

14 海の豊かさを  
守ろう



# The Best Site for Oyster Cultivation in Minamata Bay and Efficient Cultivation Methods

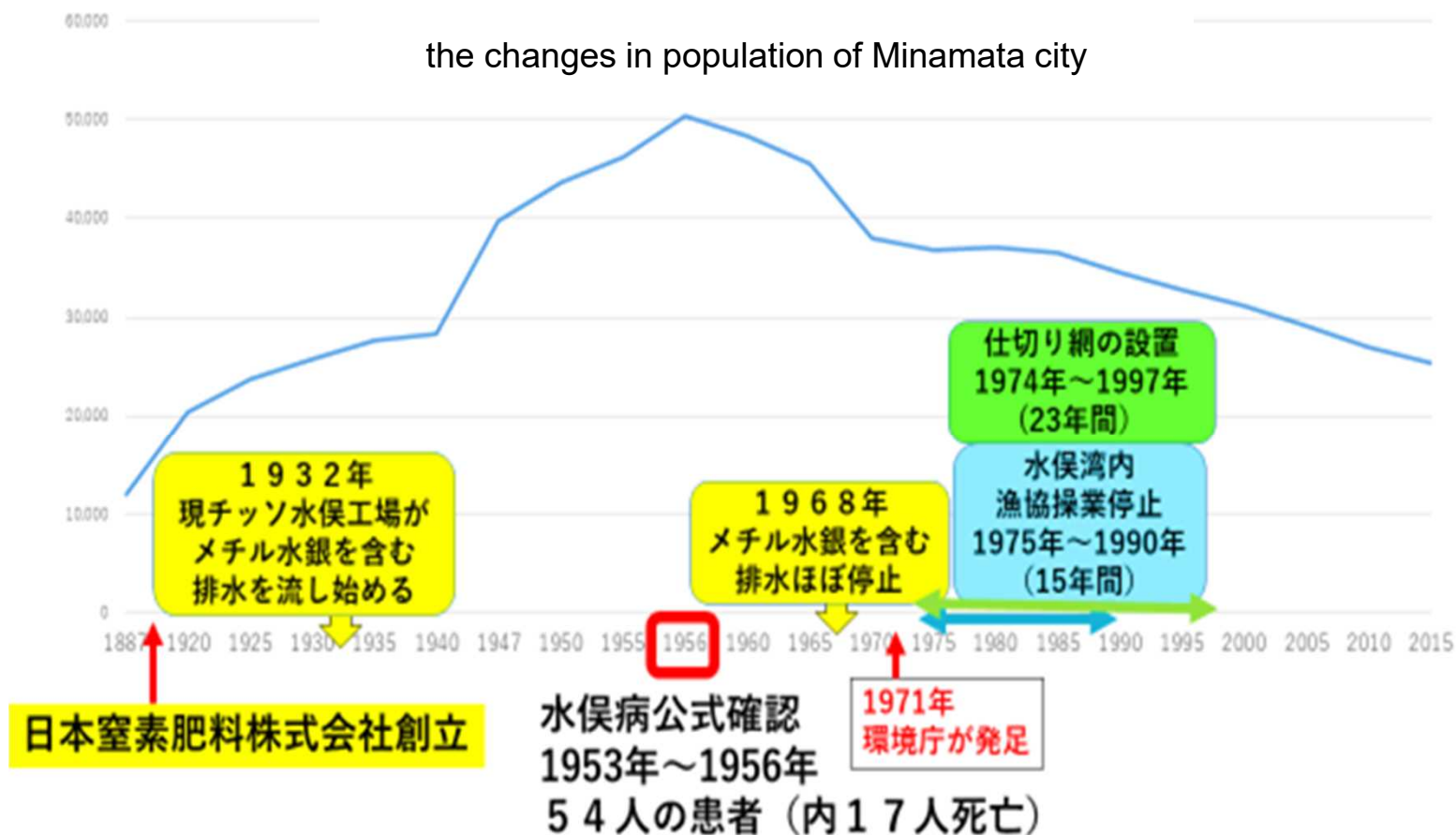


SGHN117 Minamata High School  
