

Aleutian Islands 2018 Report Card

Region-wide

- The North Pacific Index (NPI) was strongly positive from fall 2017 into 2018 due to the relatively high sea level pressure in the region of the Aleutian Low, which was displaced to the northwest, over Siberia, and caused **persistent warm winds from the southwest**. Positive NPI is expected during La Niña, but its magnitude was greater than expected.
- The Aleutians Islands region experienced **suppressed storminess through fall and winter 2017/2018** across the region.
- The **Alaska Stream appears to have been relatively diffuse** on the south side of the eastern Aleutian Islands.
- Although the **sea surface temperatures cooled in 2018, relative to the 2014–2017 warm period, the overall temperature was still warm** due to heat retention throughout the water column.

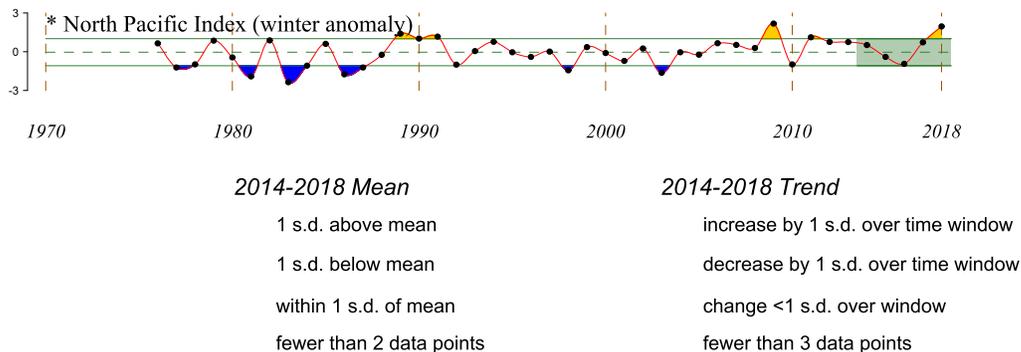


Figure 1: The winter North Pacific Index time series. * indicates time series updated in 2018.

Western Aleutian Islands Ecoregion 2018

- While sea surface temperature declined relative to 2016, the **warm water extended more deeply in 2018 than 2016**.
- The reproductive success of five planktivorous seabird species at Buldir Island was average to above average in 2018, indicating that **overall zooplankton availability was sufficient to support successful chick-fledging in 2018**.
- Forage fish trends as indicated in tufted puffin chick meals have varied over the long term, with episodic peaks lasting 1–2 years. In general, sand lance have been absent since 2009, and age-0 gadids have not been seen in great abundance since 2006. Tufted puffins experienced reproductive failures in 2017 and 2018, so there were few forage fish samples. The failures suggest that **sufficient forage fish to support chick-rearing was limiting in 2017-2018**. Squid were the most common prey delivered to chicks.
- The **pelagic fish foraging guild biomass decreased slightly** from 2016 to 2018. The decreasing trend was primarily due to declines in Atka mackerel and northern rockfish biomass, as the biomass of Pacific ocean perch increased from that in 2016.
- The **overall biomass of the fish apex predator foraging guild continued its long term decline** to the lowest level of the time series, which began in 1991. The largest declines were noted in Pacific cod, while Kamchatka and arrowtooth flounder biomasses increased.
- The most recent data available for **otters show no trend**, in contrast to the steep decline during the early 2000s.
- Steller **sea lions remain below their long-term mean** in this ecoregion, although there has been no significant trend in the past 5 years. The 2016 estimate was the lowest in the time series.
- The **amount of area trawled has increased since 2012**, which was the last year of a dramatic 4-year decline following measures aimed at increasing protection for Steller sea lions during 2012–2014. Also, commercial fishing patterns may reflect recent changes in economics, ownership, and fishing effort allocation.
- There are no schools in the western Aleutian Islands ecoregion.

