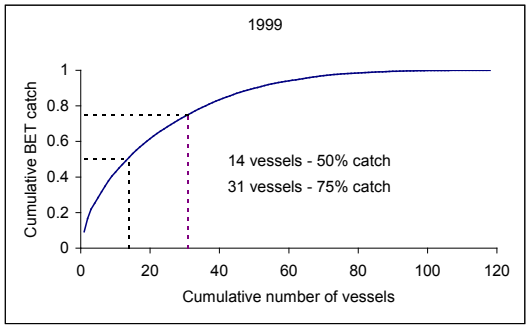
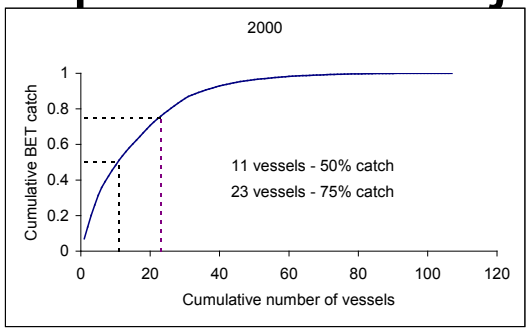
CATCH LIMITS FOR INDIVIDUAL PURSE-SEINE VESSELS TO REDUCE FISHING MORTALITY ON BIGEYE TUNA IN THE EASTERN PACIFIC OCEAN.

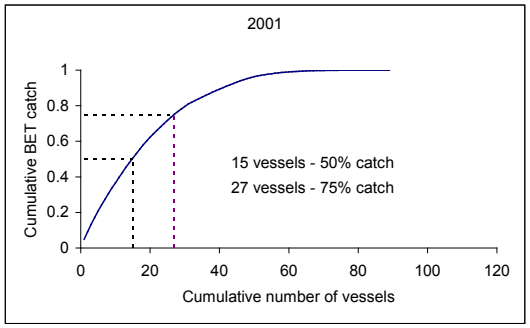
Methods

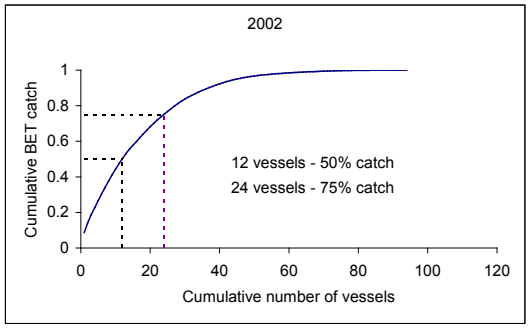
- Based on trip records
- Data for each vessel is summed to provide total catch of bigeye, yellowfin, and skipjack for each year for each vessel.
- 1) Determine the number of vessels that capture the majority of bigeye catch.
  - Order the data by descending catch of bigeye.
- 2) Investigate individual vessel catch limits.
  - Assuming that catch occurs at a constant rate throughout the year
  - Fishing stops as soon as the bigeye limit is taken.

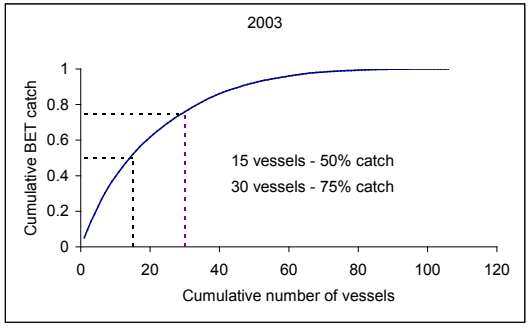
Number of vessels that capture the majority of bigeye