Oysters Project Team 2022

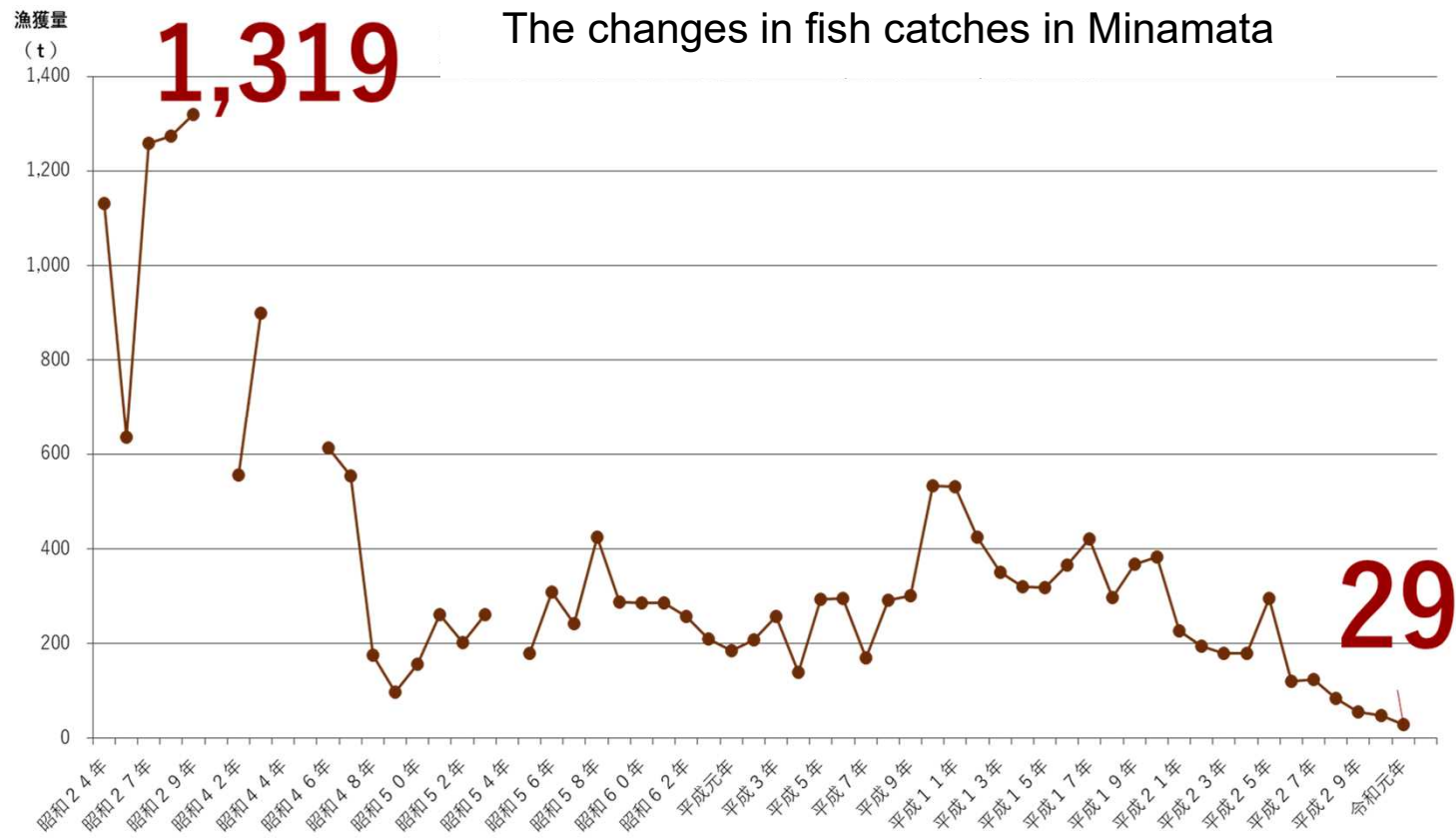
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# 1 Background of the study 1: Severe impact of pollution on fisheries

