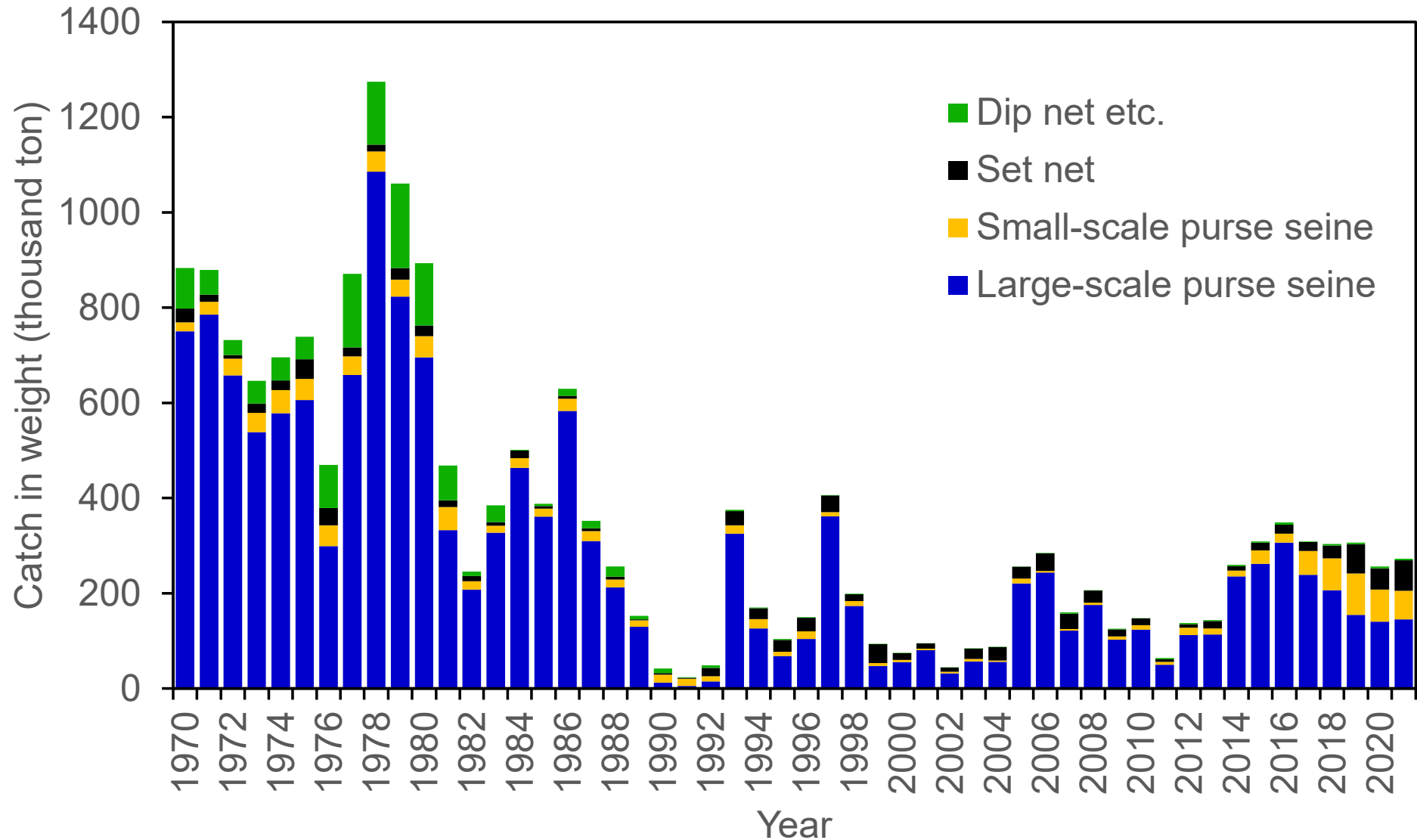


# Fisheries information and research