Monterey Bay Aquarium Seafood Watch

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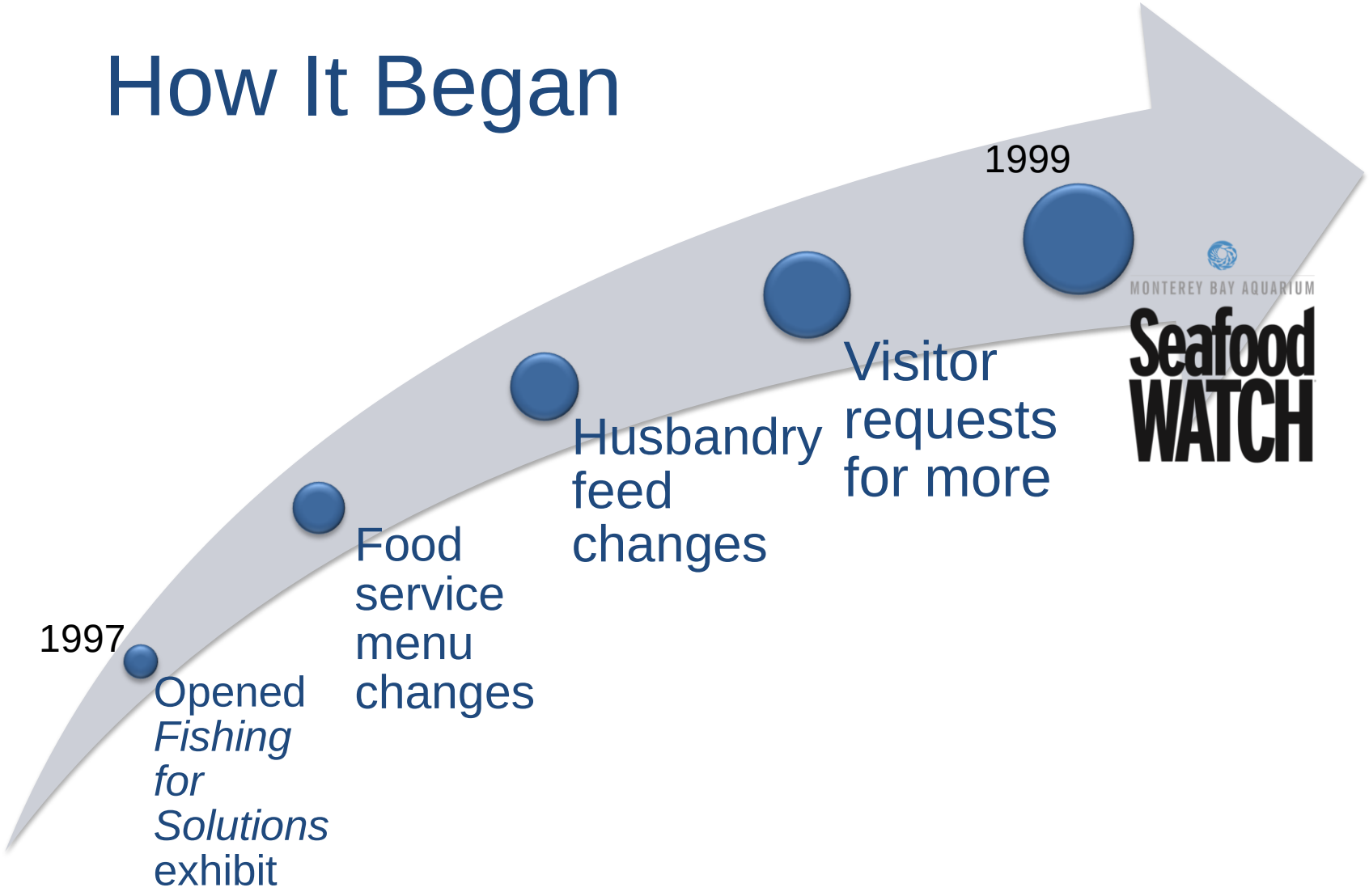
How It Began



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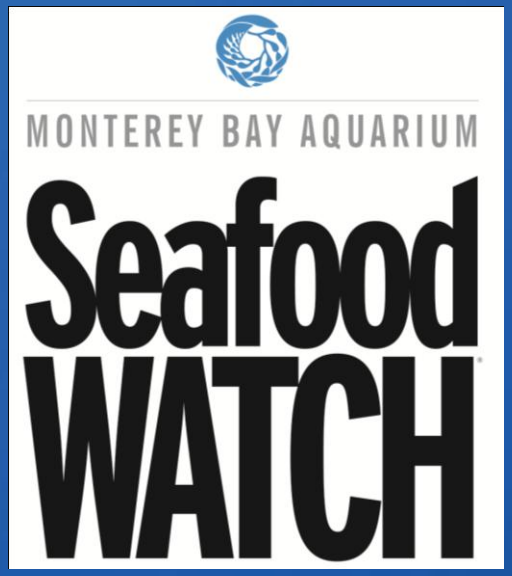

