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COVID-19 and the U.S. Seafood Sector

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The Coronavirus Disease 2019 (COVID-19) pandemic has reduced demand for many seafood products and disrupted seafood supply chains. Food service purchasers, such as restaurants, cafeterias, and schools, have either closed or operated at reduced capacities, and the risk of coronavirus transmission in public settings has affected consumer behavior. Loss of food service sales are especially harmful to the seafood sector, because these sales account for approximately two-thirds of consumer expenditures on seafood. In addition, decreases in consumer demand, health risks to workers, and restrictions on businesses have disrupted domestic and international supply chains. *Supply chains* refer to the movement of seafood from fishers and fish farmers to processors and wholesalers that supply retail markets and food services, where consumers purchase seafood products. These disruptions, as well as lower economic activity in the United States and other countries as a result of the pandemic, have contributed to decreased trade in seafood products. In some cases, businesses have adapted to these disruptions and reduced some of the early impacts of the coronavirus. However, disruptions to the seafood sector are likely to continue until the virus can be contained and restrictions on dining and social gatherings are relaxed.

Section 12005 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act; P.L. 116-136) authorized \$300 million for assistance to fishery participants, including commercial, charter, tribal, and subsistence fishermen, and processors. The National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service (NMFS) has allocated funds in proportion to average annual revenues of each state's seafood sector. Interstate fishery commissions are distributing assistance to fishery participants according to spend plans developed by the states and approved by NMFS. Some seafood businesses also are eligible for other types of assistance from Small Business Administration (SBA) and U.S. Department of Agriculture (USDA) programs.

Industry representatives have welcomed federal assistance but contend it is unlikely to be sufficient for many segments of the industry. In a letter, 25 Senators requested an additional \$1 billion package that would provide direct assistance to fishing participants under the terms of Section 12005 of the CARES Act. The Senators' letter also supported allocation of \$2 billion for USDA purchases of seafood for food banks. Additional assistance for the seafood sector has been proposed in two bills. The Heroes Act (H.R. 6800), which has passed the House of Representatives, would provide \$100 million to assist fishery participants pursuant to the same conditions of eligibility as those in the CARES Act. The Coronavirus Response Additional Supplemental Appropriations Act, 2020 (S. 4320), would provide \$500 million to assist fishery participants, but it would not include states that do not border the coast. S. 4320 also would add average annual domestic landings in each state to the criteria used to allocate funds.

Other bills that have been proposed in the 116th Congress would indirectly benefit the seafood sector by assisting the food service industry. Similar versions of the RESTAURANTS Act of 2020 (S. 4012 and H.R. 7197) would provide support to food service businesses by establishing a \$1.2 billion Restaurant Revitalization Fund. The fund would provide grants to support these businesses' ongoing operations, maintenance, and payroll needs. The RESTAURANTS Act does not include direct support that is specific to the seafood sector; nevertheless, the seafood sector likely would benefit from the bill, because food services account for a large portion of seafood expenditures.

Fishery disaster assistance may be provided under the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. §§ 1861(a) and 1864) and the Interjurisdictional Fisheries Act (16 U.S.C. § 4107). Fishing industry losses related to the COVID-19 pandemic do not qualify for assistance under either law, because pandemics are not an allowable cause of a fishery failure or disaster. The Pandemic Fishery Disaster Response Act (H.R. 7167) would amend Section 312 of the MSA to include pandemics as an allowable cause of a fishery failure. This change would allow NMFS to use the process established under the MSA to evaluate impacts of a pandemic and to allocate assistance to fishery participants.

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Introduction

The Coronavirus Disease 2019 (COVID-19) pandemic has impacted the seafood sector by changing consumer behavior, constraining businesses, and threatening the health of seafood sector workers. These impacts have been felt throughout the supply chain, which includes fishers, aquaculture farmers, processors, wholesalers, distributors, retailers, and food service providers. The impacts of the pandemic on the seafood sector vary because of regional characteristics and variations in the severity and timing of the pandemic in different areas. Closures or restrictions on food services negatively impacted the sector, because these businesses account for approximately two-thirds of consumer expenditures on seafood. The decrease in dining outside the home has caused a general shift from food service to retail sales of seafood. In addition, health risks to workers needed to harvest and process seafood have caused disruptions to supply chains.

Congress has provided assistance to the seafood sector and continues to consider additional relief. Section 12005 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act; P.L. 116-136) authorized \$300 million for assistance to commercial, tribal, subsistence, and charter fishery participants, and seafood processors. Further assistance has been proposed in coronavirus relief bills, such as H.R. 6800 and S. 4320. The seafood industry also has recommended other types of assistance, such as greater use of U.S. Department of Agriculture (USDA) programs and long-term changes to marketing seafood that could make the sector more resilient to future disruptions.

The U.S. Seafood Sector

The *seafood sector* is much more diverse than other animal protein commodities, such as chicken or beef, with regard to the number and types of products and its supply chain. The term *seafood* includes hundreds of commercial species—shellfish, such as clams, scallops, and oysters; crustaceans, such as crabs and lobsters; and finfish, such as pollock, cod, and snapper, for example. The characteristics of the sector from production (fishing or aquaculture) to consumer include various production methods, products, trade relationships, and markets. Characteristics of the seafood sector also vary by region of the United States and are influenced by each region's marine resources, management systems, social and cultural norms, and consumer preferences. In addition, the term *fishery participants* as used in the CARES Act includes commercial fishers, processors, aquaculture farmers, recreational charter boat operators, subsistence consumers, ceremonial participants, and tribal fishers.

