

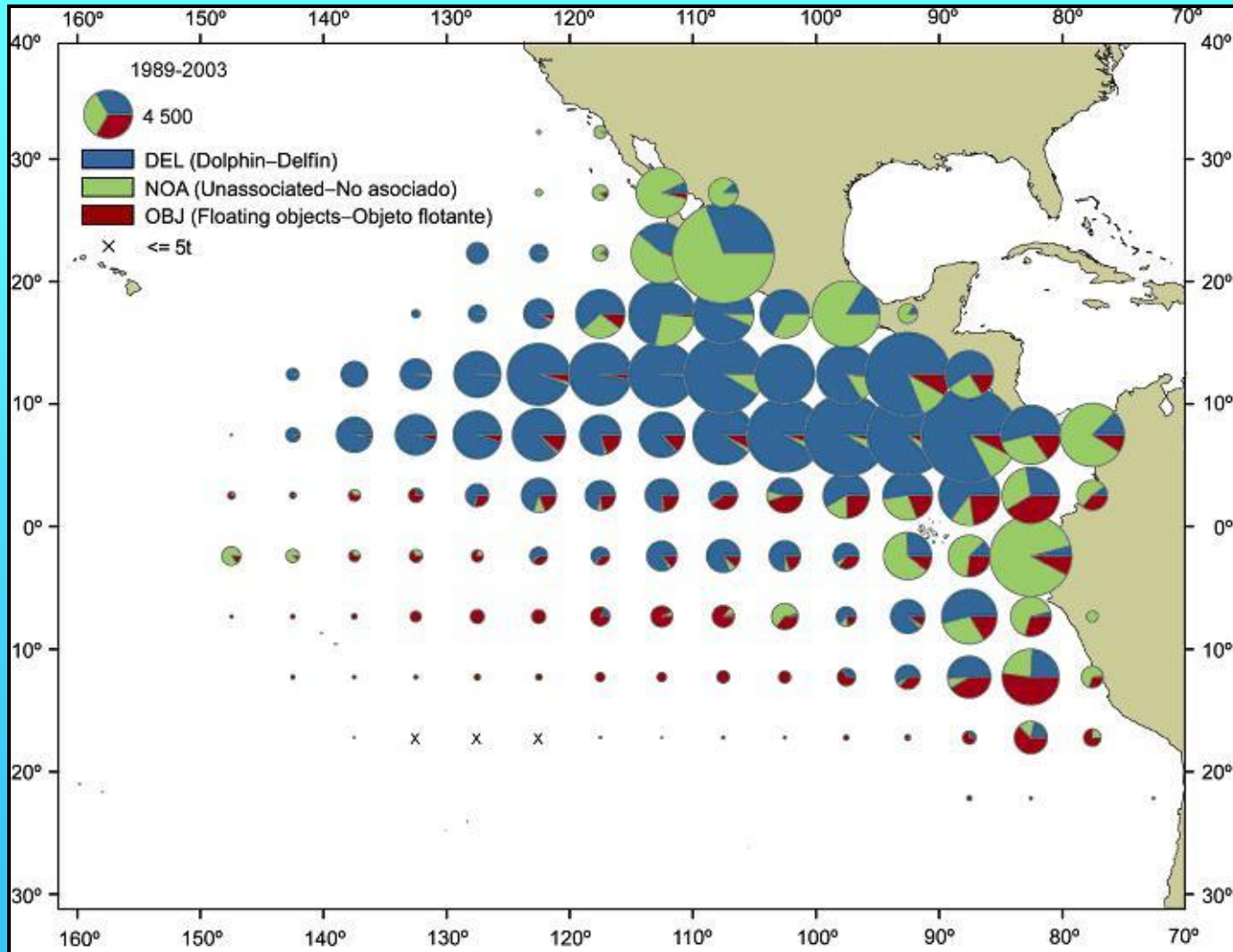
# HMS Stock Assessment Update for the Pacific Fishery Management Council

**Gary Sakagawa, Ph.D.**  
Assistant Center Director for  
Fishery Management Programs  
Southwest Fisheries Science Center  
NOAA Fisheries  
La Jolla, CA  
USA