Helping consumers and businesses make choices for **healthy oceans** through recommendations of "**Best Choice**," "**Good Alternative**" and "**Avoid**" for seafood items

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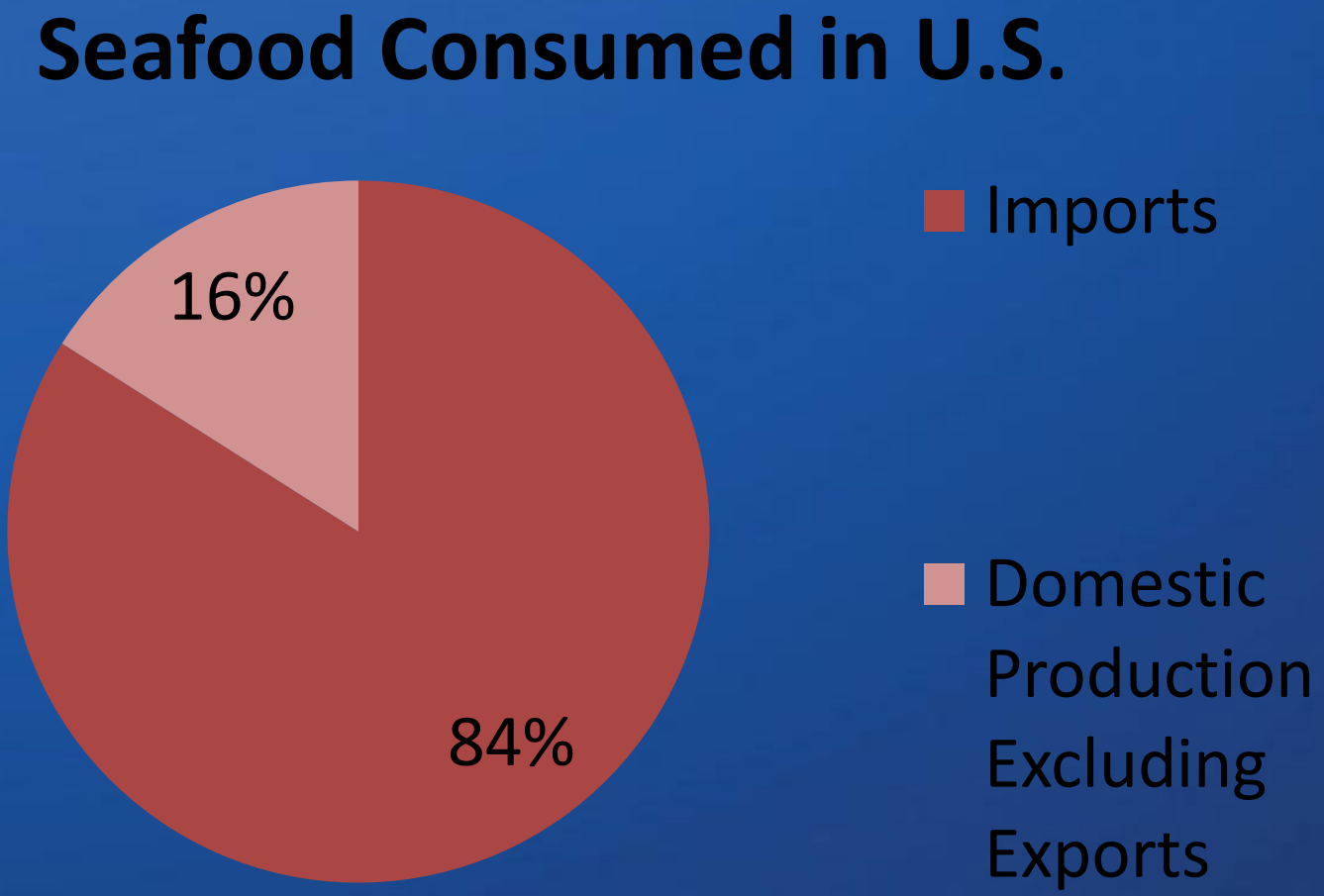
Global Trends: Imported vs. Domestic



Sources: NOAA 2008

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Seafood Watch Science

- Independent 3rd party
- Transparent, scientific methodology
- Thorough scientific report
- Peer reviewed
- All data referenced
- Regularly updated

