Trends in Economic Performance of Swordfish Fisheries

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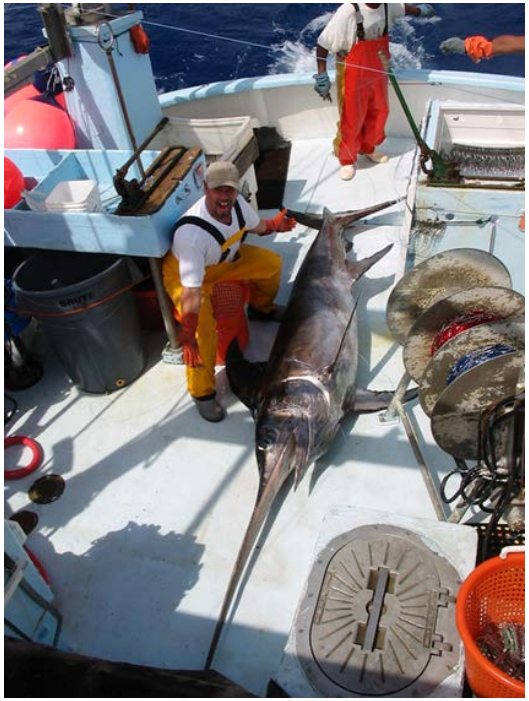
Swordfish Meeting
May 11, 2015



Preview

- Economic Performance Indicators
- Global Fisheries Overview
- North Pacific Fisheries
- U.S. Balance of Trade in Swordfish
- Sources of U.S. Swordfish Imports
- Conclusions

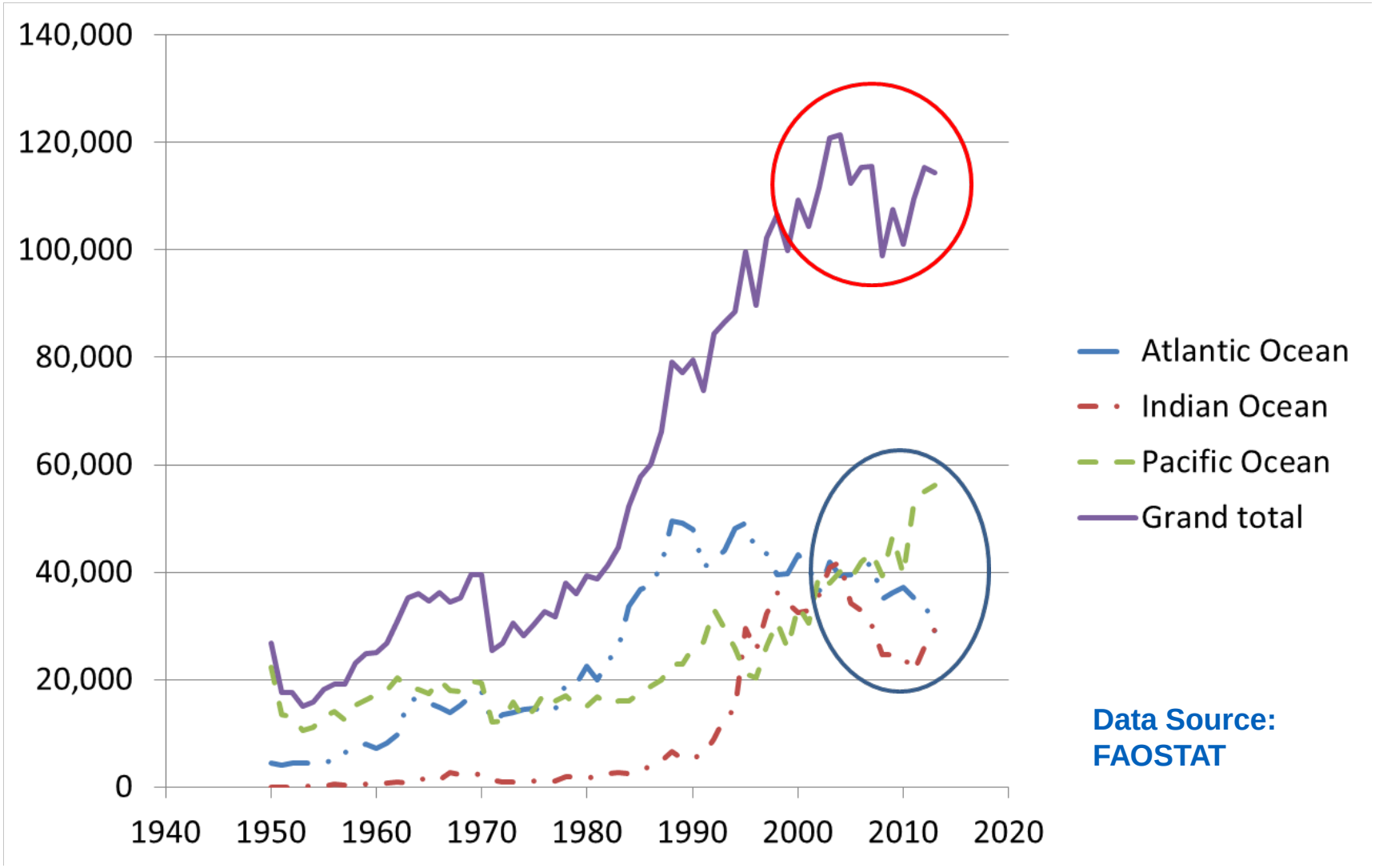
Economic Performance Indicators

- Goal: Compare economic performance of swordfish fisheries using production indicators at the global, North Pacific and U.S. Pacific fishery levels
- Data include catch by country (FAO, assessments), and landings, revenues and active vessel counts (U.S. landings databases)
- Indicators include catch (international); landings, revenues and participation (U.S.)
- Trends represented in annual time series

