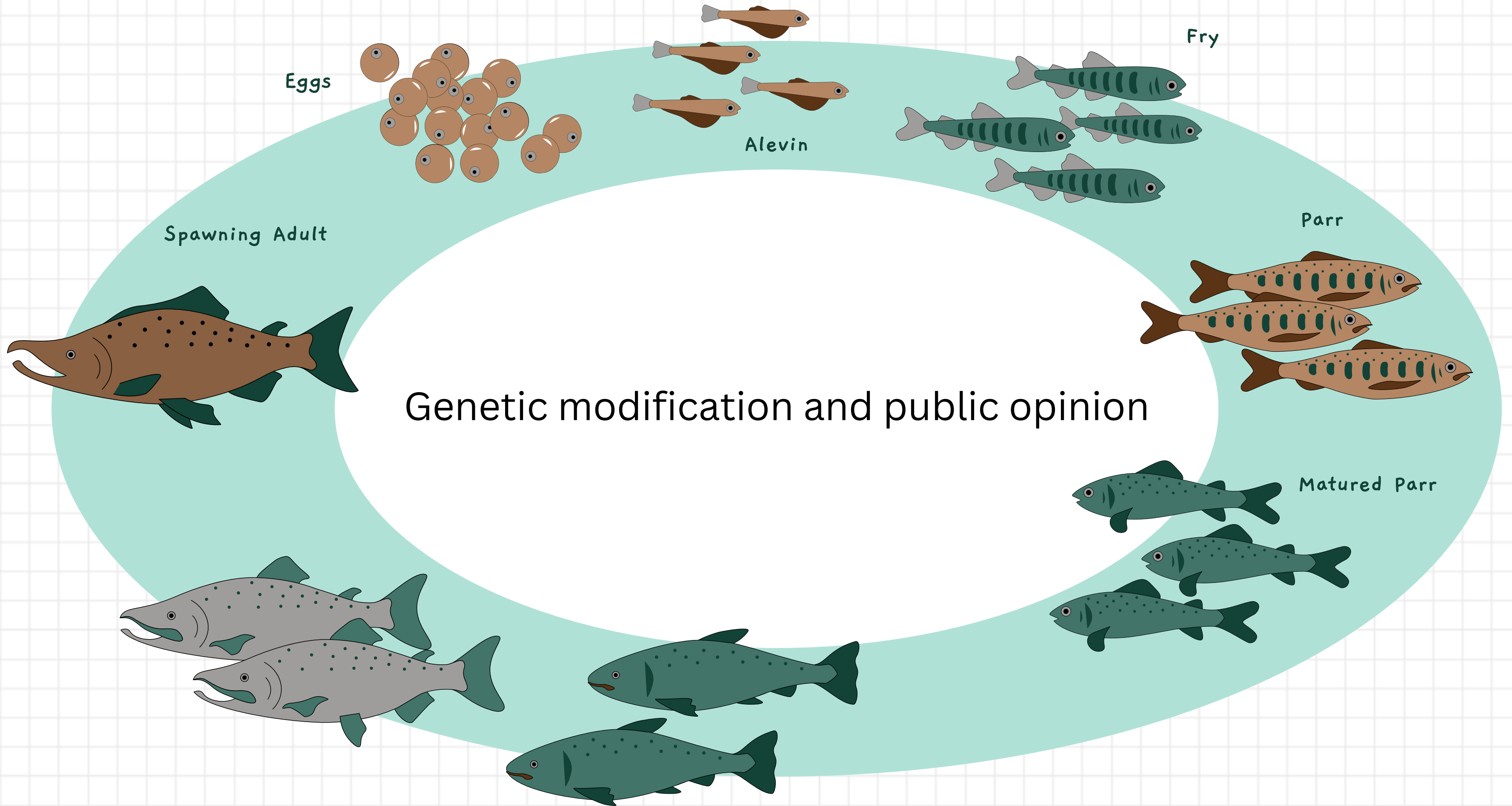




# Effects of GM Salmon

