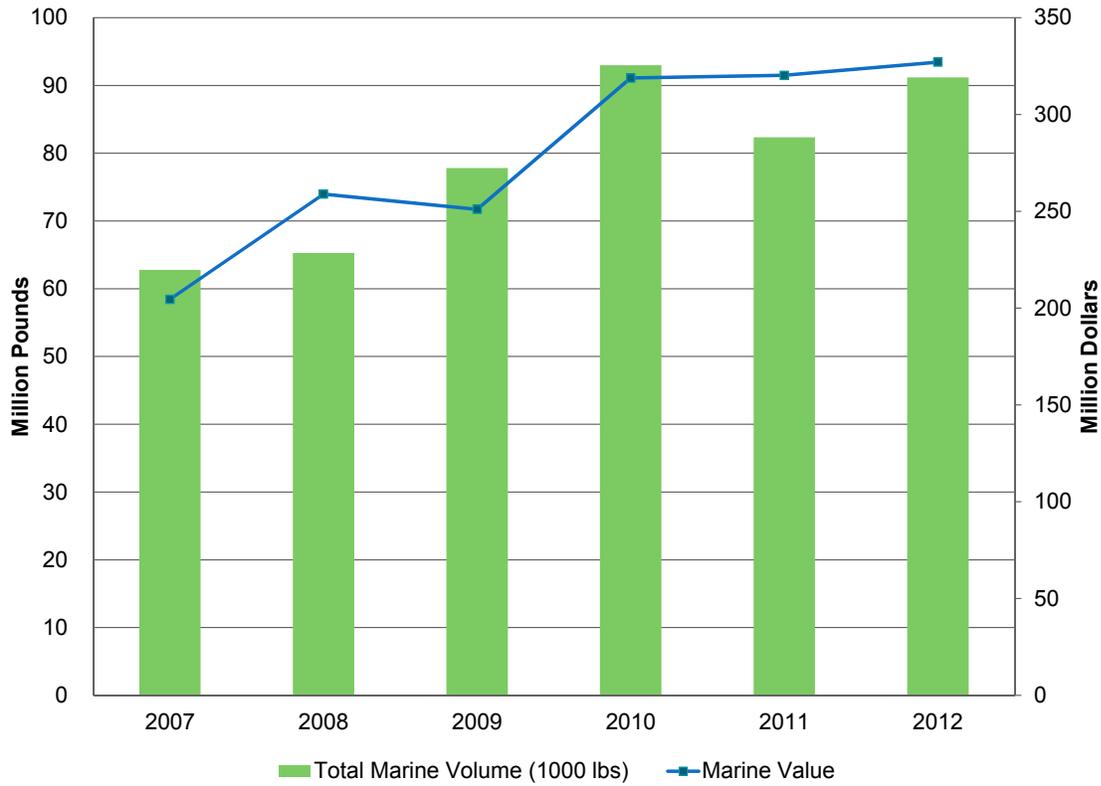
## Volume of Domestic Commercial Landings and Aquaculture Production



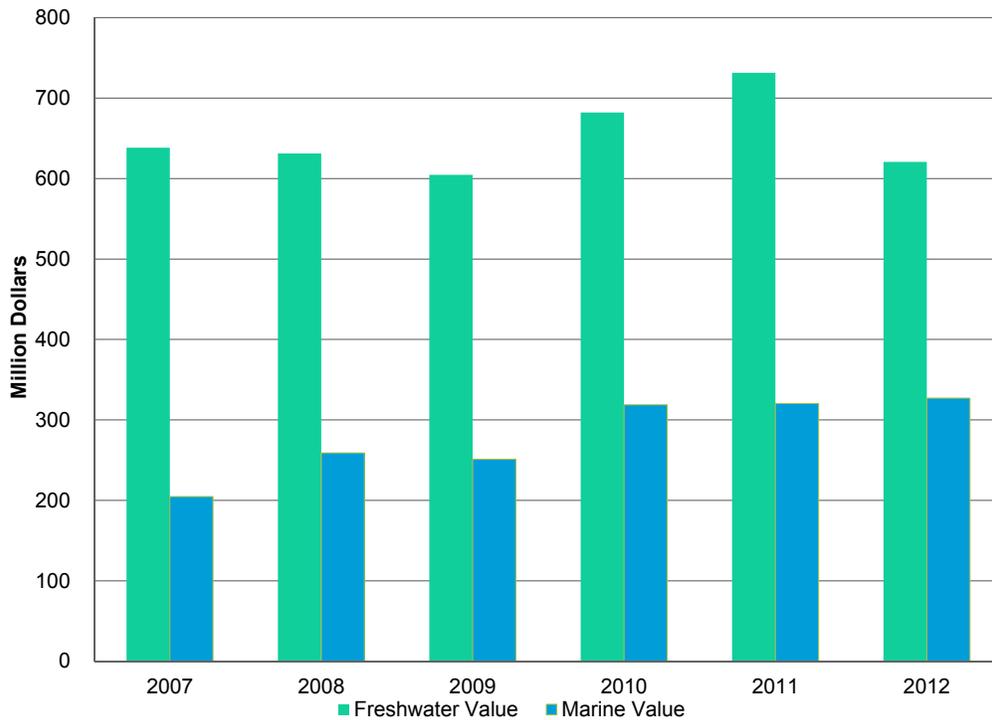
## Value of Domestic Commercial Landings and Aquaculture Production