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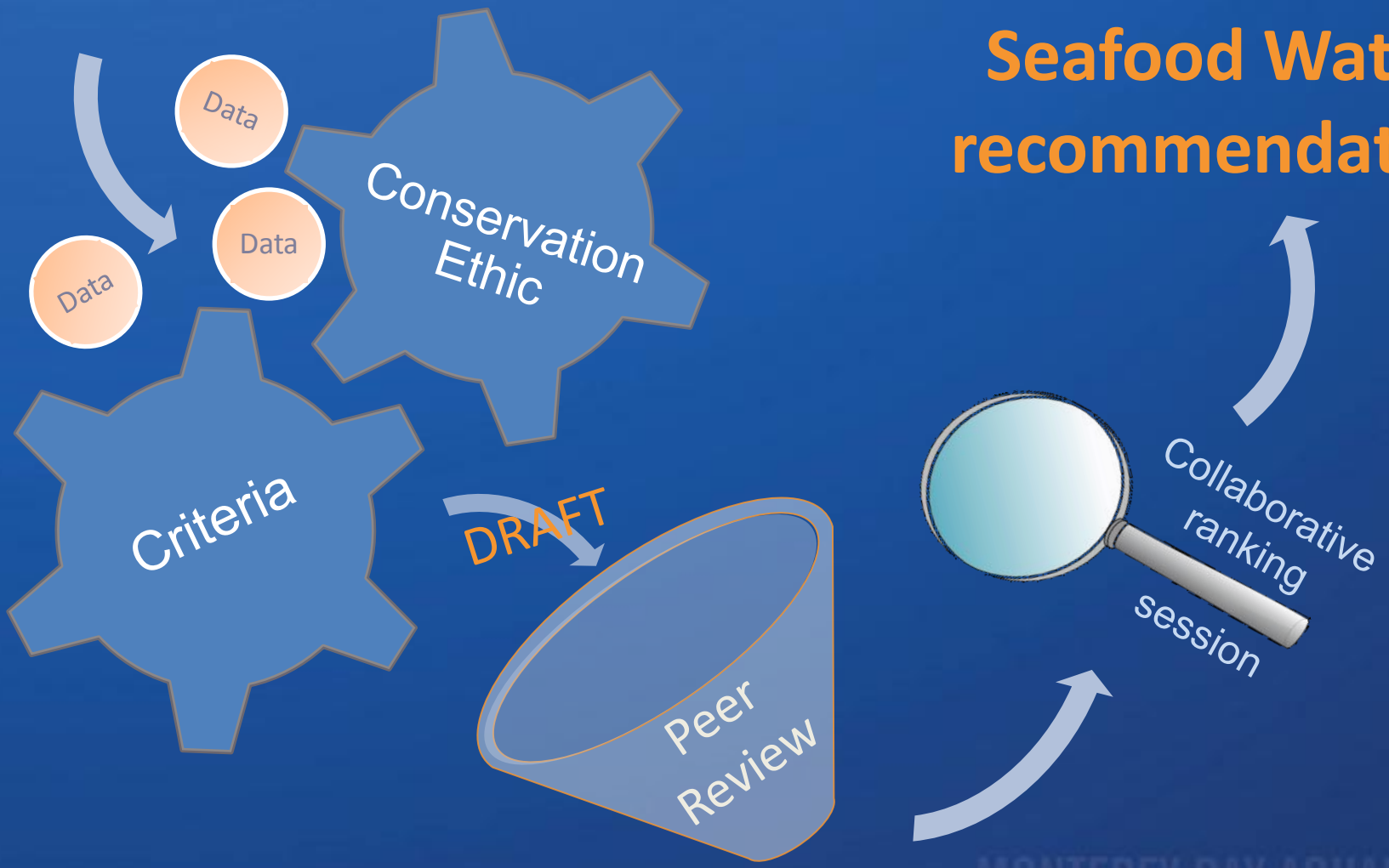
Methodology



Criteria for Assessments

WILD-CAPTURE FISHERIES

Inherent vulnerability

- Age at 1st maturity
- Reproductive potential
- Lifespan

Stock status

- Health of current fish stocks
- Occurrence of overfishing
- Trends in population abundance

Bycatch

- Quantity relative to targeted landings
- Species of special concern
- Population consequences

Habitat & ecosystem effects

- Impacts to sea floor
- Ecosystem alteration

Fisheries management

- TAC
- Scientific monitoring & data collection
- Bycatch reduction plan
- Enforcement and mitigation of destructive gear

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Criteria for Assessments

CRITERION 3: NATURE AND EXTENT OF DISCARDED BYCATCH[4]

Guiding Principle: A sustainable wild-caught species is captured using techniques that minimize the catch of unwanted and/or unmarketable species.

