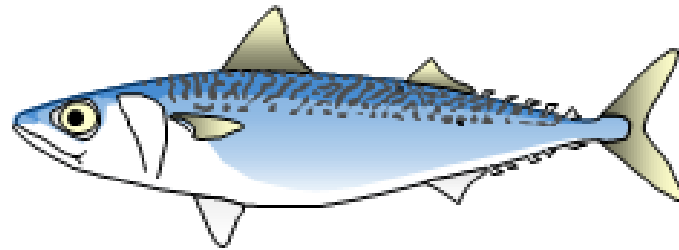


# Recent fishery and stock status of chub mackerel from Japan (updates since Vanuatu)



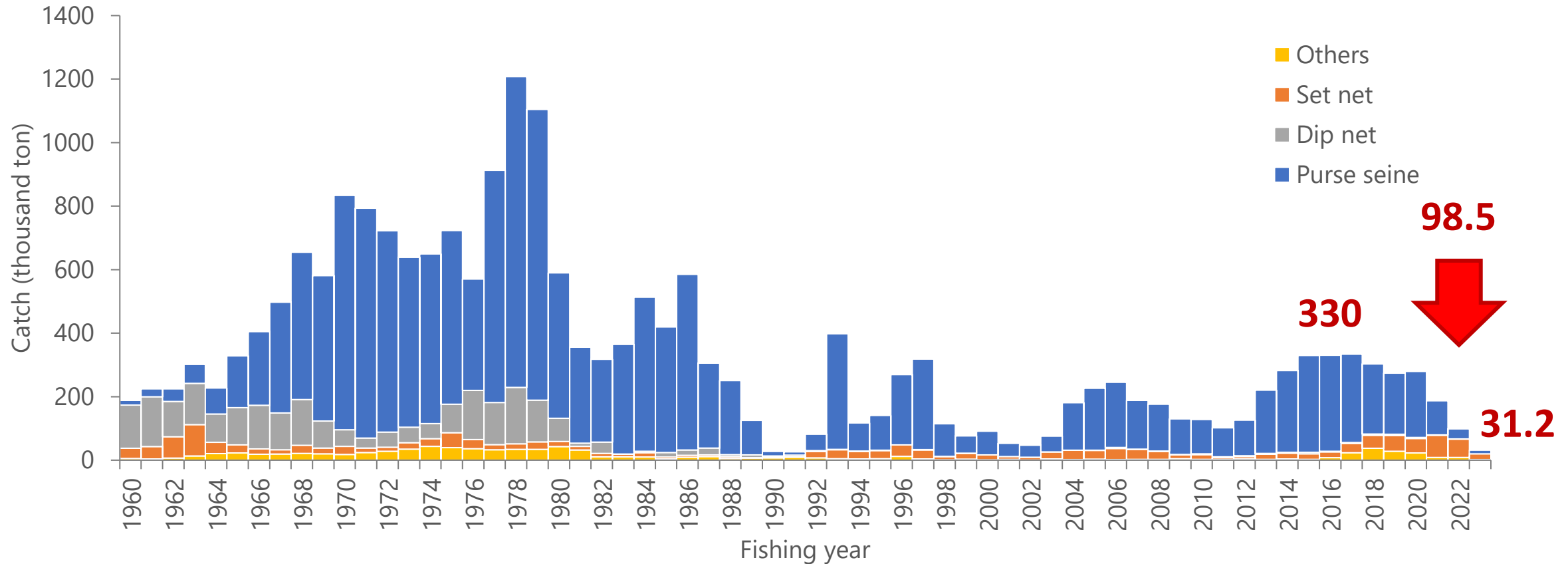
NPFC-2023-TWG CMSA08, Niigata, Japan

Akihiro MANABE, Ryuji YUKAMI

Fisheries Research Agency (FRA) JAPAN

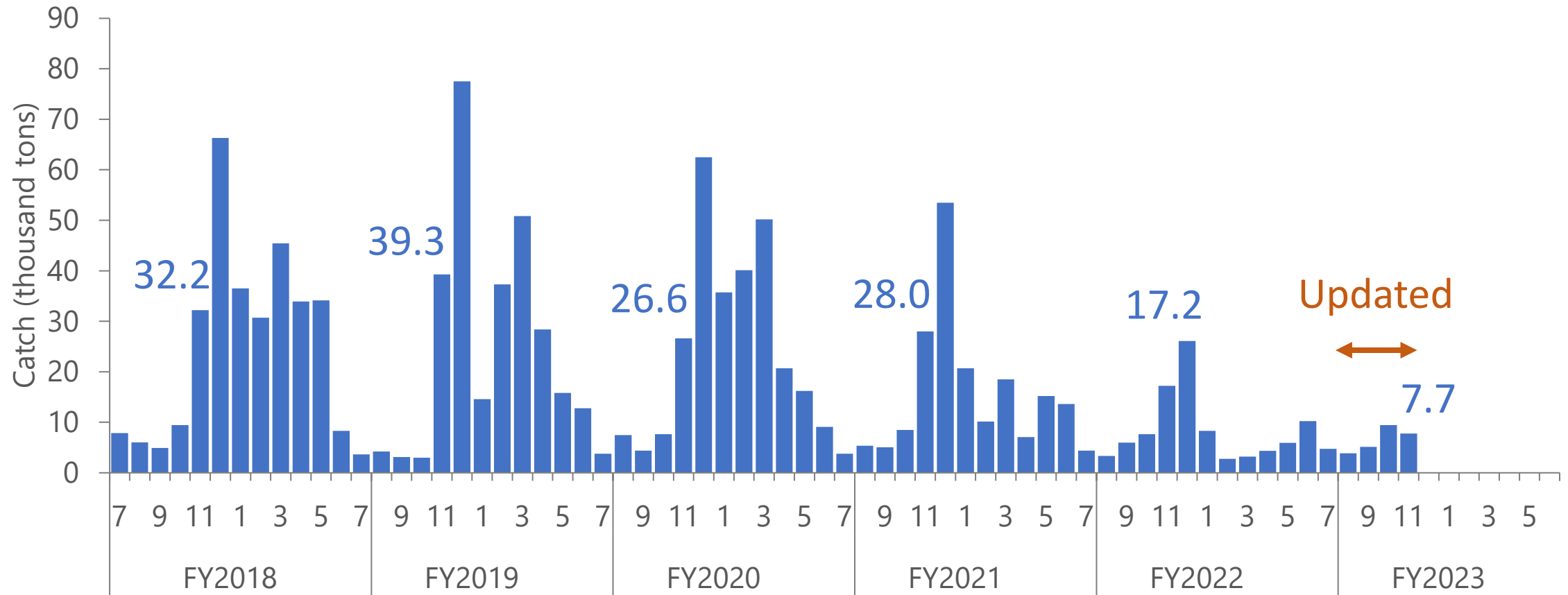


# Catch by Japanese fisheries (up to Nov 2023)



- Fishing year-based catch data (July – following June)
- **Purse seine** as the primary catch
- Substantial decline in FY 2022 (Jul 2022- Jun 2023) = **98.5 thousand-ton**
- **Catch in FY2023 (still ongoing) is 31.2 thousand tons so far**