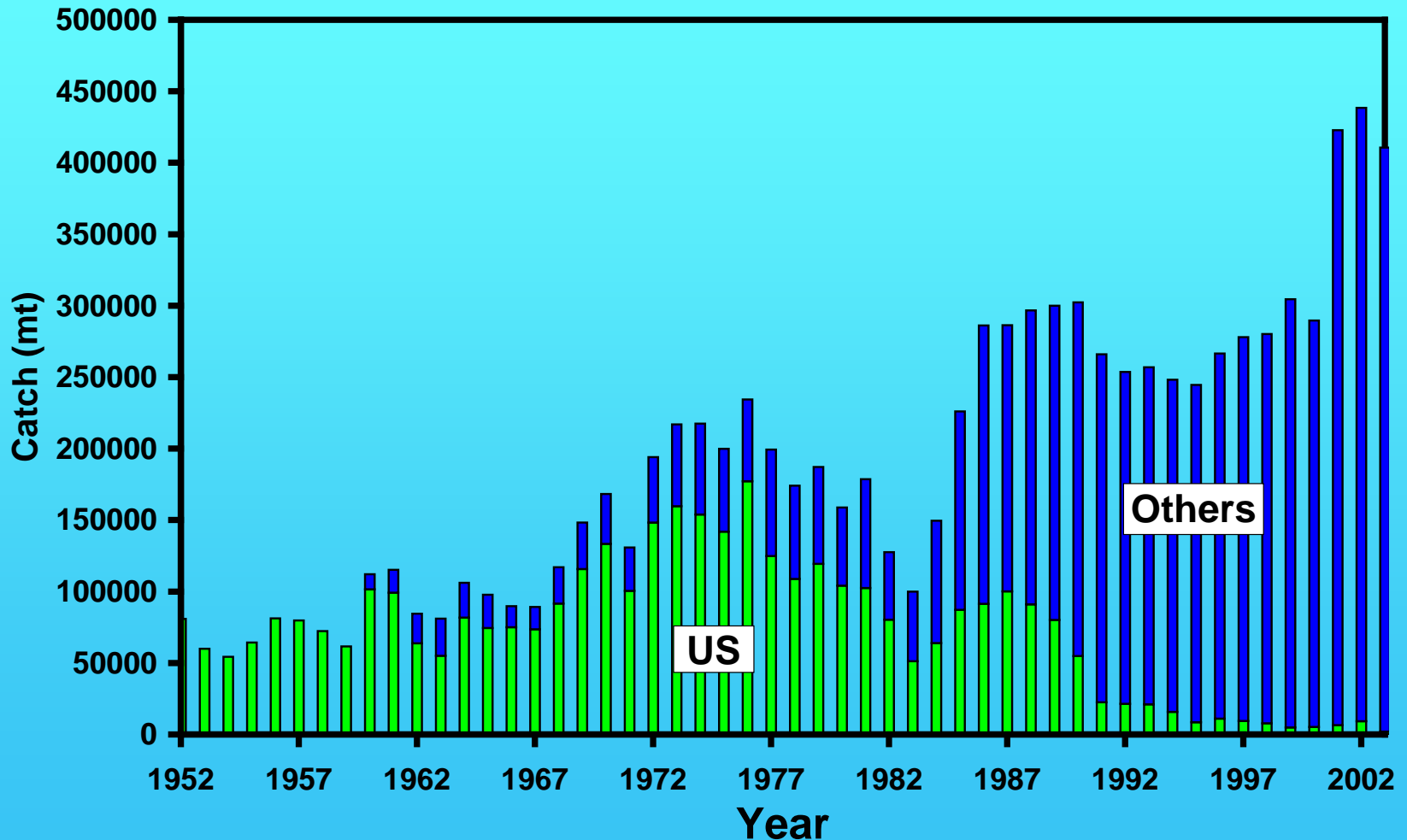
Foster City, CA  
June 2005



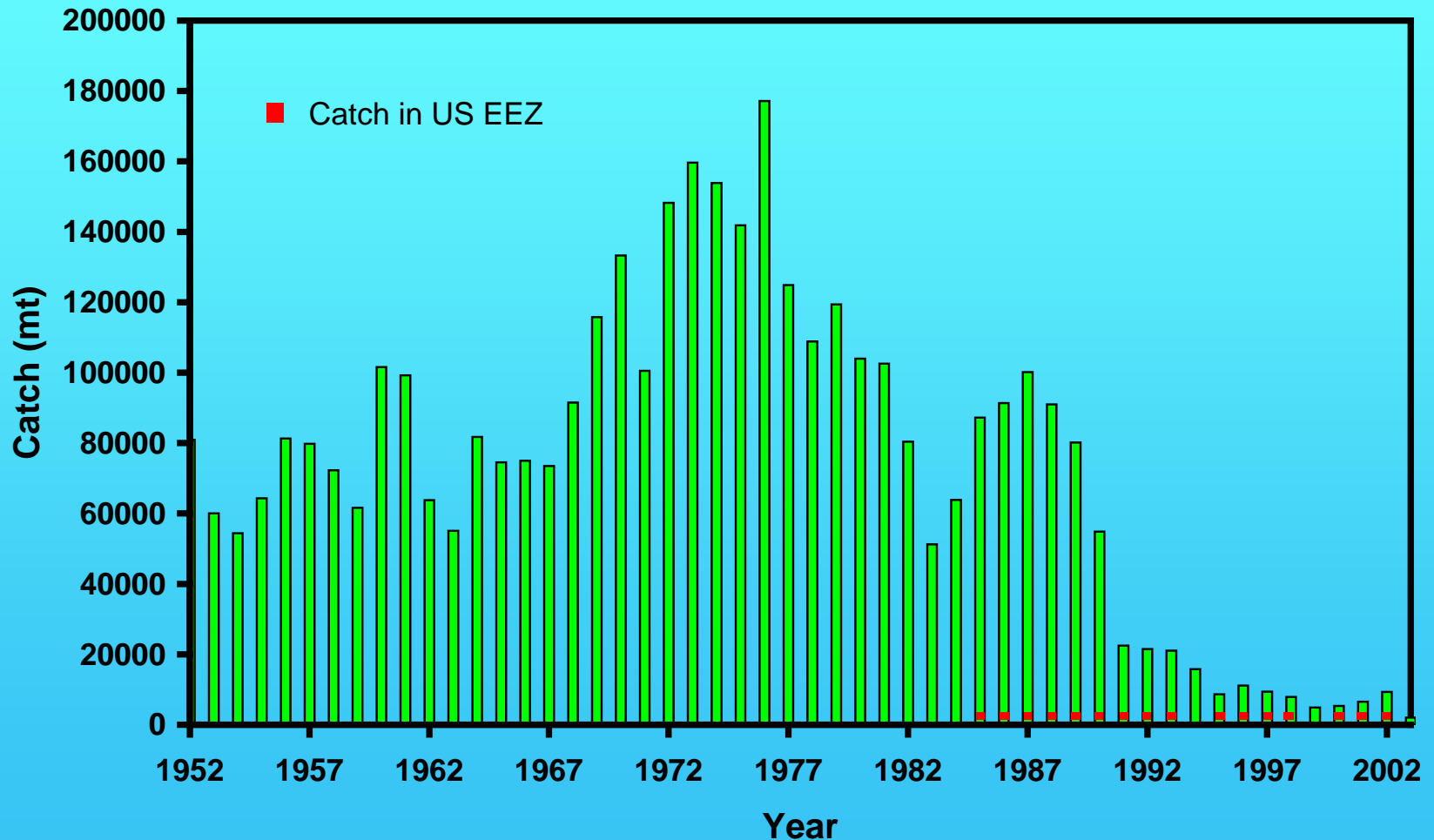
# Distribution of Yellowfin Tuna Catches in the EPO