Fish and shellfish are harvested from the wild and cultured on farms using various methods. Wild fisheries are limited by the productive capacity of U.S. waters, and most U.S. stocks are now fished at their maximum sustainable levels. In 2018, U.S. fishermen landed 9.4 billion pounds of seafood, with a dockside value of \$5.6 billion.¹ The top species groups by value included lobster (\$684 million), crabs (\$645 million), salmon (\$598 million), scallops (\$541 million), and shrimp (\$496 million).² In 2017, freshwater and marine U.S. fish farmers raised 625.7 million pounds of seafood, with a value of nearly \$1.5 billion.³ In many parts of the world, aquaculture production is increasing rapidly and now accounts for nearly half of production used for human

¹ National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), Office of Science and Technology, *Fisheries of the United States, 2018 Report*, Current Fishery Statistics No. 2018, February 2020. Hereinafter cited as NMFS, *2018 Fisheries Report*.

² NMFS, *2018 Fisheries Report*.

³ NMFS, *2018 Fisheries Report*.

consumption.⁴ Unlike worldwide trends, U.S. aquaculture production has grown relatively slowly, and in 2017, accounted for approximately 6.7% by volume and 26.8% by value of U.S. seafood production.⁵ In 2018, the value of products processed from domestic catch and imports was \$11.6 billion, including edible products (\$10.7 billion) and industrial products (\$0.9 billion).⁶

In 2018, edible seafood exports totaled 2.9 billion pounds, with a value of \$5.6 billion, and edible imports totaled 6.1 billion pounds, with a value of \$22.4 billion.⁷ Growth in U.S. seafood consumption has depended on imports, which, according to estimates, provide approximately 85% to 95% of the seafood consumed in the United States.⁸ Approximately 50% of seafood imports, such as shrimp from Southeast Asia and salmon from Norway or Chile, are aquaculture products.⁹ Seafood is a highly traded commodity in world markets, and supply chains are integrated across regions and trading partners. For example, a portion of seafood produced in the United States, largely from Alaska fisheries, is exported and processed overseas, often in China. A portion of these products are subsequently imported back into the United States.

Effects of COVID-19 on the Seafood Sector

Impacts of the COVID-19 pandemic on different segments of the seafood sector depend on the type of product, the related supply chain, and consumer behavior. In some cases, the diversity of the sector's businesses and supply chains may have provided some resilience to the system by providing alternative markets. Diversity also has likely resulted in uneven impacts, where specific segments of the sector have been negatively impacted, while others have maintained or increased sales.

Food Services

Food services account for approximately two-thirds of consumer expenditures on seafood.¹⁰ The remaining expenditures consist of retail sales from outlets for seafood that is consumed at home, such as fish markets and grocery stores. The largest decreases in seafood sales are directly related to restrictions on indoor dining and customers' reluctance to dine out due to risks of exposure to the coronavirus. One study estimated that in March 2020, demand for seafood consumed in restaurants dropped by 30%, with the greatest impacts in inland states and the Northeast.¹¹ The loss of restaurant sales generally resulted in lower prices and volume, and it directly and

⁴ Species raised using aquaculture have relatively high market values and include only edible products. Wild fisheries include species ranging from highly valued species, such as lobster, to lower-valued species that are used for animal feeds, such as menhaden.

⁵ See CRS Report R45952, *U.S. Offshore Aquaculture Regulation and Development*, by Harold F. Upton.

⁶ Industrial fisheries target large schools of relatively low-value species, such as menhaden. The harvest is processed to produce fish meal and oil, largely for animal feeds.

⁷ NMFS, *2018 Fisheries Report*.

⁸ NMFS, *2018 Fisheries Report*, p. 116. A portion of imports include domestic catch that was exported for further processing and returned to the United States as an import in processed form.

⁹ Shrimp are grown in ponds constructed in tropical estuaries, and most salmon aquaculture employs net pens in coastal areas.

¹⁰ David C. Love et al., "Food Sources and Expenditures for Seafood in the United States," *Nutrients*, vol. 12, no. 6 (June 20, 2020). Food services include restaurants, cafeterias, and other service industries that serve food outside the home.

¹¹ David R. White et al., "Early Effects of COVID-19 Interventions on U.S. Fisheries and Seafood," OSF Preprints, June 2, 2020. Hereinafter cited as White et al., "Early Effects of COVID-19 Interventions."

indirectly affected other segments of the seafood sector, such as fishing, processing, distribution, and wholesale businesses.

The effects on food services have differed depending various factors. Loss of expenditures at high-end restaurants have affected sales and prices of fresh, high-value products. For example, the July 2020 market price of \$6.25 per pound for fresh, imported yellow fin tuna was the lowest since 2006.¹² Some restaurant chains rely on regular supplies and relatively high volumes of imported products, such as farm-raised shrimp and tilapia. In addition to facing closures and consumer reluctance to dine out, initially these businesses may have been affected by disruptions in supply from other countries. Early in the pandemic, uncertainties related to market demand appear to have limited inventories and imports.¹³ Some of these disruptions have diminished, and for some products, imports have returned to levels observed in previous years.

In other cases, locally produced seafood is supplied to restaurants and seafood markets, especially in coastal areas frequented by tourists. Decreases in tourism have affected these businesses and associated local processing, fishing, and aquaculture businesses.¹⁴ For example, domestic oyster aquaculture operations may incur losses, because restaurants pay premium prices for live oysters served on the half shell. Without restaurant sales, oyster farmers would receive lower prices and would compete with imported or lower-valued domestic sources if they switched to supplying shucked, canned, breaded, or cooked products.¹⁵ Although the causes and scope of these impacts vary, the most serious disruptions of the seafood sector appear to stem from lost food service sales.¹⁶

Retail Sales

During the pandemic, there have been notable changes in the ways consumers obtain seafood, with a general shift from restaurants to retail purchases, home delivery, and local seafood purchases.¹⁷ For the 16 weeks ending on June 20, 2020, retail seafood sales grew by 22.6% as customers prepared more meals at home.¹⁸ However, it appears the large reduction in food service sales has not been fully offset by the increase in retail sales.¹⁹

Some seafood retailers may have benefitted from these changing consumer habits, but many also experienced negative effects of the pandemic. Many retail chains that depend on regular supplies were affected by COVID-related restrictions in other countries and other supply chain

¹² Amanda Buckle, “Rise in COVID-19 Cases Weighs Heavily on Restaurants, Fresh Seafood Markets,” *Seafood News*, July 16, 2020. Hereinafter cited as Buckle, “Rise in COVID-19 Cases.”