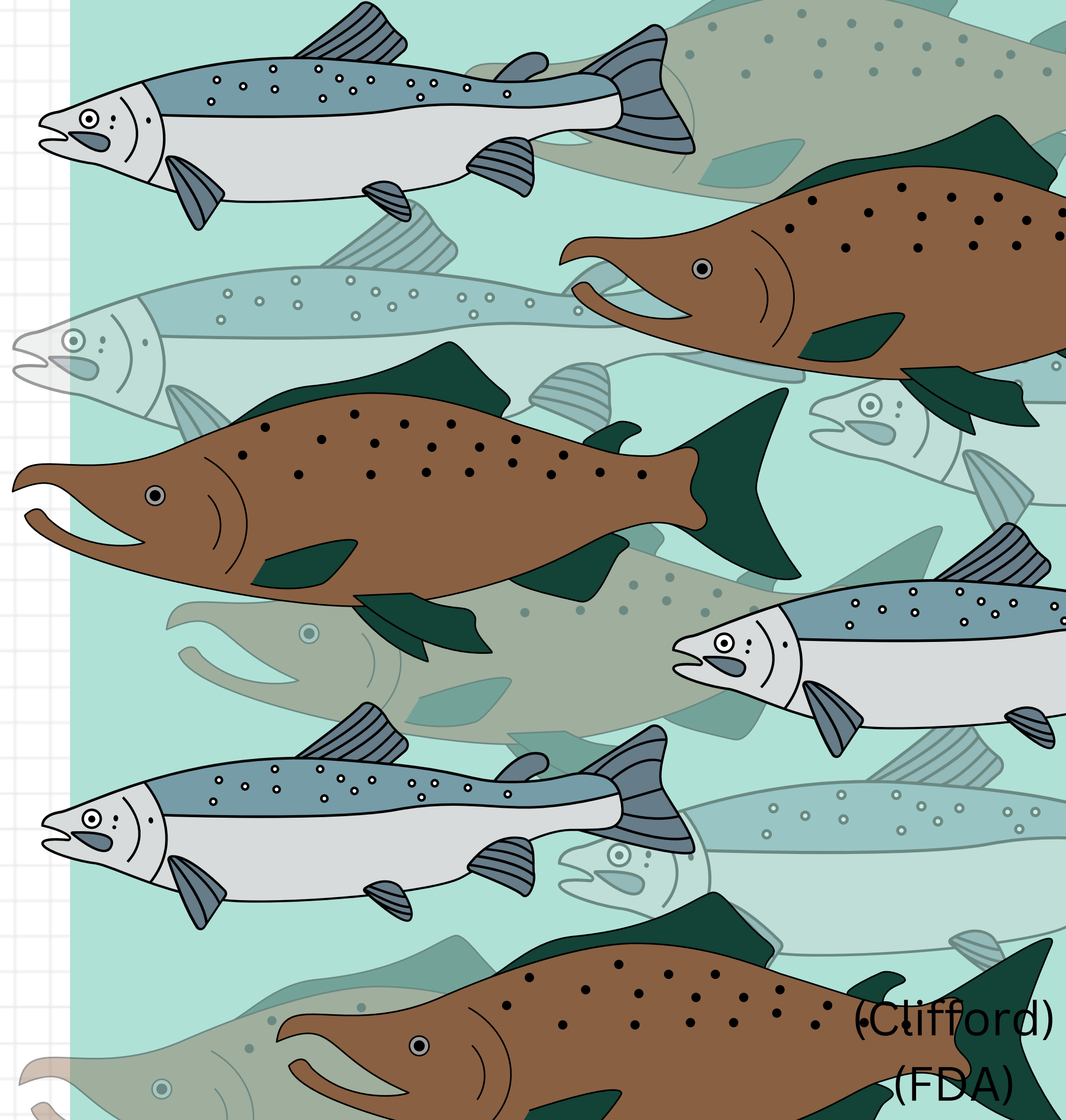
in natural environments



(Amin et al.)

