

# Red-Listed Seafood

NUTR 4913 SUSTAINABLE FOOD  
SYSTEMS AND DIETARY PATTERNS

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# STATEMENT OF THE PROBLEM

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**The problem:** There is a lot complexity and lack of transparency surrounding the global seafood supply chain and what seafood is sustainable to eat.

Buying seafood that is red-listed poses a significant problem, as it is linked to major concerns for our fisheries and the health of the planet.

- Low fish stock numbers
- Destabilization of the ecosystem-wide food chain.
- Irresponsible fishing practices that contribute to the destruction of our oceans.

Therefore, this seafood should not be made commercially available and alternative options need to be considered.





## CHARTWELL'S SUSTAINABILITY COMMITMENT

- Body
  - Community
  - Planet
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# CATEGORIZING RED- LISTED SEAFOOD

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**Seafood Watch's** ranking system is the foundation for many sustainability recommendations.

- Tailored for various types of fishing:
  - Fisheries
  - Aquaculture
- Scoring revolves around major sustainability criteria.
  - Sum of the scores designates specific stock as Green, Yellow, or Red.

(Monterey Bay Aquarium, 2020).







# Fisheries

**Wild-caught seafood that is not artificially managed through aquaculture.**

- **Four main criteria to assess sustainable practices.**

(Monterey Bay Aquarium, 2020).



# Sustainability Ranking of Fisheries



**Green (Good Choice)** if the criteria sum is between 3.3 and 5, with no red or critical scores.



**Red (Avoid)** if score is less than 2.2, or two or more red, and/or more than one critical score.



**Yellow (Good Alternative)** if sum is between 2.2 and 3.2, with no critical scores and no more than 1 red score.





# Aquaculture

**Farmed seafood that is often located within an artificial barrier or within human-made enclosures outside of the ocean.**

- **Ten criteria to assess sustainable practices.**

(Monterey Bay Aquarium, 2020).



