



Are Cleaner Fish Helping or Harming Norwegian Salmon?

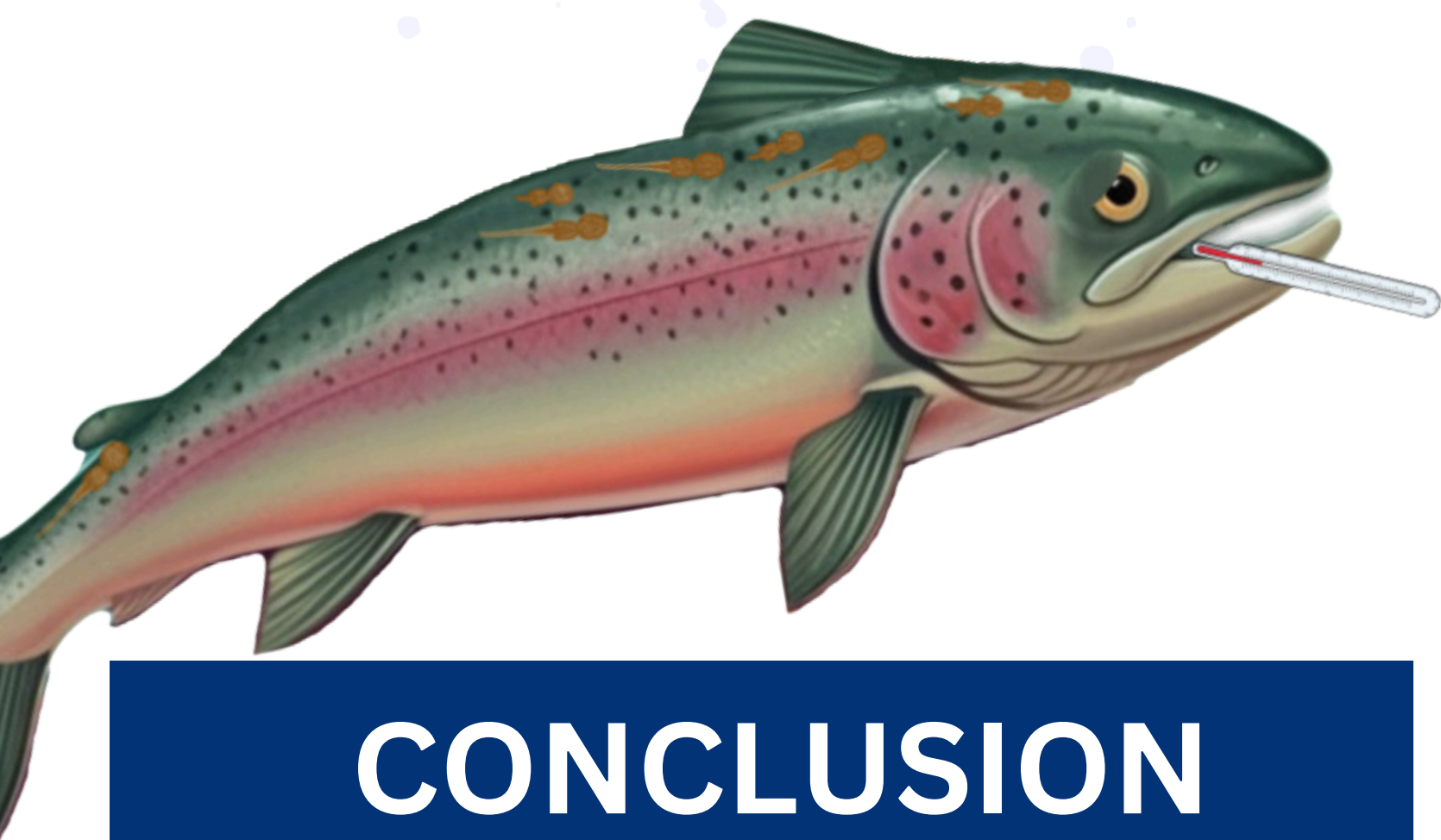
INTRODUCTION

The spread of lice and disease poses risks to salmonoids Aquaculture in Norway. To manage sea lice, the industry uses cleaner fish as a biological control. Concerns are rising about the transmission of viral diseases such as Pancreas Disease (PD) and Infectious Salmon Anemia (ISA) between cleaner fish and salmon.

METHODS

Data on delousing methods (mechanical, medical, cleaner fish) and PD/ISA outbreaks were extracted from BarentsWatch.