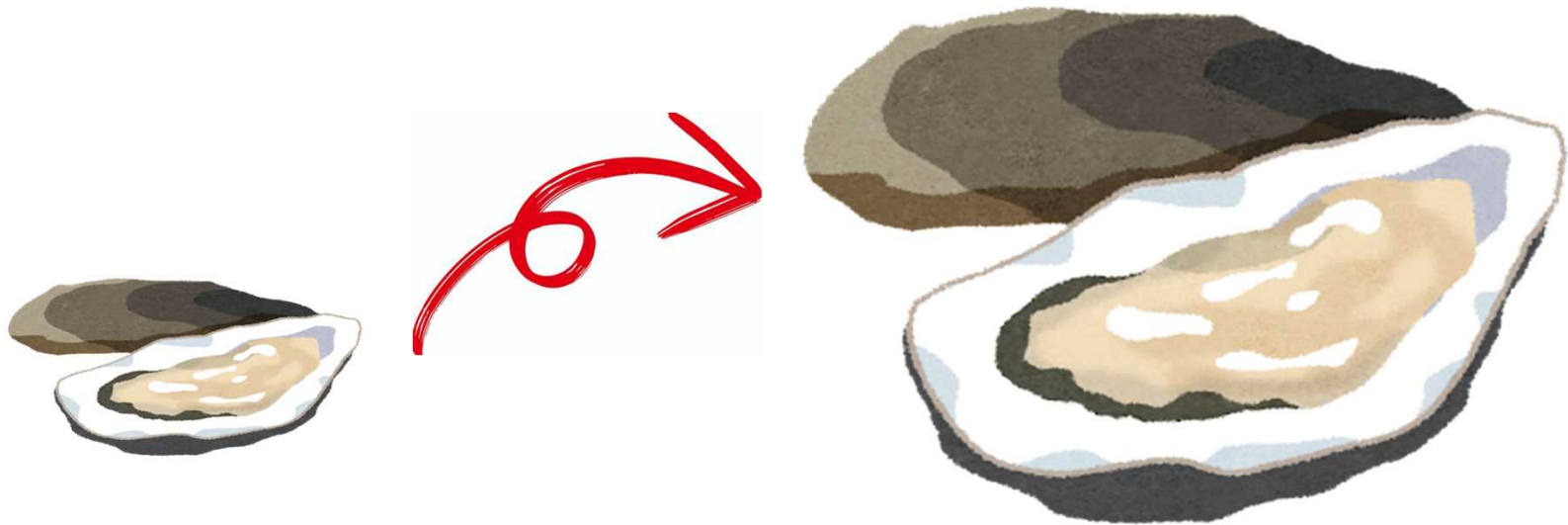


# 1 Background of the study 2: Changes in catches



- 2 Purpose of the study  
Oyster cultivation project for restoration of fisheries

How can we grow big oysters consistently...?

