Figures and analyses for: Early effects of COVID-19 on US fisheries and seafood consumption

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COVID-19 and seafood news in USA

We collected 196 articles related to COVID-19 and US seafood. Of these articles, 9.7 percent focused on small-scale fisheries, 21.9 on industrial fisheries, and 26 which discussed both.

We also found that 26 percent of articles highlighted effects on fresh products specifically, the largest percentage for any one product form.

Figure 1

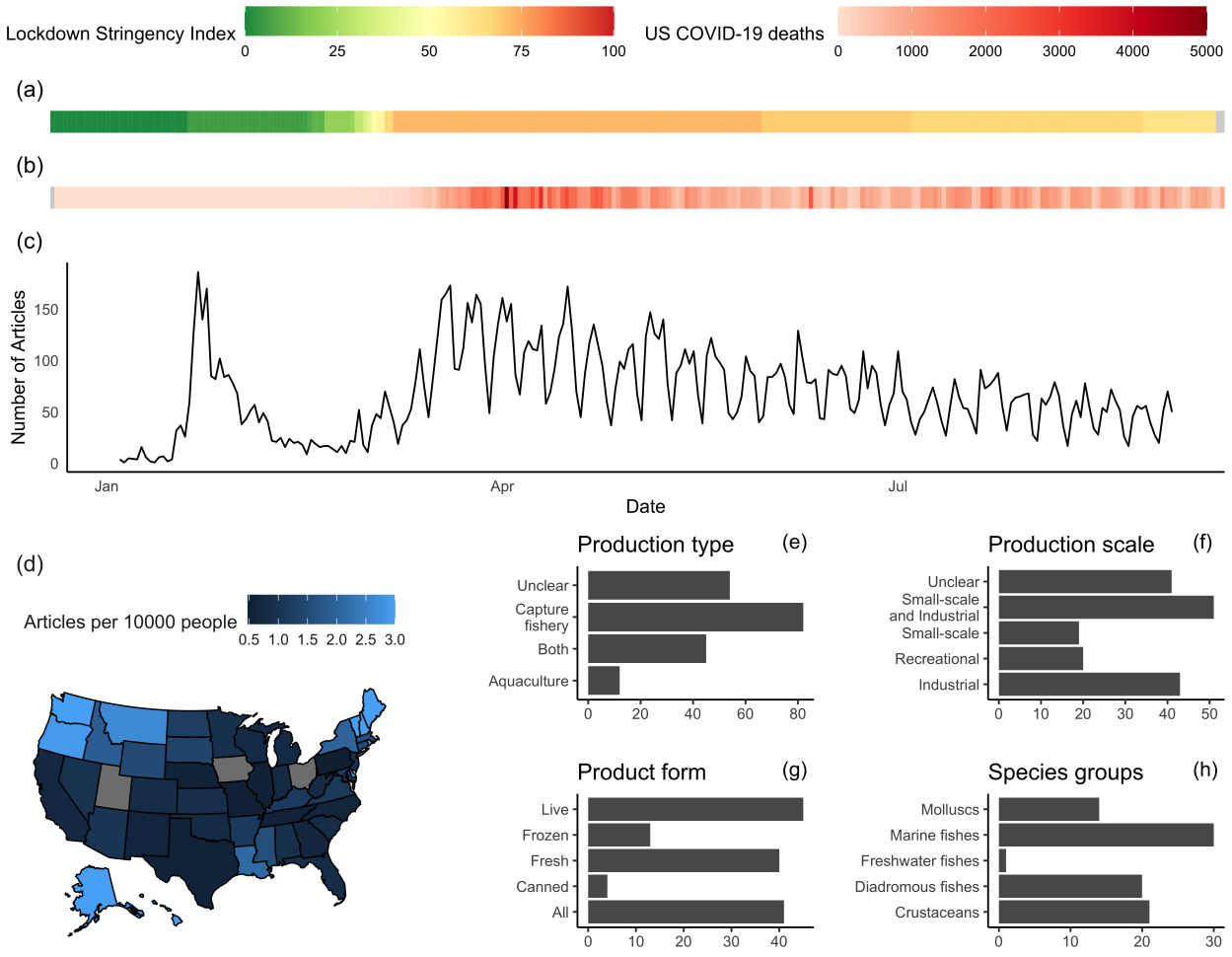

Figure 1: (a) Timeline of key events in the US seafood industry related to COVID-19 along with the government lockdown stringency index ("17 indicators aggregated reporting a number between 1 and 100 to reflect the level of government action", Hale et al. 2020), COVID-19 related deaths per day in the US.

