

Adventures in LCA

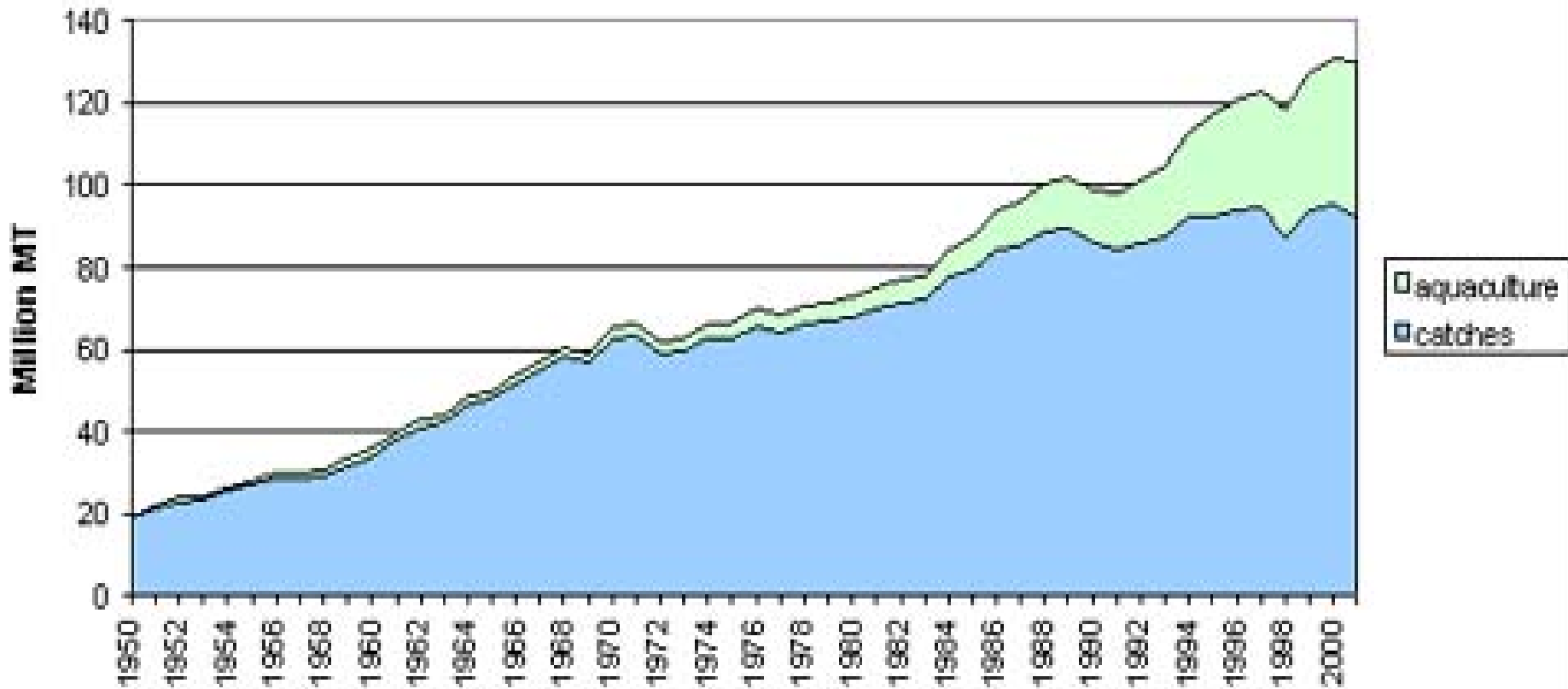
Transforming the sustainable seafood debate
one impact category at a time