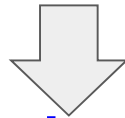


### 3 Research Question 1: Investigation of DIN values

nitrate ion

nitrite ion

ammonium ion

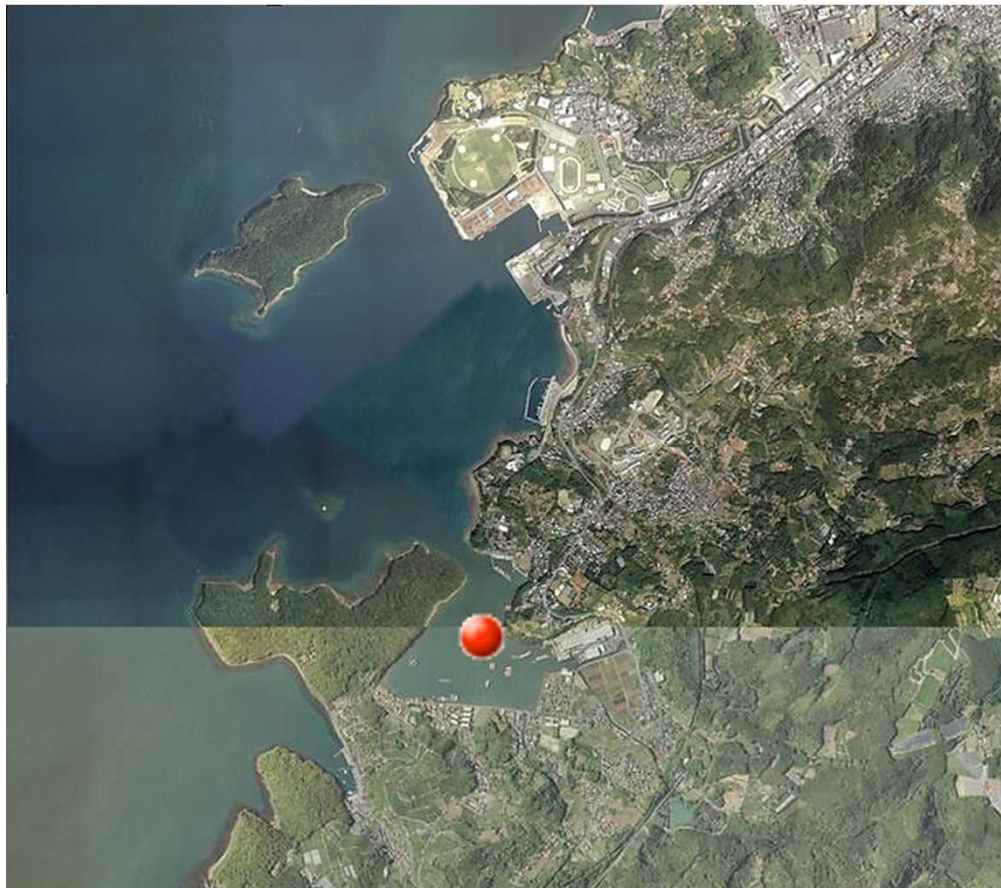


DIN (nutrient salts in water)