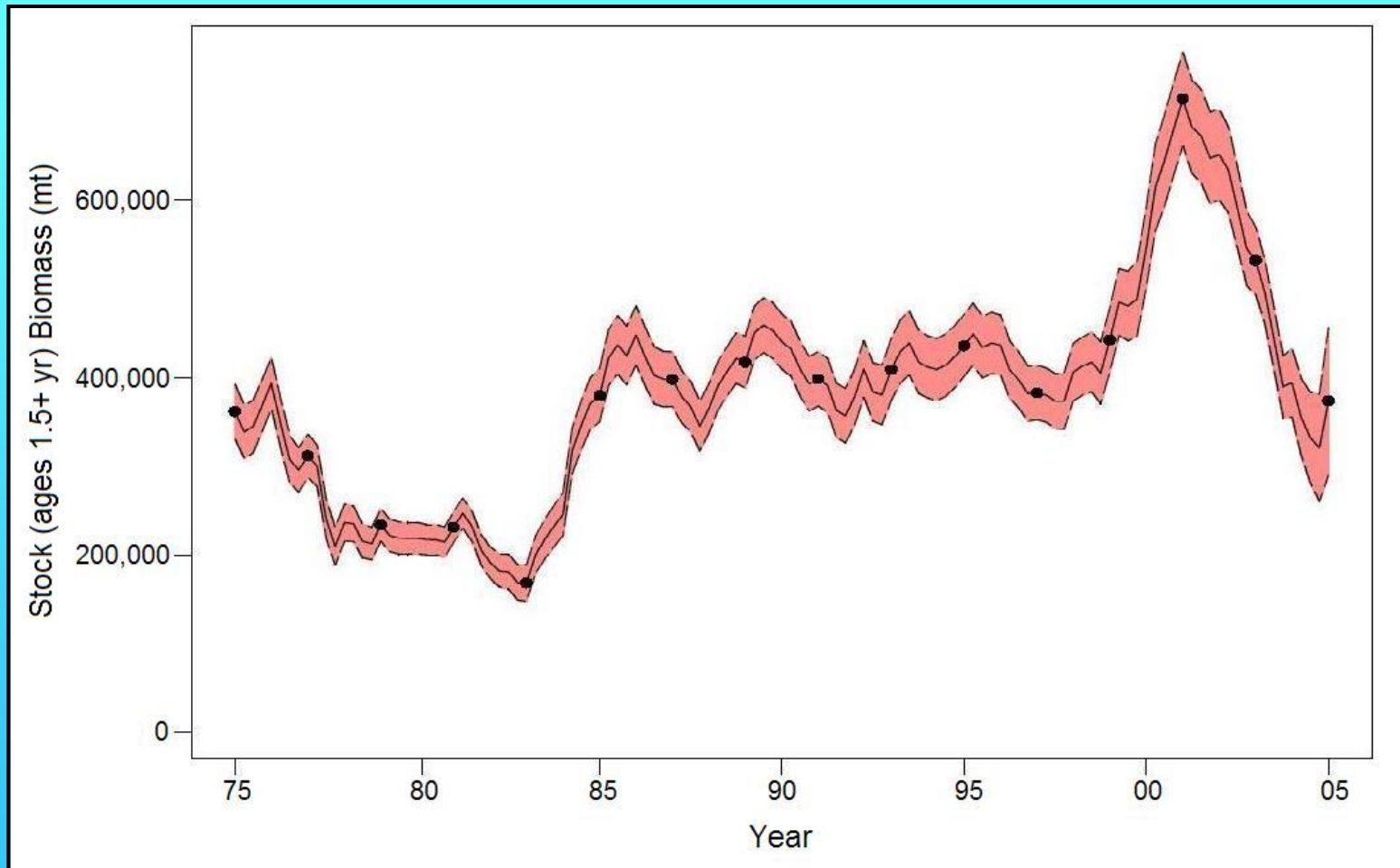
# Yellowfin Tuna Catch - EPO



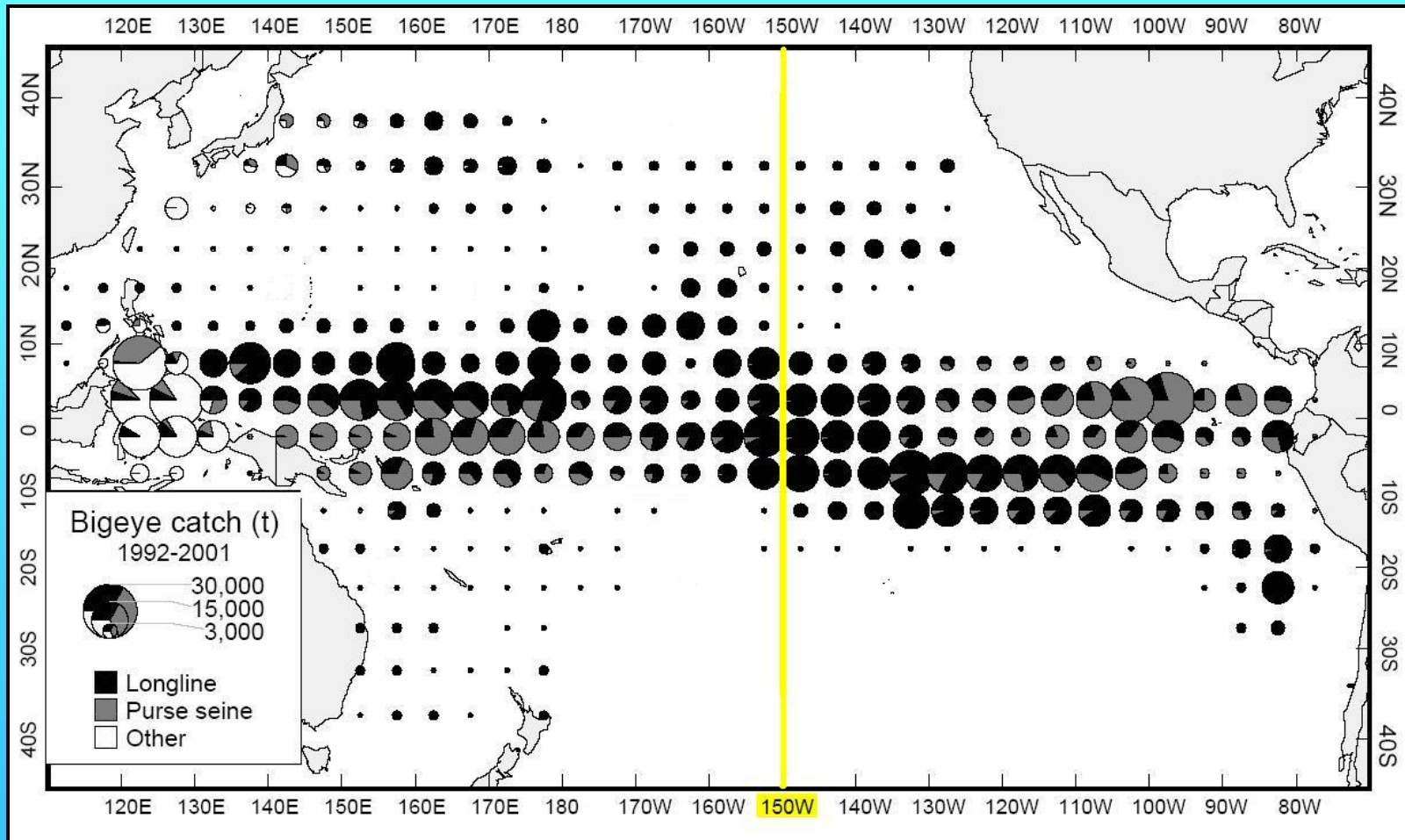