activities

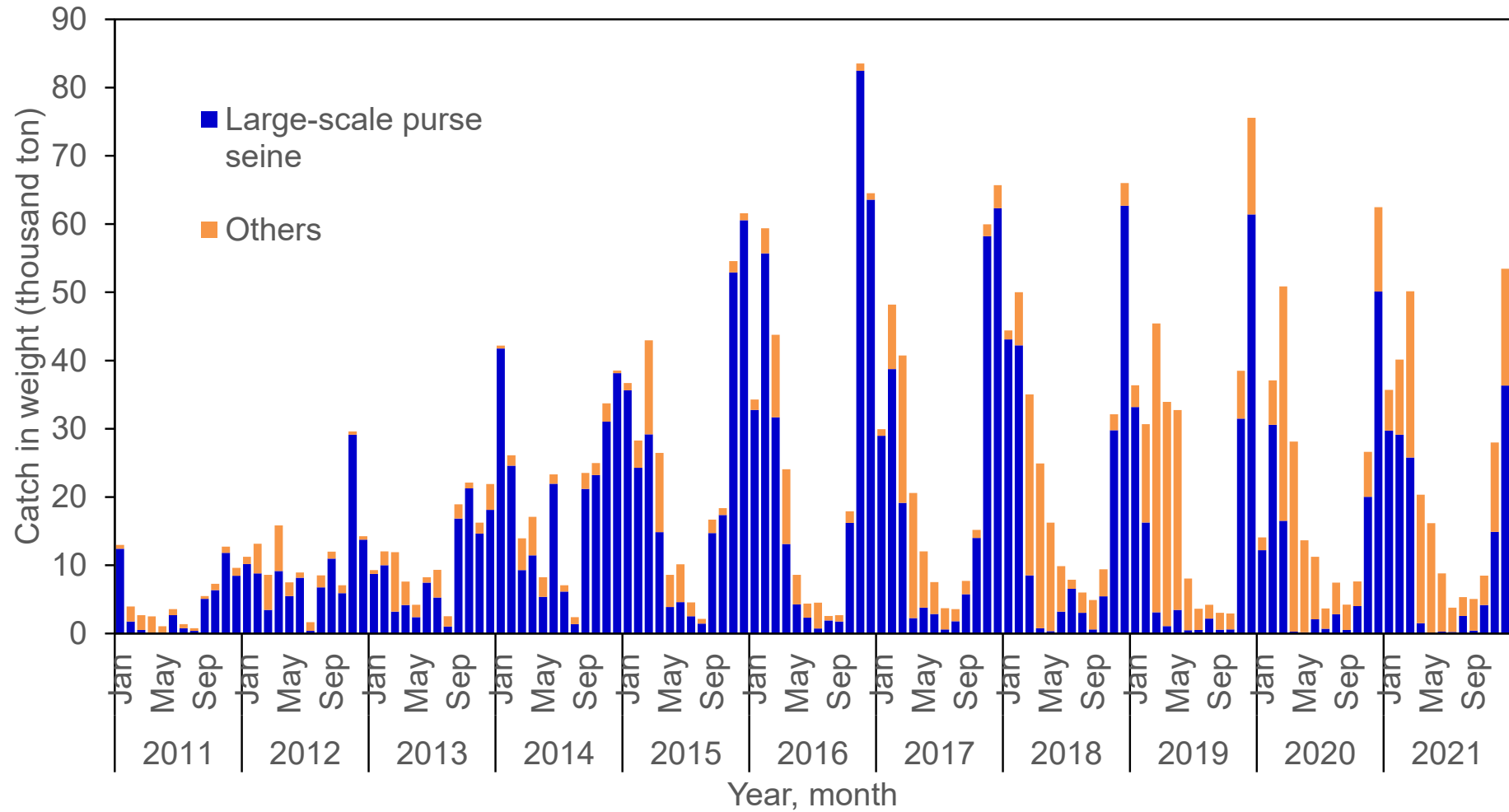
## JAPAN

# Fisheries information