Global Fisheries Overview

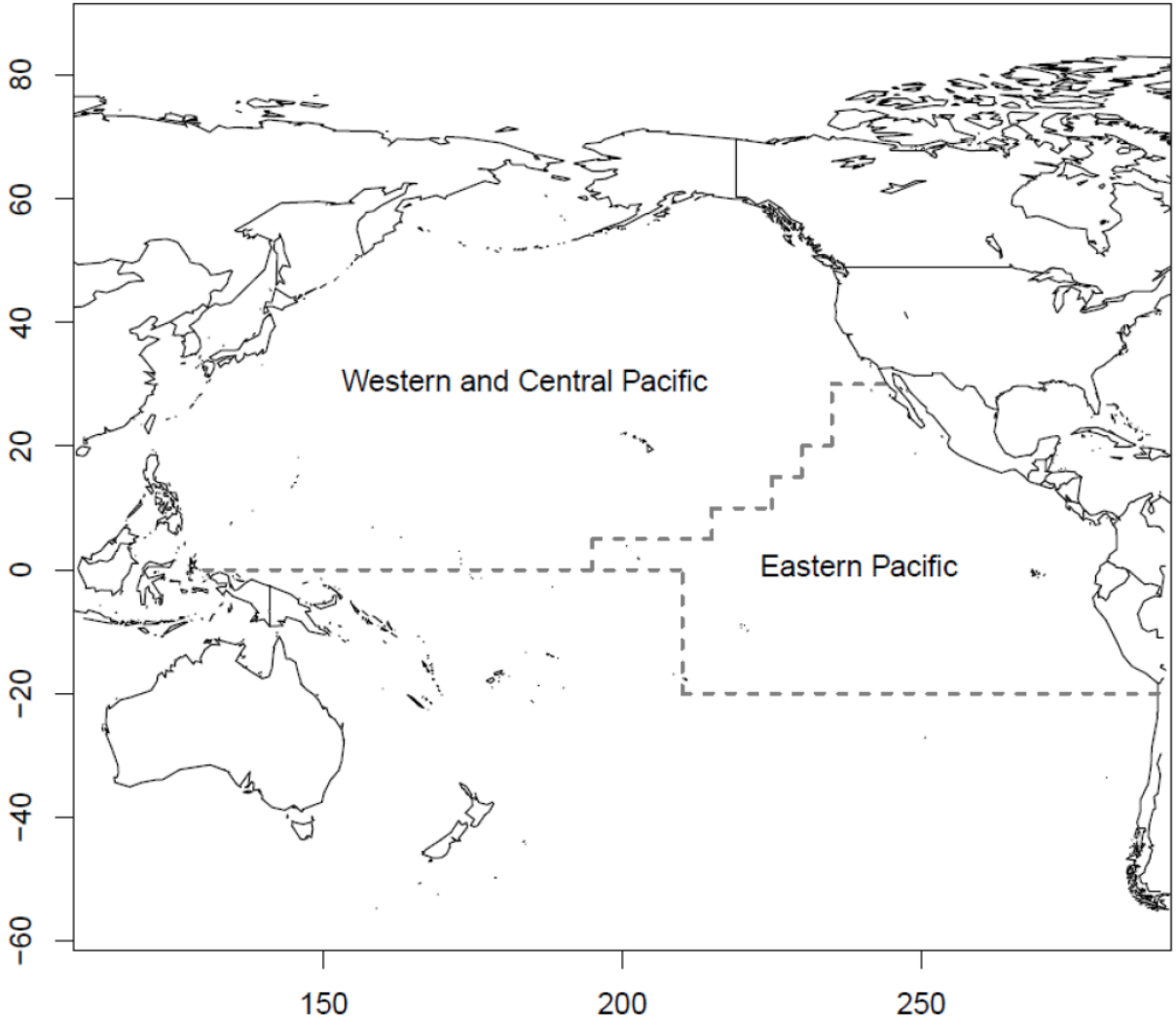
- Swordfish is a highly migratory species
- Inhabit tropical, subtropical and temperate waters of Pacific, Indian, Atlantic Oceans and Mediterranean Sea
- Prized for human consumption since antiquity
- Modern fisheries since the mid-20th century in temperate to tropical regions of the Atlantic, Pacific and Indian Oceans
- Gears include longline, drift gillnet, harpoon and buoy
- Production, trade and consumption occur in a highly integrated international product market

Global Production (t)