¹³ Buckle, “Rise in COVID-19 Cases.”

¹⁴ In many cases, it is difficult to categorize the supplier of a given business, as many businesses may obtain supplies from both local and international sources.

¹⁵ Lukas Southard, “Can American Seafood Survive the COVID-19 Tidal Wave?,” *Marketplace*, May 6, 2020. Hereinafter cited as Southard, “Can American Seafood Survive?”

¹⁶ Statement from NOAA, NMFS, in U.S. Senate, Committee on Commerce, Science, and Transportation, Subcommittee on Science, Oceans, Fisheries, and Weather, *Impacts of COVID-19 Pandemic on U.S. Fisheries*, 116th Cong., 2nd sess., July 29, 2020. Hereinafter cited as NMFS Statement, 2020. Also see Lillianna Byington, “Coronavirus guts demand for seafood as sales plummet,” *Food Dive*, April 9, 2020, at <https://www.fooddive.com/news/coronavirus-guts-demand-for-seafood-as-sales-plummet/575736/>.

¹⁷ White et al., “Early Effects of COVID-19 Interventions.”

¹⁸ John Sackton, “The Winding Glass: Retail Seafood Increases Likely Permanent; Provides Opportunity to Rethink Retail,” *Seafood News*, July 20, 2020. Hereinafter cited as Sackton, “Winding Glass.”

¹⁹ NMFS Statement, 2020.

disruptions. Initially, these disruptions limited supplies and the variety of available products. It is likely that the impacts have been uneven depending on the supply chain and product in question.

Early in the pandemic, some fresh, chilled, and live seafood became more difficult to obtain because of supply chain disruptions. Seafood is a highly perishable product, and market uncertainties and consumer preferences resulted in a shift that generally favored shelf-stable seafood products, such as canned and frozen items. Frozen seafood sales reportedly increased by 44.7% for the four weeks ending April 26 when compared with the same period in 2019.²⁰ Early in the pandemic, there was a surge in sales for canned and pouched tuna, salmon, and sardines because of their shelf life, availability, and relatively low price.²¹ Industry representatives expect future canned tuna sales will remain elevated, but not at the levels seen earlier this year.

Some observers question whether the boost in retail trade represents a permanent change in consumer behavior.²² When the effects of the pandemic ease, many consumers likely will return to their former preferences, such as dining out. Some changes in consumption might be permanent for consumers who have been introduced to new products and sources of seafood. Some industry observers believe retail business could take advantage of this opportunity by expanding the variety of products retail outlets offer, especially frozen seafood; linking products to local producers; and improving seafood quality and customer service.²³

Commercial Fishing

The slowing of food service purchases reduced demand for specific species and products. The loss of these markets has affected the supply chain, including production and processing of seafood. As prices received by fishermen decreased at the dock, it became less or sometimes unprofitable for fishermen to take fishing trips. Fewer and shorter fishing trips translated into lower landings, reduced revenue, and less employment. In the first six months of 2020, revenues obtained by fishermen at the dock (ex-vessel revenue) for finfish landings in the Southeast region decreased by 23% when compared with 2019.²⁴ Respondents to a University of Florida and Florida Sea Grant survey of Florida commercial fishermen and seafood processors for the first six months of 2020 reported average revenue losses of 74% for commercial fishermen and wholesale dealer average revenue losses of 70%.²⁵ The Southern Shrimp Alliance reported that in the first six months of 2020, shrimp landings decreased by 38% relative to average landings over the last 18 years. On the West Coast, from March through May 2020, ex-vessel revenue decreased by \$21

²⁰ Anne-Marie Roerink, “Frozen Food Sales Once More Top 50% Gains Versus Year Ago,” *The Shelby Report*, May 9, 2020, at <https://www.theshelbyreport.com/2020/05/09/frozen-food-sales-top-50-gains-versus-year-ago/#:~:text=year%20ago.,sales%20were%20up%2035.8%20percent>.

²¹ Lucy Craymer, “Coronavirus Has Americans Hooked on Canned Tuna, and Producers Are Playing Catchup,” *Dow Jones and Company Inc.*, July 15, 2020.

²² Sackton, “Winding Glass.”

²³ Sackton, “Winding Glass.”

²⁴ Testimony of Leann Bosarge, Council Member, Gulf of Mexico Fishery Management Council, in U.S. Congress, Senate Committee on Commerce, Science, and Transportation, Subcommittee on Science, Oceans, Fisheries, and Weather, *Building a Stronger and More Resilient Seafood Sector*, hearing, 116th Cong., 2nd sess., July 29, 2020. Hereinafter cited as Bosarge Testimony, 2020. The Southeast Region is one of five National Marine Fisheries Service regions and includes waters off the coast from North Carolina to Florida, the Gulf of Mexico, Puerto Rico, and the U.S. Virgin Islands.

²⁵ Bosarge Testimony, 2020.

million, representing a 40% loss when compared with the average for the same period from 2015 to 2019.²⁶

Tribal fisheries in Alaska and the Pacific Northwest provide commercial benefits, and in many cases fisheries are an integral part of tribes' spiritual and cultural identity. According to the Centers for Disease Control, "American Indian and Alaskan Native people have suffered a disproportionate burden of COVID-19 during the pandemic."²⁷ According to reports, tribal fisheries also have faced health risks and market disruptions. For example, during the first several months of the pandemic, Pacific Northwest tribes reported losses associated with season delays and price decreases. As restaurants closed, prices for crabs and shrimp in the winter fishery and spring salmon fishery decreased by approximately 50%.²⁸ As in many commercial fisheries, tribal fisheries are constrained by health concerns, because fishers and processors work in close proximity. Reports indicate that fishing has resumed in some tribal Pacific Northwest fisheries, and prices and markets have shown signs of recovery as of July 2020.²⁹

Seafood Processing and Worker Safety

Seafood processing has slowed, both because of decreased food service sales for businesses such as restaurants and because of health risks to workers. Seafood workers on offshore fishing vessels and in onshore seafood processing plants often work in areas where they are in close contact with coworkers.