# Yellowfin Tuna Catch - US



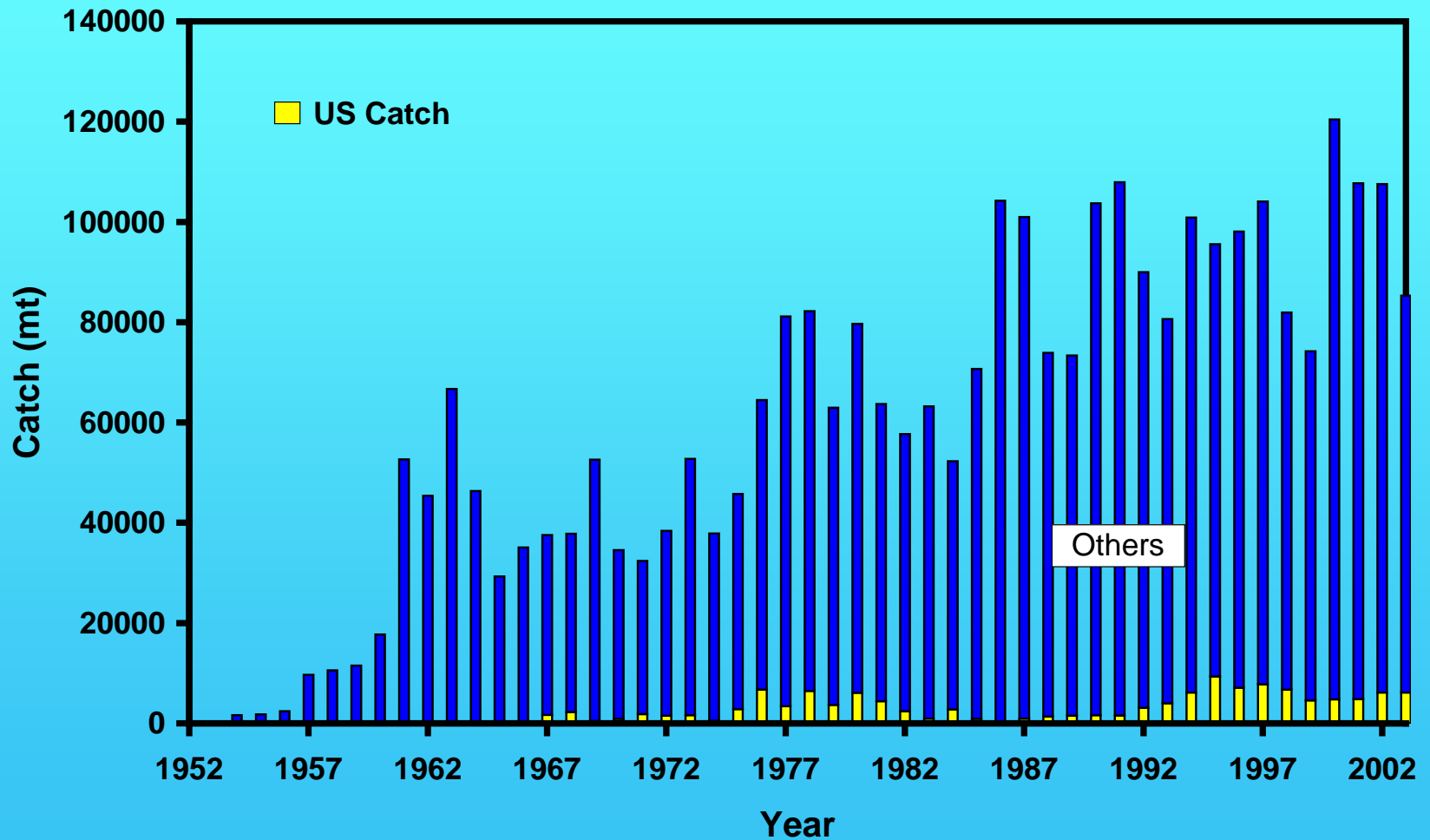
# Estimated (2005) Stock Biomass for Yellowfin Tuna (EPO)