Figure 2. US seafood import and export data

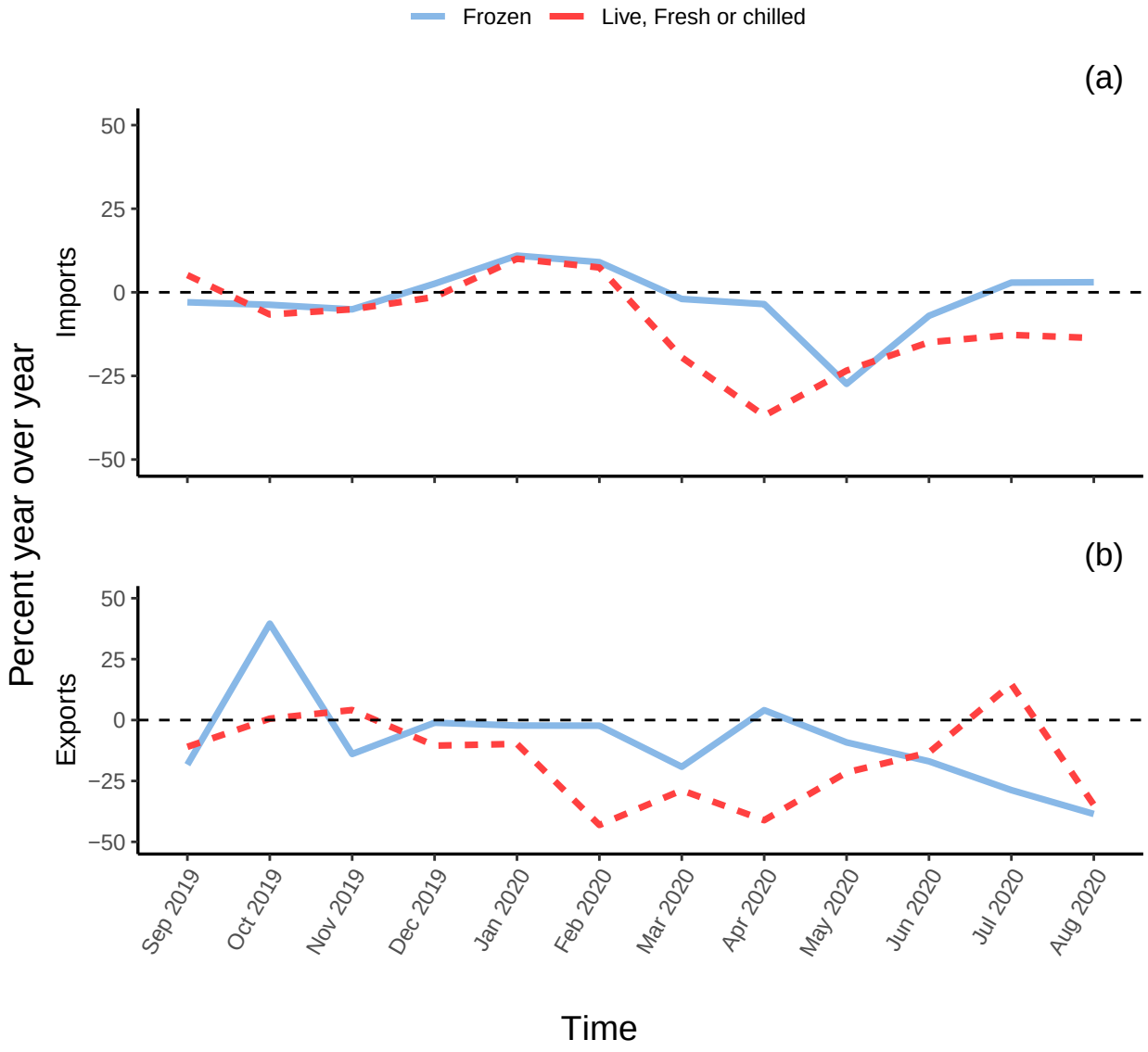

Figure 2: Monthly US imports and exports of frozen or fresh (live, fresh, or chilled) seafood as a percent change since the previous year.