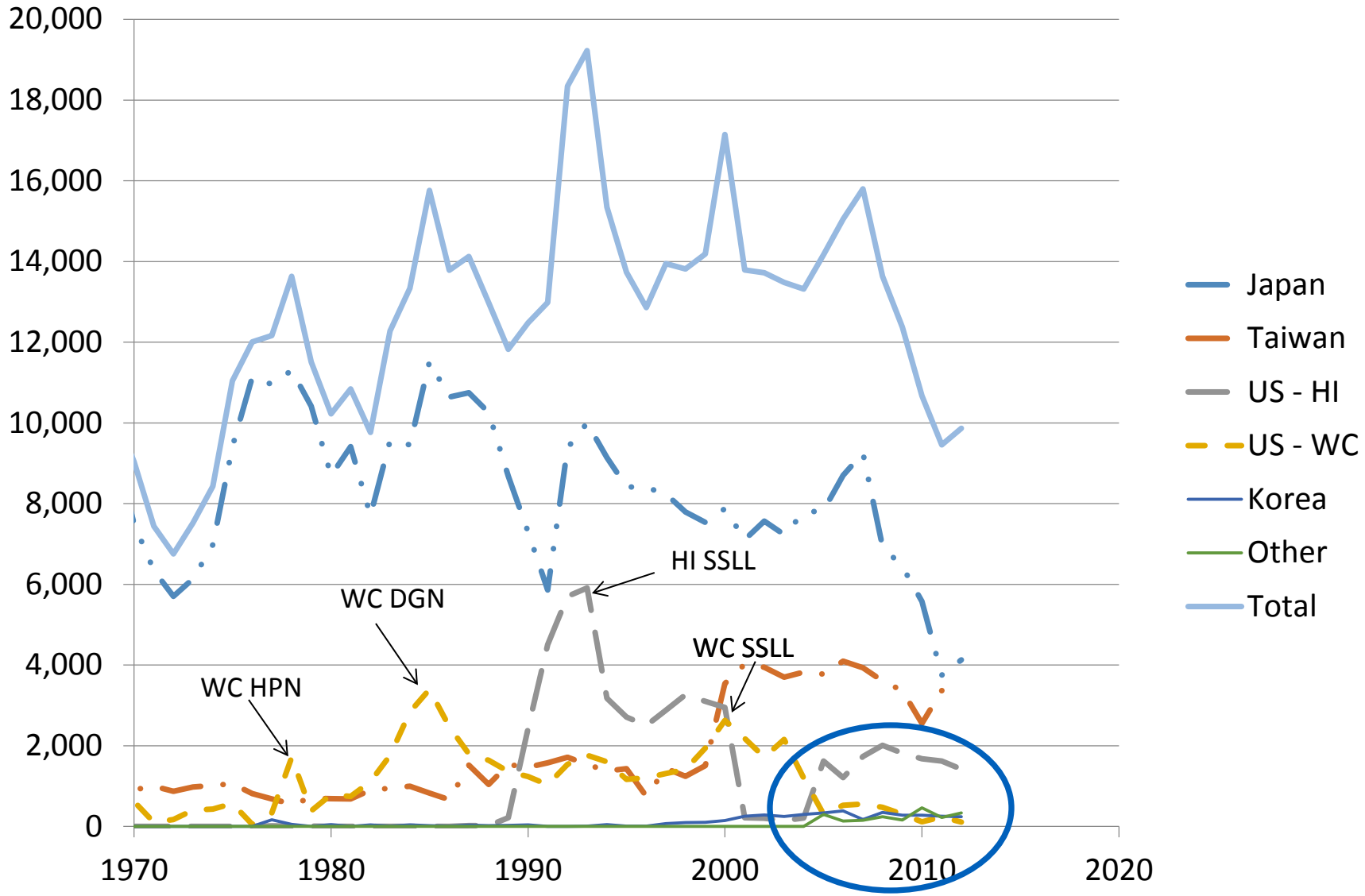
Data Source: FAOSTAT

North Pacific Fisheries



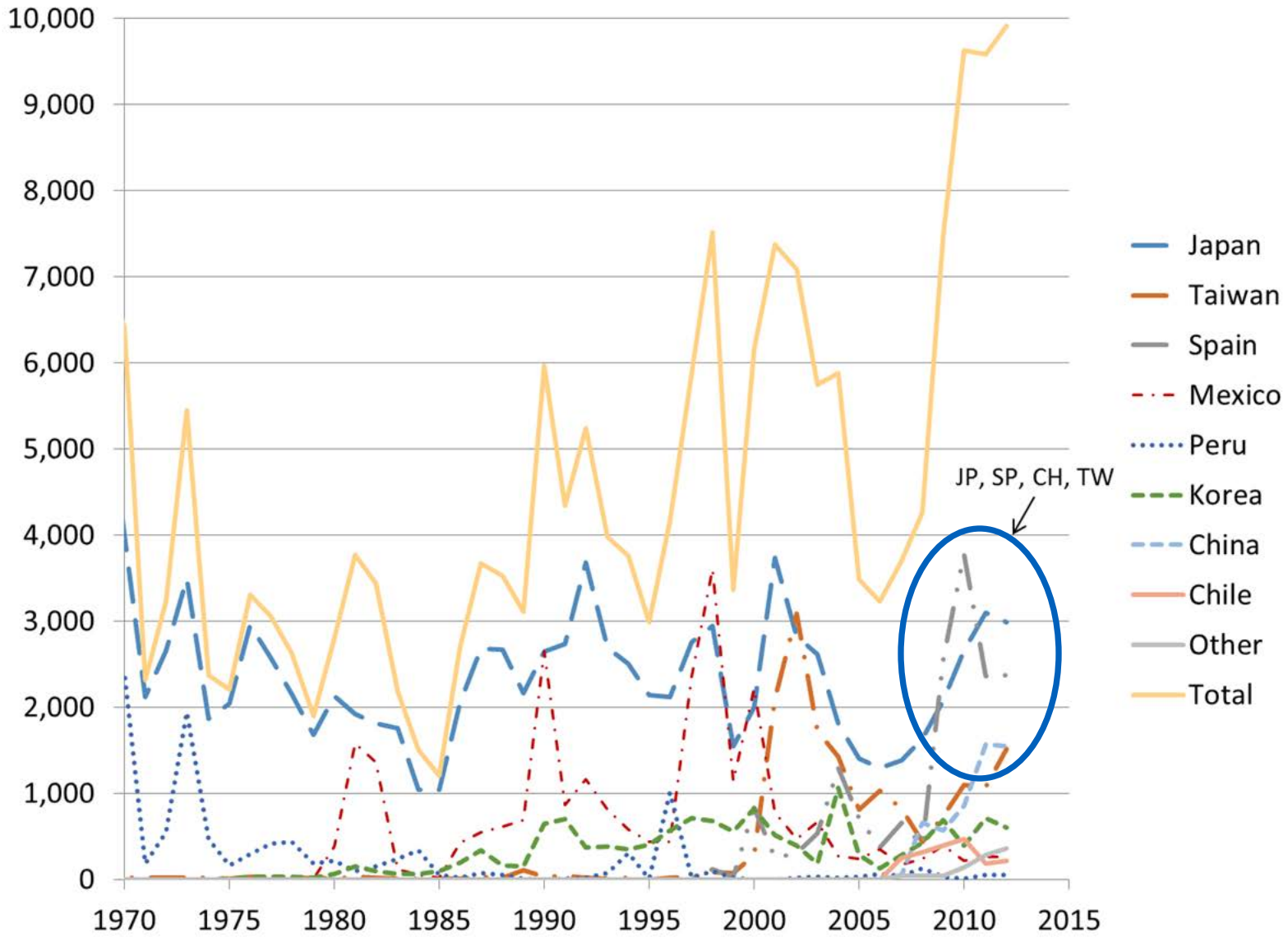
Source: North Pacific Swordfish Stock Assessment in 2014, Figure 1 (ISC)

Western and Central Pacific Ocean Catches (t)