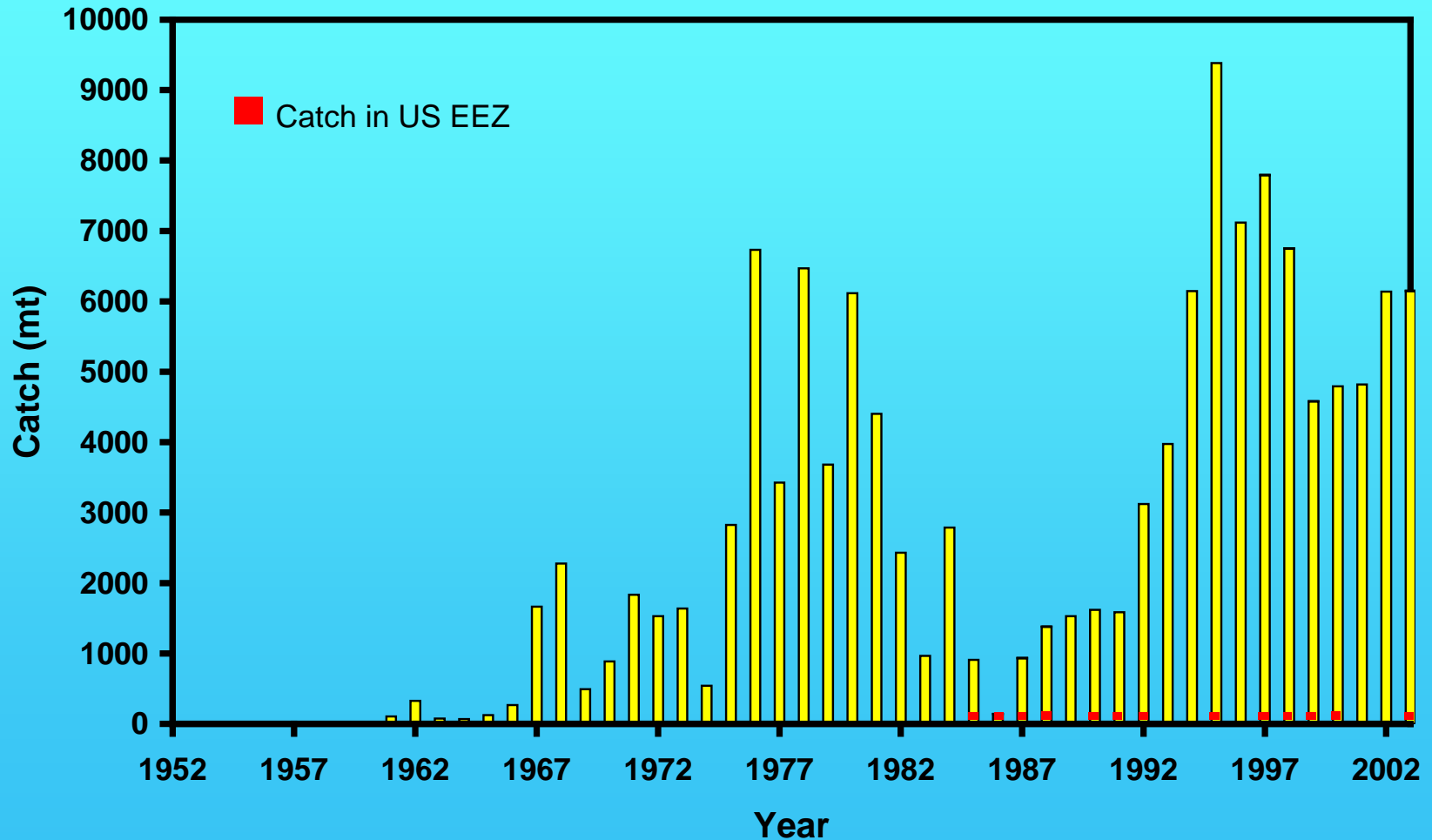
# Distribution of Bigeye Tuna Catches



# Bigeye Tuna Catch - EPO

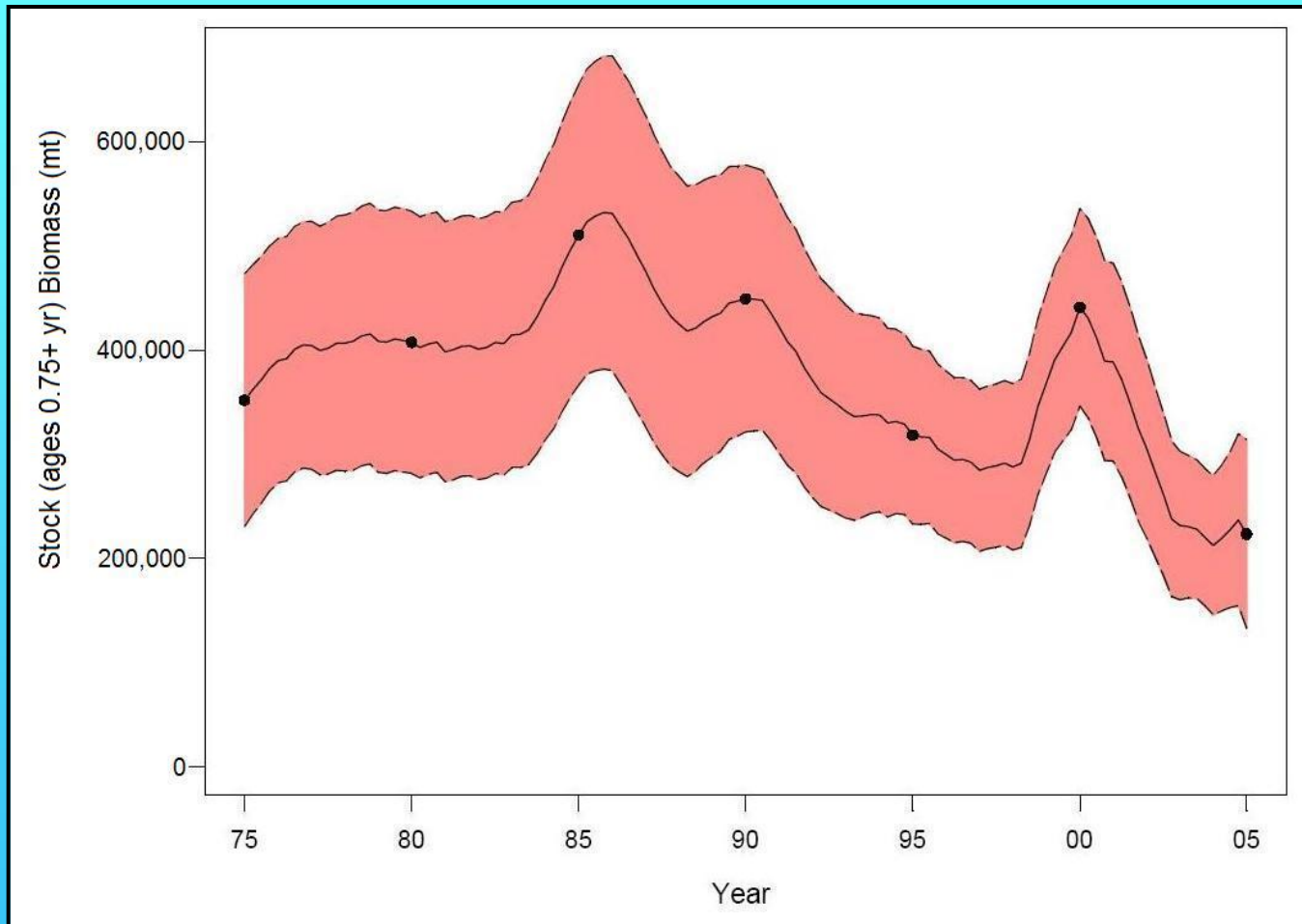


