



**NOAA**  
**FISHERIES**

NMFS Office of  
Science and  
Technology  
Silver Spring, MD

# Highlights from the First Update to the U.S. National Bycatch Report

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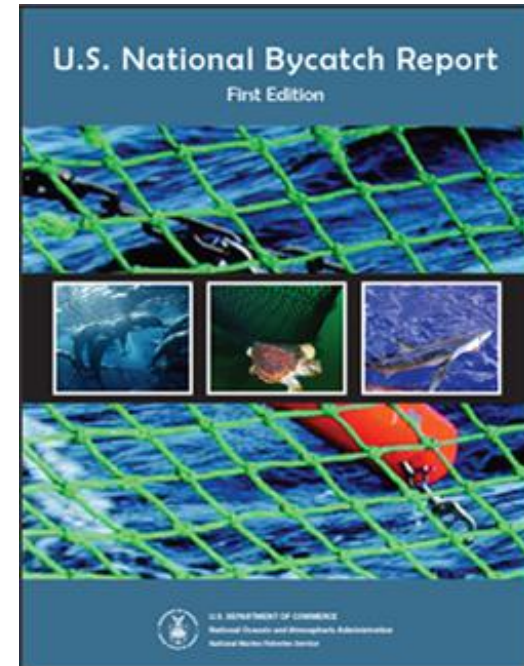


# Definitions of Bycatch

- **Magnuson-Stevens Act (1996):** Fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program.
- **Evaluating Bycatch (2004):** Discarded catch of any living marine resource plus unobserved mortality due to a direct encounter with fishing gear. This does not include retained incidental catch, although NMFS is committed to accounting for target catch, retained incidental catch, and bycatch.

# National Bycatch Report (NBR) First Edition: Key Accomplishments

- Published September 2011, based on 2005 data
- Bycatch estimates: 81 fisheries, 480 fish stocks, 94 protected species
- National bycatch ratio: 0.17
- Comprehensively documented:
  - Bycatch data sources
  - Analytical estimation methods
- Provided four new performance measure and trend monitoring tools:
  - Tier Classification System
  - Key Stocks
  - Fisheries of Focus
  - Bycatch Estimation Improvement Plans



# NBR First Edition Performance Measure Tools

- **Tier System:** quantitative means to evaluate the quality of bycatch data and estimation procedures. Scored 0-4 based on quality of:
  - Observer data
  - Supplemental data
  - Database/IT considerations
- **Key Stocks:** based on:
  - Bycatch level of the stock
  - Management importance of the stock or population
  - Overall stock or population status

# NBR First Edition Trend Monitoring Tools

- **Fisheries of Focus:** fisheries with one or more Key Stocks as bycatch and/or high bycatch levels.
  - Based on frequency analysis of all fishery bycatch ratios in which the median bycatch ratio was 0.17.
  - Fisheries with bycatch ratios  $>0.17$  were considered Fisheries of Focus.
- **Bycatch Estimation Improvement Plans:** developed for all Fisheries of Focus. Included information on:
  - Current tier scores
  - Deficiencies in bycatch data collection and estimation
  - Recommendations for improving bycatch data collection and estimation

# NBR Report Schedule

Year	Document Type	Data Years Included
<b>2011</b>	Comprehensive Report (First Edition)	2005
<b>2013 (2014)</b>	Online Update (First Edition Update 1)	2010
<b>2015</b>	Online Update (First Edition Update 2)	2011, 2012, 2013
<b>2017</b>	Comprehensive Report (Second Edition)	2014, 2015 + synthesis of 2010-2015
<b>2019</b>	Online Update (Second Edition Update 1)	2016, 2017
<b>2021</b>	Online Update (Second Edition Update 2)	2018, 2019
<b>2023</b>	Comprehensive Report (Third Edition)	2020, 2021 + synthesis of 2016-2021





# NBR Biennial Update Contents

- **Will include:**
    - Short national summary
    - Regional summaries, including progress on NBR recommendations
    - Updated species-specific and fishery bycatch estimates for all species and fisheries included in the original report (with some consolidation)
  - **Will NOT include:**
    - National bycatch ratio or regional bycatch ratios
    - Discussion of performance measures
    - Detailed discussion of bycatch estimation improvement plans
- These last three items are labor-intensive and would prevent timely reporting of updated bycatch estimates.