Primary Factors to evaluate

Quantity of bycatch, including any species of "special concern" (i.e. those identified as "endangered", "threatened" or "protected" under state, federal or international law)

- Quantity of bycatch is low (< 10% of targeted landings on a per number basis) AND does not regularly include species of special concern
- Quantity of bycatch is moderate (10 – 100% of targeted landings on a per number basis) AND does not regularly include species of special concern OR Unknown
- Quantity of bycatch is high (> 100% of targeted landings on a per number basis) OR bycatch regularly includes threatened, endangered or protected species

Population consequences of bycatch

- Low: Evidence indicates quantity of bycatch has little or no impact on population levels
- Moderate: Conflicting evidence of population consequences of bycatch OR Unknown
- Severe: Evidence indicates quantity of bycatch is a contributing factor in driving one or more bycatch species toward extinction OR is a contributing factor in limiting the recovery of a species of "special concern"

Trend in bycatch interaction rates (adjusting for changes in abundance of bycatch species) as a result of management measures (including fishing seasons, protected areas and gear innovations):

- Trend in bycatch interaction rates is down
- Trend in bycatch interaction rates is flat OR Unknown

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Criteria for Assessments

WILD-CAPTURE FISHERIES

Evaluation Guidelines

Bycatch is "**Minimal**" if:

1) Quantity of bycatch is <10% of targeted landings AND bycatch has little or no impact on population levels.

Bycatch is "**Moderate**" if:

1) Quantity of bycatch is 10 - 100% of targeted landings
2) Bycatch regularly includes species of "special concern" AND bycatch has little or no impact on the bycatch population levels AND the trend in bycatch interaction rates is not up.

Bycatch is "Severe" if:

1) Quantity of bycatch is > 100% of targeted landings
2) Bycatch regularly includes species of "special concern" AND evidence indicates bycatch rate is a contributing factor toward extinction or limiting recovery AND trend in bycatch is down.

Bycatch is considered a **Critical Conservation Concern** and the species is ranked "Avoid", regardless of other criteria, if:

1) Bycatch regularly includes species of special concern AND evidence indicates bycatch rate is a factor contributing to extinction or limiting recovery AND trend in bycatch interaction rates is not down.
2) Quantity of bycatch is high AND studies show evidence of substantial ecosystem impacts.

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What Drives Swordfish Rankings?

- Bycatch in DGNs and longlines worldwide
- US regulations dramatically reduce bycatch
  - Closed areas, pingers, etc.
- Harpoon and handline highly selective

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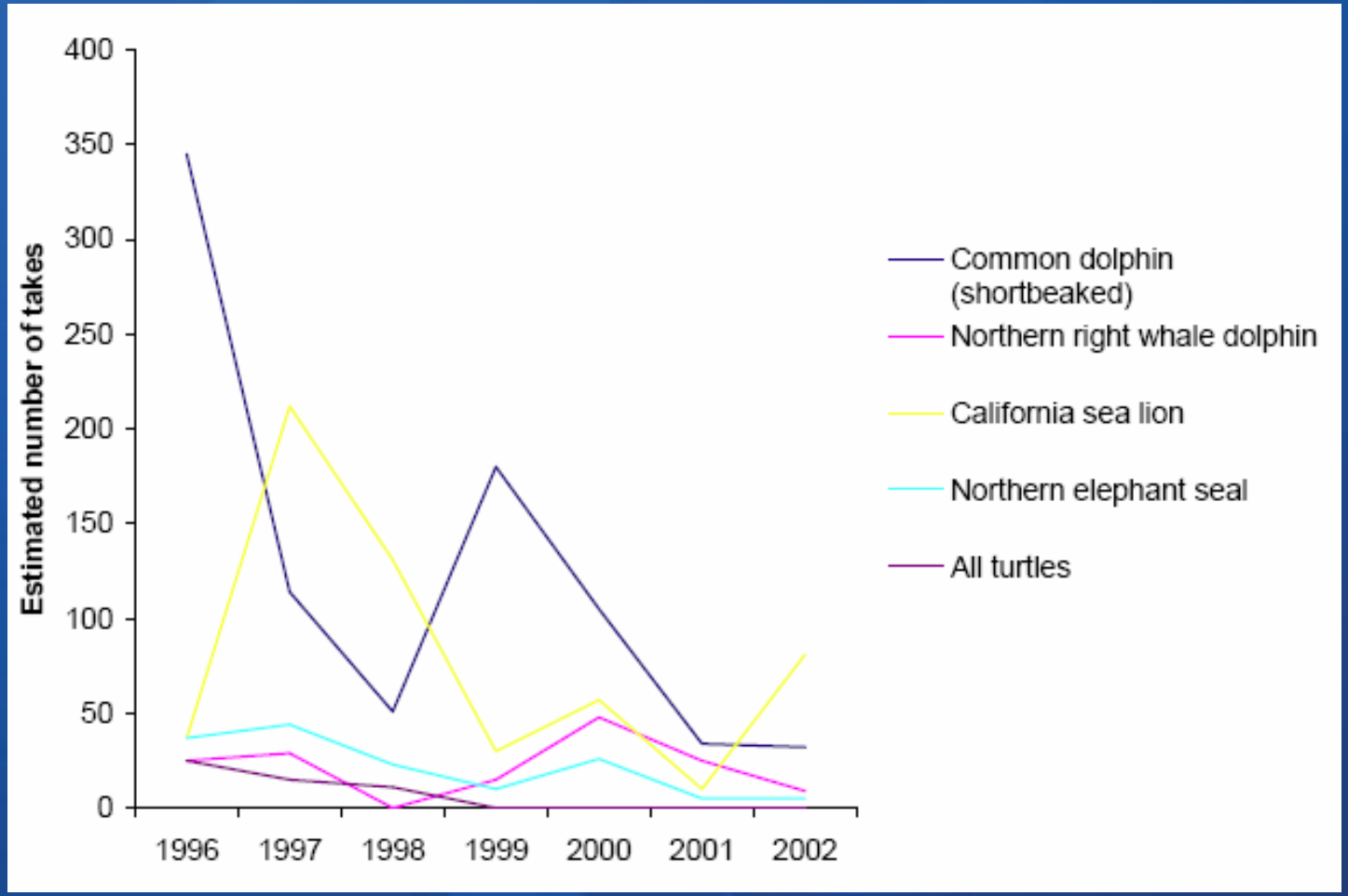
Bycatch in California drift gillnet fishery