## Marine Aquaculture Production Value and Volume, 2007-2012

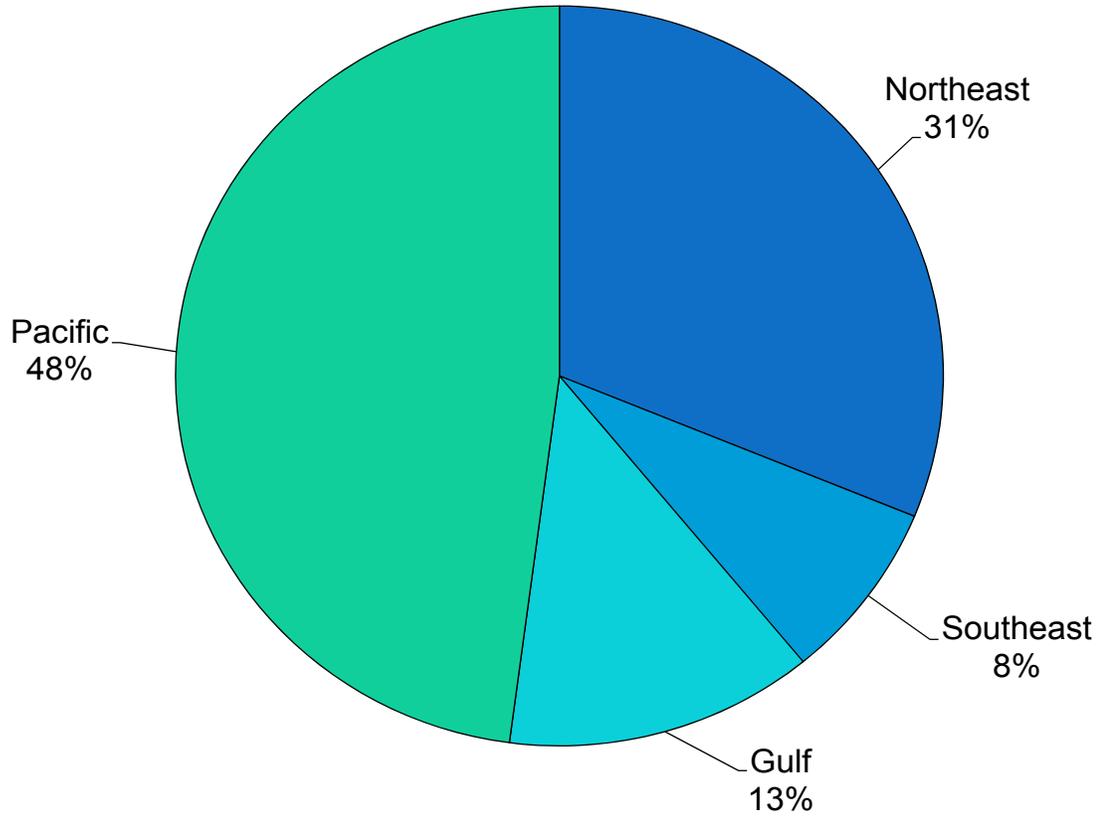


## Value of Freshwater and Marine Aquaculture, 2007-2012