# Comprehensive Report Contents (next in 2017)

- Species-specific and fishery bycatch estimates for the two years following the last NBR *update*
- Updated NBR bycatch performance measures  
Synthesis of data presented since the last *comprehensive report*
- Summary of progress in bycatch monitoring and management since last *comprehensive report*
- Summary of progress regarding recommendations published in the previous *comprehensive report*
- Updated recommendations for improving bycatch data collection and estimation



# NBR First Edition Update 1

- **Shorter time lag**
- **573 fish bycatch estimates** (vs. 480 in 1<sup>st</sup> Edition)
- **NE/Mid-Atlantic:** provided bycatch estimates for 2 additional fisheries and 6 additional protected species stocks/populations
- **AK:** merged numerous state fisheries in response to feedback from AK Department of Fish & Game
- **NW:** provided bycatch estimates for 3 additional fisheries
- **PI:** added protected species bycatch estimates for American Samoa longline
- **SW:** provided fish bycatch estimates
- **HQ:** developed NBR database with dedicated staff, public interface

# Update 1 Landings for NBR Fisheries with Fish Bycatch Estimates, Compared to Overall U.S. Fishery Landings

Region	NBR Fish Landings (lb)	Total U.S. Fish Landings (lb)	NBR Landings as a % of Total Landings
Northeast	860,171,000	1,362,914,000	63%
Southeast	133,457,000	1,401,954,000	10%
Alaska	3,285,446,000	4,347,449,000	76%
West Coast	482,279,000	1,070,967,000	45%
Pacific Islands	23,708,000	28,069,000	84%
<b>Total</b>	<b>4,785,061,000</b>	<b>8,211,353,000</b>	<b>58%</b>

SE landings include 967,025,000 pounds of Gulf of Mexico menhaden. Because NMFS is unable to estimate bycatch for this fishery due to logistical and confidentiality issues, this fishery is not included in this update, resulting in the low percentage.

# West Coast: Notable Changes in 2010 vs. 2005

- Bycatch levels are decreasing in key U.S. fisheries due to:
  - Management actions by the RFMCs
  - Gear innovations developed through BREP and regional cooperative research programs
- West Coast groundfish bottom trawl fishery: bycatch was reduced from 34% of total catch in 2005 to 20% of total catch in 2010.



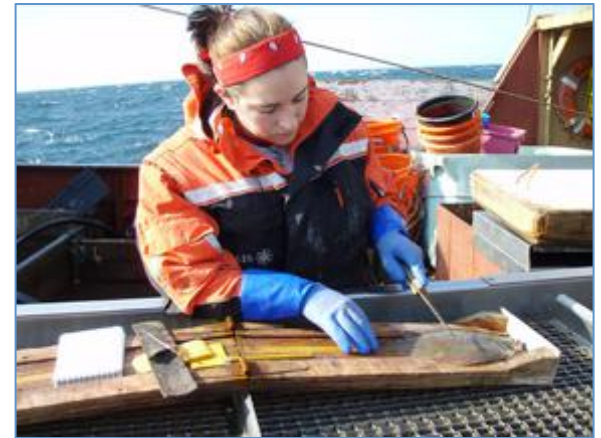
# Alaska: Notable Changes in 2010 vs. 2005

- Arrowtooth flounder:
  - Highest estimated Alaskan fisheries bycatch in 2010 (38.06 M lb; total catch estimates well below ABC)
  - Species bycatch ratio of 0.27 in 2010 (vs. 0.44 in 2005)
- Trawl fisheries' bycatch ratios:
  - BSAI Flatfish Group Trawl: 0.12 vs. 0.36 in 2005
  - BSAI Rock Sole Trawl: 0.09 vs. 0.34 in 2005
- Alaska longline fishing fleet: seabird bycatch decreased by 50% from 2005 to 2010



# NE and SE: Notable Changes in 2010 vs. 2005

- Northeast spiny dogfish bycatch:
  - 14.5 M lb vs. 21.5 M lb in 2005
  - Bycatch ratio: 0.56 vs. 0.90 in 2005
- Northeast fishing trips observed: up to 5,008 from 3,565 in 2005
- Gulf of Mexico shrimp trawl bycatch ratio: 0.67 vs. 0.76 in 2005
- Southeast red snapper bycatch:
  - 1.60 M individuals vs. 2.57 M individuals in 2005
  - 0.49 M lb vs. 0.71 M lb in 2005



## NBR Next Steps

- Expand NBR public database to allow for queries of NBR First Edition data: **Summer 2014**
- In-person NBR Steering Committee meeting to discuss how to make the bycatch estimates more consistent across regions, as well as to decrease the coefficient of variation for NBR bycatch estimates: **September 2014**
- Online publication of NBR First Edition Update 2: **December 2015**
- <http://www.st.nmfs.noaa.gov/observer-home/first-edition-update-1>



**Thank You!  
Questions?**