Astrid Scholz

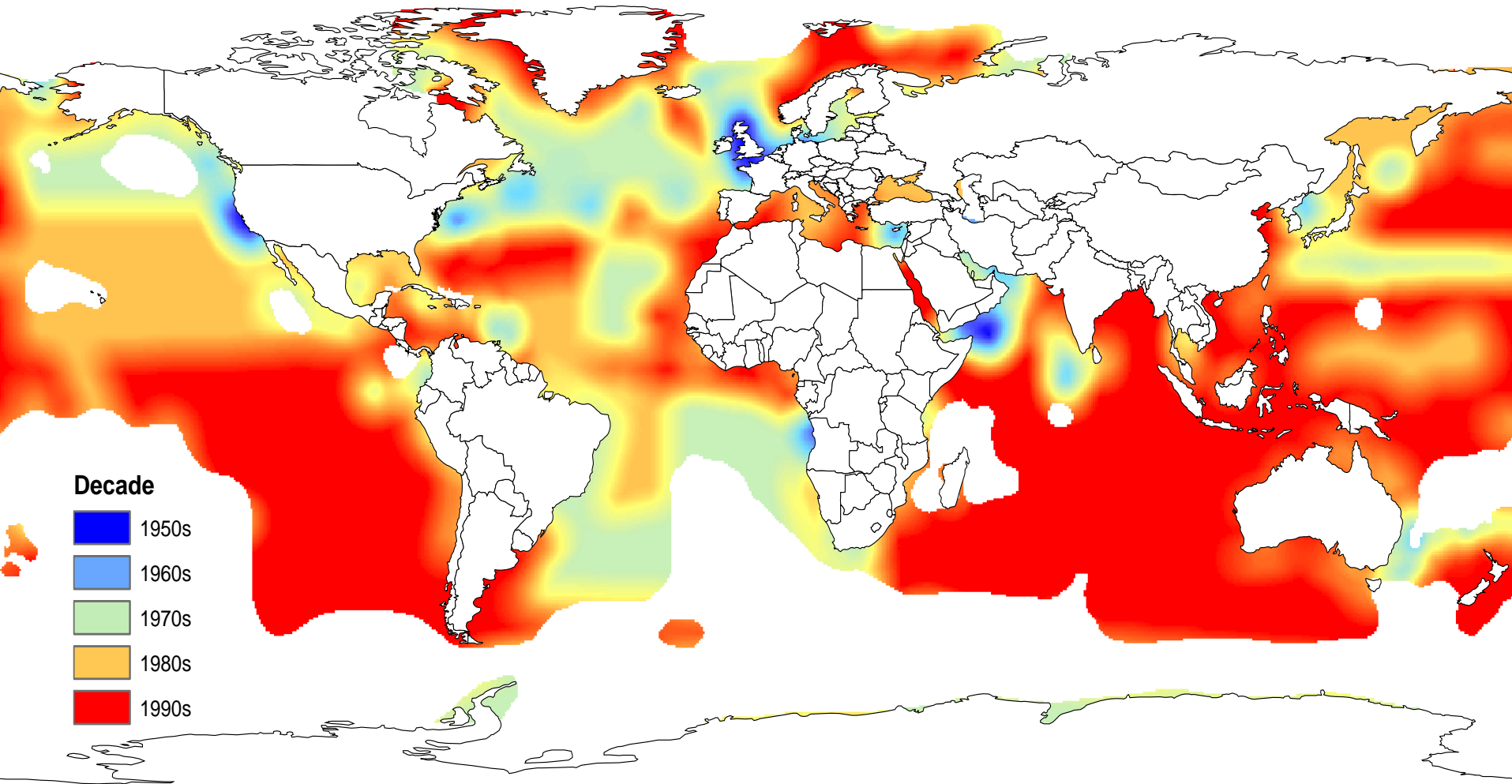
LCA in Foods, Göteborg, 25 April 2007

The world has an insatiable appetite for seafood...

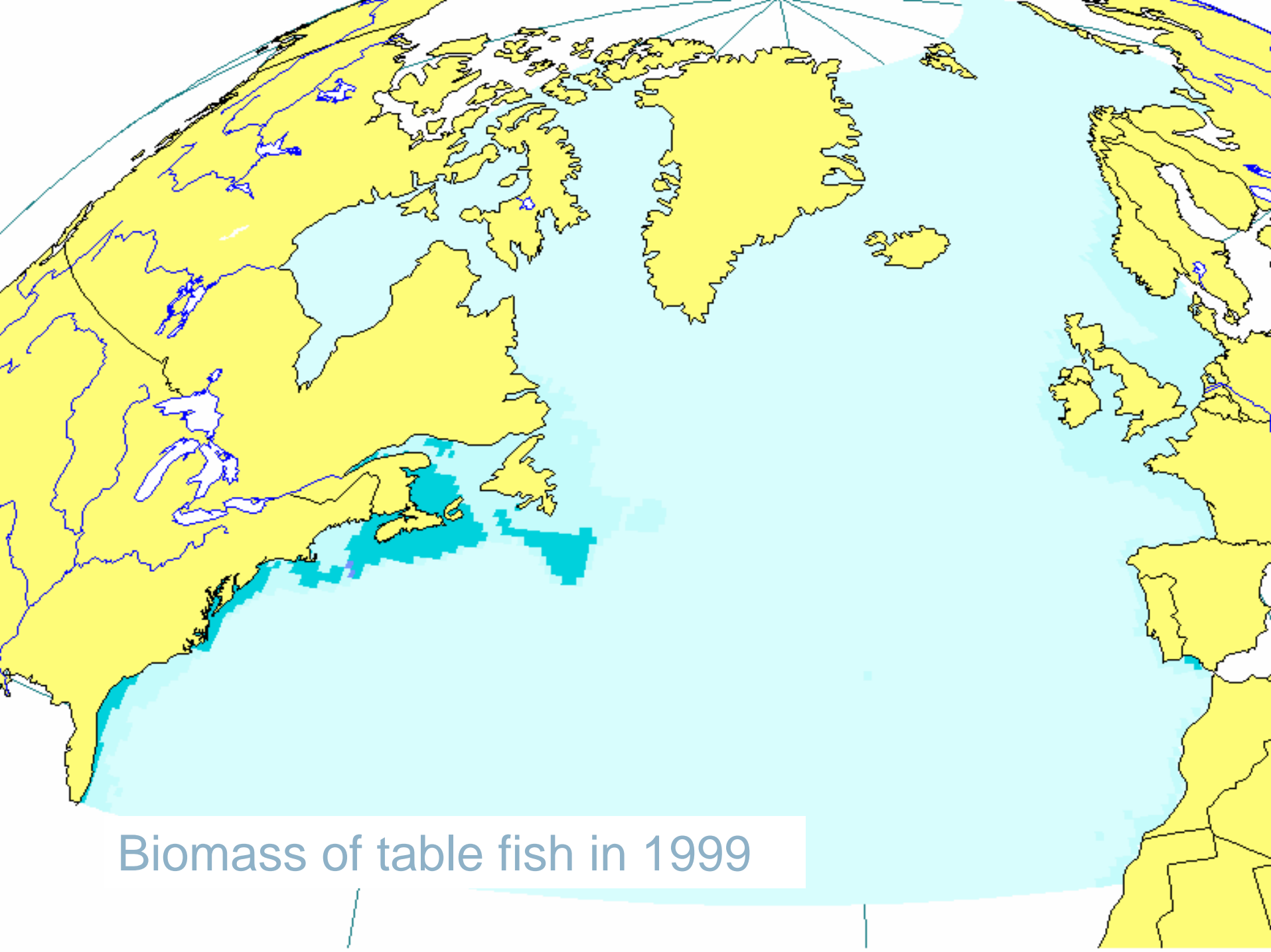
Figure 2: Evolution of world seafood production



Fish have no place left to hide from global fleets...