# Bigeye Tuna Catch - US





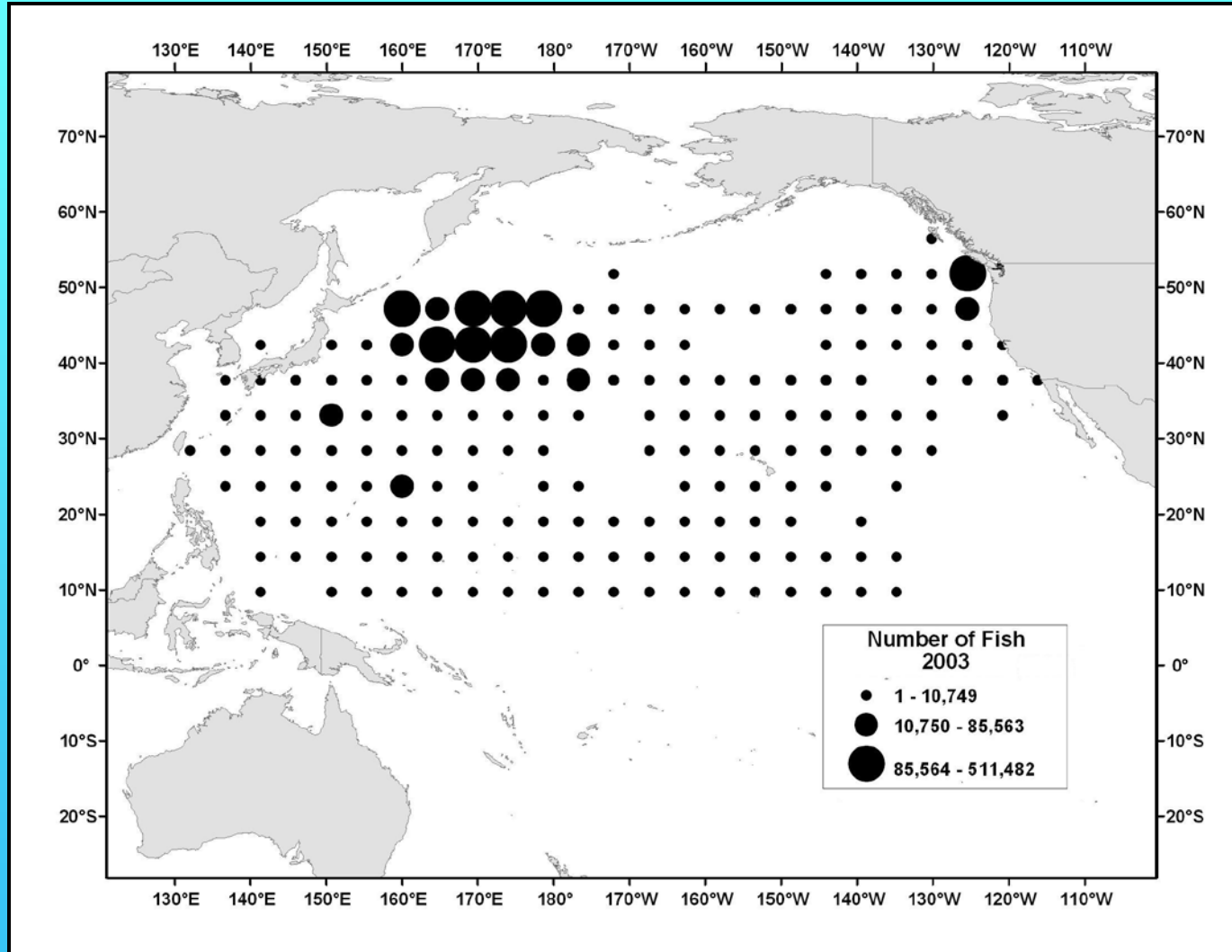
# Estimated (2005) Stock Biomass for Bigeye Tuna (EPO)