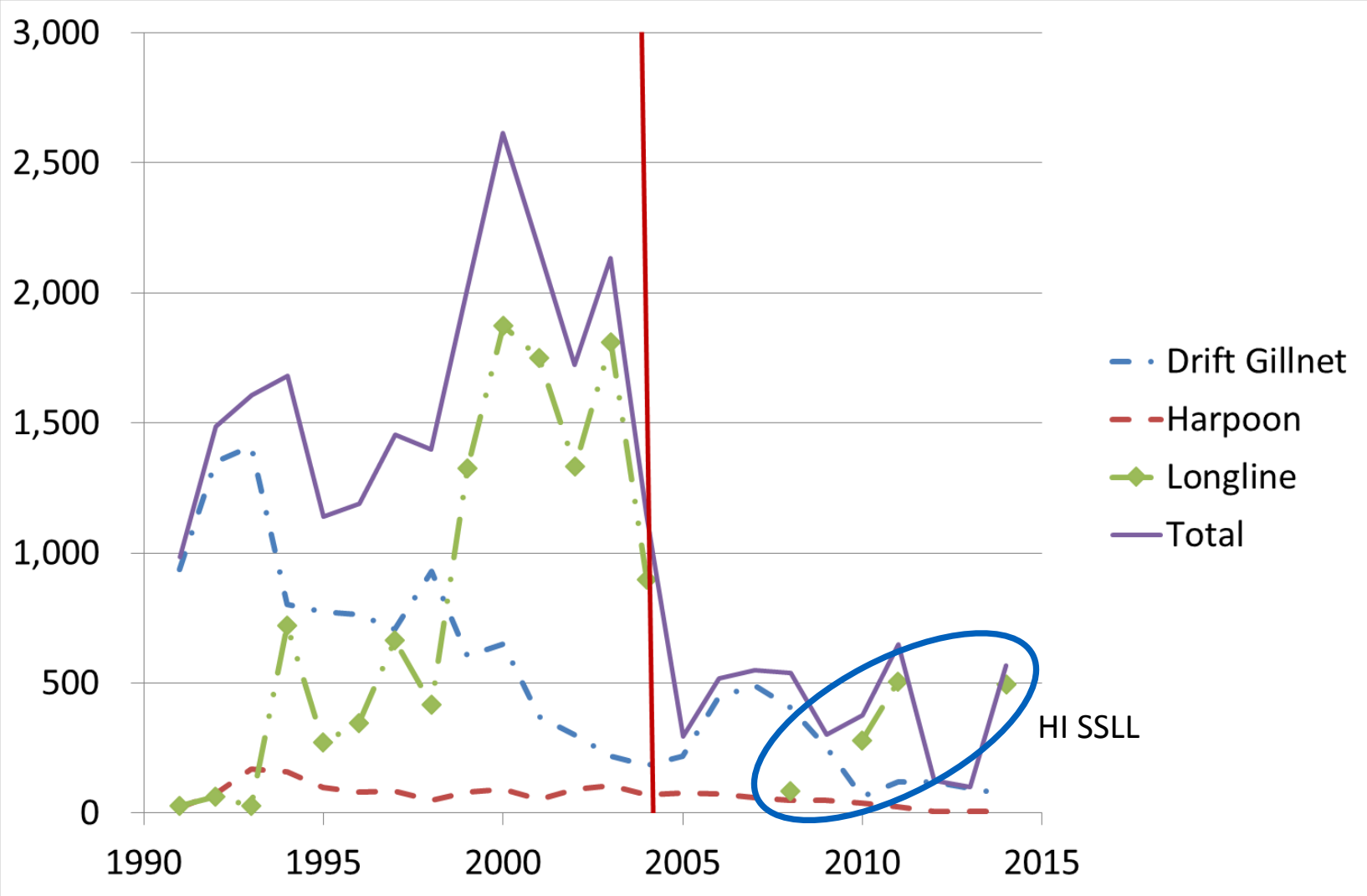
Source: North Pacific Swordfish Stock Assessment in 2014, Table 1.1 (ISC)

Eastern Pacific Ocean Catches (t)



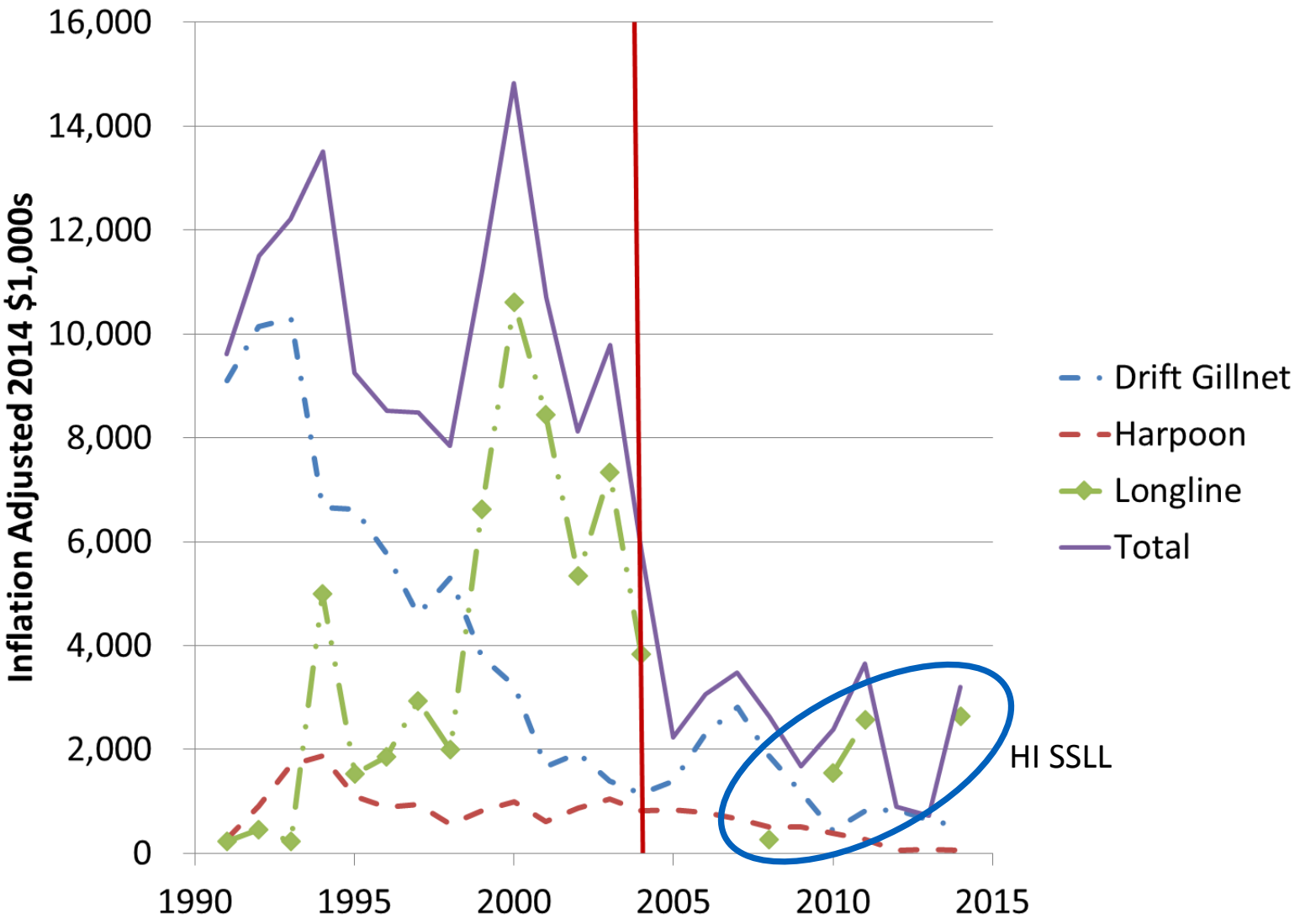
Source: North Pacific Swordfish Stock Assessment in 2014, Table 1.2 (ISC)