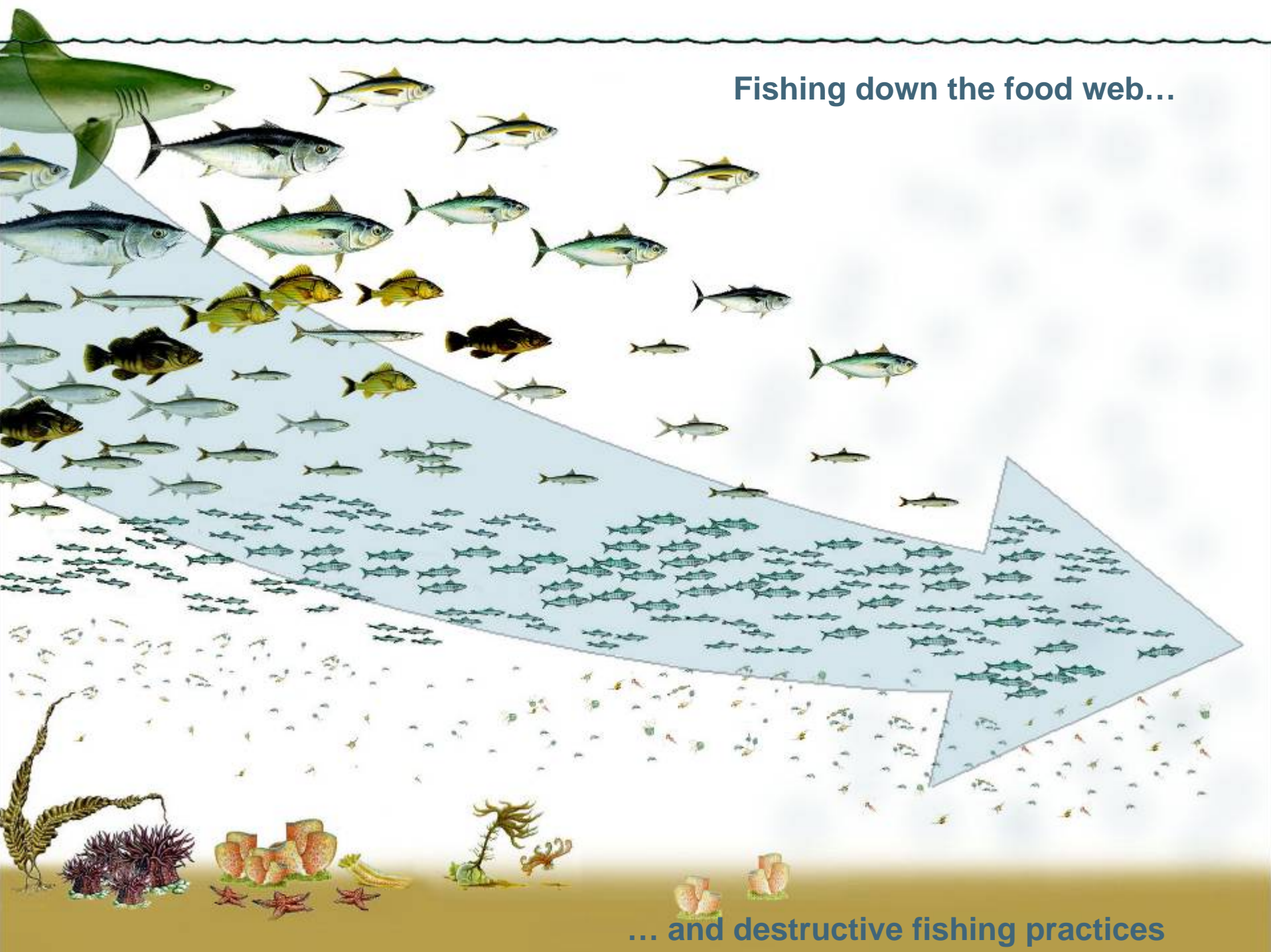


Map shows decade of highest catch: expansion to Southern Oceans, 1950-2000;
slide courtesy of Daniel Pauly, UBC/SAUP



Biomass of table fish in 1999

Fishing down the food web...



... and destructive fishing practices

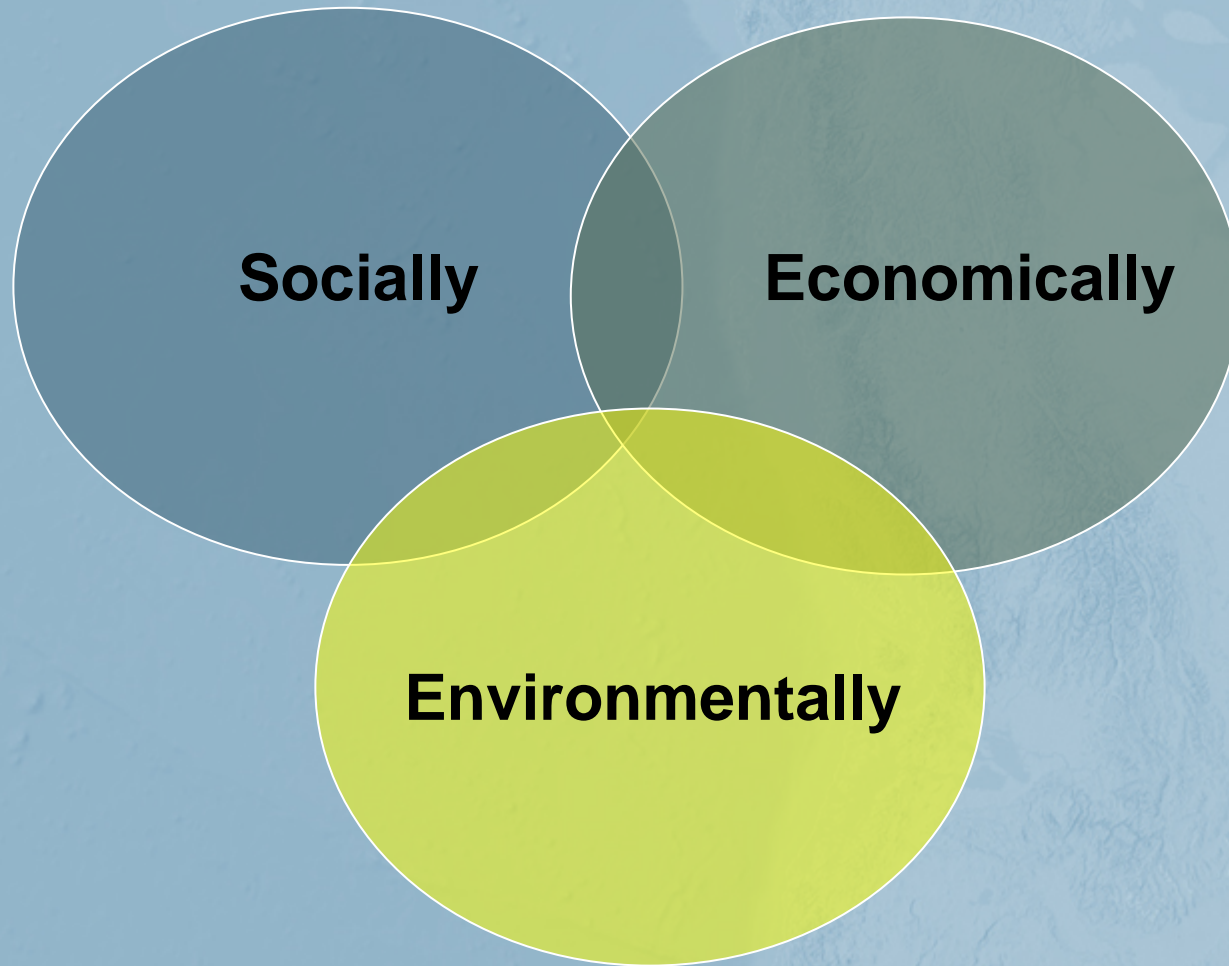
Aquaculture has its problems, too...