☆ Essential for phytoplankton growth

**Decrease in DIN → decrease in phytoplankton  
→ decrease in oysters and fish**

### 3 Research Question 2

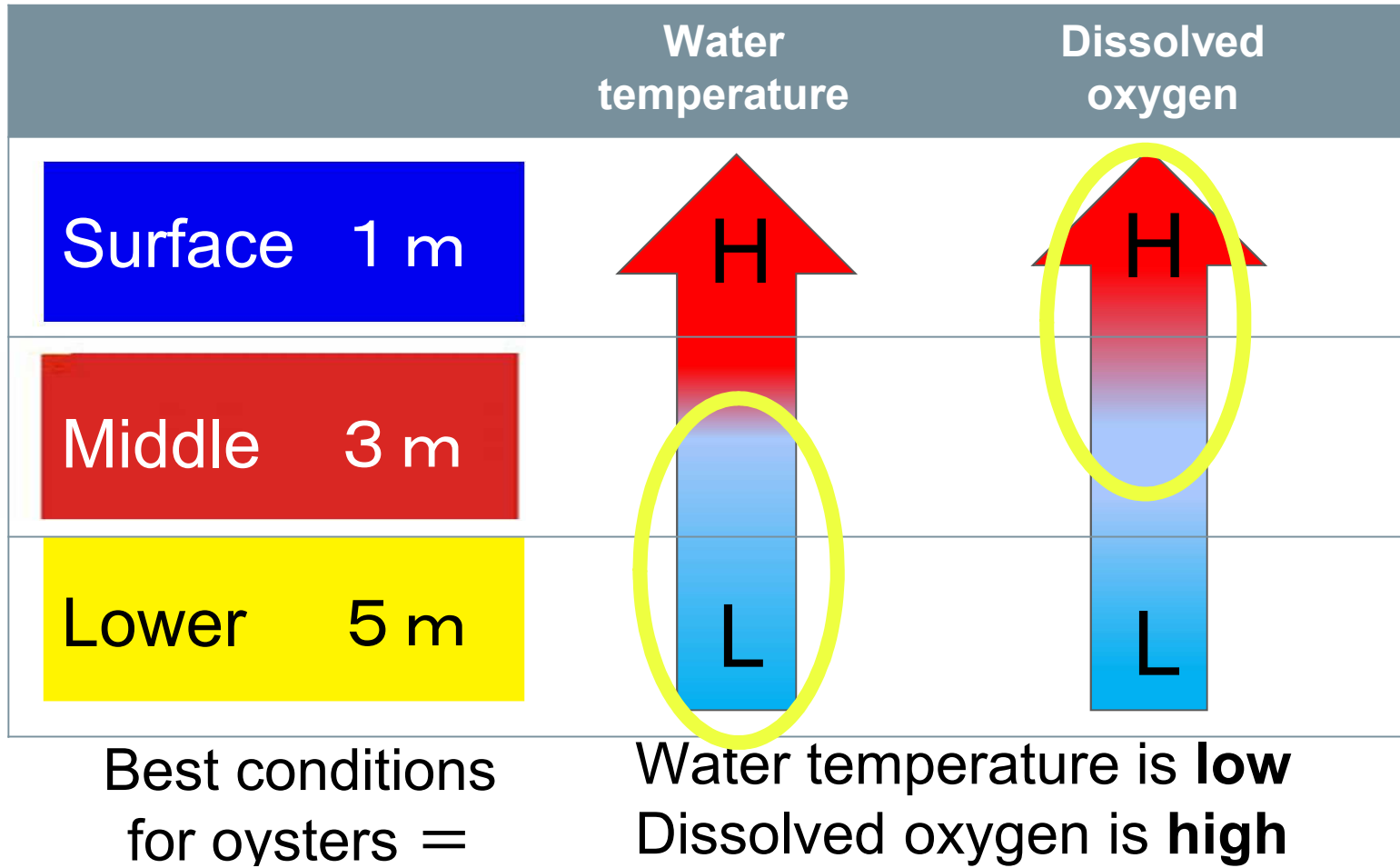


Oyster Survey for 2021

⇒ Fukuro Bay  
is the best location

Investigate the appropriate **depth of the ministry**, paying attention to **water temperature and dissolved oxygen levels**.

## 4 Hypothesis





## 5 Research Method

- (1) 700 cages containing juvenile clams were placed in the surface, middle, and lower layers of Fukuro Bay.
- (2) Surveys are conducted once a month
- (3) Remove dead oysters
- (4) Remove 65 oysters each for measurement
- (5) Measure size and weight