West Coast Landings (t)



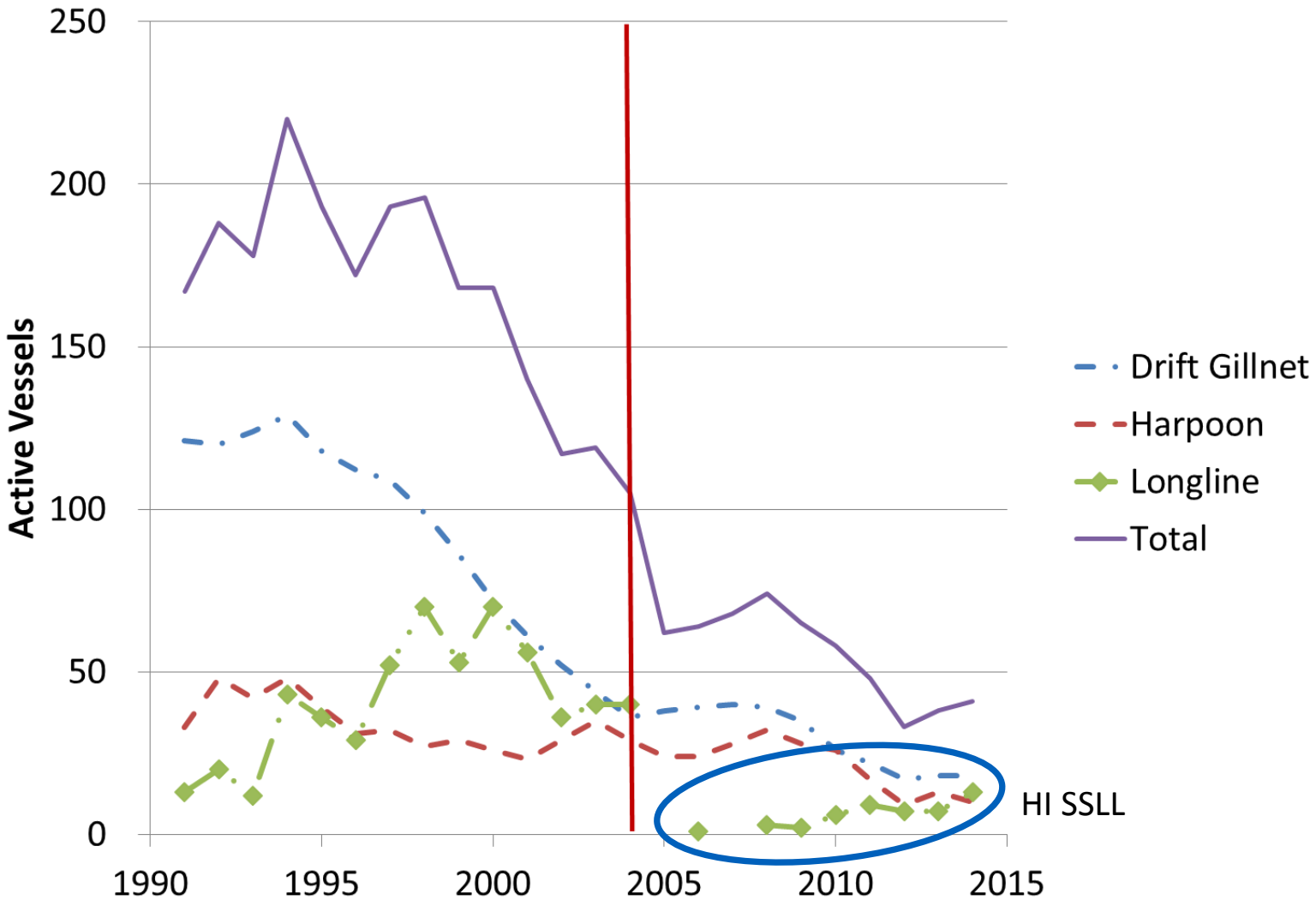
Data Source: HMS SAFE Report (Pacific Fishery Management Council)