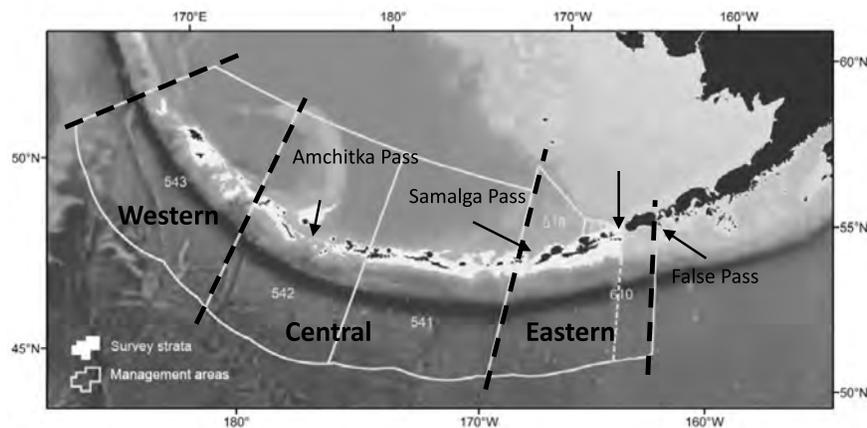
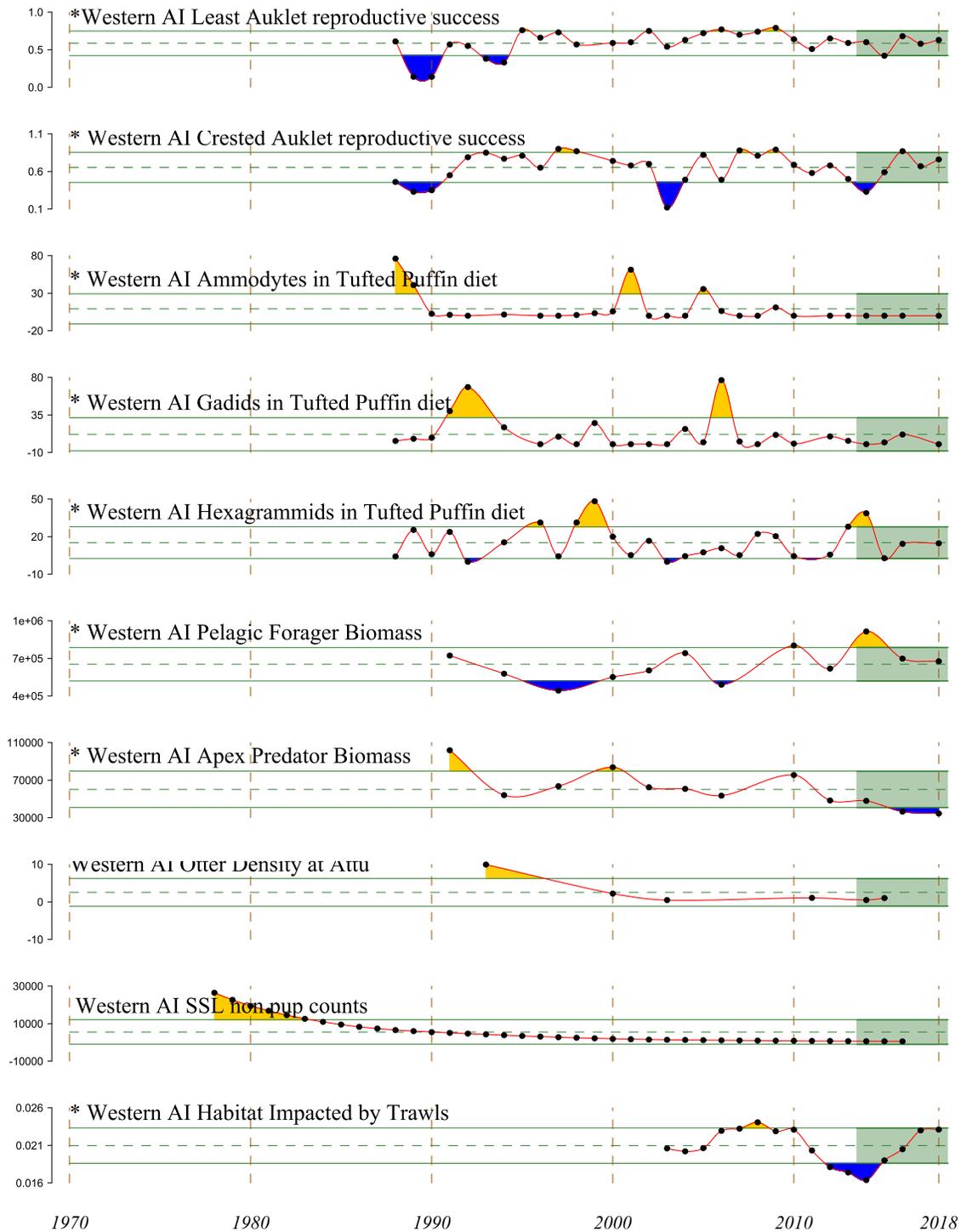