- Escapes
- Parasites/diseases
- Pollution
- Feed
- Etc.



Is Seafood Consumption Sustainable?





FORESTRY



FISHERIES



FOOD & FARMS



**KNOWLEDGE
SYSTEMS**



**NATIVE
PROGRAMS**



CITIZENSHIP

Working in Salmon Nation

- Community development from Alaska to California;
- Building a conservation economy: balancing economy, ecology, equity (3E);
- Fisheries, forests, food & farm; First Nations
- Research, ecosystem mapping, decision support tools, investments
 - Shorebank Enterprise Pacific
 - Natural Capital Fund
 - North Pacific Fisheries Trust

HOI TIA'S
NATION



MOOSE NATION



WILD RICE
NATION



CLAMBAKE
NATION



MAPLE SYRUP
NATION



CORN
BREAD
NATION

GATOR NATION



PINYON NUT
NATION

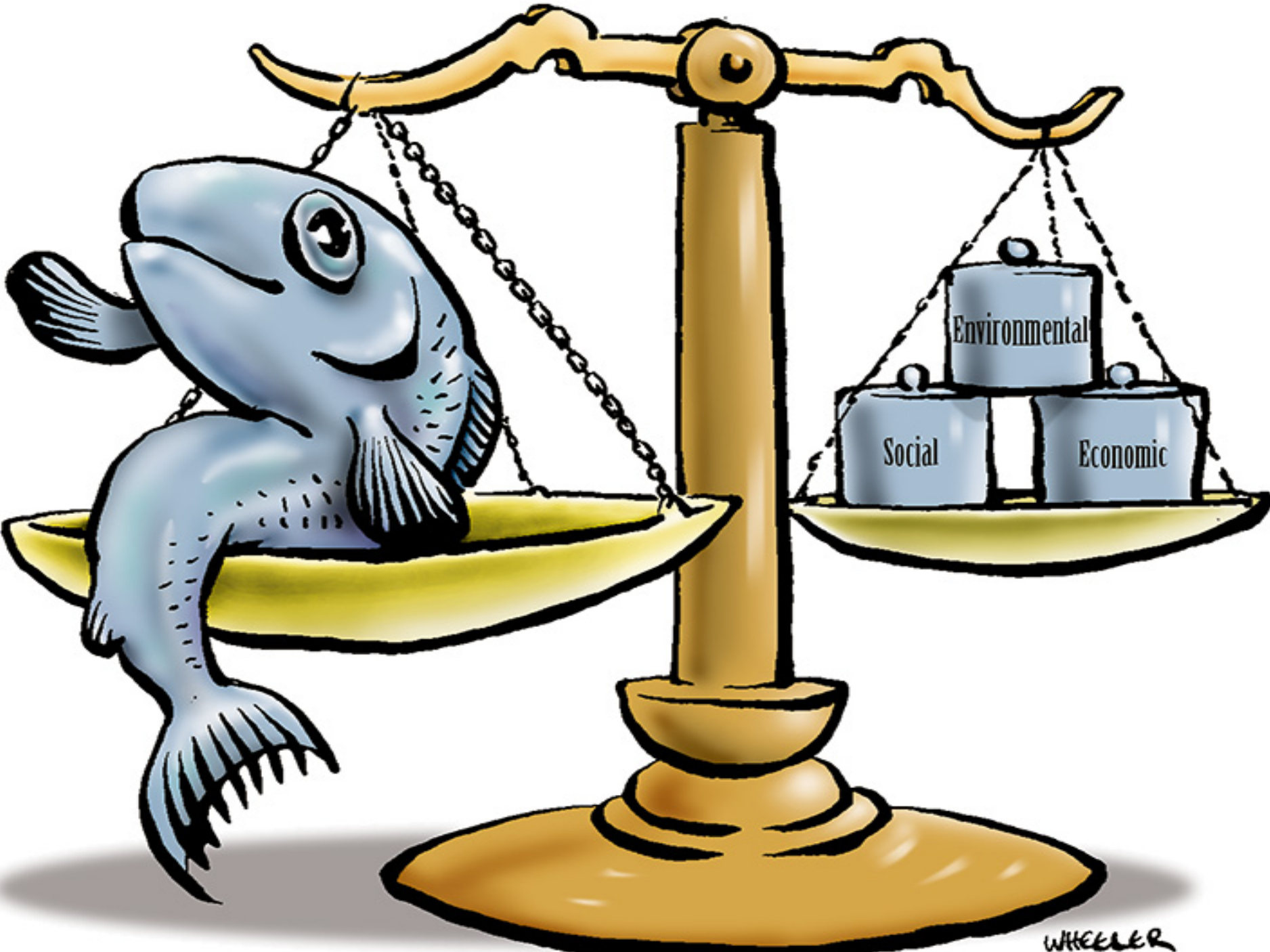


ABALONE
NATION



CHILE PEPPER
NATION





WHEELER

Impacts along the (sea)food value chain



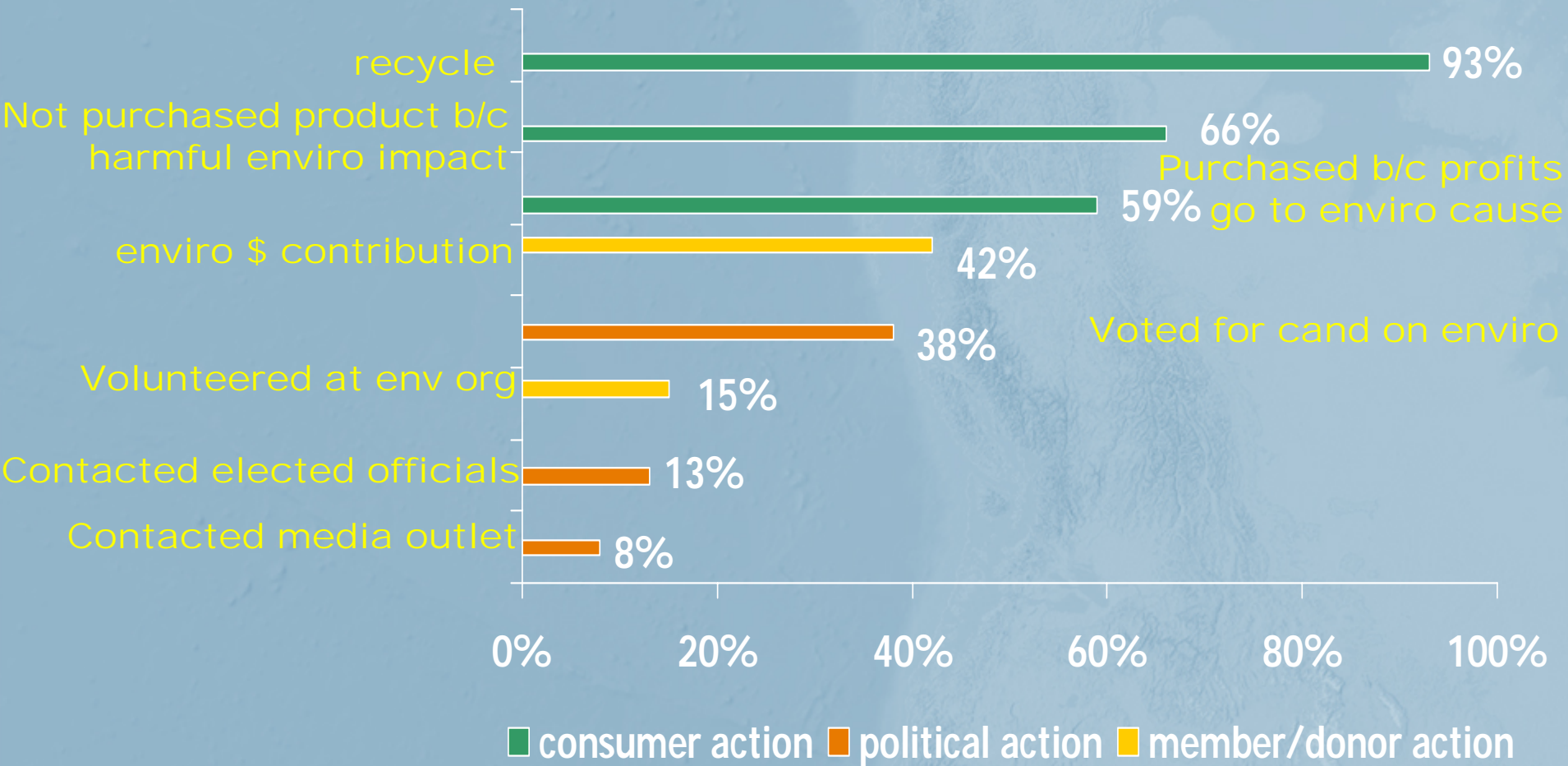
Biophysical impacts

Ecological and socioeconomic indicators