Data from Caretta et al. 2005

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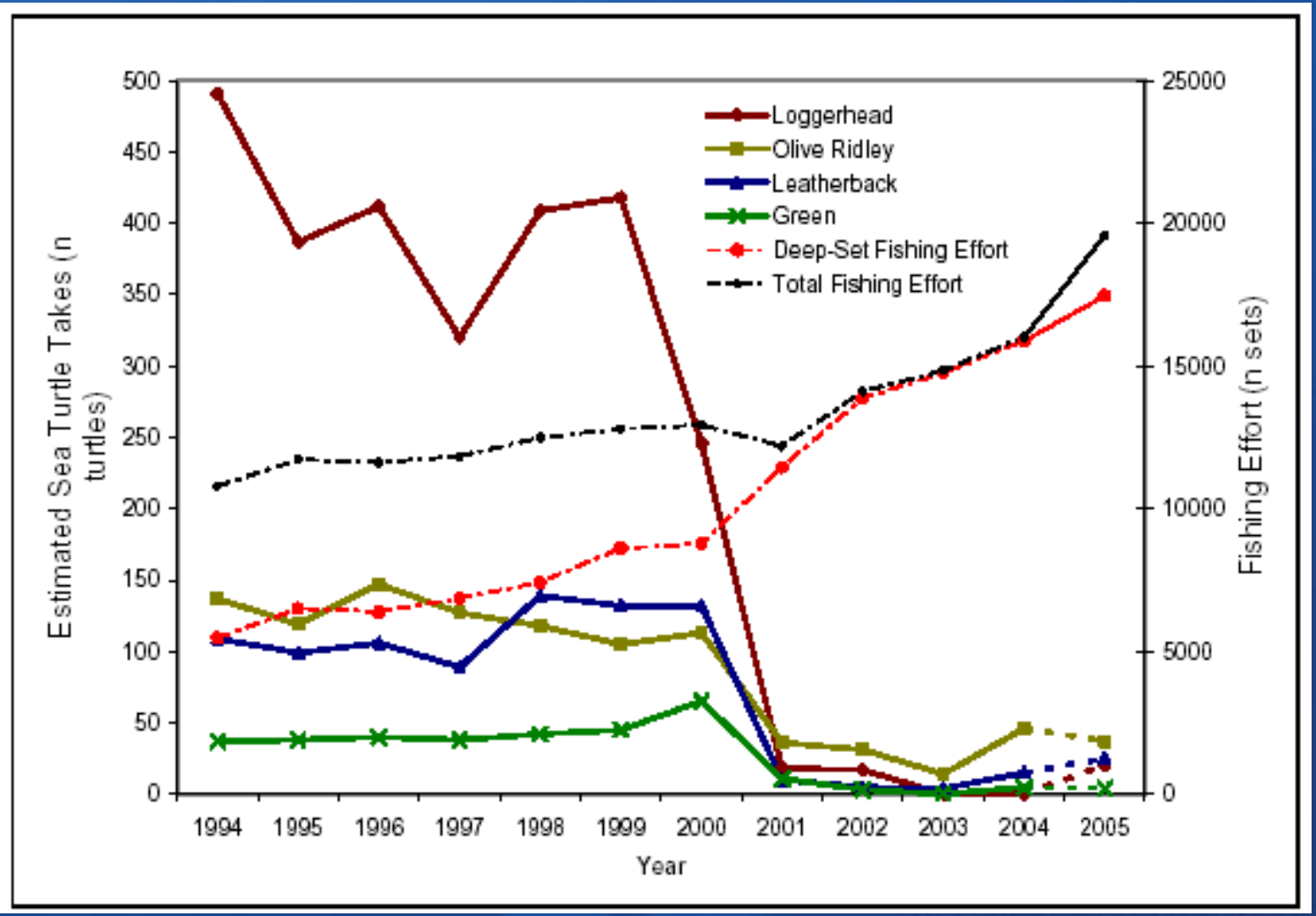
Bycatch in Hawaii Longline Fishery