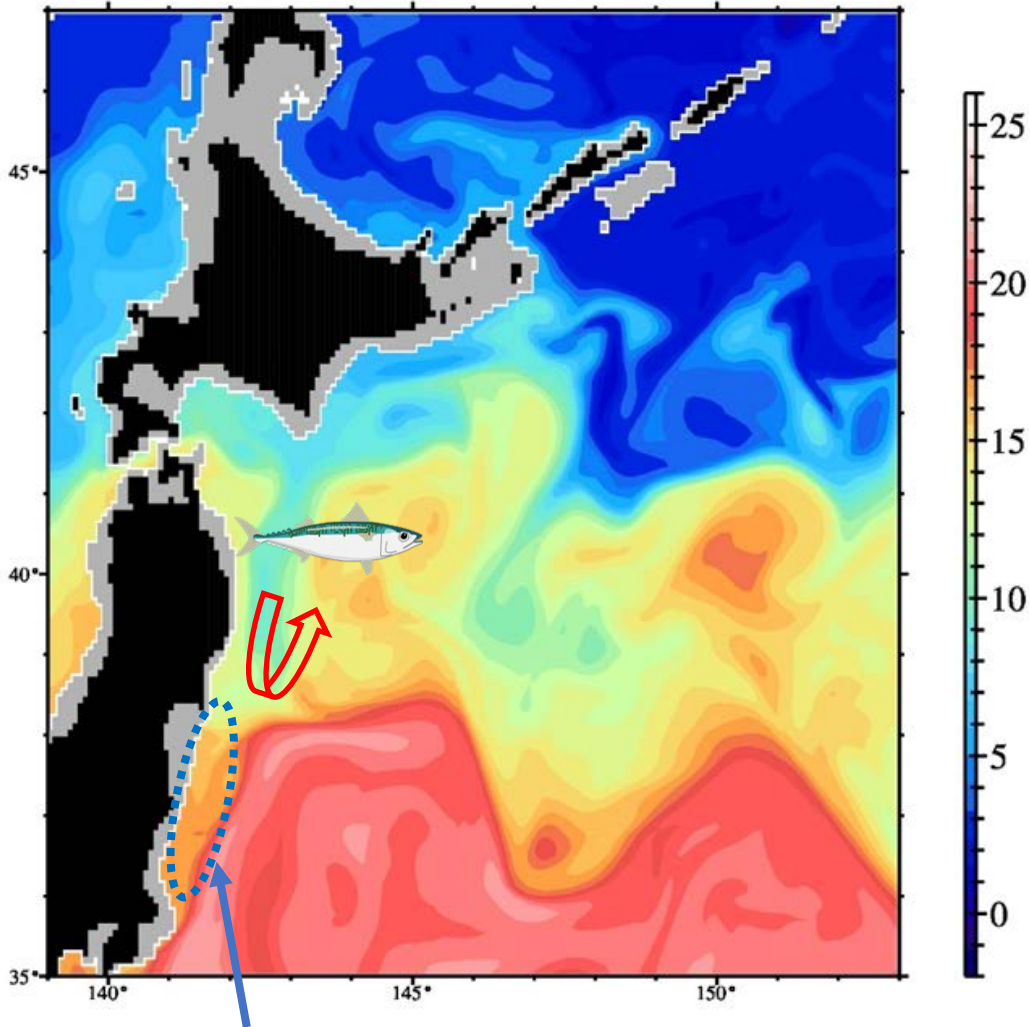
# Monthly catch up to FY2022



- Substantial catch between **November and spring months**
- Typically, catch in November tended to be high, but not in FY2023