Transforming seafood in North America

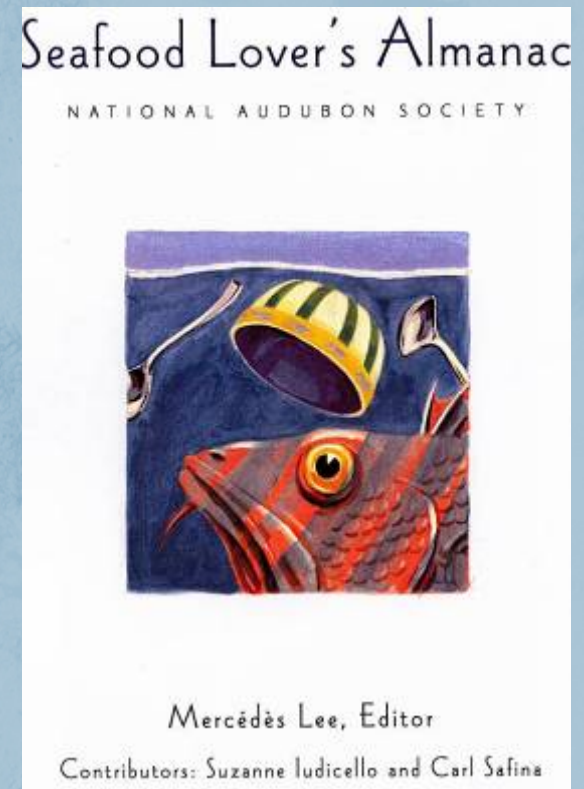
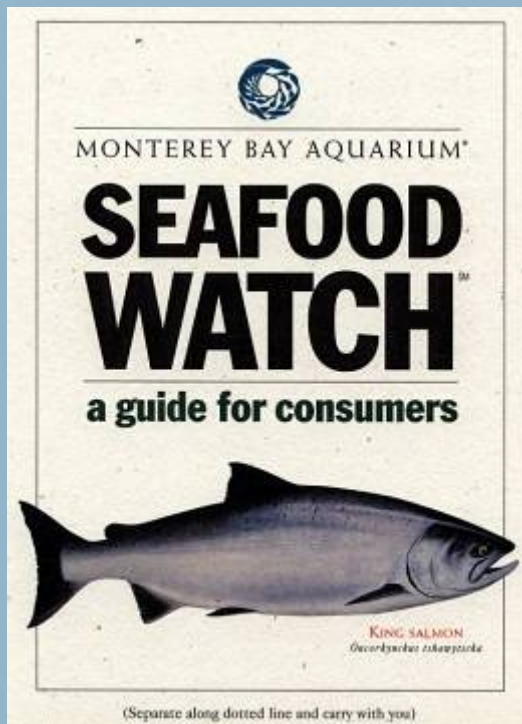
- ~~Regulators:~~
 - Sustainability not integrated into public policy—emphasis is on nutrition, health and safety, and abundance;
 - ISO 14,000 virtually unknown, only voluntary adoption
- Consumers:
 - Labels & certification,
 - seafood watch cards,
 - Slow Food movement
- Industry:
 - market incentives,
 - response to climate challenge,
 - whole supply chain management...

More People Have Taken Consumer Action Than Political Or Membership Actions



Promoting Seafood Choices

Seafood Watch, Give Swordfish a Break, and Seafood Lover's Almanac — all successful



Marine Stewardship Council

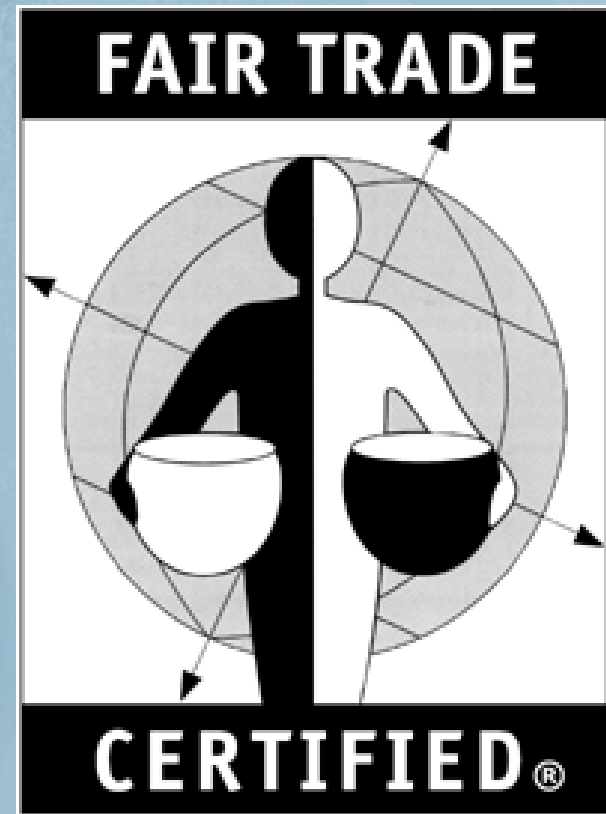
- Overfishing is bad for business
- Partners found common ground
- MSC launched in 1995
- Market incentives influence politics...



First Labeled Products



Next?