Data from NMFS 2005

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Bycatch in Hawaii Longline Fishery

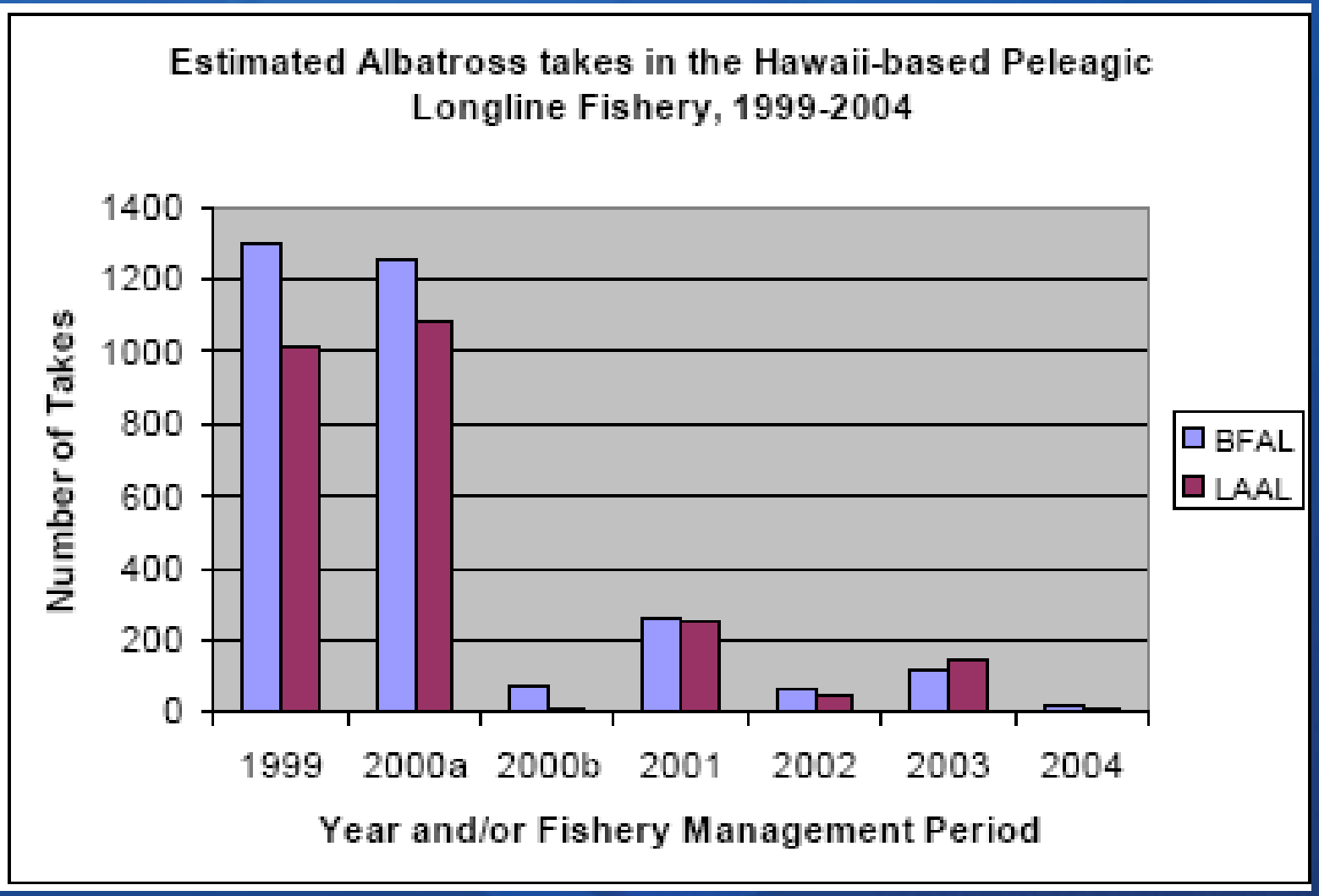

Figure from PIRO 2005

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Determining the Recommendation

	Conservation Concern			
Sustainability Criteria	**Low**	**Moderate**	**High**	**Critical**
Inherent Vulnerability	√			
Status of Stocks	√ Eastern Pacific			
Nature of Bycatch	√ Harpoon			
Habitat & Ecosystem Effects	√ Harpoon			
Management Effectiveness	√ U.S. Canada			

U.S. Pacific Harpoon Fishery = Best Choice

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Determining the Recommendation