Seafood processing worksites have been designated as components of critical infrastructure within the food and agriculture sector.³⁰ Guidance from the Centers for Disease Control and Prevention (CDC) advises that critical infrastructure workers may be permitted to continue to work following potential exposure provided (1) they remain asymptomatic, (2) they do not test positive, and (3) additional precautions are taken to protect them and the community. Factors that may increase risk include duration of contact, type of contact (respiratory droplets from talking, coughing, or sneezing), and housing or living quarters.³¹

Some large fishing vessels that process fish at sea may be especially vulnerable to virus transmission, because workers live and work in close quarters for sometimes weeks at a time. Since June 2020, crewmembers on several freezer trawler vessels have tested positive for the coronavirus. Diagnostic testing of one vessel revealed 119 cases and required hospitalization of one crewmember.³² The fishing company that owns the vessel now requires a quarantine period of 14 days before boarding and mandates quarantined crewmembers undergo two nasal swab tests administered on different days. Outbreaks on West Coast whiting vessels have slowed harvest and

²⁶ Bosarge Testimony, 2020.

²⁷ Centers for Disease Control and Prevention (CDC), "CDC Data Show Disproportionate COVID-19 Impact in American Indian/Alaska Native Populations," press release, August 19, 2020, at <https://www.cdc.gov/media/releases/2020/p0819-covid-19-impact-american-indian-alaska-native.html>.

²⁸ Northwest Treaty Tribes, *Tribal Fishermen, Natural Resources Staff Adapt to Impact of Covid on Harvests, Culture*, July 6, 2020. Hereinafter cited as Northwest Treaty Tribes, *Tribal Fishermen*.

²⁹ Northwest Treaty Tribes, *Tribal Fishermen*.

³⁰ CDC, *Protecting Seafood Processing Workers from COVID-19*, June 24, 2020, at <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-seafood-processing.html>. Hereinafter, CDC, *Protecting Seafood Processing Workers*.

³¹ CDC, *Protecting Seafood Processing Workers*.

³² Peggy Parker, "American Seafood's Vessel Returns to Quarantine Again with 85 Cases of COVID-19 in Unalaska," *Seafood News*, July 20, 2020.

made it more difficult to harvest the available quota.³³ Processing in shore-based processing plants face similar problems related to transmission of the virus among workers, because they also work in confined indoor areas. For example, early in the pandemic, Pacific Seafood developed a preparedness plan to educate workers on practices to prevent the spread of the virus. Despite these efforts, the company in June confirmed 124 cases in their Newport plants.³⁴

The seafood sector has incurred additional costs to implement proactive health and safety protocols specific to the COVID-19 pandemic.³⁵ In Alaska, seafood processors are implementing quarantines for incoming seasonal workers, modifying processing lines to increase social distancing, providing daily screenings, and procuring medical supplies. These actions are necessary to maintain operations and seafood production while protecting workers and communities. Fishing industry representatives recommend that Congress support assistance in the next relief act to compensate for these health and safety costs.³⁶

Direct Sales

When shutdowns and restrictions were initiated in response to the COVID-19 pandemic, demand for seafood decreased, and fishermen could no longer find markets for their landings. Some fishermen have adopted strategies that attempt to sell directly to consumers; these efforts have supported an increase in direct producer-to-consumer sales. User traffic on the Local Catch Network, an online community of fishermen, researchers, and consumers who provide information on where consumers can purchase fresh seafood products, was up by 310% from March 15, 2020, to May 14, 2020, compared with the previous year.³⁷ Before the COVID-19 pandemic, some Alaska seafood businesses adopted a similar model that links fishermen and processors directly to consumers, who pay up-front for a share of the seafood harvest. However, off-the-dock sales or direct shipments to consumers have limitations because most of these markets are not set up to handle fisheries that land high volumes of seafood.

Other examples of marketing directly to consumers include lobster fishermen who sell lobster directly off the boat and oyster farmers who sell live oysters directly to consumers. However, the lobster industry doubts this approach is a long-term solution, especially when higher volumes of product are landed as the season progresses. The lobster industry also appears to have increased its reliance on markets for frozen tails and packaged meat. Returns to lobster fishermen are lower for this market, but, according to some observers, the revenue may be sufficient to keep the lobster fleet fishing.³⁸

³³ Testimony of Phil Anderson, Chair, Pacific Fishery Management Council, in U.S. Congress, Senate Committee on Commerce, Science, and Transportation, Subcommittee on Science, Oceans, Fisheries, and Weather, *Building a Stronger and More Resilient Seafood Sector*, hearing, 116th Cong., 2nd sess., July 29, 2020.

³⁴ Amanda Buckle, “Clatsop County Confirms New COVID-19 Case at Pacific Seafood’s Warrenton Plant,” *Seafood News*, September 11, 2020.

³⁵ Organization for Economic Co-operation and Development, *Fisheries, Aquaculture and COVID-19: Issues and Policy Responses*, June 4, 2020, at https://read.oecd-ilibrary.org/view/?ref=133_133642-r9ayjfw55e&title=Fisheries-aquaculture-and-COVID-19-Issues-and-Policy-Responses.

³⁶ Testimony of Cora Campbell, Council Member, North Pacific Fishery Management Council, in U.S. Congress, Senate Committee on Commerce, Science, and Transportation, Subcommittee on Science, Oceans, Fisheries, and Weather, *Building a Stronger and More Resilient Seafood Sector*, hearing, 116th Cong., 2nd sess., July 29, 2020. Hereinafter cited as Campbell Testimony, 2020.

³⁷ Southard, “Can American Seafood Survive?”

³⁸ Southard, “Can American Seafood Survive?”