# GM Salmon

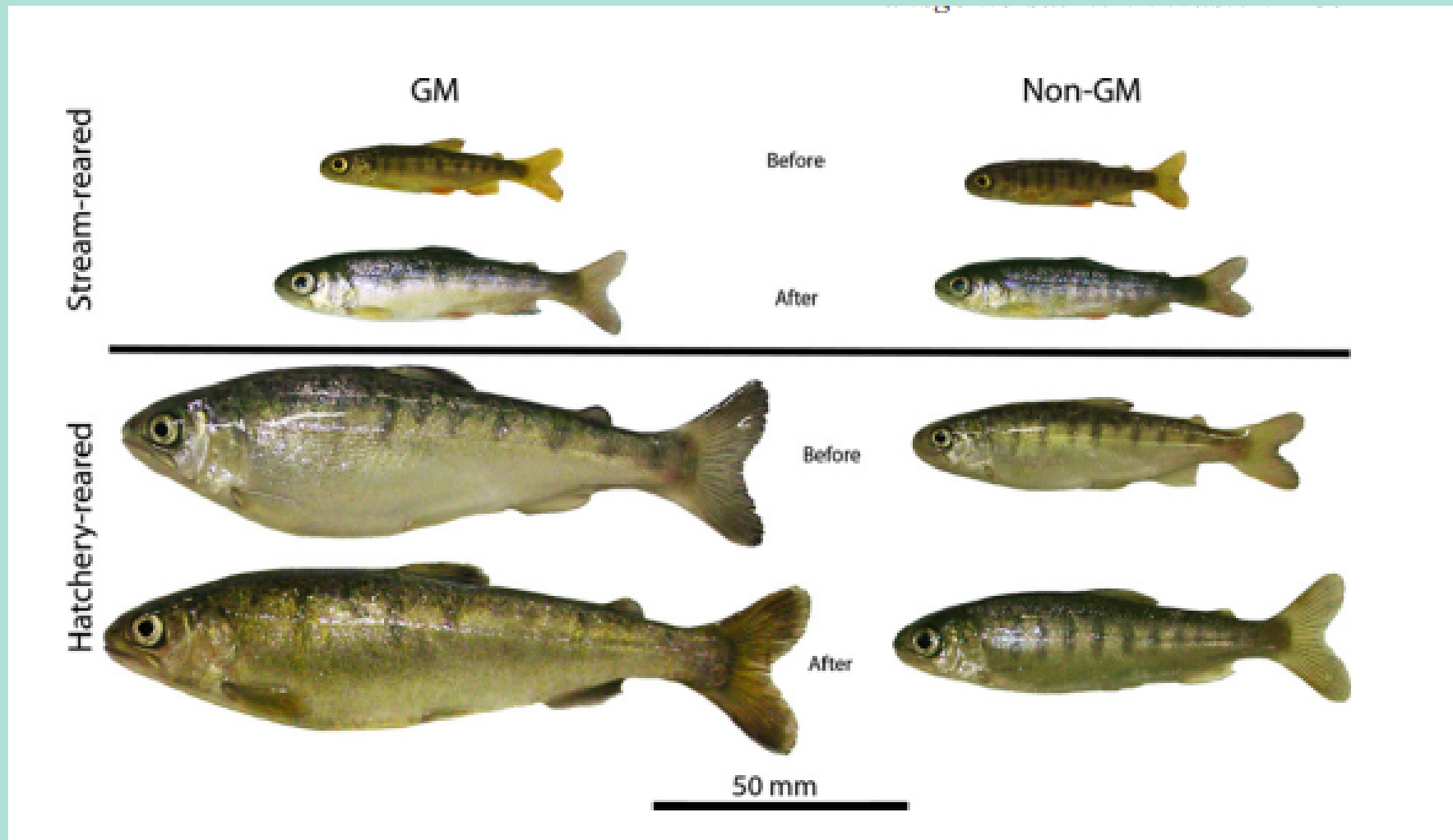
- Genetically modified salmon.
- Pioneer in the field – AquAdvantage.
- Genes are edited and transgenic changes are made, Chinook and Pout DNA is inserted.