	Conservation Concern			
Sustainability Criteria	**Low**	**Moderate**	**High**	**Critical**
Inherent Vulnerability	√			
Status of Stocks	√ Eastern Pacific			
Nature of Bycatch			√ California drift gillnet	
Habitat & Ecosystem Effects	√ Drift gillnet			
Management Effectiveness	√ U.S. Canada			

California Drift Gillnet Fishery = Good Alternative

Determining the Recommendation

	Conservation Concern			
Sustainability Criteria	**Low**	**Moderate**	**High**	**Critical**
Inherent Vulnerability	√			
Status of Stocks	√ Eastern Pacific			
Nature of Bycatch				√ International longline
Habitat & Ecosystem Effects		√ Longline		
Management Effectiveness		√ International EPO		

International Longline Fishery = Avoid

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Seafood Watch® Recommendation	Where Caught and Gear Used
Best Choices	Harpoon or handline (US and Canada, EPO and N. Atlantic)
Good Alternatives	California drift gillnet
	Harpoon or handline (International)
	U.S. Atlantic and Hawaii longline
Avoid	International longline
	South American drift gillnet
	Mediterranean (all gears)

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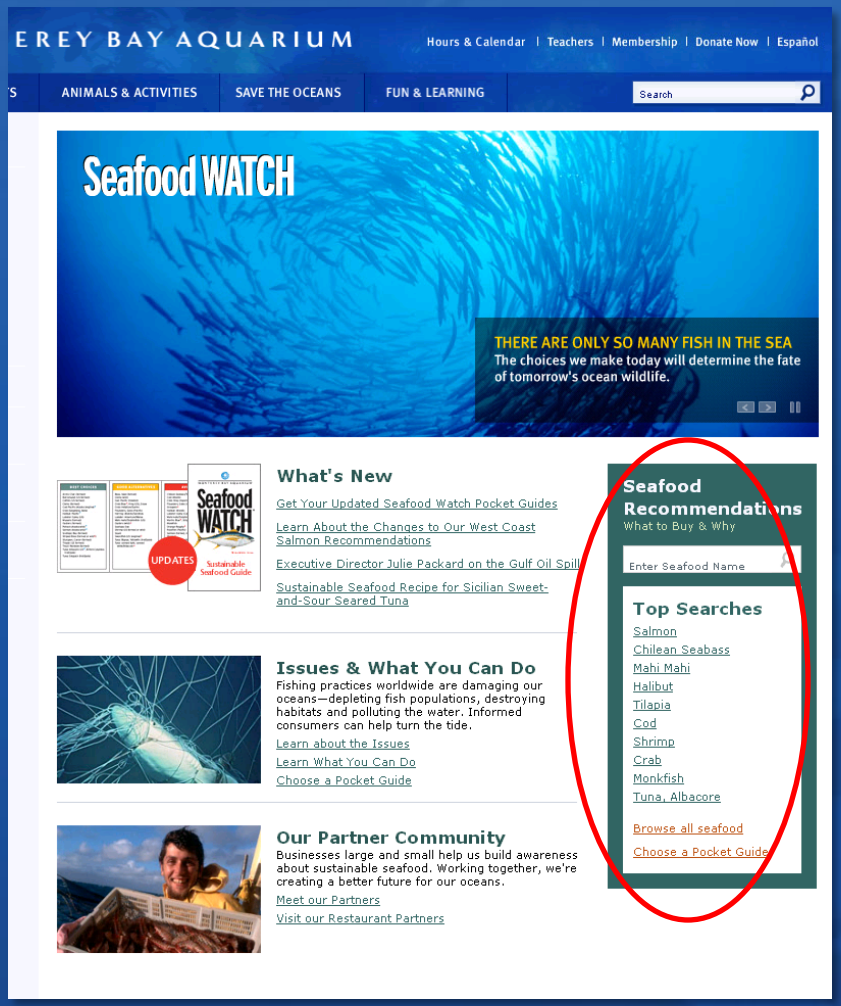
Website Resources



SEAFOOD	RATING	MARKET NAMES	WHERE CAUGI
Swordfish	**BEST CHOICE**	**Broadbill, Emperador, Espada, Shutome**	**Hawaii**
Swordfish	BEST CHOICE	Broadbill, Emperador, Espada, Shutome	U.S., Canada, North Atlantic, East Pacific
Swordfish	GOOD ALTERNATIVE	Broadbill, Emperador, Espada, Shutome	California
Swordfish	GOOD ALTERNATIVE	Broadbill, Emperador, Espada, Shutome	U.S. Atlantic, Hawaii
Swordfish	AVOID	Broadbill, Emperador, Espada, Shutome	Imported

Swordfish

Swordfish is found in most of the world's oceans but not all fisheries in all regions are well-managed. Some of the gears used to catch swordfish accidentally catch other marine life such as sea turtles, seabirds and sharks. Harpoon or handlines are the most environmentally-friendly gears.

and Hawaii, where strict bycatch regulations result in a "Good Alternative" ranking.