# Why is FY2022 so bad?

Daily 100-m temperature 2022/12/15

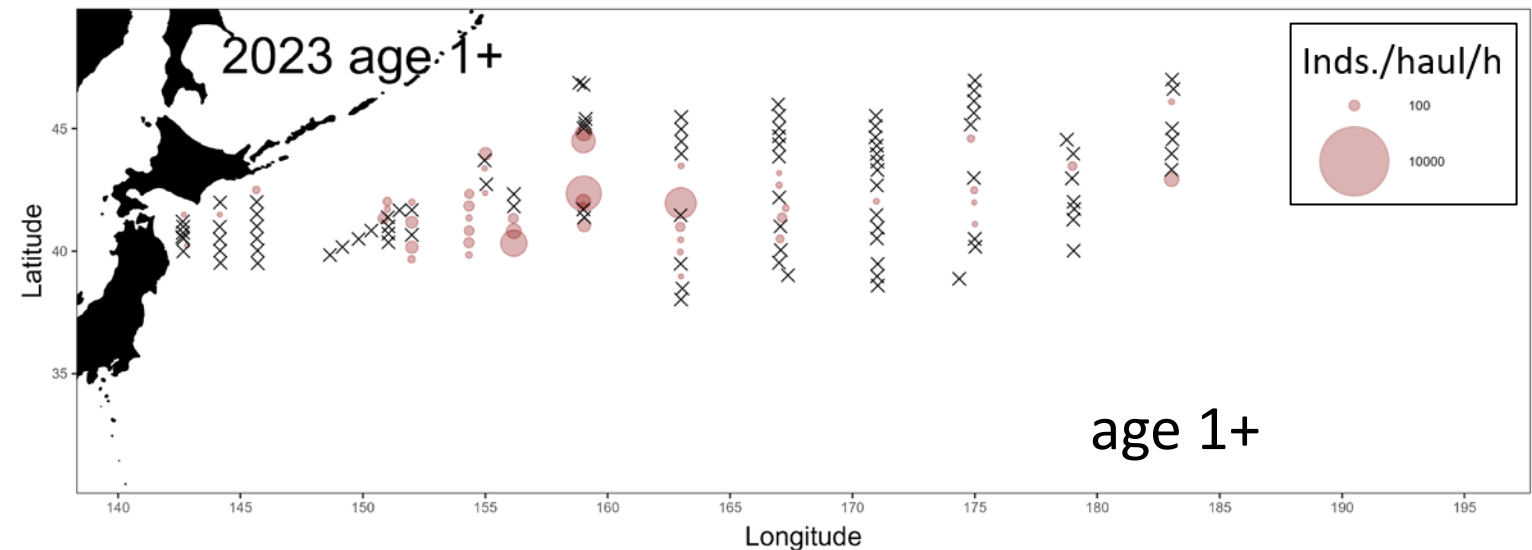
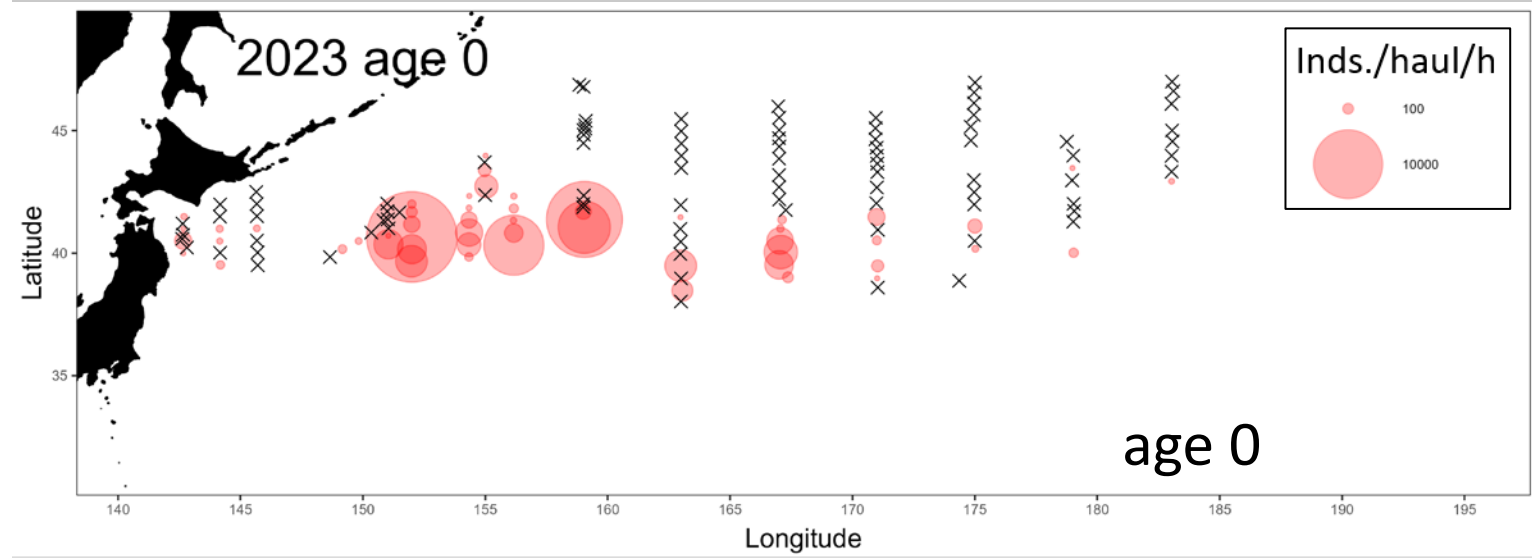


Main fishing grounds  
for purse seine

- Since December 2022 till present, the bend of Kuroshio extension is shoved into the northward and nearshore region
  - CM tend to avoid warm water from Kuroshio current
  - CM avoids the warm Kuroshio extension and does not enter the main fishing grounds for purse seine
  - Difficult oceanic condition for spawning fish to reach to the main spawning ground (Izu Islands)