(Clifford)  
(FDA)

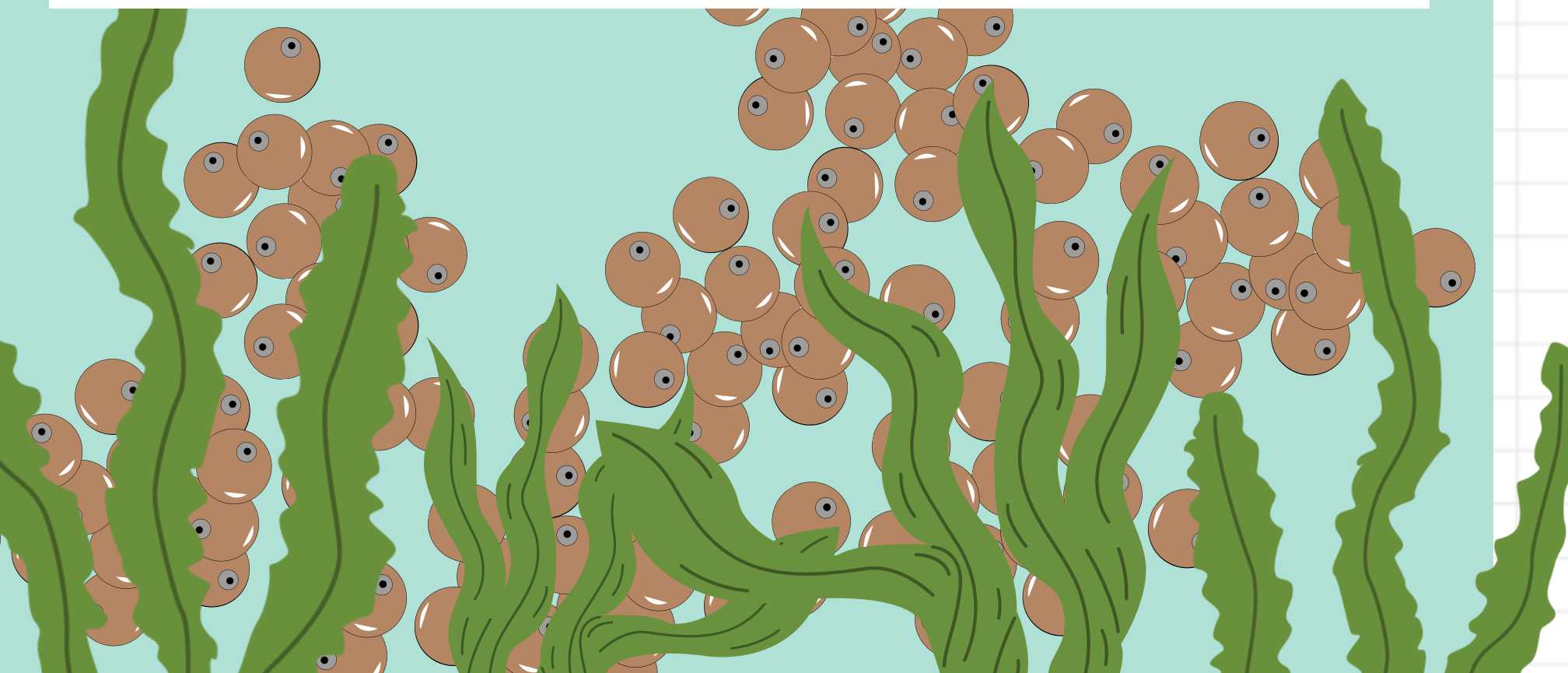


# Evaluation by the FDA

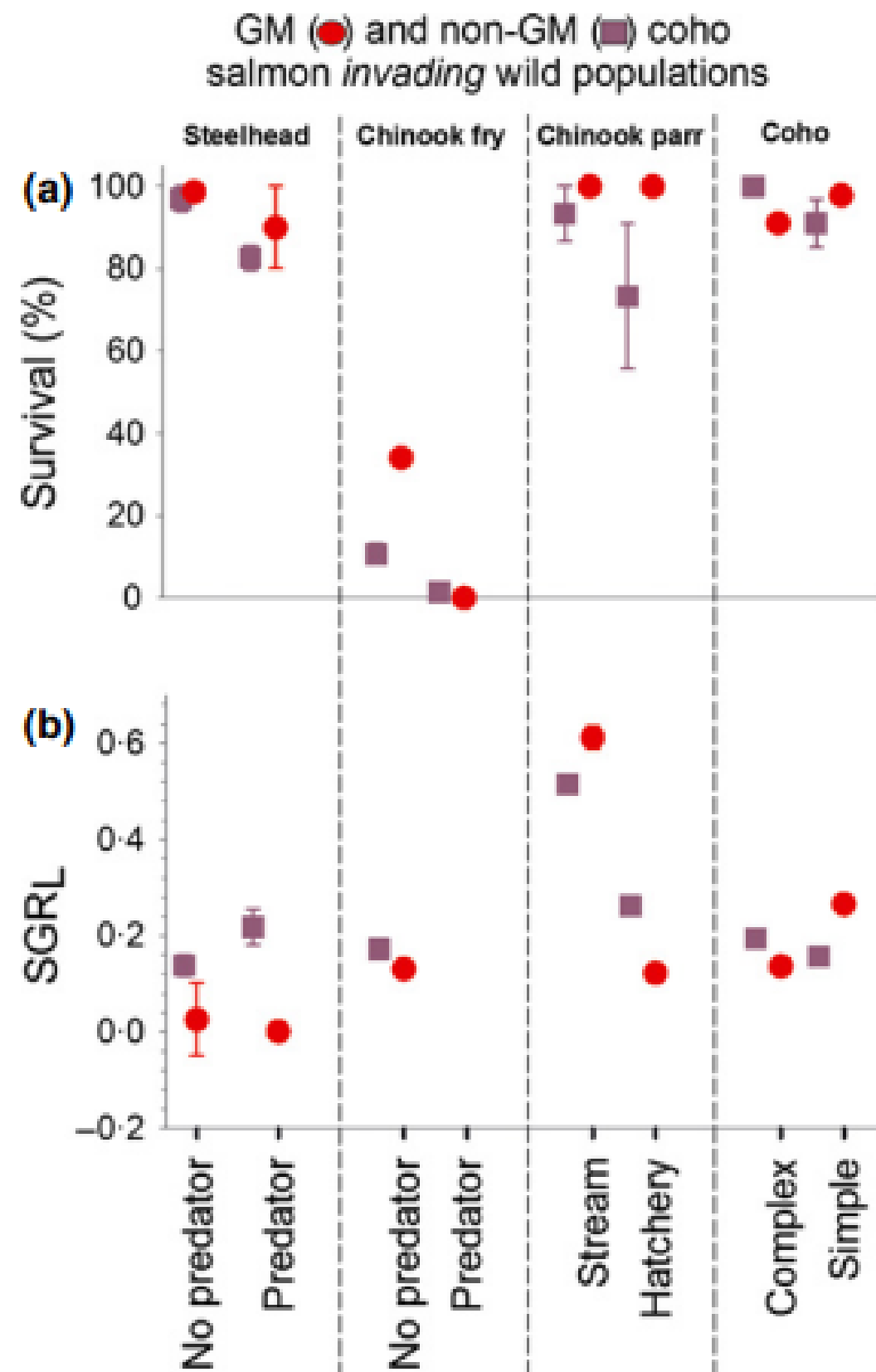


- FDA approved and concluded that GM salmon is safe to consume.
- Hormonal evaluations have been done.
- Environmental regulations are in place.

(Sundström et al.)



