

Decadal trends in cadmium and lead concentrations in
Mytilus edulis samples from several European nations

https://github.com/slm119/ENV872_FinalProject

Sena McCrory

Contents

1	Rationale and Research Questions	5
2	Dataset Information	6
3	Exploratory Analysis	7
4	Analysis	8
4.1	Question 1: How have cadmium and lead concentrations in <i>Mytilus edulis</i> changed over time?	8
4.2	Question 2: Do cadmium and lead concentrations in <i>Mytilus edulis</i> differ by country?	8
5	Summary and Conclusions	12
6	References	13

List of Tables

List of Figures

1	Yearly median concentrations of cadmium and lead in <i>Mytilus edulis</i> ICES monitoring data from 1979 to 2018.	7
2	Distirbution of sample concentrations of cadmium and lead in <i>Mytilus edulis</i> from ICES data 1990 to 2019.	8
3	Cadmium and lead sample concentrations over time for ICES <i>Mytilus edulis</i> monitoring. Grey lines show the various instrument detection limits reported in each the data set.	9
4	Concentrations of cadmium and lead in <i>Mytilus edulis</i> in ICES study region from 1990 to 2018.	10
5	Concentrations of cadmium and lead in <i>Mytilus edulis</i> for countries with more than 100 samples between 1990 and 2018.	11

1 Rationale and Research Questions

2 Dataset Information

3 Exploratory Analysis

The ICES database includes *Mytilus edulis* sample data from 1979 to 2018 for X European countries. Most samples were collected near shorelines and within some enclosed bay or lake areas (Fig 1).

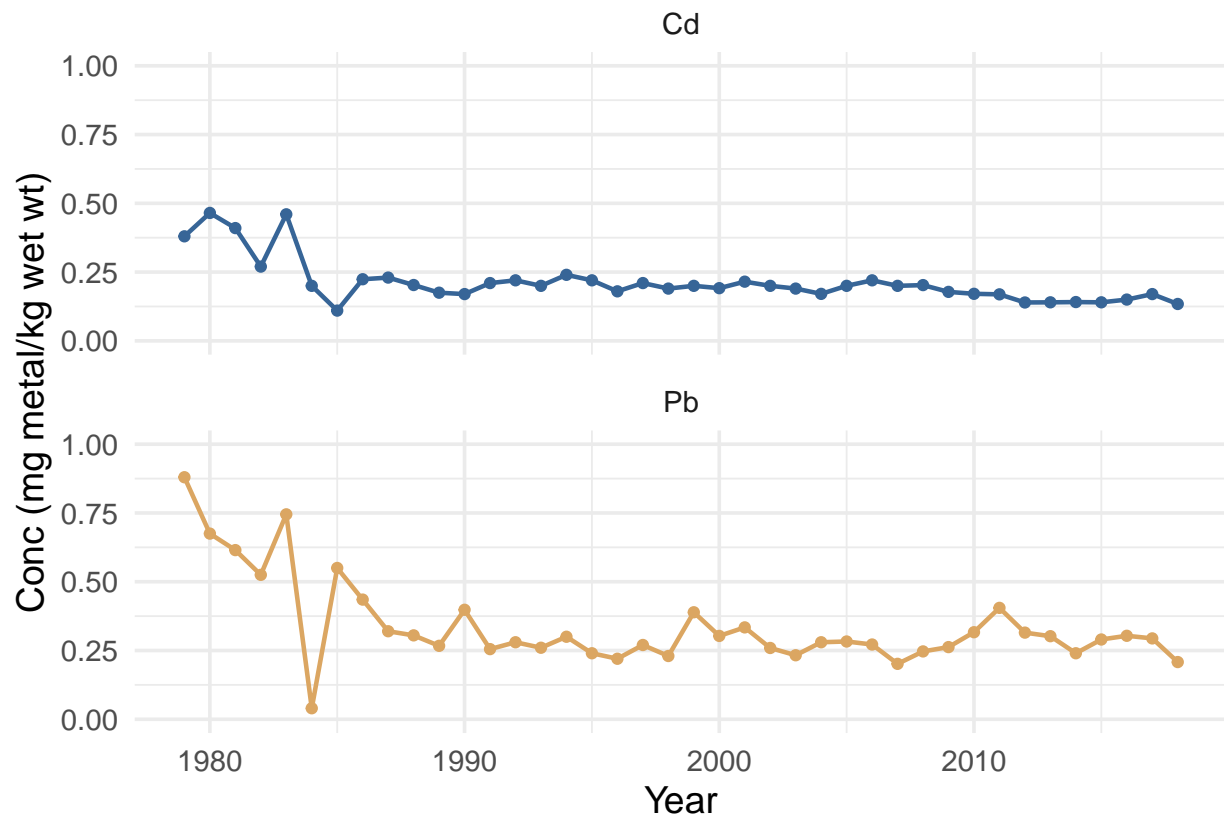


Figure 1: Yearly median concentrations of cadmium and lead in *Mytilus edulis* ICES monitoring data from 1979 to 2018.