Trade

The slowing of international trade was especially disruptive to the seafood sector, because seafood is a highly traded commodity. Lower economic activity in other countries and disruptions to parts of the transportation network weakened U.S. seafood exports. Early in the pandemic, some ports were closed, which curtailed shipments, and air freight costs for fresh and live products increased because of flight cancellations. U.S. wild-caught commercial fish that are exported to China and other Asian markets were immediately impacted when these countries took actions to stop the spread of the virus. U.S. seafood exports dropped by 20% in February and March 2020, as compared with the same period in 2019, and U.S. seafood exports to China decreased by 31% in January 2020 and 44% in February 2020, as compared with the same period in 2019.³⁹ Fresh seafood exports such as lobster, crab, oysters, and geoduck clams nearly stopped.⁴⁰ Transportation constraints still may hamper some shipments, but there are indications that seafood imports and exports are returning to pre-pandemic levels in some countries.⁴¹ For example, in July, U.S. shrimp imports were 12.9% higher than in July of 2019.⁴²

Seafood Safety

Some have questioned whether the coronavirus can be transmitted by seafood or its packaging. Coronavirus is not known to infect aquatic food animals or to contaminate seafood products. According to the CDC, “workers involved in seafood processing are not exposed to coronavirus through the fish and other seafood products they handle.”⁴³ Further, “in general because of poor survivability of these coronaviruses on surfaces there is a very low risk of spread from food products or packaging.” However, China suspended frozen shrimp imports from Ecuador after finding coronavirus in samples taken from the outside of shrimp packages.⁴⁴ In response, several Ecuadorian ministries have formed a COVID-19 oversight task force to monitor hygiene and food safety policies for the shrimp industry.

NMFS Agency Actions

Some federal fisheries policies have been modified to avoid risks associated with the virus. On March 27, 2020, the National Oceanic and Atmospheric Administration’s (NOAA’s) National Marine Fisheries Service (NMFS) issued a temporary rule to provide the authority to waive fisheries observer coverage.⁴⁵ Observer coverage is required by regulations promulgated under existing statutes and international obligations.⁴⁶ Fisheries observers are stationed on commercial fishing vessels to collect fishery-dependent data that are used to monitor catch limits, bycatch,

³⁹ White et al., “Early Effects of COVID-19 Interventions.”

⁴⁰ NMFS Statement, 2020.

⁴¹ NMFS Statement, 2020.

⁴² Gary Morrison, “Analysis: July Shrimp Imports Higher by Double Digits,” *Seafood News*, September 4, 2020.

⁴³ CDC, *Protecting Seafood Processing Workers*.

⁴⁴ Amanda Buckle, “Ecuador Forms COVID-19 Oversight Taskforce After China Suspends Shrimp Imports from 3 Companies,” *Seafood News*, July 13, 2020.

⁴⁵ NOAA, NMFS, “Emergency Measures to Address Fishery Observer Coverage During the COVID-19 Coronavirus Pandemic,” 85 *Federal Register* 17285-17287, March 27, 2020. Hereinafter cited as NMFS, “Emergency Measures.”

⁴⁶ Statutes include the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §§1801 et seq.), the Marine Mammal Protection Act (16 U.S.C. §§1361 et seq.), and laws implementing international agreements.

marine mammal and endangered species interactions, compliance, and other information. The purpose of waivers to observer coverage is to “protect public health and to ensure the safety of fishermen, observers, and other persons involved with observer coverage, while meeting conservation needs and providing an ongoing supply of fish to markets.”⁴⁷ According to NMFS, coverage can be waived if (1) observers or at-sea monitors are not available for deployment or (2) observer providers cannot meet safety protocols on commercial fishing crews imposed by a state, vessel, or vessel company.⁴⁸

After the announcement, NMFS provided waivers for placing fisheries observers or at-sea monitors on commercial fishing vessels in the Northeast region.⁴⁹ In some cases, NMFS also provided waivers in other regions for specific fisheries or on a case-by-case basis. The Northeast region waiver was extended several times but ended on August 14, 2020. Some have questioned why approaches varied by region and required some fishermen and observers to accept more risk than others.⁵⁰ Industry groups urged NMFS to extend the Northeast region waiver to other regions.⁵¹ Some also suggested that electronic monitoring could be used in some cases to substitute for observers. According to NMFS, different approaches have been taken because at-sea monitoring requirements vary by region.⁵²

The coronavirus pandemic also has caused NMFS to cancel most of its main fishery independent survey cruises.⁵³ Fishery independent surveys are conducted in each of the five management regions to collect information used in stock assessments and other ecological investigations.⁵⁴ Fishery research cruises could present a risk to NOAA staff, because there is limited space for social distancing of crew and scientists on research vessels. The loss of these data could affect future federal management and conservation efforts by increasing uncertainties associated with stock assessments and related management actions. Some have suggested alternatives, such as greater involvement of fishermen in collecting data or use of new technologies.⁵⁵ Industry representatives also stressed the need for a 2021 survey plan that would provide COVID-19 contingencies for future concerns related to vessel operations and labor.⁵⁶

⁴⁷ NMFS, “Emergency Measures.”

⁴⁸ Chris Oliver, *NOAA Fisheries Identifies National-Level Observer Waiver Criteria; Will Begin Redeployment in Northeast*, NOAA, NMFS, July 30, 2020.

⁴⁹ The Northeast (Greater Atlantic) Region includes federal fisheries stretching from Maine to Virginia.

⁵⁰ Letter from Jared Huffman, Chair, Subcommittee on Water, Oceans, and Wildlife, to Dr. Neil Jacobs, Assistant Secretary of Commerce for Environmental Observation and Prediction, July 16, 2020, at <https://huffman.house.gov/download/071620-huffman-letter-to-noaa-re-fisheries-covid>.

⁵¹ Susan Chambers, “Seafood Industry Continues to Pressure NMFS on Observer Waivers Nationwide,” *Seafood News*, July 15, 2020.

⁵² Susan Chambers, “NMFS Doubles Down on Observers; Rep. Huffman Takes Aim at NMFS on COVID-19 Impacts,” *Seafood News*, July 17, 2020.