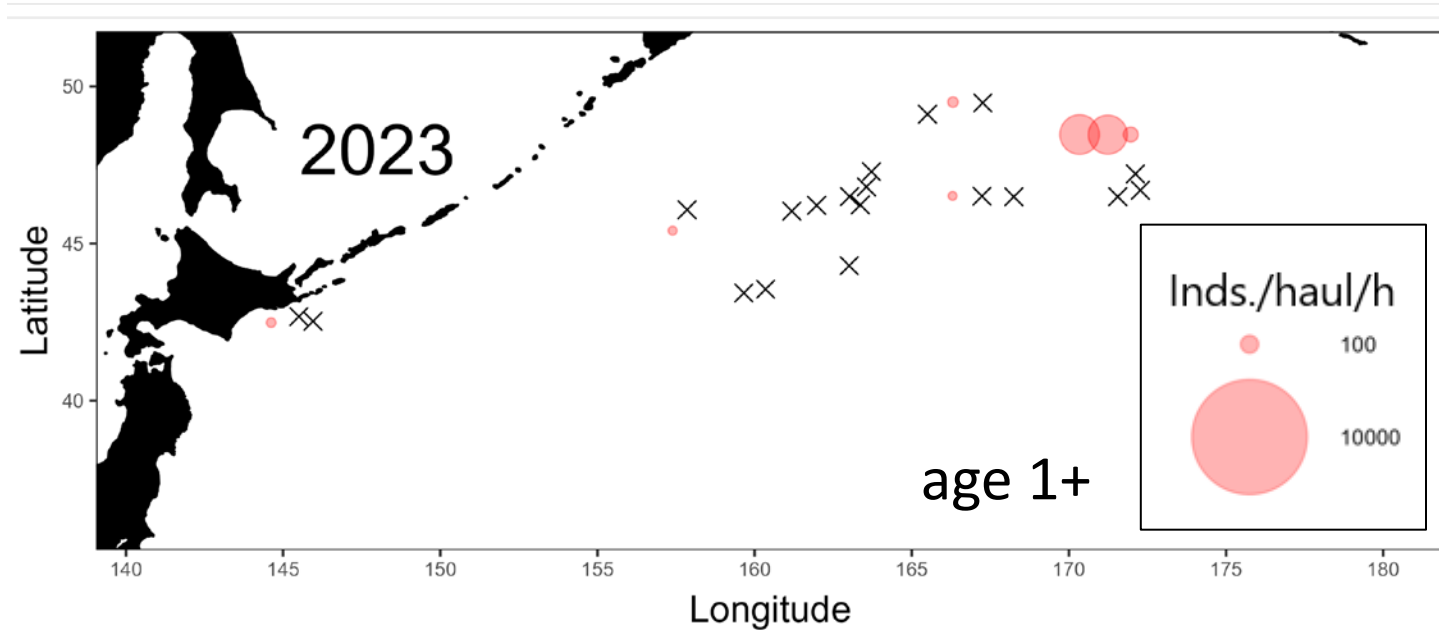
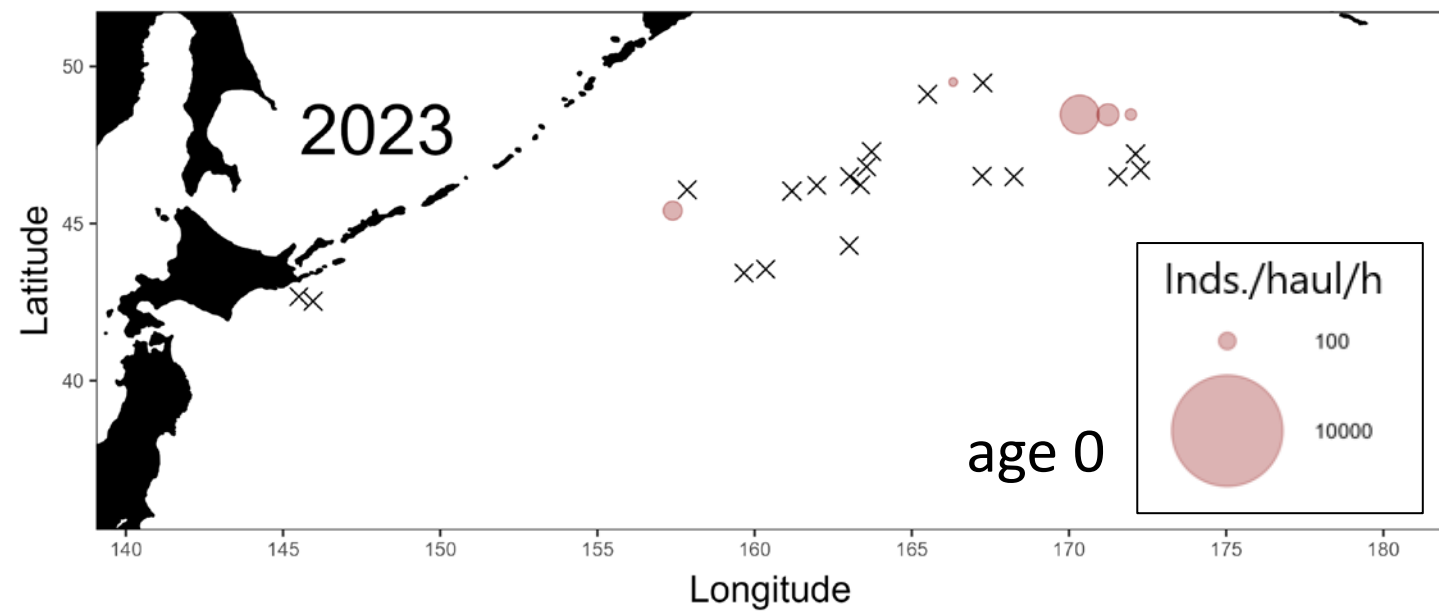
# Research survey – Summer survey