Industry early adopters

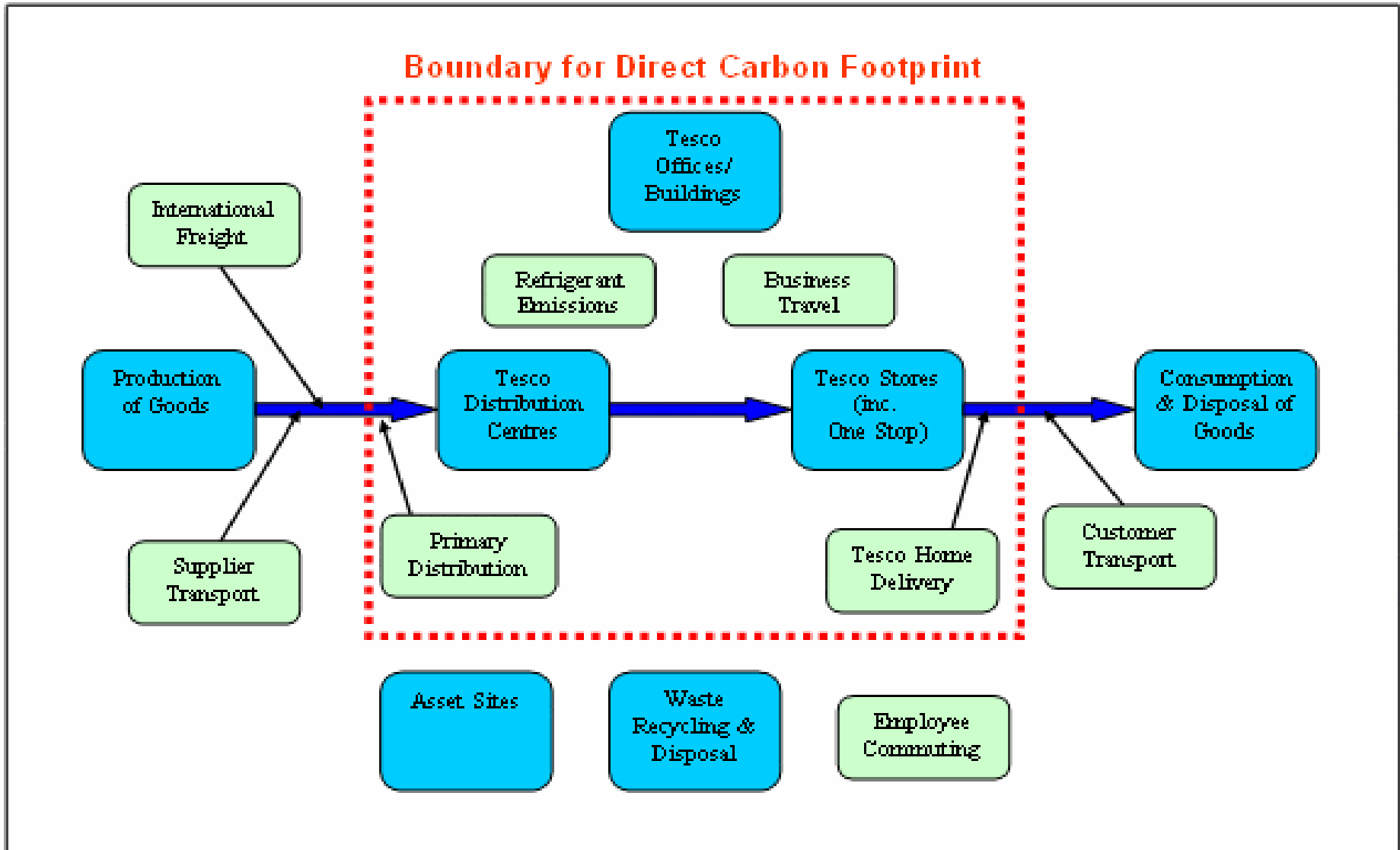


"I am determined that Tesco should be a leader in helping to create a low-carbon economy. [...]"

We must also help to stimulate the development of low-carbon technology, and work with our suppliers and others to deliver significant CO₂ reductions throughout our supply chain end to end."

Sir Terry Leahy, 18 January 2007