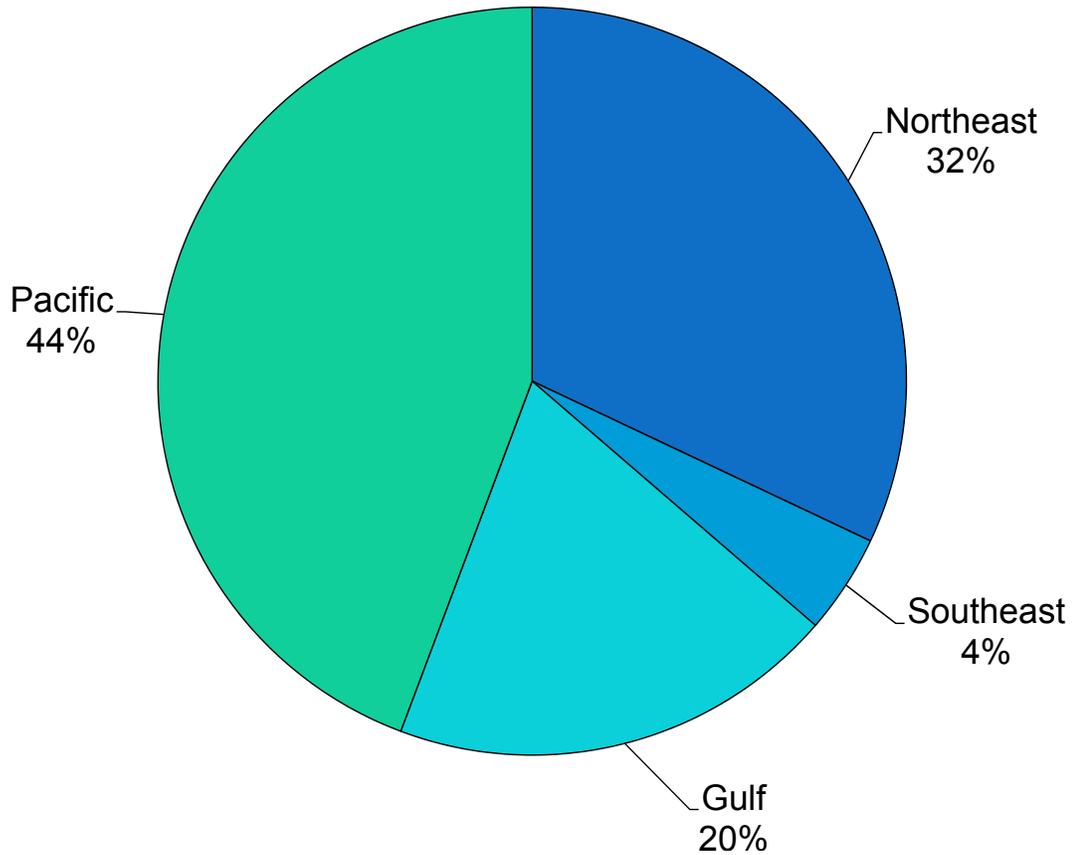


Note: Total marine + freshwater does not match the summary chart on p22 because the 'Miscellaneous' category has been excluded from this graph