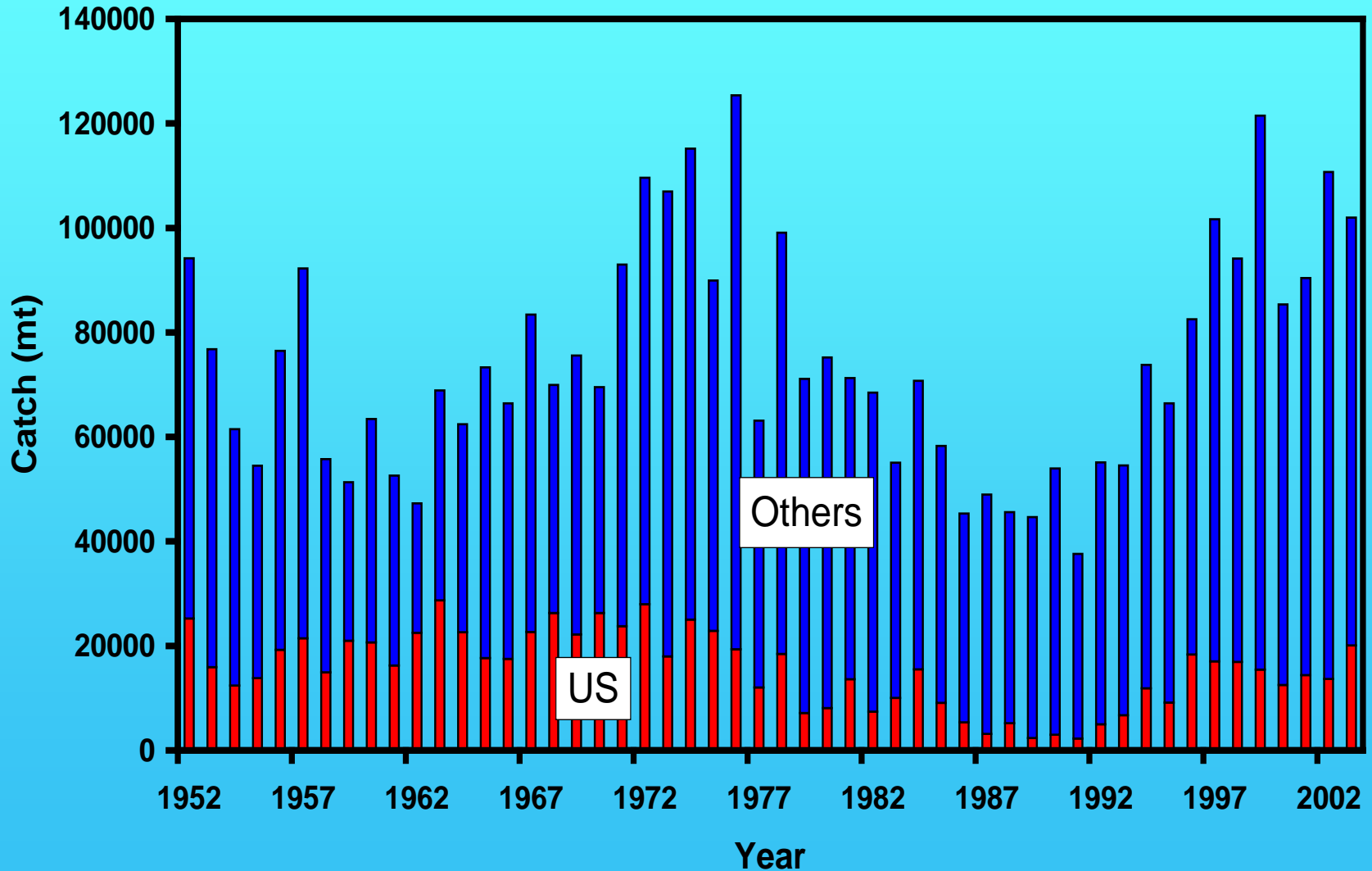
## Summary of Stock Status for Yellowfin and Bigeye Tunas

Forum	$F_{\text{recent}}/F_{\text{MSY}}$	$B_{\text{recent}}/B_{\text{MSY}}$	$SSB_{\text{recent}}/SSB_{\text{MSY}}$
<b>Yellowfin Tuna (EPO)</b>			
ISC5 (Feb 2005)	High	0.79	0.80
IATTC (May 2005)	1.20	0.89	0.87 (c.i. 0.66-1.07)
<b>Bigeye Tuna (EPO)</b>			
ISC5 (Feb 2005)	1.62	0.57	0.68
IATTC (May 2005)	1.75	0.76	0.59

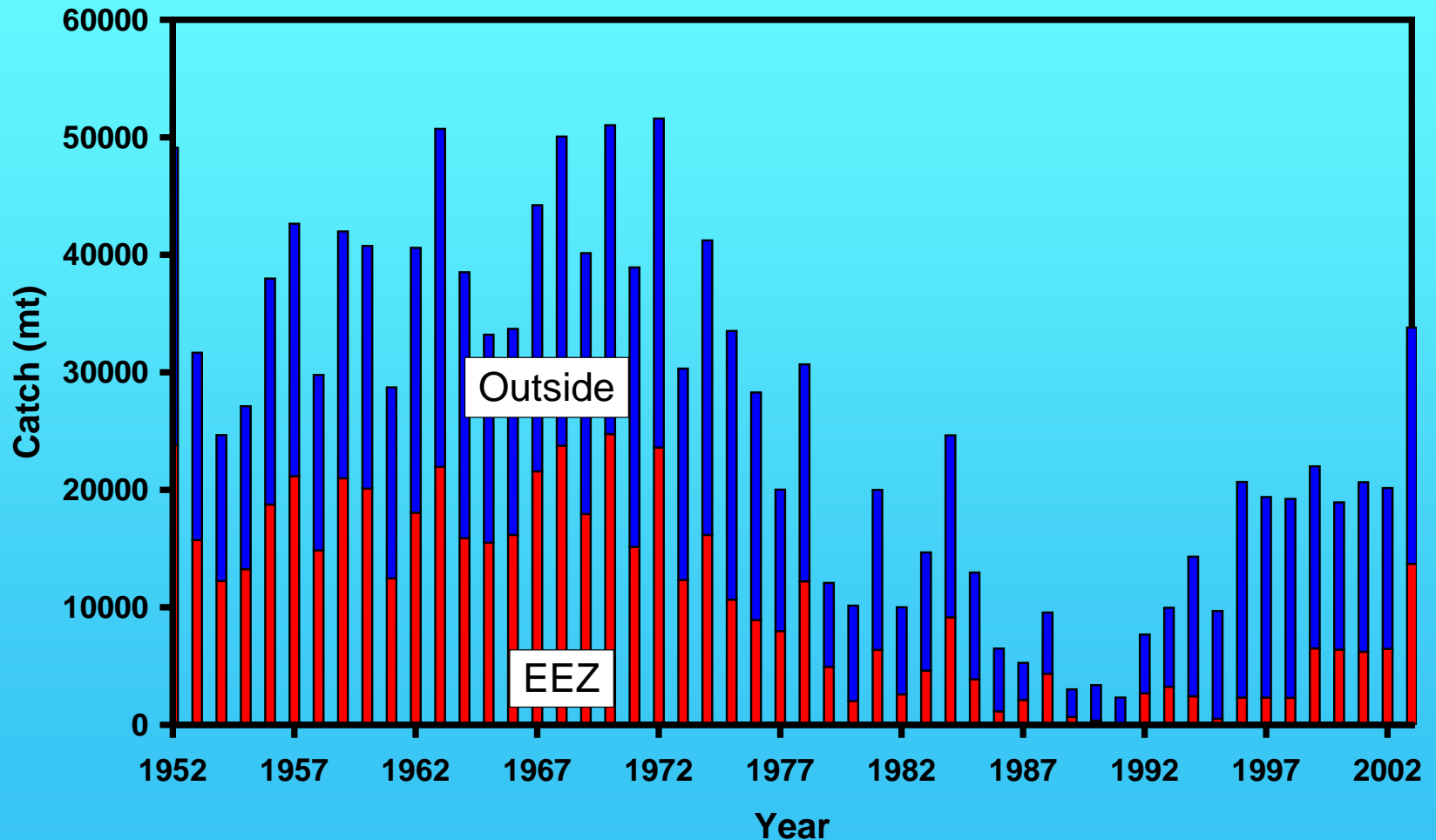
# Distribution of North Pacific Albacore Catches