Scientific Reports About Our Ratings

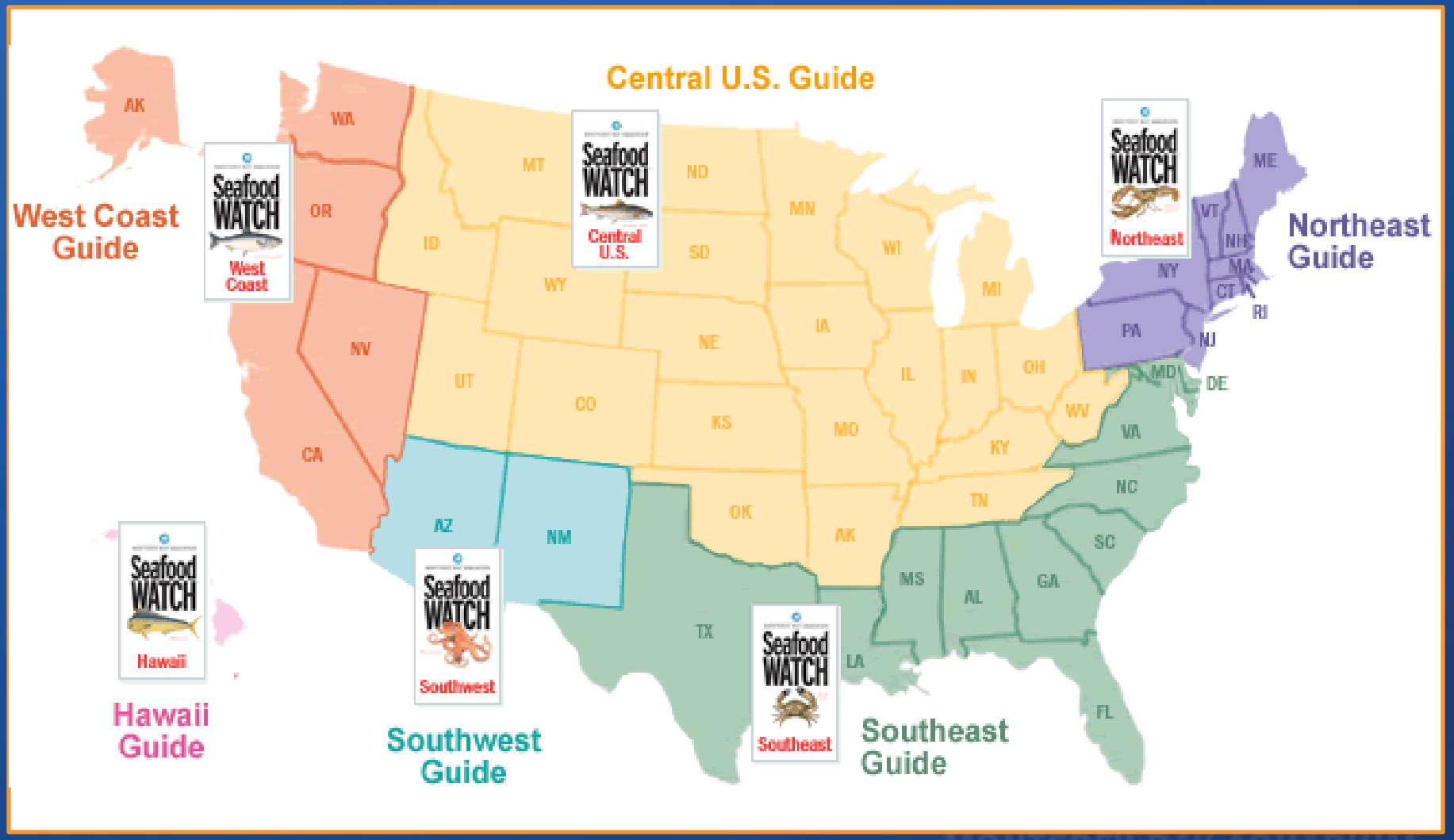
Longlining Fact Card

Swordfish Fact Card

Swordfish Seafood Watch Report

www.seafoodwatch.org

Seafood Watch Outreach



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Seafood Watch Outreach

Consumer Awareness and Interest

- Most Americans familiar with “sustainable seafood”
- Safety and health top of mind
- Eating local identified as part of sustainability
- Americans will pay more, favor stores and restaurants with sustainable seafood

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Concluding Thoughts

- Detailed SFW recommendations and reports available on web
- Scientific process, criteria and review
- Input from experts always needed
- Consumer awareness, buyer partnerships key to promoting sustainable seafood
- US can stay a leader in sustainability and have healthy fisheries

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