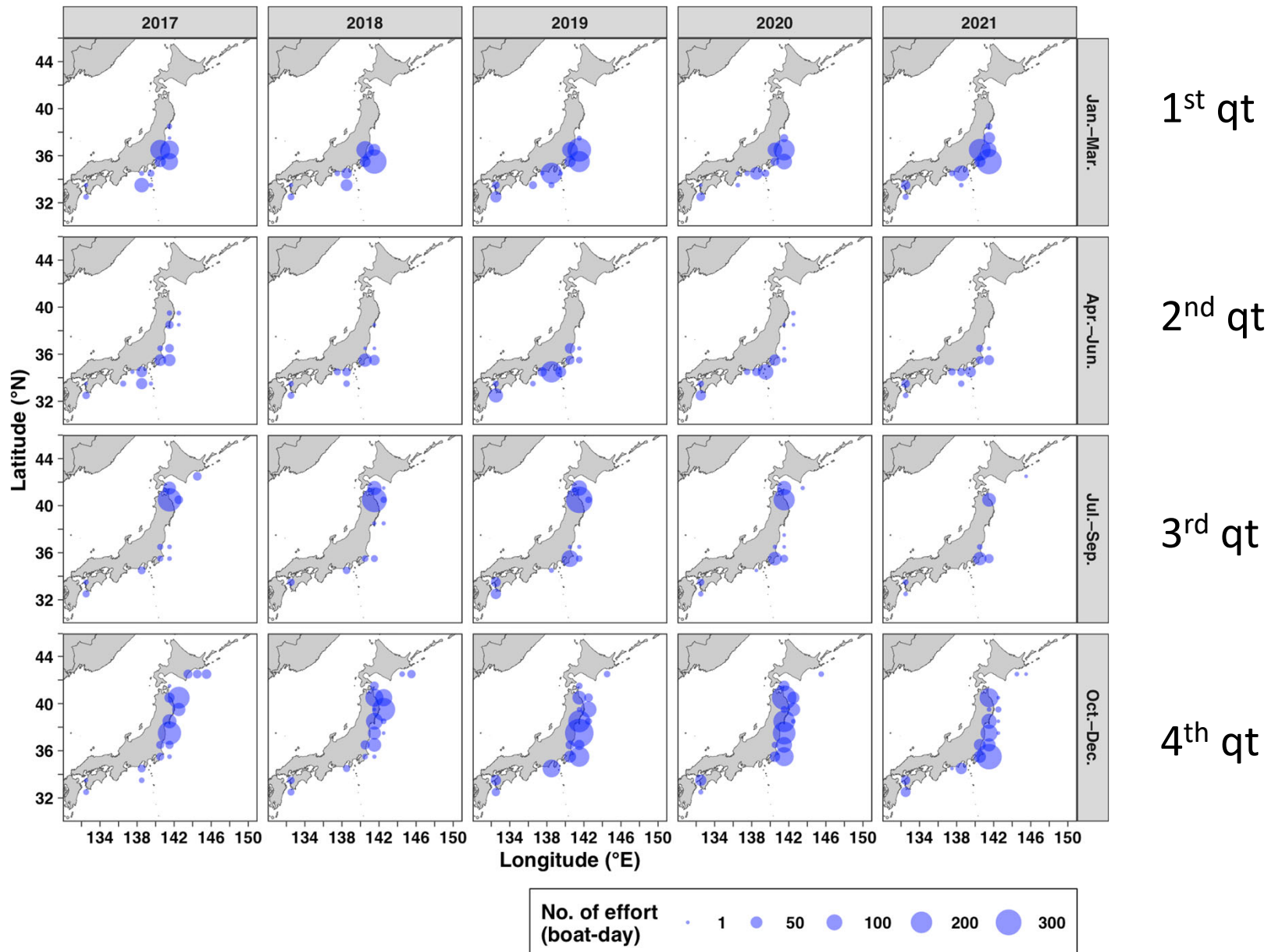
# Annual CM catch by fishery