Figure 2: The Aleutian Islands ecoregions.



2014-2018 Mean

- 1 s.d. above mean
- 1 s.d. below mean
- within 1 s.d. of mean
- fewer than 2 data points

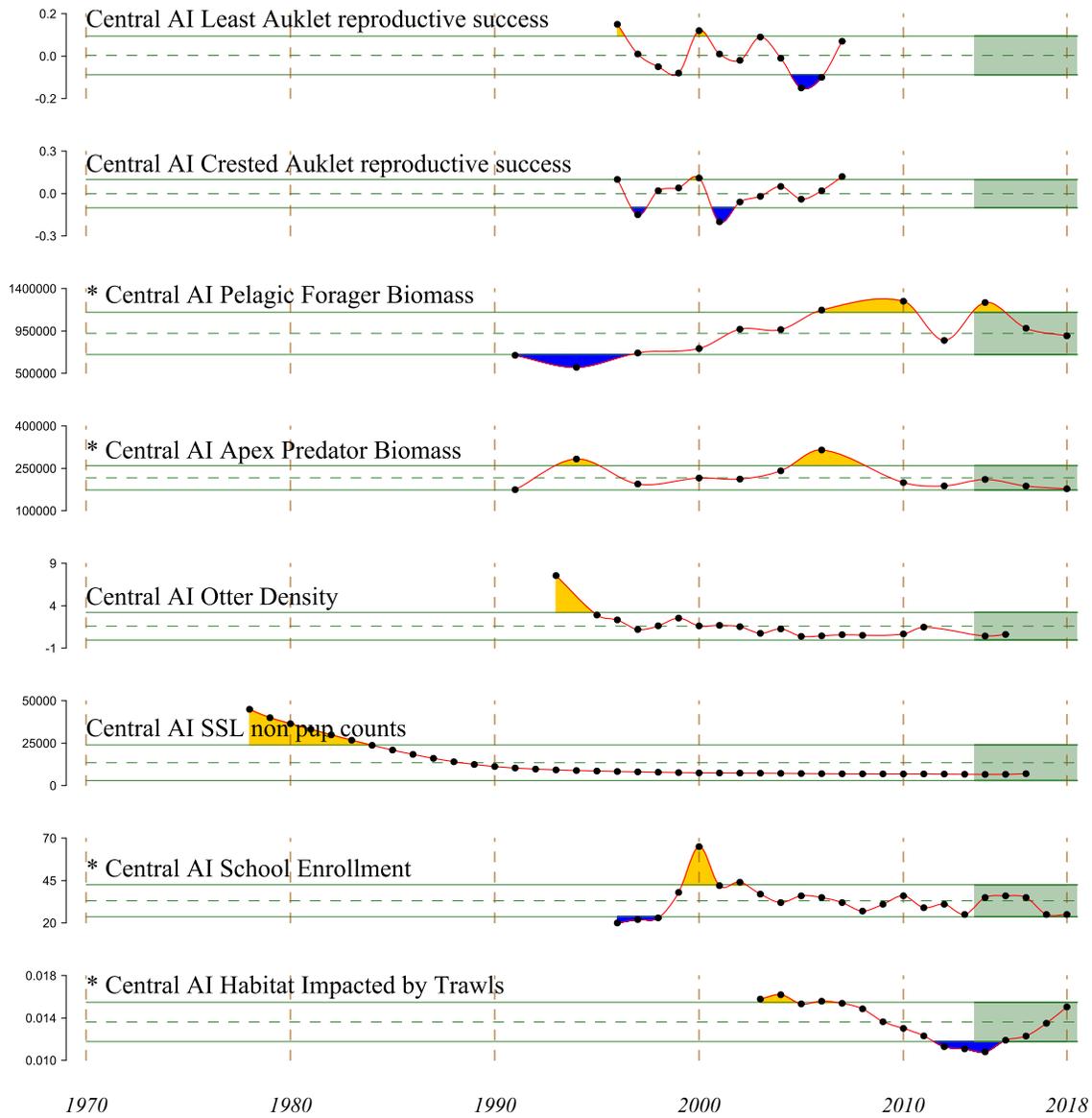
2014-2018 Trend

- increase by 1 s.d. over time window
- decrease by 1 s.d. over time window
- change <1 s.d. over window
- fewer than 3 data points

Figure 3: Western Aleutian Islands ecoregion indicators. * indicates time series updated in 2018.
 NPFMC Bering Sea and Aleutian Islands SAFE

Central Aleutian Islands Ecoregion 2018

- The **pelagic fish foraging guild biomass declined** overall from 2016 to 2018. Decreases were seen in all species but walleye pollock.
- The **slight decrease in the fish apex predator foraging guild biomass** from 2016 to 2018 was largely driven by arrowtooth and Kamchatka flounder.
- The most recent data available for **otters show no trend**, in contrast to the steep decline during the early 2000s.
- Counts of non-pup **Steller sea lions remain below the long term mean** although there is no significant trend in the past 5 years.
- Both Adak and Atka **schools in the central Aleutian Islands have experienced declining enrollment** over the past 2 years, approaching the 10-student threshold that risks closure of the schools, which would have negative impacts on the communities.
- The **amount of area trawled has increased since 2012**, which was the last year of a dramatic 4-year decline following measures aimed at increasing protection for Steller sea lions during 2012–2014. Also, commercial fishing patterns may reflect recent changes in economics, ownership, and fishing effort allocation.



2014-2018 Mean

- 1 s.d. above mean
- 1 s.d. below mean
- within 1 s.d. of mean
- fewer than 2 data points