TESCO's carbon footprint: 4.3m tonnes CO₂e



Wal-Mart's Green Goals & Targets



*To be supplied
100% by
renewable energy*

- Stores 25% more efficient in 7 years



*To create
zero waste*

- 25% reduction in solid waste in 3 years



*To sell products that
sustain our resources
& environment*

- 20% supply base aligned in 3 years

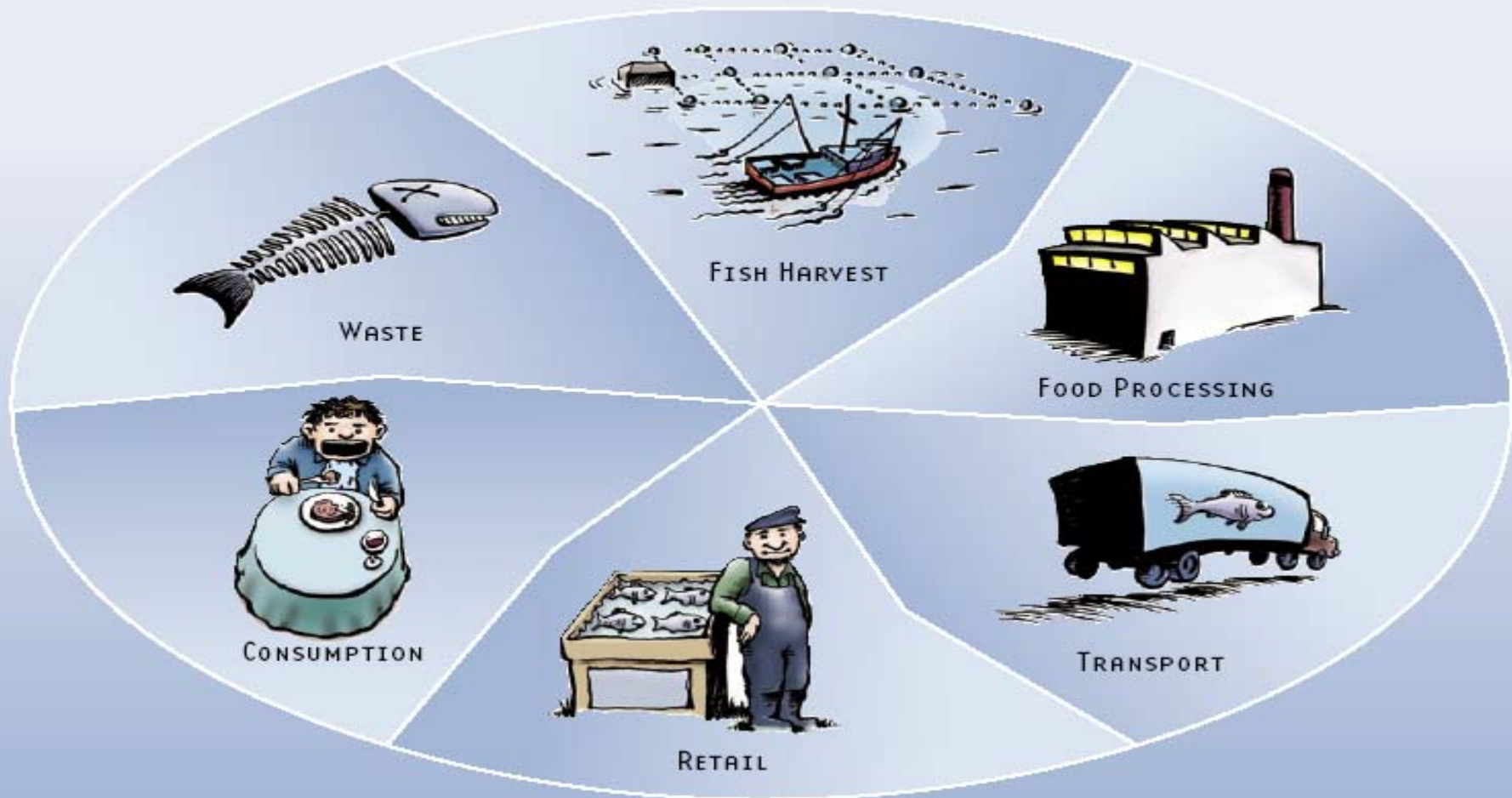
When Wal-Mart says “jump”, ...