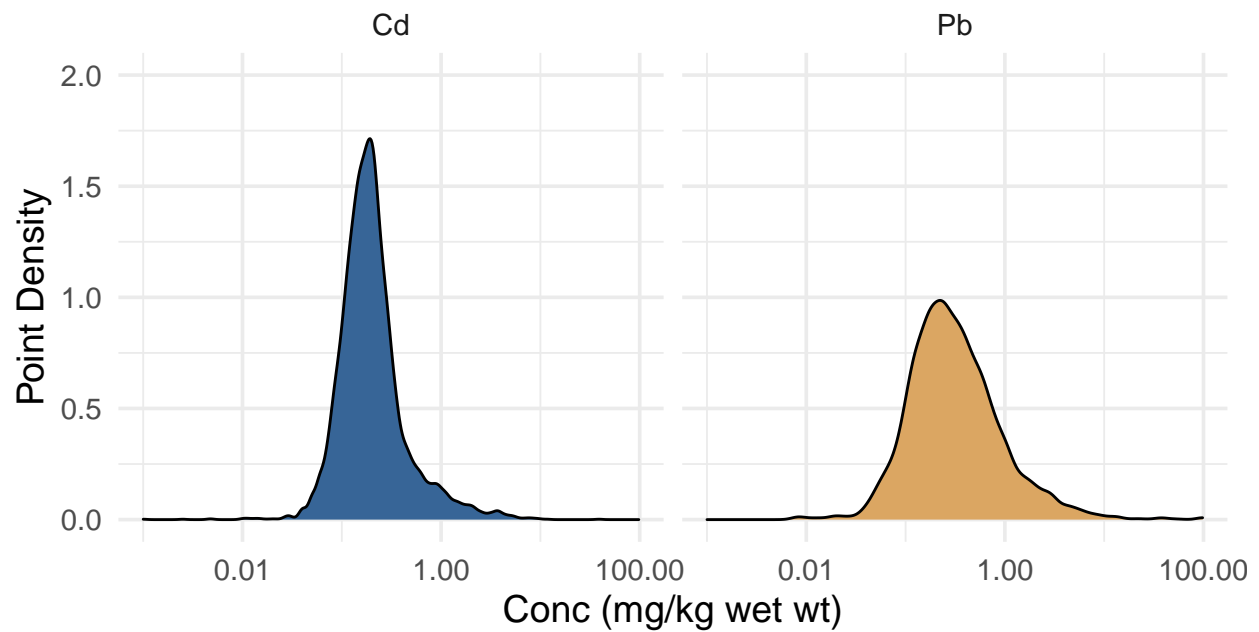


Figure 2: Distribution of sample concentrations of cadmium and lead in *Mytilus edulis* from ICES data 1990 to 2019.

4 Analysis

- 4.1 Question 1: How have cadmium and lead concentrations in *Mytilus edulis* changed over time?
- 4.2 Question 2: Do cadmium and lead concentrations in *Mytilus edulis* differ by country?