Figure 3a-e. Google trends

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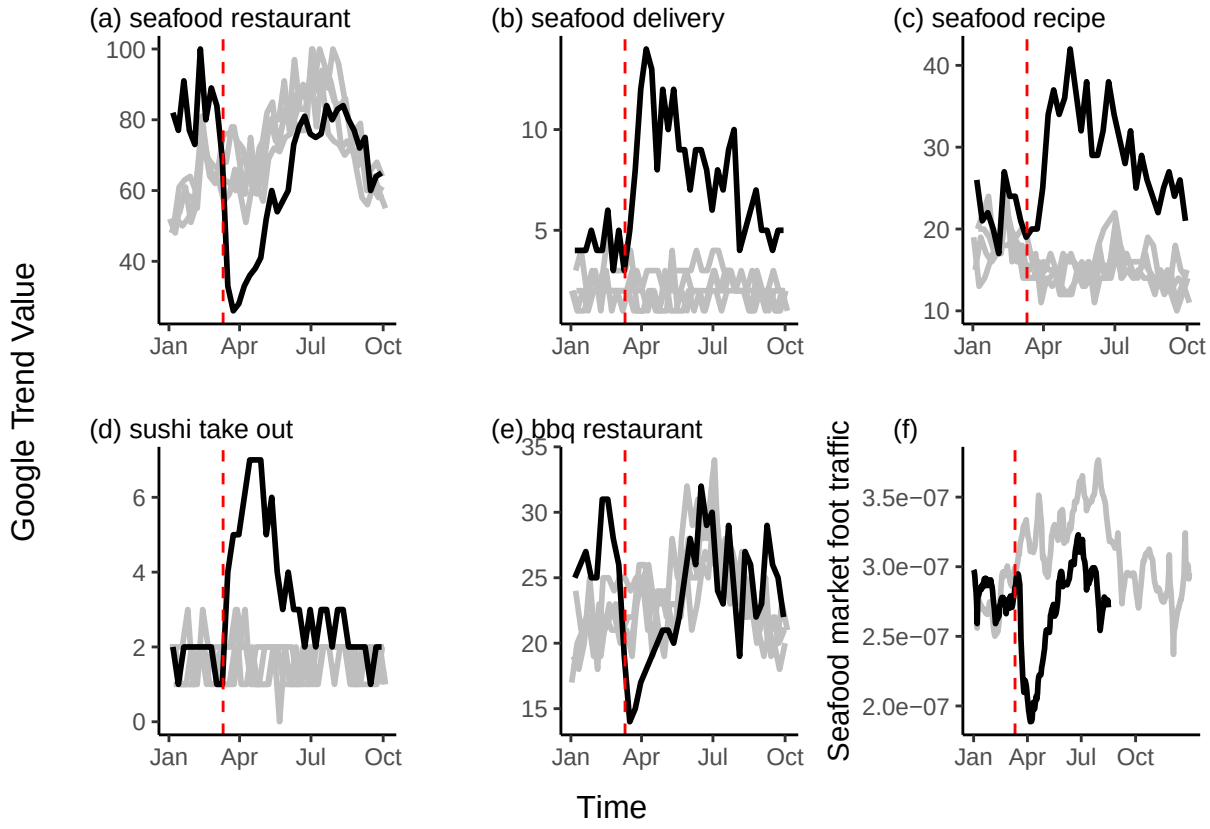

Figure 3: **US seafood consumer demand.** Previous and current relative Google trends for several search terms: (a) seafood restaurant, (b) seafood delivery, (c) seafood recipe, (d) sushi take out, and (e) bbq restaurant (as a control). Panel (f) is the rolling mean of normalized (see methods) foot traffic data for all US fish and seafood markets.

Figure 3f. Seafood market foot traffic over time

Figure S1. Seafood market foot traffic per state over time (Jan - Mar)