- Little appearance near the coastal region
- Abundant age-0 in 150E-160E
- Very broad distribution of age-0 and age-1 to eastward region (even east of 180E)
- Data used for tuning indices in the domestic assessment (VPA)

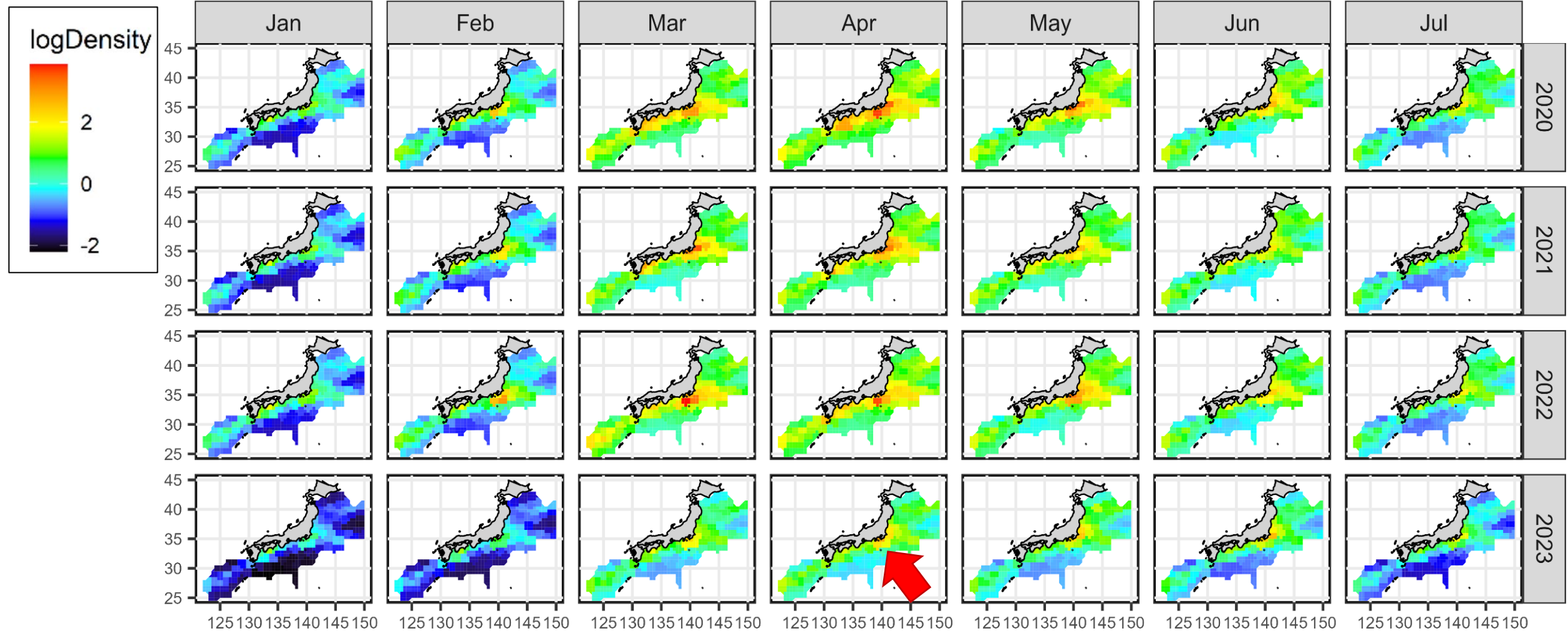


# Research survey – Autumn survey

- Little appearance compared to the same survey from 2022
- Limited survey point for west of 160E
- Still showing broad distribution to east of 170E
- Data used for tuning indices in the domestic assessment (VPA)



# Egg survey



- Egg density of 2023 exhibited the center of egg density exists around Izu Islands
- Yet, the density is low compared to pre-2022 seasons

# Conclusion

- Catch of CM is **declining** in Japan, **still is in FY2023**
- Catch by purse seines in FY2022 was **the lowest in the past 30 yrs**
- Summer survey showed broad distribution of age-0 and age-1
- Autumn survey was data-limited, yet showed distribution in offshore
- Egg survey showed the main fishing ground exists near Izu Islands and coastal Japan
- **Strong northward insertion of Kuroshio extension might play a key role**