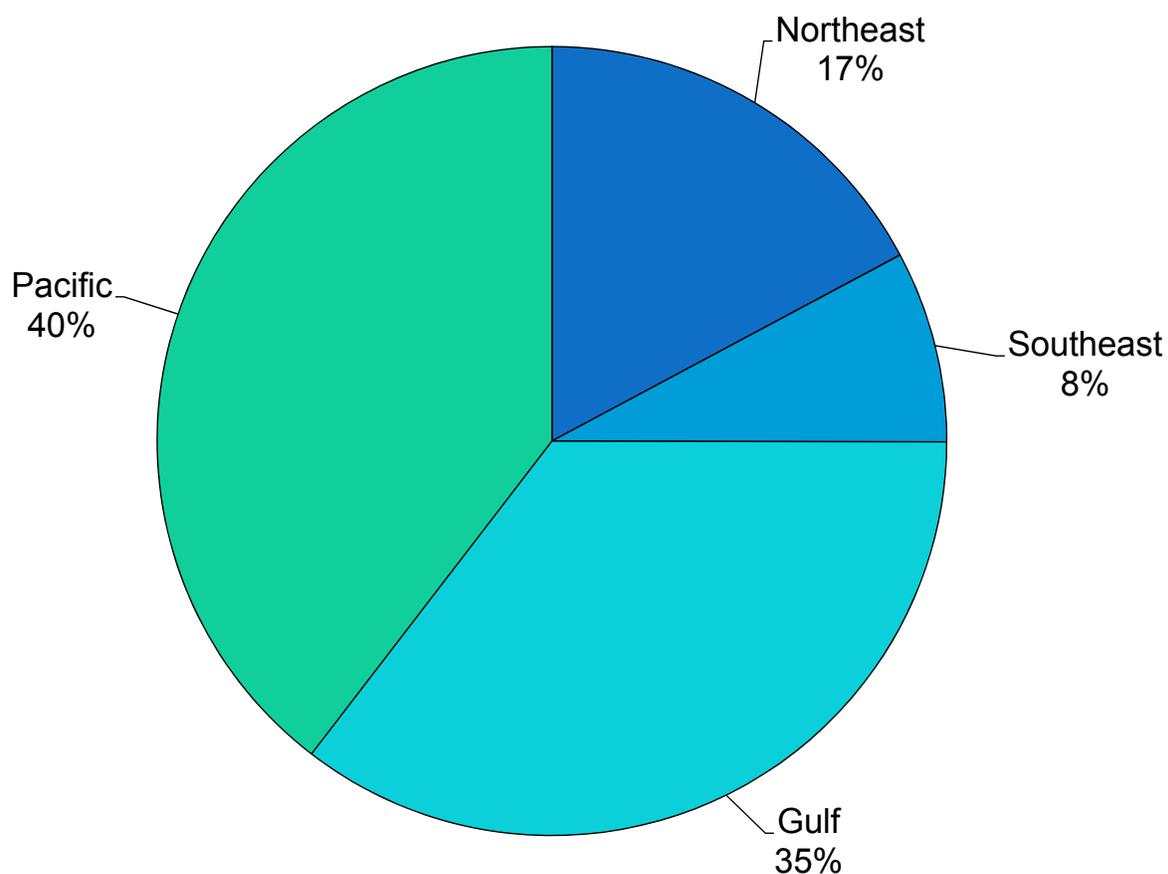
## U.S. Marine Aquaculture Production By Region, by Value



## U.S. Marine Aquaculture Production By Region, by Volume



## Shellfish Aquaculture Production, by Volume



**ESTIMATED SHELLFISH VOLUME AND VALUE BY REGION, 2012**

Region	Total Shellfish Volume (KG)	Total Shellfish Value (1000 \$)
Northeast	10,207,847	83,844
Southeast	4,664,776	29,843
Gulf	21,024,272	49,536
Pacific	23,510,650	108,534

## AQUACULTURE PRODUCTION OF FISH, CRUSTACEANS, AND MOLLUSKS, BY TOP COUNTRIES AND BY CONTINENT, 2012

Country (ranked by volume)	Volume (metric tons)	Value (1000 US\$)	Continent	Volume (metric tons)	Value (1000 US\$)
China	41,108,306	66,212,555	Asia	58,900,068	109,321,566
India	4,209,415	9,248,394	Europe	2,876,308	11,150,904
Viet Nam	3,085,500	5,807,800	South America	2,298,552	9,908,871
Indonesia	3,067,660	6,715,109	Africa	1,485,367	3,370,792
Bangladesh	1,726,066	3,911,495	North America	888,767	2,815,992
Norway	1,321,119	5,166,850	Oceania	184,191	1,163,390
Thailand	1,233,877	3,316,288			
Chile	1,071,421	5,993,048			
Egypt	1,017,738	2,010,815			
Myanmar	885,169	1,500,569			
Philippines	790,894	1,954,613			
Brazil	707,461	1,502,001			
Japan	633,047	4,102,417			
South Korea	484,404	1,394,424			
United States	420,024	1,005,658			
All others	4,871,152	17,889,479			
<b>Total</b>	<b>66,633,253</b>	<b>137,731,515</b>		<b>66,633,253</b>	<b>137,731,515</b>

Source: FAO, U.S. total may not agree with other estimates in this section.

Additional detail on global aquaculture production can be found in the world section.

## AQUACULTURE PRODUCTION BY CONTINENT, 2012