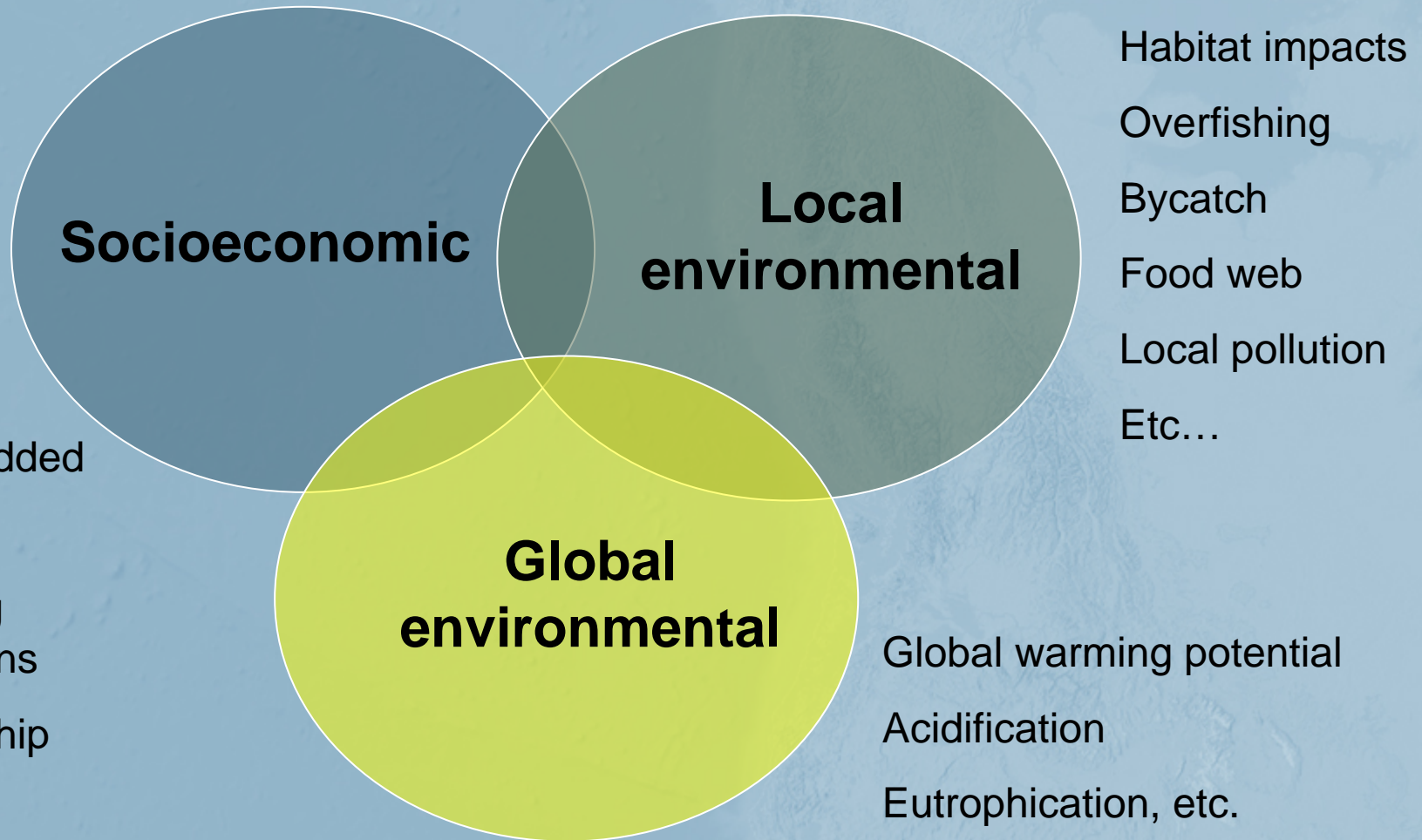
Bon Appétit: Low Carbon Diet

- American subsidiary of largest food service company in the world: 25 million meals a day worldwide...
- *“As you know, we've just introduced the idea of a Low Carbon Diet: first, educating our chefs (at 400 cafes) and changing corporate purchasing and menu-writing behavior; second, educating consumers with an analytical tool that allows them to calculate the carbon load of their meals and commit to reducing it — kind of a Weight Watchers program.”*

LCA is a great tool for all that!



Dimensions of Sustainability



Impacts along the (sea)food value chain



Biophysical impacts

Ecological and socioeconomic indicators



Asia ←

→ Europe

 Wild Salmon
 Farmed Salmon

Salmon Distance to Consumer	
Location	Distance (km)
Vancouver, BC to San Francisco	1,640
Cordova, AK to San Francisco	3,916

What we need from you

- Applied research that consumers and industry can use—make LCA the best available science, keep it rigorous
- Keep up those EU projects: European policy sweeps across the Atlantic through trade and market signals
- Work with industry directly: create competitive pressure on industry to be green
- The View from Salmon Nation:
 - More comprehensive impact accounting globally makes our job easier, of building a conservation economy with regional food systems!