# Environmental impacts



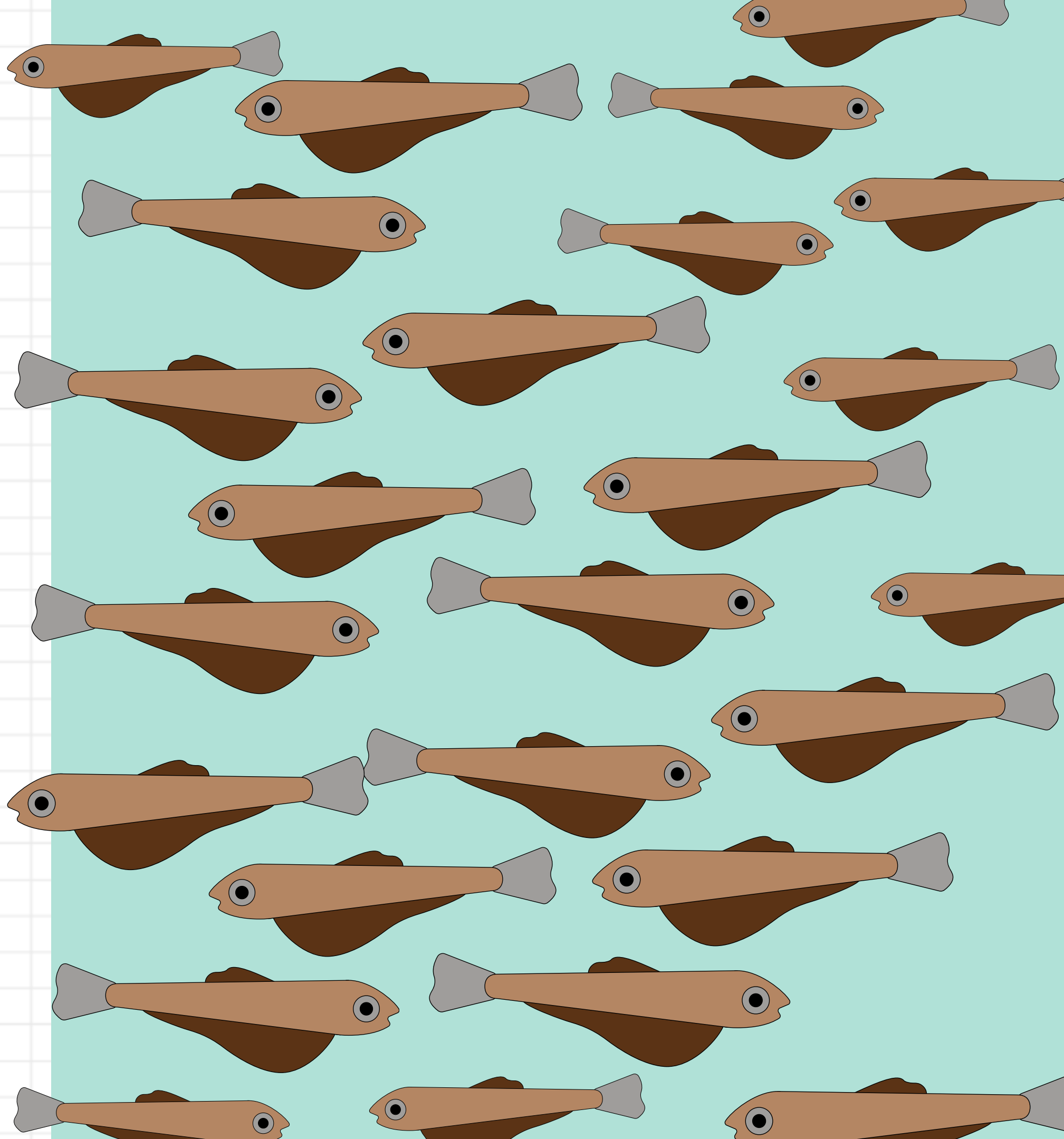
- genetically modified (GM) growth-enhanced coho salmon
- Significant difference between impacts of Hatchery raised and Stream raised fish.