West Coast Revenues



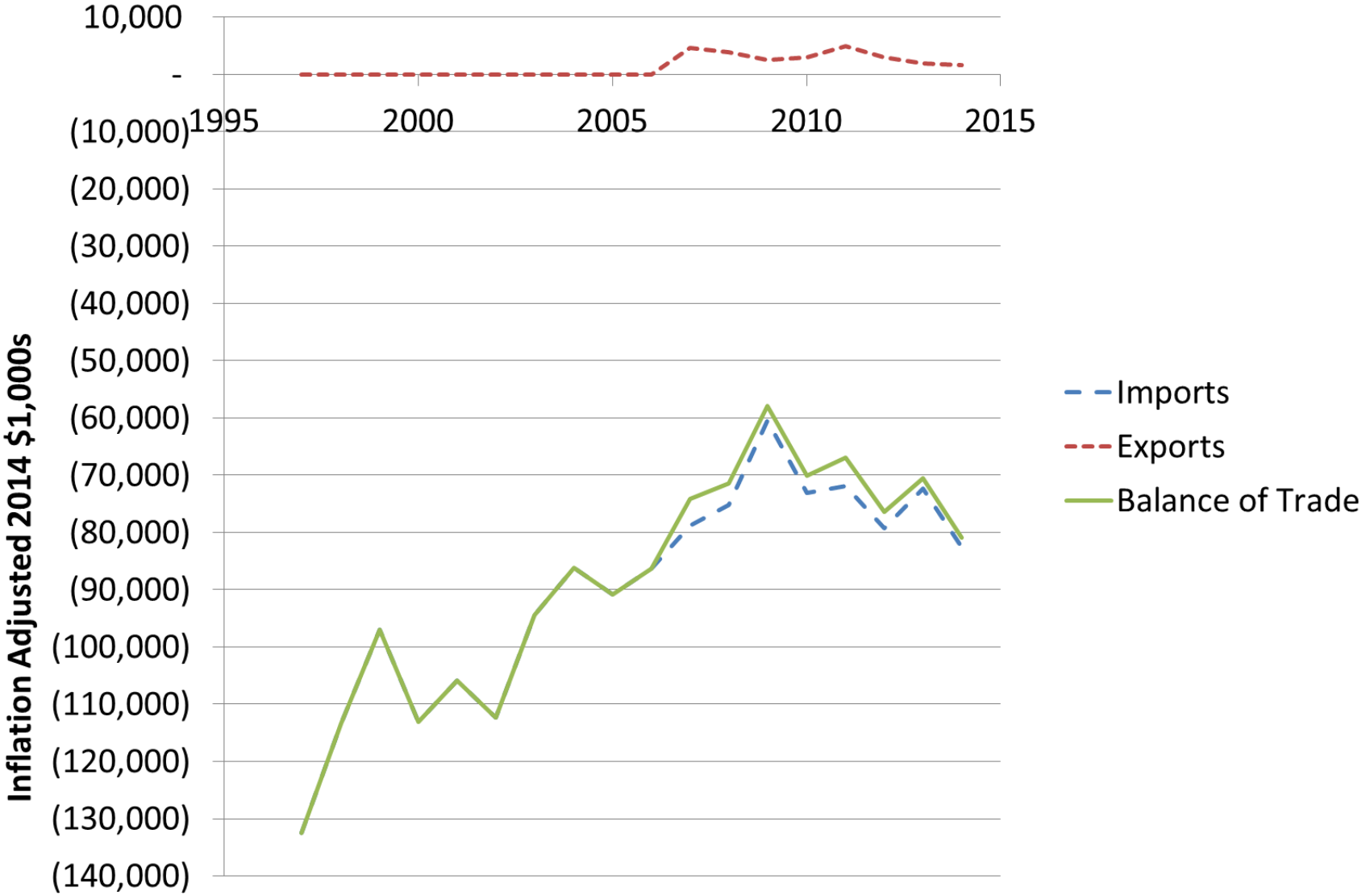
Data Source: HMS SAFE Report (Pacific Fishery Management Council)

West Coast Participation



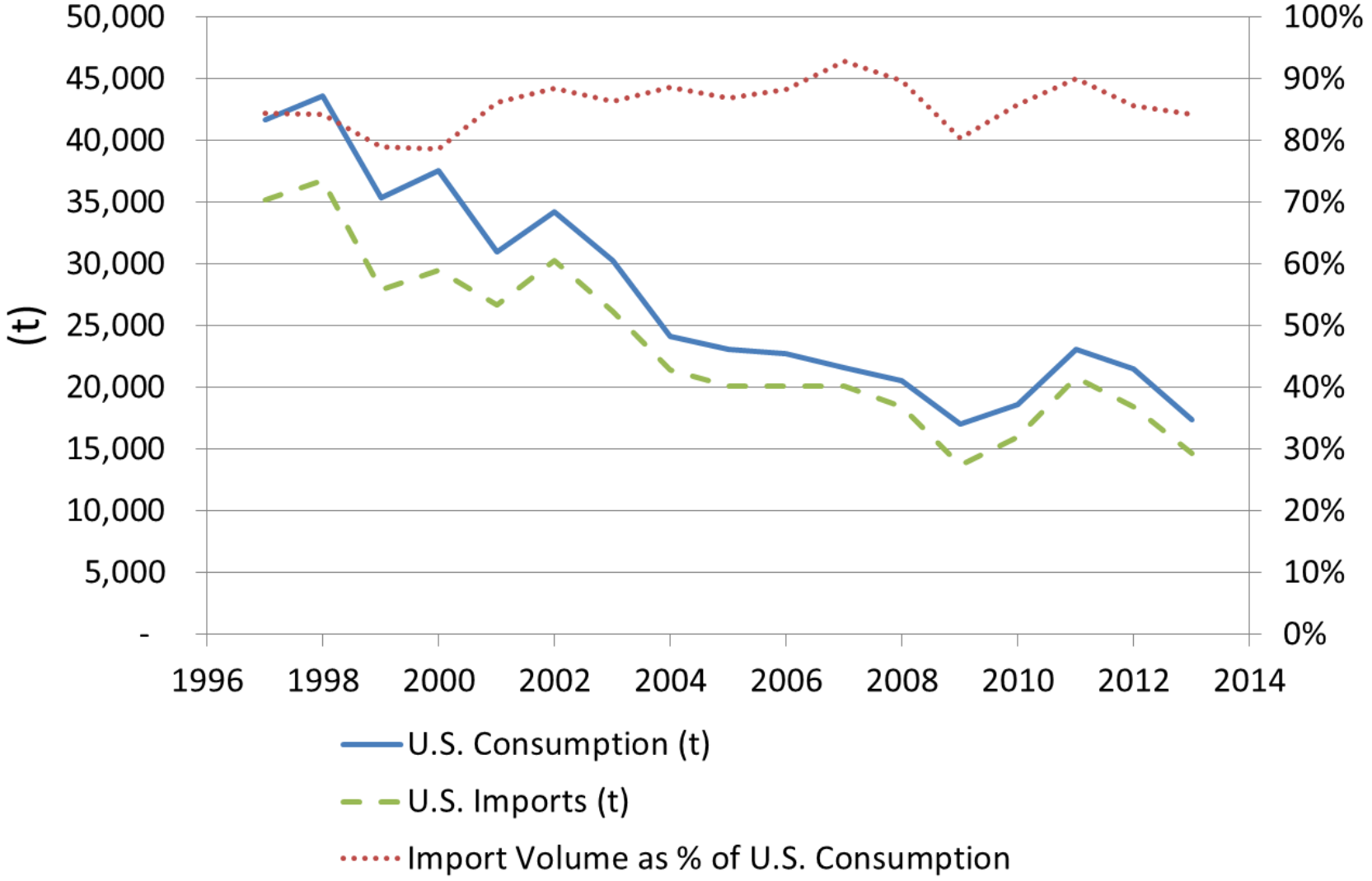
Data Source: HMS SAFE Report (Pacific Fishery Management Council)