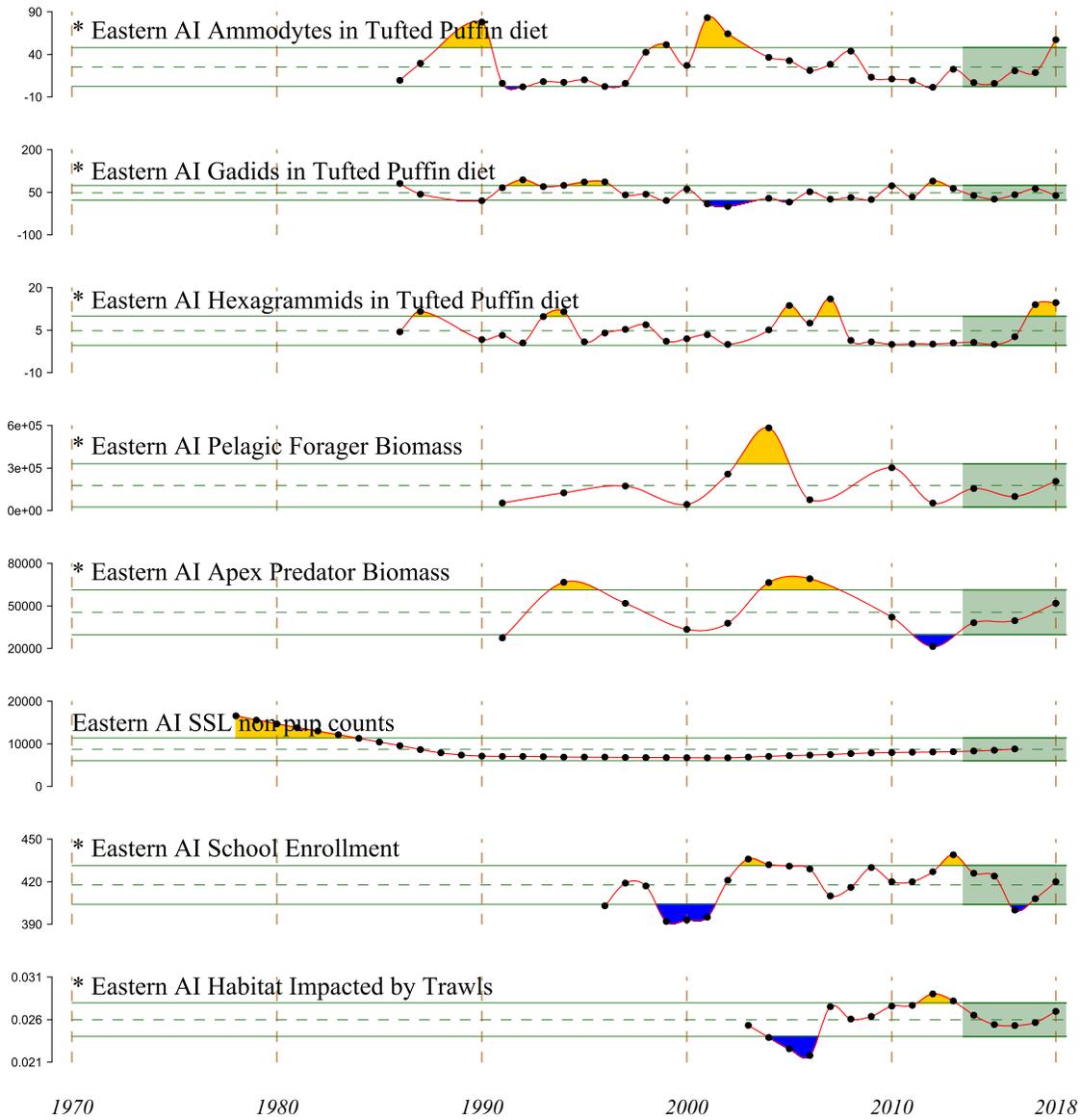
2014-2018 Trend

- increase by 1 s.d. over time window
- decrease by 1 s.d. over time window
- change <1 s.d. over window
- fewer than 3 data points

Figure 4: Central Aleutian Islands ecoregion indicators. * indicates time series updated in 2018. See NPFMC Bering Sea and Aleutian Islands SAFE Figure 3 for legend.

Eastern Aleutian Islands Ecoregion 2018

- Relative abundances of **gadids and *Ammodytes* (sand lance)** in prey brought back to feed puffin chicks **have shown opposite trends. Sand lance were above the long-term average in 2018.** Puffins also had high reproductive success, indicating that forage fish were sufficient to support chick-rearing.
- Pollock, Atka mackerel, Pacific ocean perch, and northern rockfish all contributed to the **increase in fish pelagic forager biomass** from 2016 to 2018. This represents a gradual increase since the low estimate in 2012.
- **Fish apex predator foraging guild biomass increased** from the low values in 2012. Pacific cod and arrowtooth flounder contributed most to the increase.
- There are no available data for otters in the eastern Aleutians ecoregion.
- In contrast to the other ecoregions, **non-pup counts of Steller sea lions remained high** during the last count in 2015. The recent estimates have been above the long-term mean and are continuing an increasing trend. Counts were largely stable through the 1990s, but increased at a rate of 3% per year between 2000 and 2008.
- **School enrollment increased overall in the past 2 years**, although there is still an overall decrease in the 5-year trend because of the steep decline in enrollment in 2016. The increase in the past 2 years is primarily due to Unalaska, whereas the small communities have either closed schools (Nikolski) or are at risk of closure (False Pass and Akutan).
- The **amount of area trawled increased slightly in 2018** to above the long-term average.



2014-2018 Mean

- 1 s.d. above mean
- 1 s.d. below mean
- within 1 s.d. of mean
- fewer than 2 data points

2014-2018 Trend

- increase by 1 s.d. over time window
- decrease by 1 s.d. over time window
- change <1 s.d. over window
- fewer than 3 data points

Figure 5: Eastern Aleutian Islands ecoregion indicators. * indicates time series updated in 2018. See NPFMC Bering Sea and Aleutian Islands SAFE Figure 3 for legend.