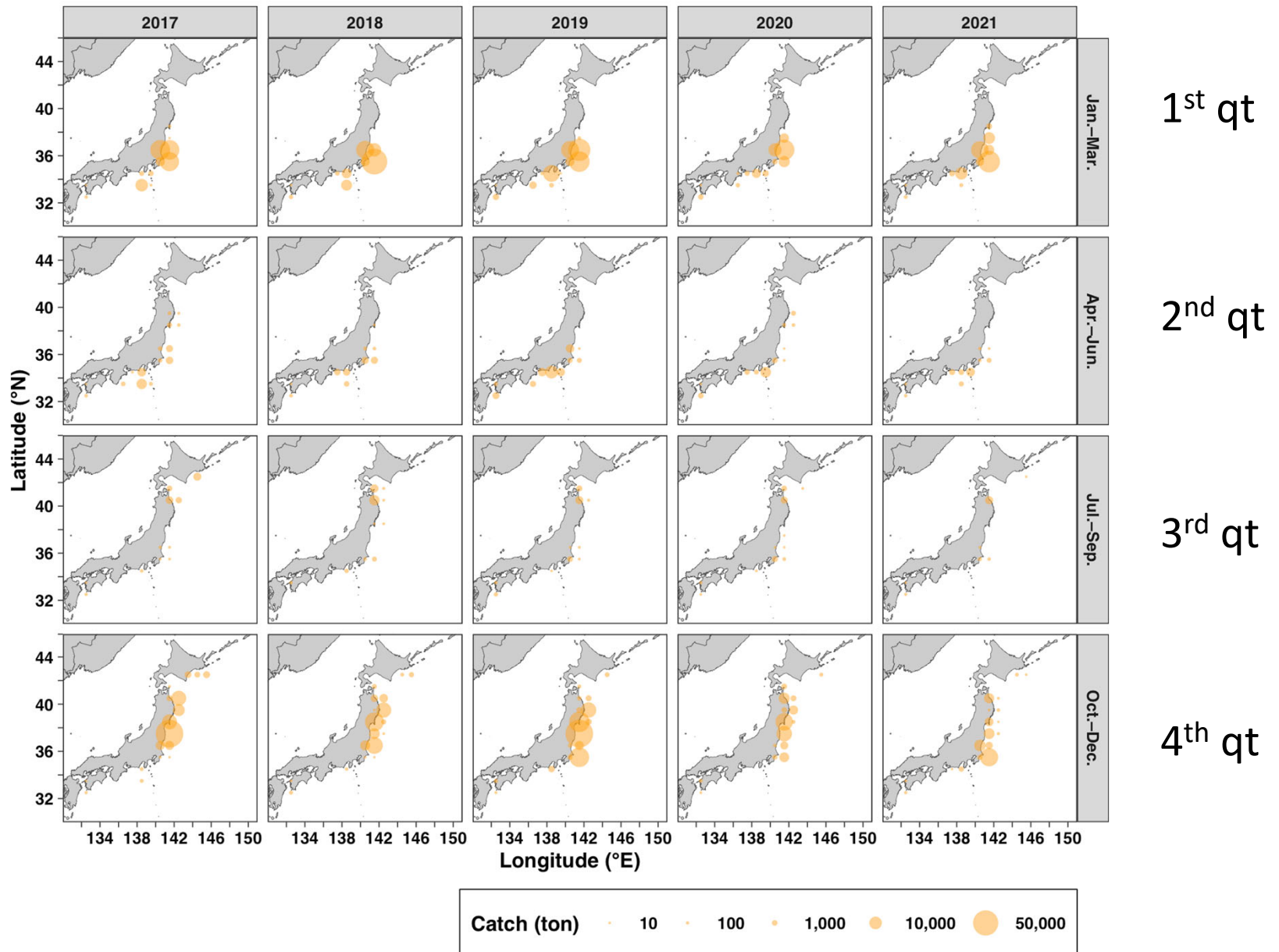
# Monthly catches from large PS & others