U.S. Balance of Trade in Swordfish



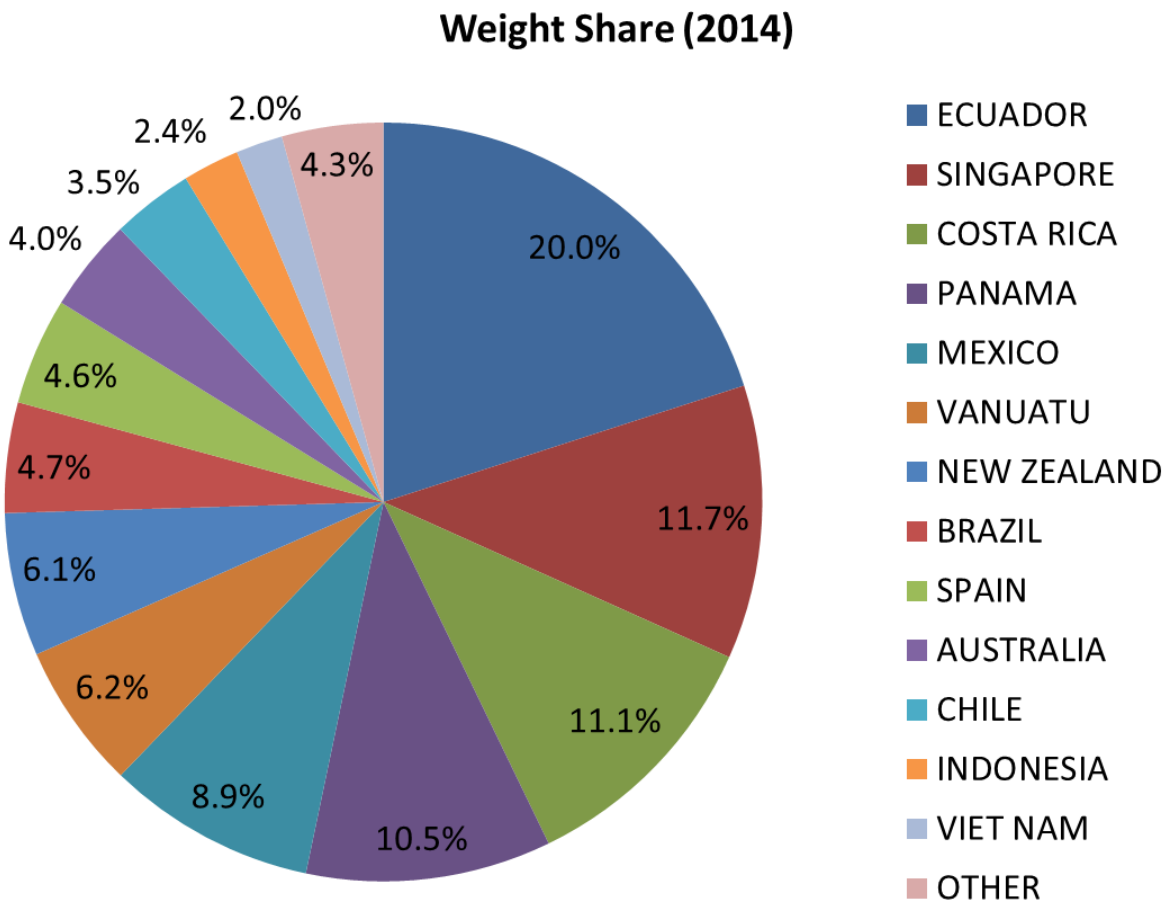
Data Source: NMFS Fisheries Statistics and Economics Division

U.S. Consumption and Imports



Data Source: NMFS Office of Science and Technology

Sources of U.S. Swordfish Imports



Data Source: NMFS Fisheries Statistics and Economics Division

Monterey Bay Aquarium® Seafood Watch®

The Monterey Bay Aquarium Seafood Watch program creates science-based recommendations that help consumers and businesses make ocean-friendly seafood choices. Carry this guide with you and share it with others to help spread the word.

BEST CHOICES

Arctic Char (farmed)
Bass: Striped (US hook & line, farmed)
Catfish (US)
Clams, Mussels & Oysters
Cod: Pacific (US hook & line)
Halibut: California (US hook & line)
Lobster: Spiny (Mexico)
Prawns: Spot (AK)
Rockfish (US)
Sablefish/Black Cod (AK & Canada wild)
Salmon (AK)
Sanddab (CA, OR & WA)
Sardines: Pacific (Canada & US)
Scallops (farmed)
Seaweed (farmed)
Shrimp (AK wild, US farmed)
Sole (CA, OR & WA)
Tilapia (Ecuador & US)
Trout: Rainbow (US farmed)
Tuna: Albacore/White canned (Canada & US troll, pole)
Tuna: Skipjack/Light canned (FAD free, US troll, pole)
Tuna: Yellowfin (US troll, pole)

GOOD ALTERNATIVES

Basa/Pangasius/Swai
Cod: Pacific (US trawl)
Crab: Blue & King (US)
Crab: Dungeness
Crab: Pacific Rock (CA & OR)
Halibut (US Pacific gillnet & trawl)
Lobster (Bahamas & US)
Mahi Mahi (Ecuador & US)
Octopus (Spain & US)
Salmon (CA, OR & WA wild)
Scallops (wild)
Shrimp (Canada & US wild, Ecuador farmed)
Snapper (US)
Sole: Petrale (CA, OR & WA)
Squid (US)
Swordfish (US)
Tilapia (China & Taiwan)
Tuna: Albacore/White canned (US longline)
Tuna: Skipjack/Light canned (imported troll, pole and US longline)
Tuna: Yellowfin (imported troll, pole and US longline)