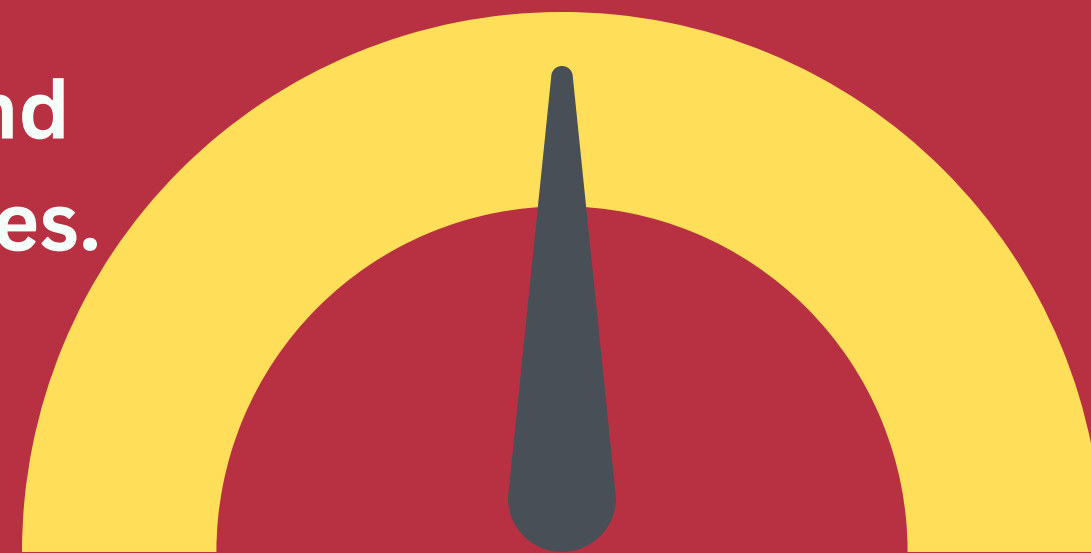
# Sustainability Ranking of Aquaculture



**Green (Good Choice)** if the criteria sum is between 6.7 and 10, with no red or critical scores.



**Red (Avoid)** if score is less than 3.4, and/or more than one red, or one or more critical scores.



**Yellow (Good Alternative)** if sum is between 3.4 and 6.6, and/or one red score, with no critical scores.

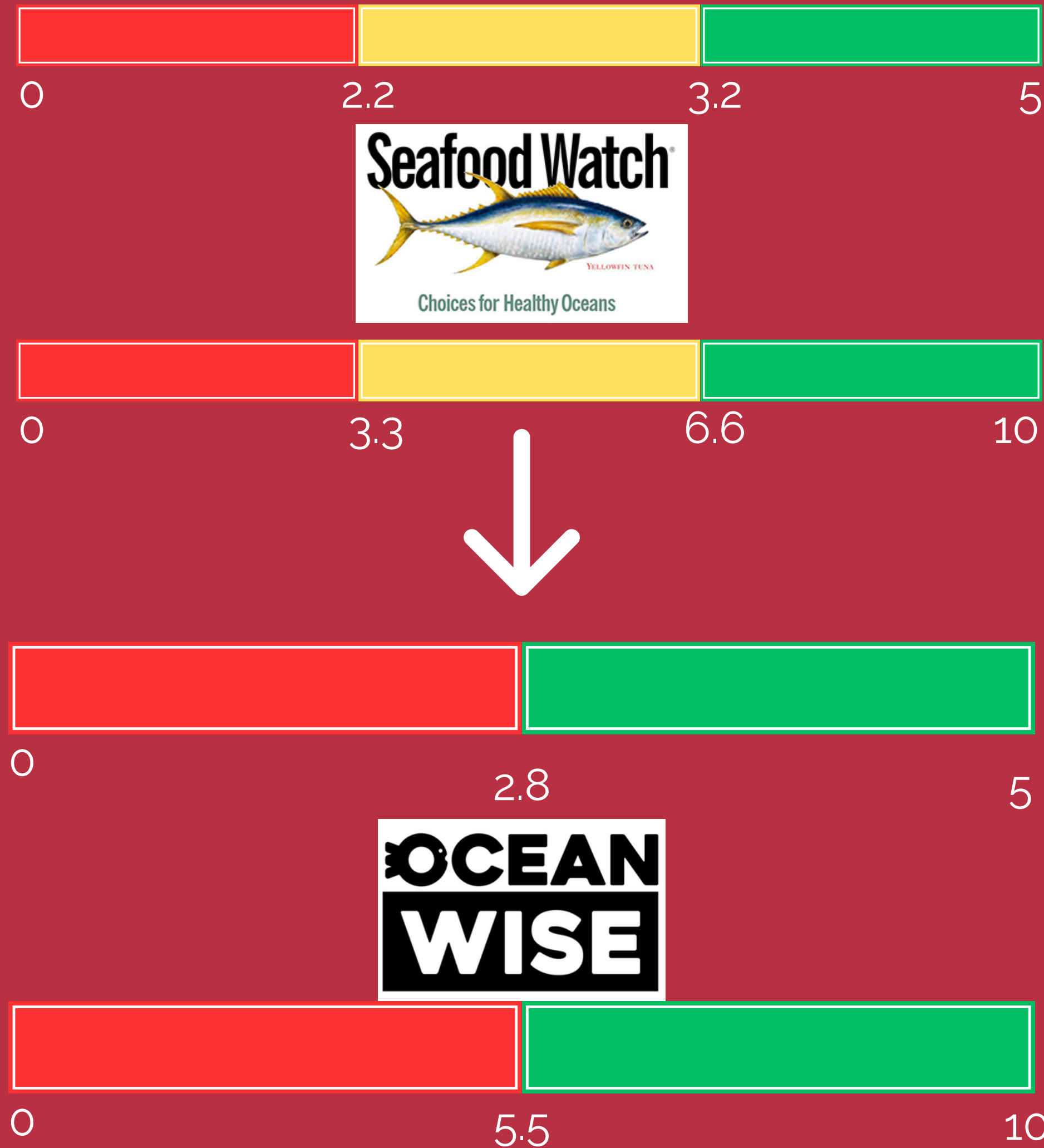


# OTHER ORGANIZATIONS

Many other initiatives that assess sustainability reference the scores from Seafood Watch.

- Ocean-Wise
  - Draws from these scores but converts them from three-fold to a binary system.
  - "Recommended or red-listed"

(OceanWise, 2023)







# IS SEAFOOD IN CANADA SUSTAINABLE?

**Nova Scotia Department of Fisheries** Vision: "An economically, environmentally, and socially sustainable aquaculture industry creating year-round jobs and increased wealth throughout rural coastal Nova Scotia."

**The Government of Canada** states that the country leads in the sustainable management of seafood systems.

## What does the Red List show?

- Despite these statements, the Canadian and Nova Scotian seafood picture is more complex. The red list shows that not every product originating in NS or Canada is recommended.
- Obtain from a trusted source with evidence backing its sustainability, even if it isn't local!





# GLOBAL SCALE - HOW DO WE FIT, NOW AND IN THE FUTURE?

Canada is surrounded by three oceans!

- Caring for these and using their resources in a sustainable way is important to keep it healthy for the future.

Fish and seafood products are some of the highest categories of goods exported from Canada - approximately \$8.7 billion annually

How do we ensure that we have aquatic resources for the future, especially with growing demand?

- Source sustainably. Resources like the red list allow consumers to invest in quality product that allows us to protect the integrity of the ocean and its resources while still enjoying seafood.





# ENVIRONMENTAL AND ECONOMIC SUSTAINABILITY

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**Aquaculture** is one of the fastest growing aspects of the food industry, and its expanse is broad - from small scale to large scale production, and ecosystems all over the ocean.

**Limited diversity in diets** causes excessive demand in a limited number of species, which can cause interruptions in marine ecosystems. Including diversity in seafood consumption reduces the stress on ocean populations.

**Economic reliance** on one species can increase the risk - if that part of the system collapses, the industry has nothing else to fall back on.





# EFFECTS ON FISH-RELYING COMMUNITIES

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- Growing populations and the growing appetite for fish and seafood in developed nations.
- Billions of people around the world rely on fish and seafood as an essential source of protein and a means of income.
- Commercial fishing operations threaten fish populations and smaller-scale fishing operations that make a living from fishing.





# HEALTH CONSIDERATIONS

## NUTRITION RECOMMENDATIONS

- Fish and other seafood contains high levels of omega-3 and omega-6 fatty acids, vitamin D, selenium, iodine, magnesium, iron and copper.
- All seafood can be eaten in moderation, however, it is best to stick with types of fish that contain higher levels of fatty acids and have lower levels of mercury.

**For examples: anchovy, herring, salmon, smelt, shrimp, mussels, oysters, and more.**

## MERCURY CONSUMPTION

- Limit consumption of high mercury fish, especially in people who are pregnant or breastfeeding.
- Excessive human exposure to mercury can lead to impaired functions of the central and peripheral nervous systems.

**High mercury fish: tuna, shark, swordfish, escolar, marlin, and orange roughy.**





# ROLE OF CHARTWELLS

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**Embrace the unique position of  
being the leader of change.**

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**Stay up to date.**

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**Educate students and promote  
critical thinking.**



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