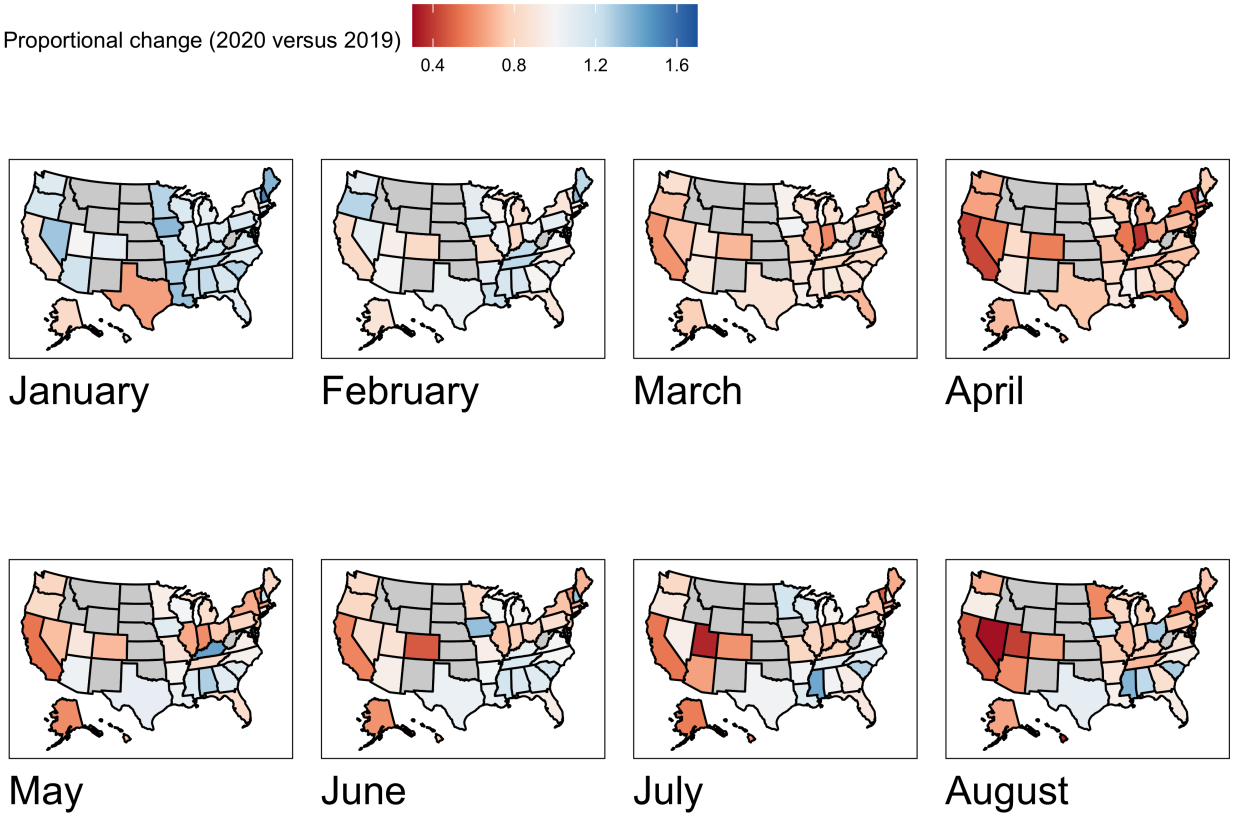

Figure 4: State-level monthly mean of normalized (see Methods) foot traffic data for fish and seafood markets for the beginning of 2019 and 2020.

Data summary of Safegraph foot traffic data

We examined 2,800 fish and seafood markets in US across the US. We noted that 39 of the 41 states with sufficient data saw declines in foot traffic in March 2019 compared to March 2020. Overall, there was 41.6 percent drop in seafood market foot traffic from early to mid-March of 2020. Compared to 2019, foot traffic is down 17.6 percent for the month of March.