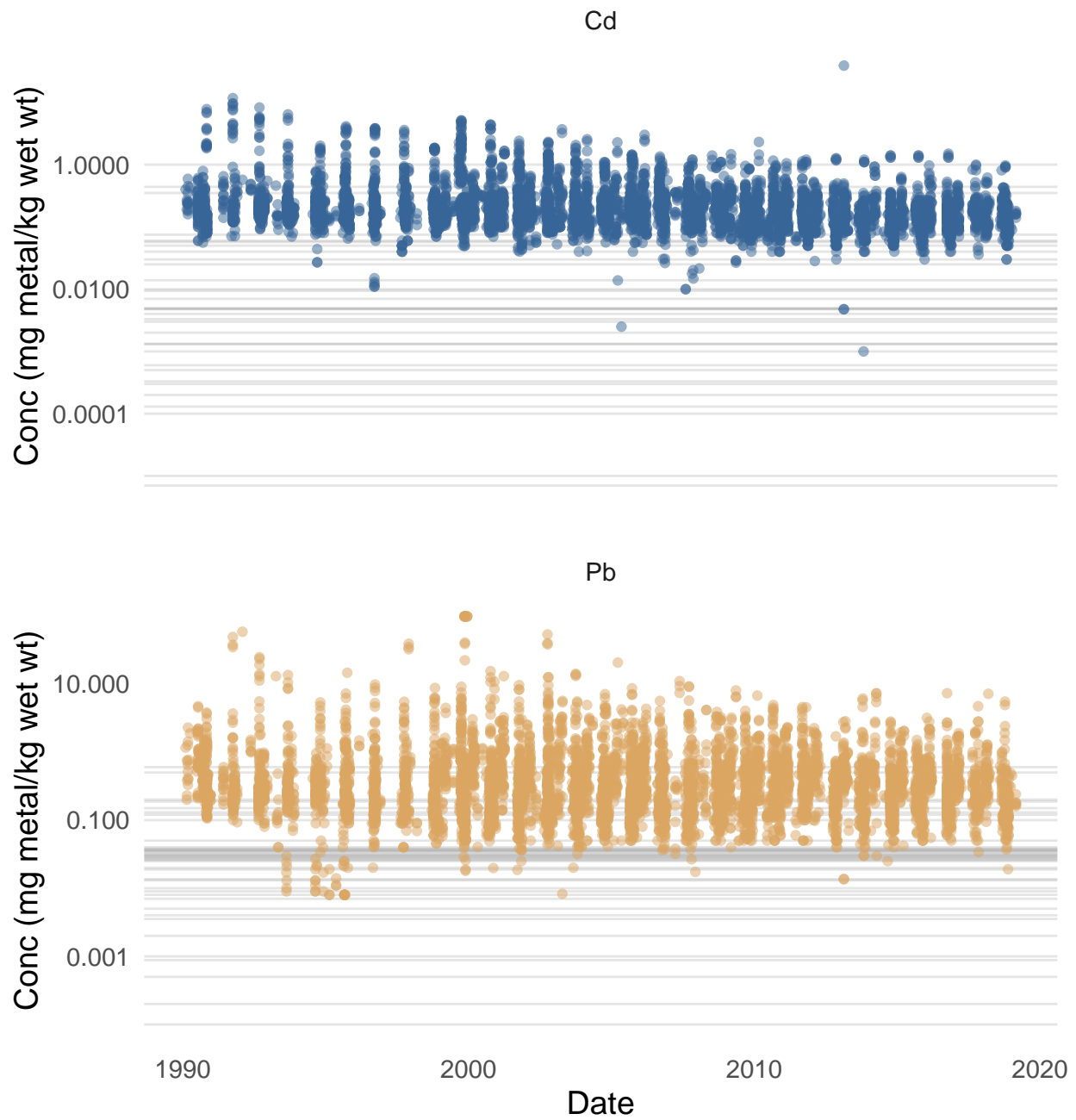


Figure 3: Cadmium and lead sample concentrations over time for ICES *Mytilus edulis* monitoring. Grey lines show the various instrument detection limits reported in each the data set.