⁵³ NOAA, NMFS, “NOAA Fisheries Coronavirus (Covid-19) Update,” August 11, 2020, at <https://www.fisheries.noaa.gov/national/noaa-fisheries-coronavirus-covid-19-update>.

⁵⁴ The five regions include the Northeast Region (Greater Atlantic); the Southeast Region from North Carolina to Florida, the Gulf of Mexico, Puerto Rico, and the U.S. Virgin Islands; the West Coast Region from California to Washington; the Alaska Region; and the Western Pacific including Hawaii, the Commonwealth of the Northern Mariana Islands, Guam, and American Samoa.

⁵⁵ Letter from Jared Huffman, Chair, Subcommittee on Water, Oceans, and Wildlife, to Dr. Neil Jacobs, Assistant Secretary of Commerce for Environmental Observation and Prediction, July 16, 2020, at <https://huffman.house.gov/download/071620-huffman-letter-to-noaa-re-fisheries-covid>.

⁵⁶ Campbell Testimony, 2020.

Federal Assistance to the Seafood Industry

Congress has provided direct assistance to the seafood sector and general assistance, which is available to most U.S. businesses. In addition, the seafood sector has benefited from some USDA programs, such as commodity purchases that include seafood.

CARES Act Assistance to Fishery Participants

Section 12005 of the CARES Act authorized \$300 million for assistance to tribal, subsistence, commercial, and charter fishery participants. According to the CARES Act, *fishery participants* include tribes, individuals, fishing communities, aquaculture businesses, processors, and other fishery-related businesses.⁵⁷ Assistance may be provided for businesses that have incurred, as a result of the coronavirus pandemic, direct or indirect revenue losses greater than 35% as compared with the prior five-year average. Subsistence, cultural, or ceremonial fisheries negatively affected by the coronavirus pandemic also may qualify for Section 12005 assistance. According to NMFS, businesses providing support to fishery participants (e.g., vessel repair) and businesses farther down the supply chain (e.g., restaurants, seafood retailers) are not considered fishery-related businesses for purposes of Section 12005.⁵⁸

NMFS has allocated CARES Act funds in proportion to average annual revenues from commercial fishing operations, aquaculture firms, the seafood supply chain (processors, dealers, wholesalers, and distributors), and charter fishing for each state. Estimates of ceremonial, subsistence, and cultural fisheries were obtained by applying multipliers to multiyear averages of fishing revenues.⁵⁹ NMFS calculated each entity's funding level by dividing the entity's average annual revenue for all eligible sectors by the total average annual national revenue for all eligible sectors and multiplying by total available funding.⁶⁰

$$\text{Allocation} = \$300 \text{ million} \times \frac{\text{Individual State, Territory, or Tribe Average Annual Revenue}}{\text{Total Average Annual Revenue Across All Entities}}$$

Allocations of funding by state, territory, and tribe are provided in **Table A-1**. The three interstate fisheries commissions, Puerto Rico, and the U.S. Virgin Islands will disburse funds according to these allocations.⁶¹ The interstate commissions coordinate activities related to the management of interstate coastal fisheries that occur primarily in states waters, including data collection and distribution of disaster assistance. The interstate commissions are working with each state, territory, or tribe to develop spend plans that are consistent with the CARES Act and NOAA's

⁵⁷ §12005 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act; P.L. 116-136) includes aquaculture businesses not otherwise eligible for assistance under Part 1416, Title 7 of the *Code of Federal Regulations* for losses related to COVID-19.

⁵⁸ NOAA, NMFS, "Commerce Secretary Announces Allocation of \$300 Million in CARES Act Funding," May 7, 2020, at <https://www.fisheries.noaa.gov/feature-story/commerce-secretary-announces-allocation-300-million-cares-act-funding>. Hereinafter cited as NMFS, "Commerce Secretary."

⁵⁹ Multipliers were estimated for the seafood sector using NMFS's Commercial Fishing and Seafood Industry Economic Impact Model.

⁶⁰ NMFS, "Commerce Secretary."

⁶¹ The three interstate commissions are the Atlantic States Marine Fisheries Commission, Gulf States Marine Fisheries Commission, and Pacific States Marine Fisheries Commission.

guidance. After NMFS approves spend plans, the interstate fisheries commissions will disburse payment to fishery participants on behalf of the states, territories, and tribes. Puerto Rico and the U.S. Virgin Islands are required to submit spend plans and award applications directly to NMFS. Reportedly, some spend plans have been approved and, in these cases, the interstate commissions are now accepting applications for assistance.

USDA Coronavirus Food Assistance Program

The Coronavirus Food Assistance Program (CFAP) provides financial assistance to farmers to offset losses and increased marketing costs associated with the COVID-19 pandemic.⁶² To qualify, aquaculture operations must be privately owned, operate in a controlled environment, and produce a commodity that suffered a loss in value of 5% or greater between January and April 2020.⁶³ Aquaculture farms may qualify if they raise species in controlled environments, which include raceways, tanks, and recirculating systems. Eligible commodities include catfish, crawfish, largemouth bass and carp sold as foodfish, hybrid striped bass, red drum, salmon, sturgeon, tilapia, trout, ornamental/tropical fish, and recreational sportfish.⁶⁴ USDA excluded shellfish such as clams, oysters, mussels, and scallops, and marine algae, because the Secretary of Commerce is providing assistance for these species under Section 12005 of the CARES Act. According to USDA, excluding these species from the CFAP will avoid duplicate payments for the same losses.⁶⁵ Several states have appealed to USDA to reconsider the eligibility of shellfish growers, but it appears these appeals have been rejected.⁶⁶ The deadline to apply for CFAP assistance was September 11, 2020.