PD/ISA cases were filtered, and delousing methods were grouped into "Cleaner fish" and "Not cleaner fish" using R-studio.

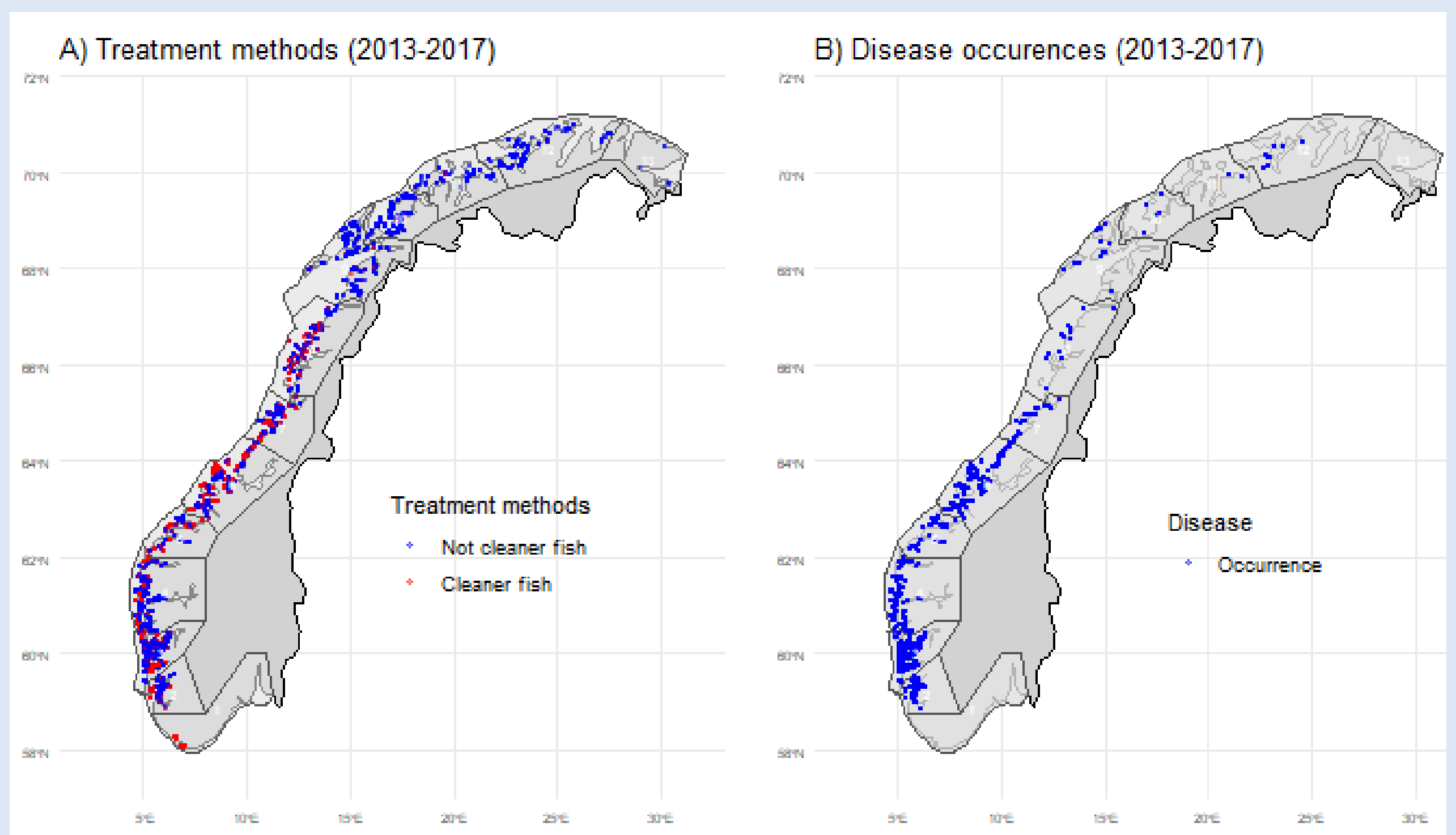


CONCLUSION

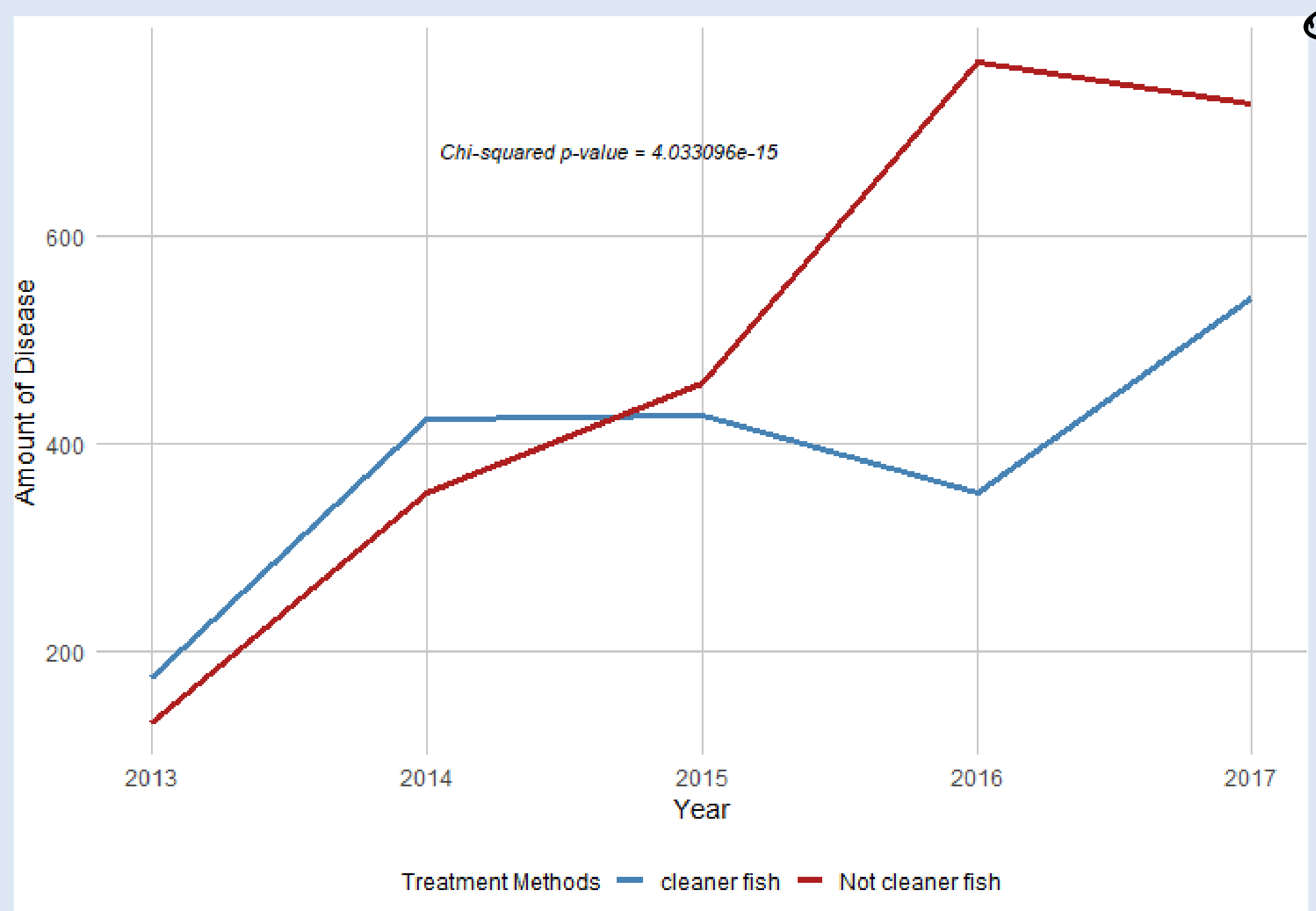
Facilities using cleaner fish for lice control experienced a more gradual and stable increase in disease occurrences compared to those how use other methods. . The Chi-squared test confirmed a statistically significant difference between the two groups.

RESULTS

The map (A and B) shows the spatial distribution of salmon lice treatment methods and reported disease outbreaks (PD and ISA) in Norwegian aquaculture facilities from 2013 to 2017.



Disease occurrence trends in aquaculture facilities using different salmon lice treatment methods. The chi-test resulted in a p-value of $4.022e-15$, indicating a strong statistical significance.



References
BarentsWatch. (n.d.). BarentsWatch. Retrieved 12. October 2024, from <https://www.barentswatch.no/>
Shutterstock AI. (2024). Cartoon of a lumpfish cleaning a salmon [AI-generated image]. Shutterstock. <https://www.shutterstock.com/nb/ai-image-generator>