## 5 Research Method



700 Cages Of Oysters

## 5 Research Method



Removed Dead Oysters Once a Month

## 5 Research Method



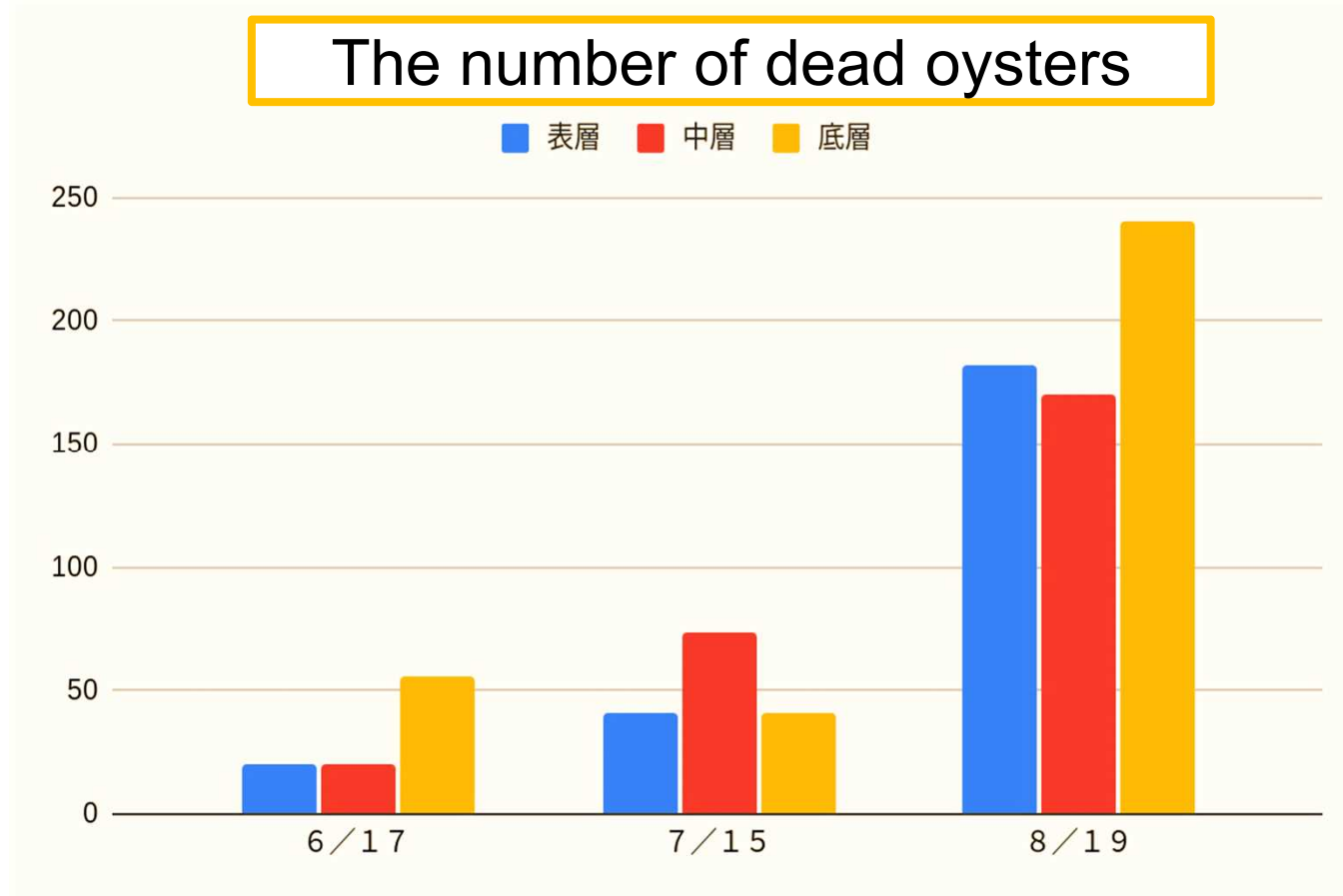
65 Oysters Randomly Selected

## 5 Research Method



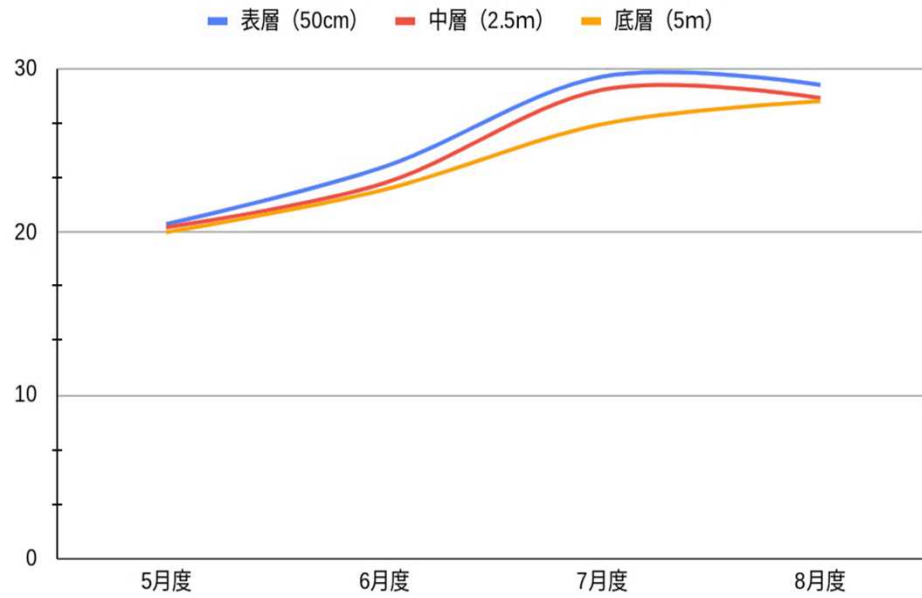
Length, Width, Thickness, and  
Weight Recorded