USDA Seafood Purchases

USDA purchases commodities for distribution to food banks, school lunch programs, and other organizations. *Section 32* is a permanent federal appropriation that sets aside the equivalent of 30% of annual customs receipts to support the farm sector through the purchase of surplus commodities, among other activities.⁶⁷ On May 4, 2020, USDA announced plans to purchase commodities totaling \$470 million because of the coronavirus pandemic.⁶⁸ Of this total, USDA allocated \$70 million for purchases of fish, including catfish (\$30 million); Alaska pollock (\$20 million); and Atlantic haddock, pollock, and redfish (\$20 million).⁶⁹ Historically, seafood products such as catfish and Alaska pollock have been included in the program. Atlantic species were added to provide a market for New England fishermen who lost sales due to the COVID-19 pandemic. In a subsequent announcement USDA reported that it will make purchases of Gulf of

⁶² USDA, “Coronavirus Food Assistance Program,” 85 Federal Register 30825-30836, May 21, 2020. See also CRS Report R46347, *COVID-19, U.S. Agriculture, and USDA’s Coronavirus Food Assistance Program (CFAP)*.

⁶³ USDA, Office of the Secretary, “Notice of Funding Availability; Coronavirus Food Assistance Program (CFAP) Additional Commodities Request for Information,” 85 Federal Register 31062-31065, May 22, 2020.

⁶⁴ USDA, Farm Service Agency, “Aquaculture Food Assistance Programs for Aquaculture Producers,” fact sheet, August 14, 2020, at <https://www.farmers.gov/sites/default/files/documents/FSA-CFAP-Aquaculture-FactSheet-English-08182020.pdf>.

⁶⁵ USDA, “Aquaculture and the Coronavirus Food Assistance Program,” at <https://www.farmers.gov/cfap/aquaculture>.

⁶⁶ Ryan Doyle, “Connecticut Delegation Looking for USDA to Reverse Decision on Shellfish Farmer COVID-19 Aid,” *Seafood News*, July 13, 2020.

⁶⁷ See CRS Report RL34081, *Farm and Food Support Under USDA’s Section 32 Program*, coordinated by Jim Monke.

⁶⁸ U.S. Department of Agriculture (USDA), “USDA Announces Additional Food Purchase Plans,” press release, May 4, 2020, at <https://www.ams.usda.gov/press-release/usda-announces-additional-food-purchase-plans>.

⁶⁹ National Sea Grant Law Center, “COVID-19 Resources,” June 2020, at <http://nsglc.olemiss.edu/covid19/>.

Mexico shrimp totaling up to \$30 million.⁷⁰ According to USDA, requests for future purchases using Section 32 funds will be assessed on an ongoing basis.

General Assistance to Businesses

Seafood businesses and employees also are eligible for assistance programs that are not specific to the seafood sector.⁷¹ Some of the main federal assistance programs include the following:

Economic Injury Disaster Loans (EIDLs) and Advances. Small businesses, cooperatives, nonprofits, sole proprietors, and independent contractors are eligible to apply for EIDLs for up to \$2 million through the Small Business Administration. These entities also may apply for advances of \$10,000, which do not have to be repaid.

Paycheck Protection Program (PPP). Small businesses, cooperatives, nonprofits, sole proprietors, and eligible self-employed individuals that were in operation on February 15, 2020, and have fewer than 500 employees were eligible for the PPP. The PPP was designed to help businesses retain workers (maintain payroll) and make mortgage, rental, and utility payments. Businesses receive a two-year loan at a 1% interest rate equal to 2.5 times average monthly payroll costs, and they may request for all or part of the loan to be forgiven. The deadline for applications to the PPP was August 8, 2020.

Pandemic Unemployment. Individuals who were unemployed, partially unemployed, or unable to work because of COVID-19 were eligible for a \$600 weekly supplement to state unemployment benefits. These benefits expired at the end of July 2020, but on August 8, 2020, President Donald Trump issued a memorandum that authorized a weekly supplement for lost wages of \$300 a week in federal funds.⁷²

Paid Leave and Sick Leave. If employees are unable to work for certain reasons associated with COVID-19, employers are required to provide two weeks of paid leave. Employees are entitled to an additional 10 weeks of paid expanded family and medical leave to care for a child whose school or child care is closed or unavailable. These provisions apply through the end of 2020.⁷³

Issues for Congress

Assistance to the seafood sector may include immediate and broader long-term issues. An immediate issue for Congress is whether to provide any further direct assistance to the seafood sector. Another issue is whether existing statutes should be changed to broaden the definition of fishery disasters to include events, such as pandemics, that disrupt markets and supply chains.

Consideration of Immediate Assistance

Decreases in seafood prices and sales have led seafood sector representatives and supporters in Congress to conclude that CARES Act relief has made up for only a small fraction of total

⁷⁰ Amanda Buckle, “USDA Authorizes Purchase of \$30 Million in U.S. Produced Shrimp,” *Seafood News*, August 5, 2020.

⁷¹ National Sea Grant Law Center, “COVID-19 Resources,” June 2020, at <http://nsglc.olemiss.edu/covid19/>.

⁷² CRS Insight IN11492, *COVID-19: Supplementing Unemployment Insurance Benefits (Federal Pandemic Unemployment Compensation vs. Lost Wages Assistance)*, by Katelin P. Isaacs and Julie M. Whittaker.

⁷³ Department of Labor, Wage and Hour Labor Division, *Families First Coronavirus Response Act: Employer Paid Leave Requirements*, at <https://www.dol.gov/agencies/whd/pandemic/ffcra-employer-paid-leave>.

losses.⁷⁴ In recent testimony, NMFS and fishing industry representatives provided some examples of losses to regional fisheries, but comprehensive estimates of national or regional losses do not appear to exist currently. In a letter, 25 Senators requested an additional \$1 billion package that would provide direct assistance to fishing participants under the terms of Section 12005 of the CARES Act. The Senators' letter also supports allocation of \$2 billion for USDA purchases of seafood for food banks.

Two bills have proposed additional assistance for the seafood sector. The Heroes Act (H.R. 6800), which has passed the House, would provide \$100 million to assist fishery participants. Funding would be provided pursuant to the same conditions of eligibility and funding requirements as in the CARES Act.⁷⁵ The Coronavirus Response Additional Supplemental Appropriations Act, 2020 (S. 4320), would provide \$500 million to assist fishery participants. It also would follow the same conditions as the CARES Act, but states that do not border the coast would not be eligible for funding and the bill would add average annual domestic landings in each state to the criteria used to allocate funds.