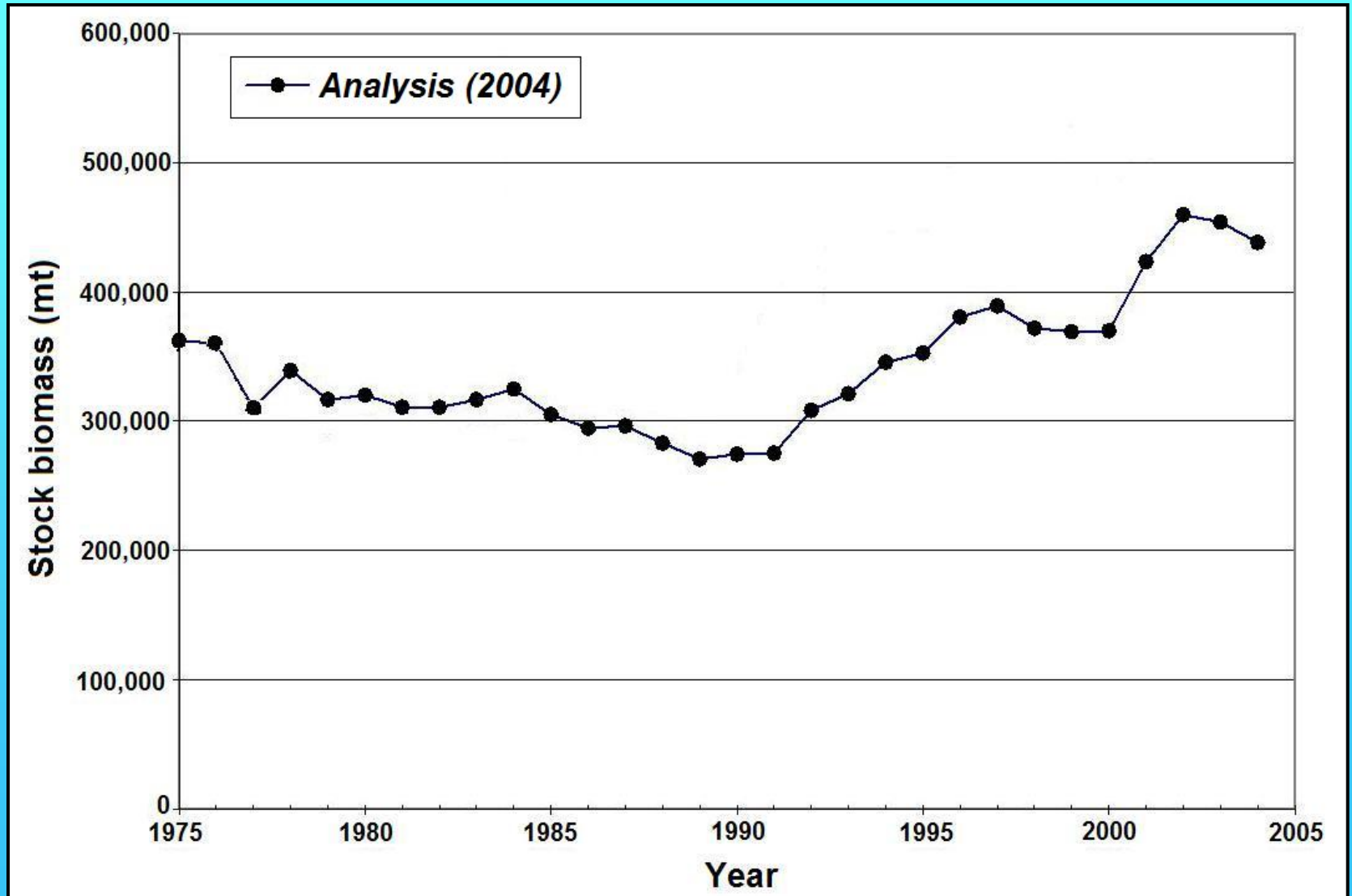
# North Pacific Albacore Catch



# North Pacific Albacore Catch - US



# North Pacific albacore total stock biomass (1975-2004)



## Summary of Stock Status for Albacore Tunas (North Pacific)

---

Forum	$F_{\text{recent}}/F_{\text{MSY}}$	$B_{\text{recent}}/B_{\text{MSY}}$	$SSB_{\text{recent}}/SSB_{\text{MSY}}$
ISC5 (Feb 2005)	1.02 - 2.27	0.67 - 1.50	0.57 - 1.05
IATTC (May 2005)	1.62 - 2.27	0.92 - 1.50	0.57 - 1.05

---

# Conclusion from 2005 Stock Assessments

	Overfishing?	Overfished?
YFT - EPO	Yes	Probably Yes --stock is nearly or beyond full exploitation level --estimated stock size is below the $B_{MSY}$ level
BET - EPO	Yes	Yes
ALB - NP	Yes	Probably Yes --if high $F$ continues, unlikely SSB will rebuild to $SSB_{MSY}$ level within 5-year. --a modest reduction from current $F$ may be required to ensure SSB remains above minimum levels