# Quarterly fishing effort map (2017-2021)



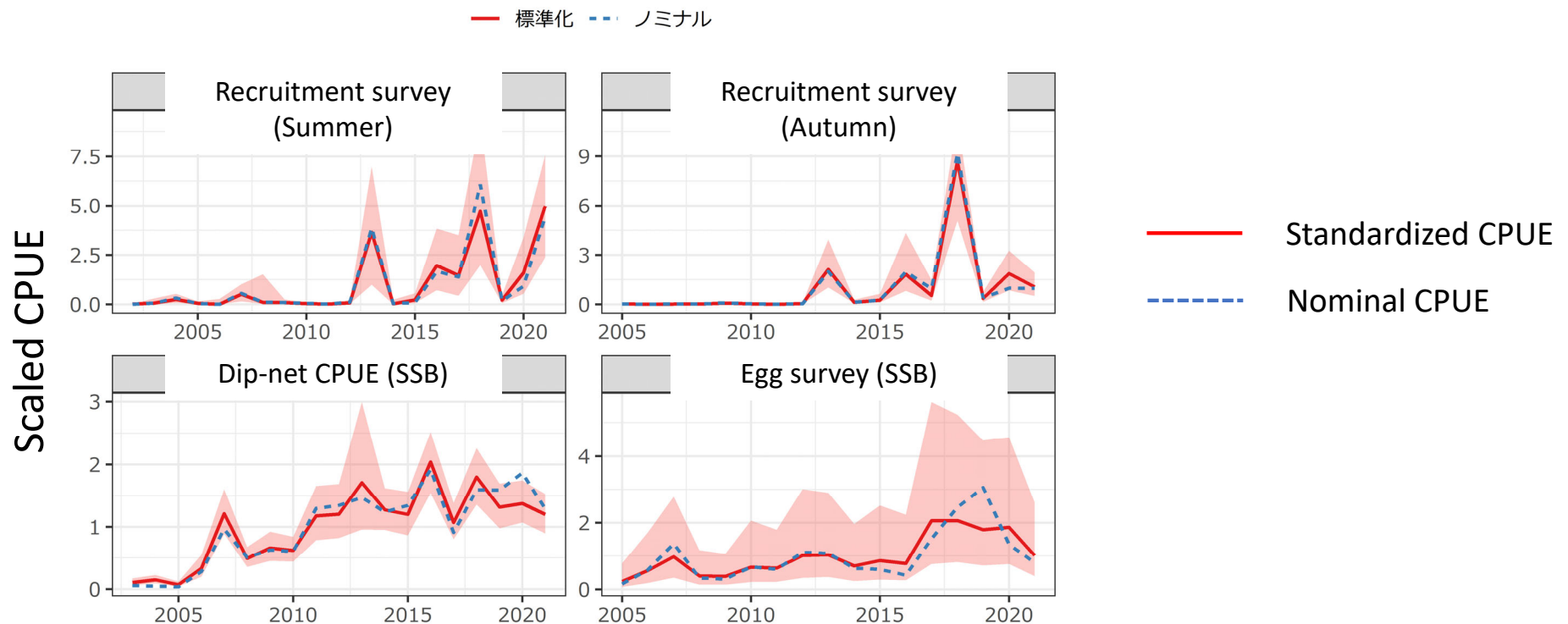
# Quarterly catch map (2017-2021)



# Research activities

# Results from the recent surveys

- CPUE of two surveys used as recruitment indices
- CPUE of dip net fishery and egg survey used as SSB indices
- CPUE in 2019 is decreased relative to 2018
- Maintaining relatively higher compared to pre-2010





# Domestic stock assessment results

# Recruitment, SSB and F

- Domestic stock assessment on CM is conducted annually using VPA by FRA.
- Recruitment remained at higher level after strong cohort in 2013.
- SSB has been at higher level since 2014.
- Exploitation rate has been at historically lower level after 2010.