## 6 What we found so far

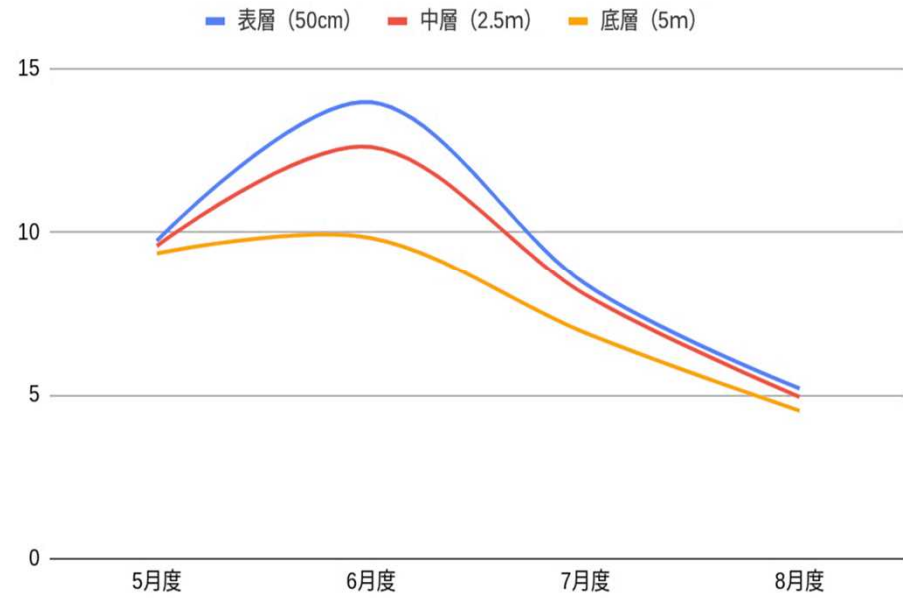


## 6 What we found so far

### Water temperature



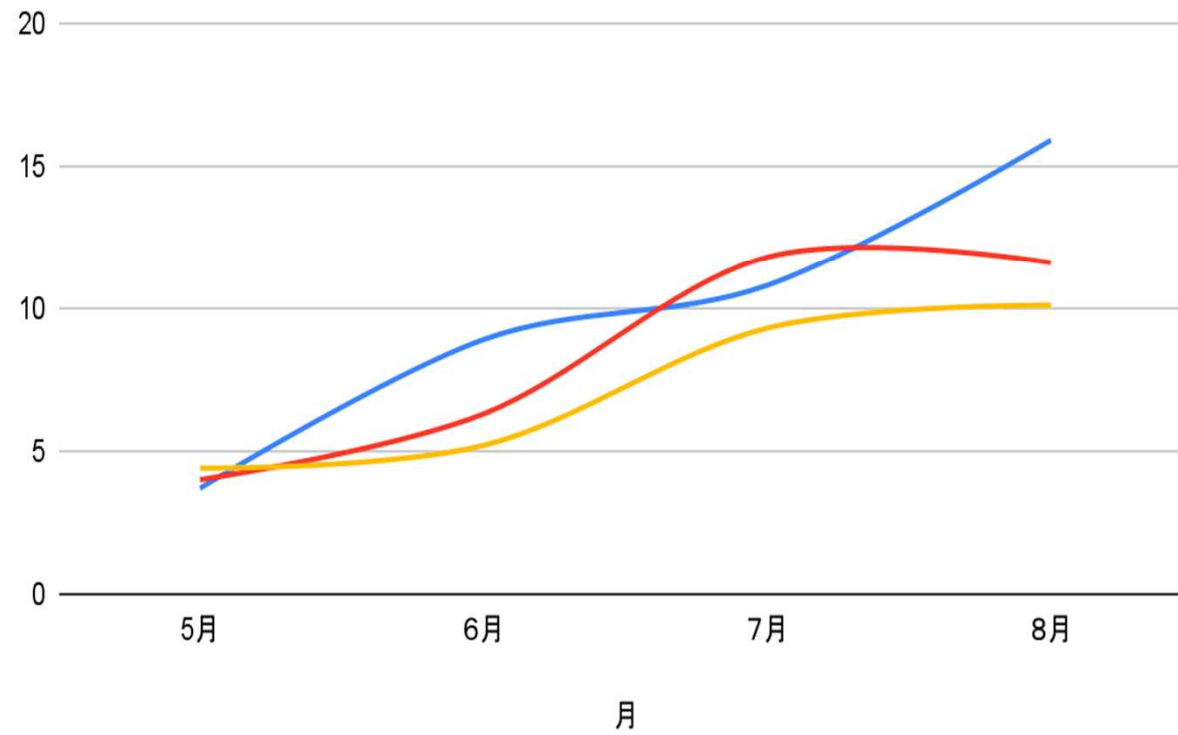
### Dissolved oxygen



## 6 What we found so far

Oyster weight (g)

■ 表層 ■ 中層-3m ■ 下層-5m





## Summary

1. Factors that affected the number of dead oysters in August were **low dissolved oxygen** rather than high water temperatures was the primary factor.
2. **Oysters in the surface layer grow best.**
3. We will continue our survey, paying attention to low dissolved oxygen and high water temperature.

# References

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# Special Thanks to;

- National Insutitue of Minamata Disease  
Mr. Akihito MATSUYAMA  
Ms. Yoko TANIGUCHI
- Minatama Fishery Cooperative  
Mr. Hiroki ISAYAMA  
Mr. Tomoo TAMURA