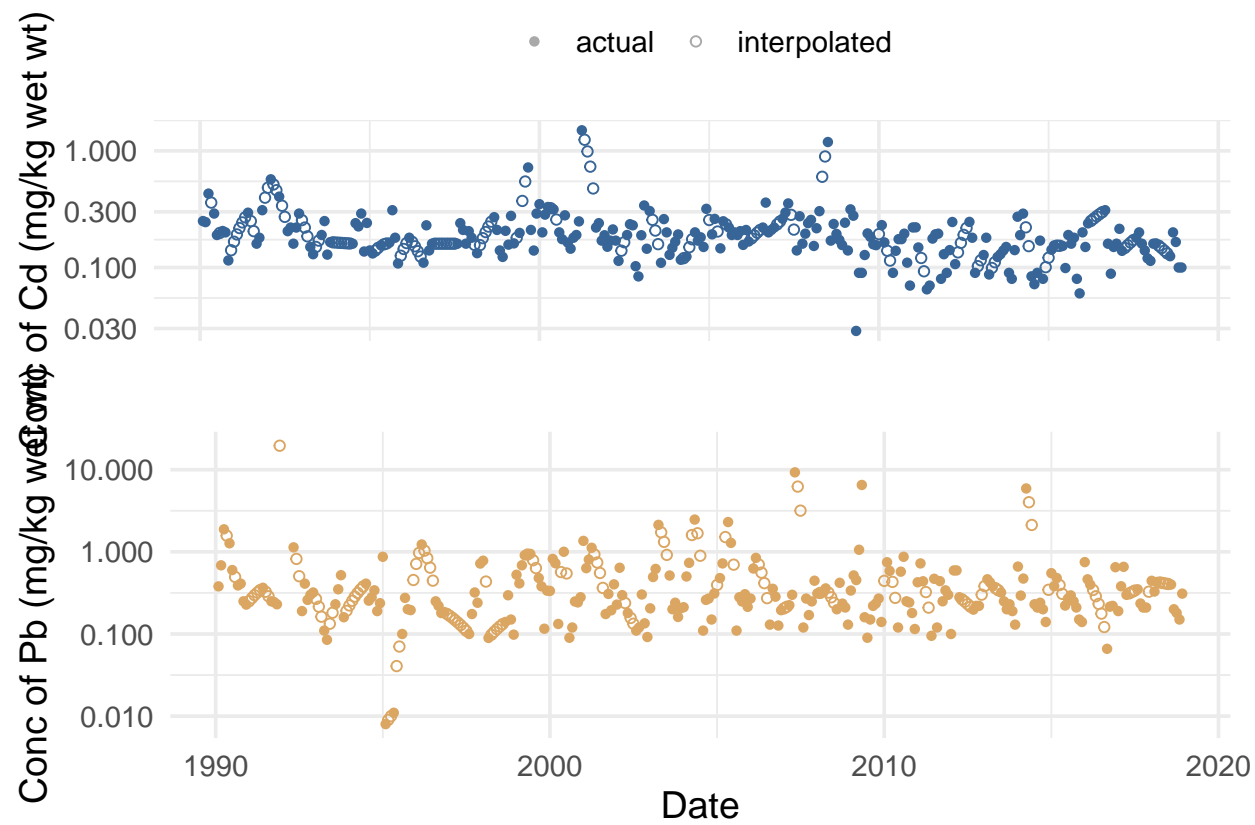


Figure 4: Concentrations of cadmium and lead in *Mytilus edulis* in ICES study region from 1990 to 2018.

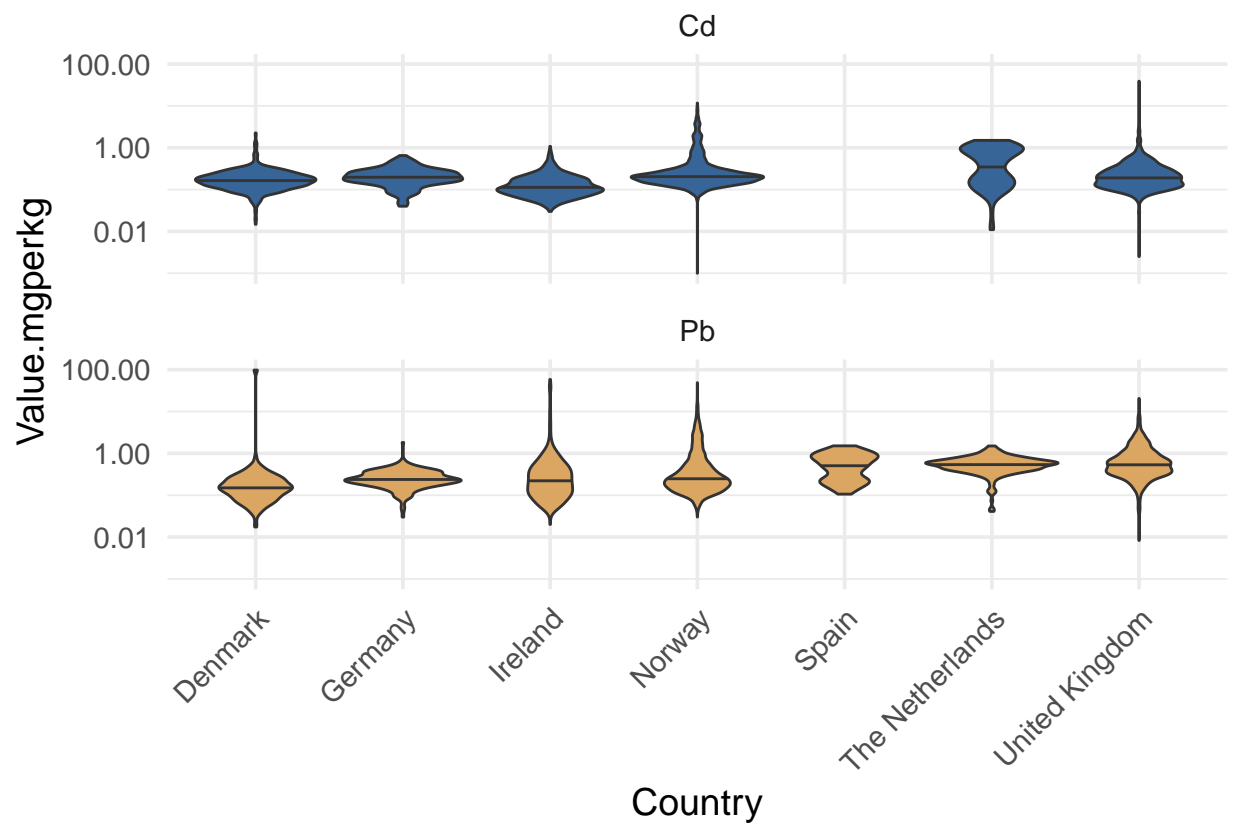


Figure 5: Concentrations of cadmium and lead in *Mytilus edulis* for countries with more than 100 samples between 1990 and 2018.

5 Summary and Conclusions

6 References

<add references here if relevant, otherwise delete this section>