# Limitations

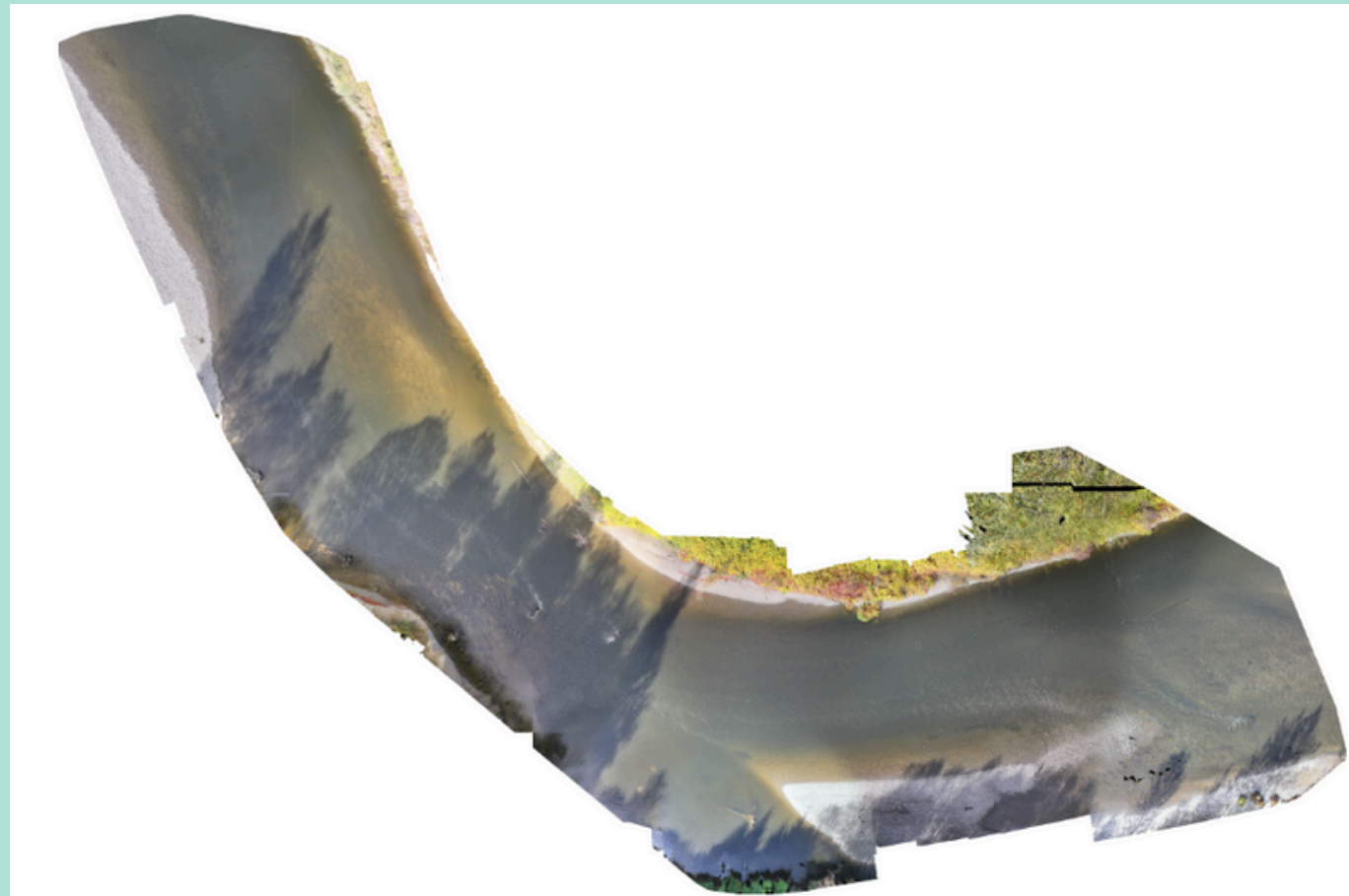
- Some experts believe it would not bring change.
- Some are afraid of the negative environmental impacts

# Adressing

- Americans require more awareness
- Trustworthy sources must be provided



# Utilizing Data to Monitor Salmon:Drones



An orthomosaic image of a segment of the Snoqualmie River. An orthomosaic is a detailed collage of smaller images stitched together using software. This orthomosaic was created using Pix4dmapp. Credit to CTRL's Helen Kuni and Evelyn Madewell.

## Drones

- Take images that can be stitched together utilizing AI software.
- Responsive and cost-efficient.

## Implications

- More frequent surveying.
- Population estimates.

## Limitations

- Still being developed.
- Varying landscape.
- Models still need training.





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Thank You for Listening