AVOID

Cod: Pacific (Japan & Russia)
Crab: Red King (Russia)
Lobster: Spiny (Belize, Brazil, Honduras & Nicaragua)
Mahi Mahi (imported)
Orange Roughy
Rockfish (Canada trawl)
Salmon: Atlantic (farmed)
Sardines: Atlantic (Medit. Sea)
Sharks
Shrimp (imported)
Squid (imported)
Swordfish (imported)
Tuna: Albacore/White canned (except Canada & US troll, pole and US longline)
Tuna: Bluefin
Tuna: Skipjack/Light canned (imported longline and purse seine)
Tuna: Yellowfin (except troll, pole and US longline)

Start with "Best Choices" then check the other columns—your favorite seafood could be in more than one.

Best Choices
Buy first, they're well managed and caught or farmed in ways that cause little harm to habitats or other wildlife.

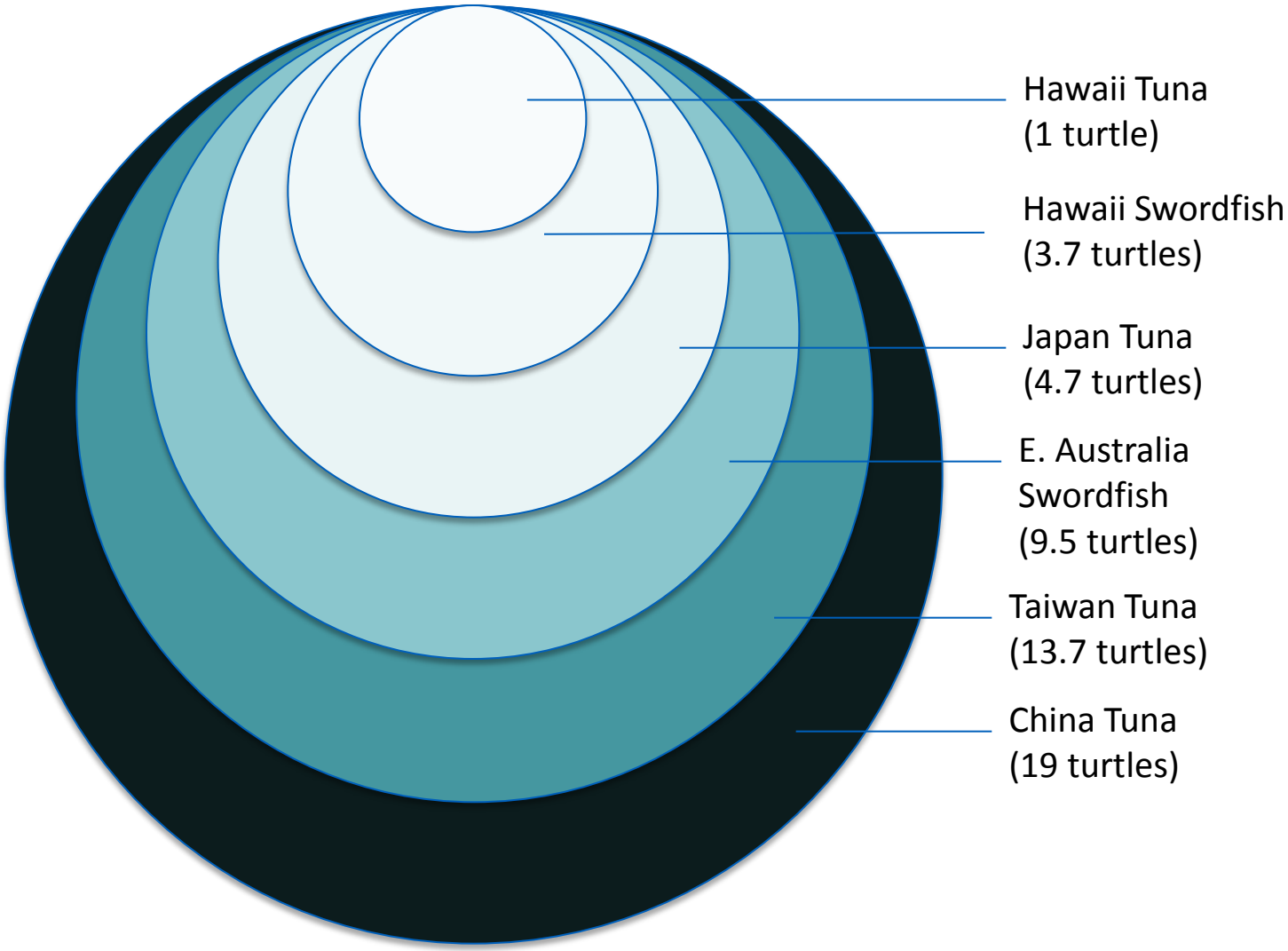
Good Alternatives
Buy, but be aware there are concerns with how they're caught or farmed.

Avoid
Take a pass on these for now, they're overfished or caught or farmed in ways that harm other marine life or the environment.

Visit us online or download our app for a **full list** of our recommendations.

Estimate of Longline Fisheries B/C Ratio

(sea turtle interactions per 190,000 kg of target fish)



Source: Bartram, P, J Kaneko and K Nakamura. 2010. Sea Turtle Bycatch to Catch ratios for differentiating longline –caught seafood products. *Marine Policy.* 34: 145-149.

Conclusions

- The majority of U.S. swordfish consumption is imported
- The contribution of swordfish to the U.S. balance of trade shows a persistent deficit (BOT = exports – imports < $0)
- U.S. management jurisdiction does not extend to other nations' fisheries which supply imports
- Based on historic evidence, the U.S. west coast swordfish fishery has recently underperformed its potential
- Increased west coast production could:
  - reduce the swordfish contribution to the trade deficit
  - increase the west coast supply of locally caught fresh fish
  - provide jobs in the fishing industry
  - reduce the carbon footprint of swordfish delivery
  - expand production that meets U.S. management standards

Questions?