Similar versions of the RESTAURANTS Act of 2020 (S. 4012 and H.R. 7197) would provide support to food service businesses by establishing a \$1.2 billion Restaurant Revitalization Fund. The fund would provide grants to support ongoing operations, maintenance, and payroll needs. The RESTAURANTS Act would not provide direct support to the seafood sector, but it likely would benefit the seafood sector because food services account for a large portion of seafood expenditures.

Potential Changes to Fishery Disaster Assistance

Another issue for Congress is whether existing statutes should be amended to provide fishery disaster assistance for economic disruptions such as pandemics or losses of markets. Currently, the Secretary of Commerce is authorized to provide disaster assistance to the fishing industry under Section 308(b) and 308(d) of the Interjurisdictional Fisheries Act (16 U.S.C. §4107) and under Sections 312(a) and 315 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. §§1861(a) and 1864). The Secretary may determine a fishery disaster or fishery failure has occurred when fisheries sustain losses from environmental changes or events, such as hurricanes, pollution, red tides, and fish stock declines.⁷⁶ These cases often affect a specific state or region and tend to be limited in duration.

CARES Act requirements differ from disaster assistance under MSA or IFA. CARES Act funding was first allocated among eligible entities (state, territory, or Tribe) and will be provided to individual businesses depending on whether they meet the 35% loss criterion. Under the MSA and IFA, the Secretary of Commerce determines whether a fishery failure or disaster has occurred depending on the level of losses to a specific fishery, such as the Northeast groundfish fishery or the salmon troll fishery, or a specific region due to a hurricane or flood. Once the determination is made, assistance is to be distributed to individual businesses without a specific threshold, as required by the CARES Act. In addition, the CARES Act defined fishery participants more broadly than the MSA and IFA. The MSA and IFA usually focus on commercial fishing and do not usually include related businesses such as seafood processors and wholesalers.

⁷⁴ Ed Markey, "OPINION: Fighting for Fishermen During COVID-19," *Herald News*, June 15, 2020.

⁷⁵ Funding would remain available until September 30, 2021.

⁷⁶ §308(b) and 08(d) of the Interjurisdictional Fisheries Act (16 U.S.C. §4107) and Sections 312(a) and 315 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §1861(a) and §1864).

The harm caused by the COVID-19 pandemic on fisheries, aquaculture, and the related supply chain is due to the loss of markets; constraints on infrastructure, such as transportation; and risks to labor. These impacts do not qualify for a fishery failure or disaster determination and assistance under existing statute. The Pandemic Fishery Disaster Response Act (H.R. 7167) would amend Section 312 of the MSA to include pandemics as an allowable cause of a fishery failure. This change would allow NMFS to use the existing process established under the MSA to determine whether a fishery failure arising from a pandemic has occurred and to allocate assistance to fishery participants. The bill does not consider whether eligibility should be broadened to include processors and wholesalers explicitly and whether the process for making determinations and providing assistance should be modified.

Appendix.

Table A-1. Summary of CARES Act Funding for Fishing Participants by State, Territory, and Tribe

State, Territory, or Tribe	CARES Act Funding ^a	Landings (thousands pounds)	Landings Revenue
Alaska	\$50,000,000	5,403,751	\$1,781,999,000
Washington	\$50,000,000	590,396	\$346,440,000
Massachusetts	\$28,004,176	241,276	\$647,179,000
Florida	\$23,636,600	106,141	\$249,448,000
Maine	\$20,308,513	228,365	\$587,381,000
California	\$18,350,586	184,153	\$197,583,000
Oregon	\$15,982,827	308,958	\$174,287,000
Louisiana	\$14,785,244	1,033,345	\$377,127,000
New Jersey	\$11,337,797	190,500	\$170,261,000
Texas	\$9,237,949	83,906	\$210,616,000
New York	\$6,750,276	22,606	\$46,988,000
North Carolina	\$5,460,385	54,801	\$78,349,000
Federally Recognized Tribes West Coast	\$5,097,501	N/A ^b	N/A
Virginia	\$4,520,475	362,480	\$177,039,000
Hawaii	\$4,337,445	35,494	\$119,116,000
Maryland	\$4,125,118	47,052	\$68,410,000
Pennsylvania	\$3,368,086	N/A	N/A
Alabama	\$3,299,821	35,524	\$67,732,000
Rhode Island	\$3,294,234	81,089	\$105,149,000
New Hampshire	\$2,732,492	9,844	\$38,431,000
American Samoa	\$2,553,194	N/A	N/A
Georgia	\$1,921,832	7,391	16,438,000
Connecticut	\$1,835,424	11,135	16,225,000
Mississippi	\$1,534,388	320,265	45,575,000
South Carolina	\$1,525,636	8,677	21,380,000
Delaware	\$1,000,000	5,275	10,535,000
Puerto Rico	\$1,000,000	N/A	N/A
U.S. Virgin Islands	\$1,000,000	N/A	N/A
Federally recognized Tribes in Alaska	\$1,000,000	N/A	N/A
Guam	\$1,000,000	N/A	N/A

Commonwealth of the Northern Mariana Islands	\$ 1,000,000	N/A	N/A
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Sources: National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), “Commerce Secretary Announces Allocation of \$300 Million in CARES Act Funding,” May 7, 2020, at <https://www.fisheries.noaa.gov/feature-story/commerce-secretary-announces-allocation-300-million-cares-act-funding>; NMFS, Office of Science and Technology, *Fisheries of the United States, 2018 Report*, Current Fishery Statistics No. 2018, February 2020.

Notes: CARES Act = Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136).

- a. CARES Act funding also was based on charter boat, processor, and other fishery participant categories.
- b. N/A = Not available in the list of state landings and value in NMFS, *Fisheries of the United States, 2018 Report*.

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