Figure S2. Alaska fish landings data

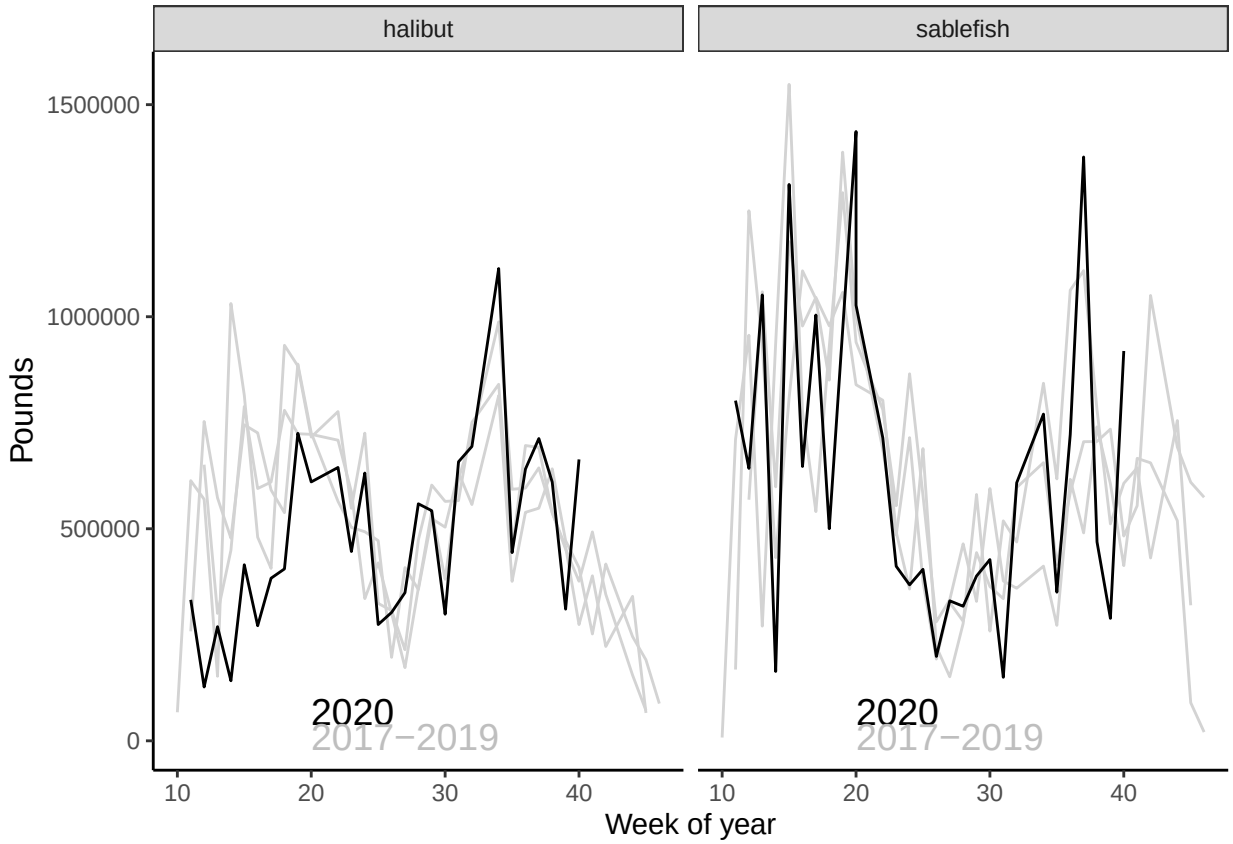

Figure 5: Alaskan weekly landings (pounds) for halibut (Hippoglossus stenolepis) and sablefish (Anoplopoma fimbria) for 2020 (black line) and past years (grey lines). Data is updated at https://www.fisheries.noaa.gov/alaska/commercial-fishing/fisheries-catch-and-landings-reports

For the first 40 weeks of the year, there were 15.1% declines in Alaskan halibut landings in 2020 compared to the previous two years. There were 4.9% declines in Alaskan sablefish landings in 2020 compared to the previous two years. These differences were more distinct prior to the start of June: 40.5% declines in Alaskan halibut landings and 1.7% declines in Alaskan sablefish landings

Figure S3. Map of news articles

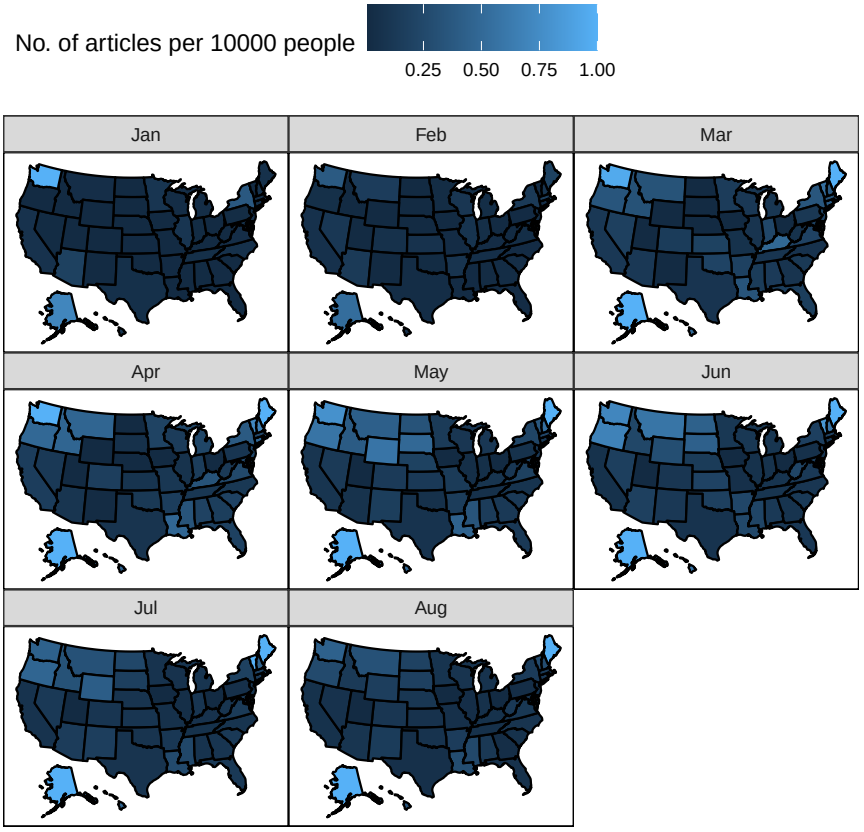

Figure 6: State-level monthly number of news articles published for search terms (covid OR coronavirus) AND (seafood OR fishery OR fisheries OR aquaculture) AND [list of all state and territory names].