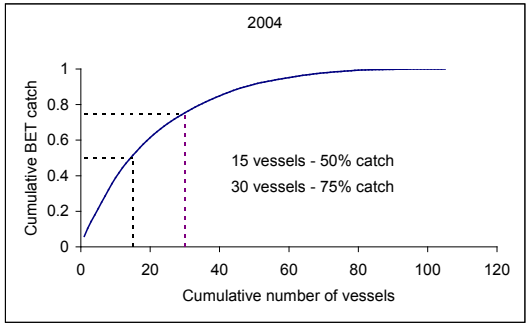


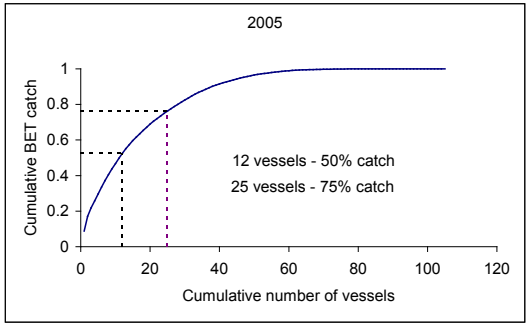




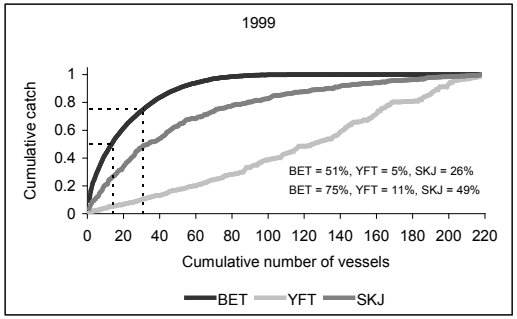


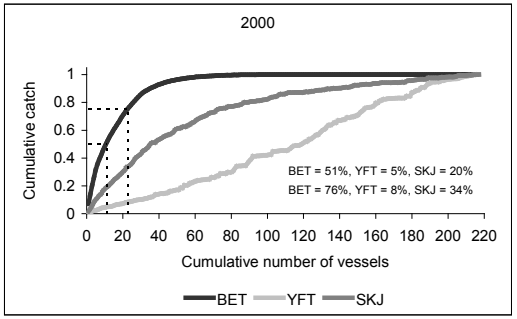


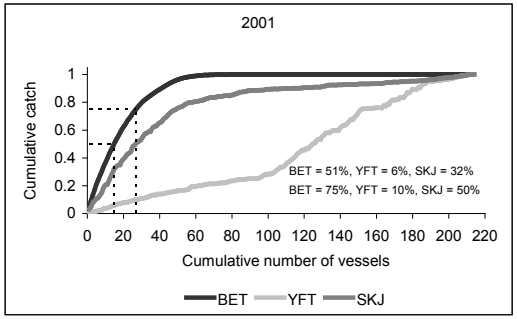


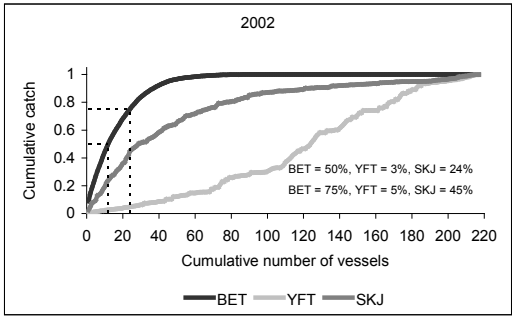


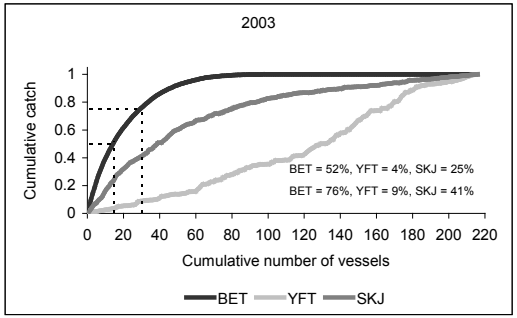
Catch of other species

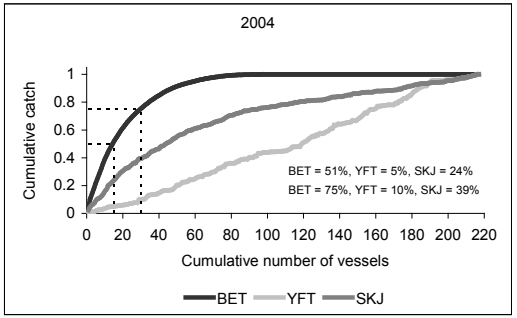


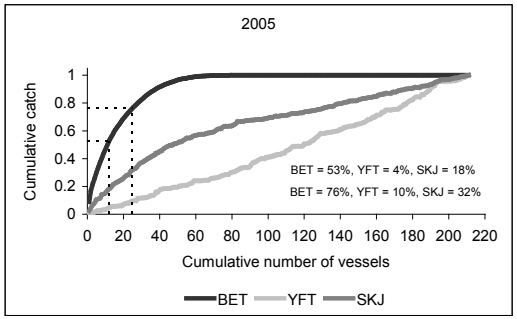










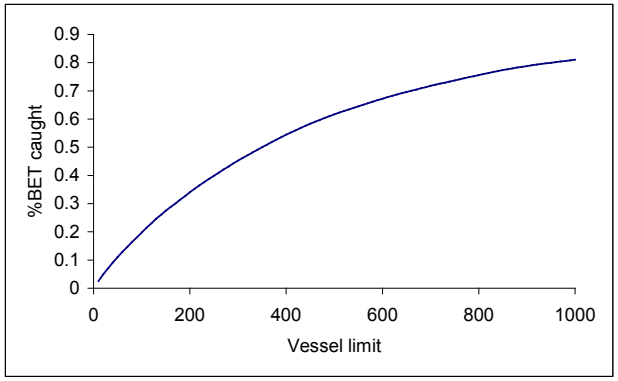


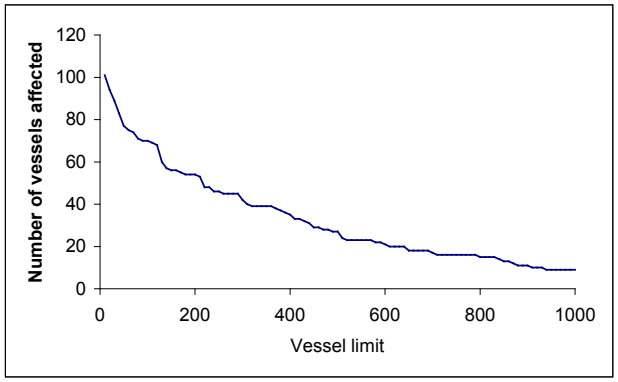
Number of vessels that capture the majority of bigeye

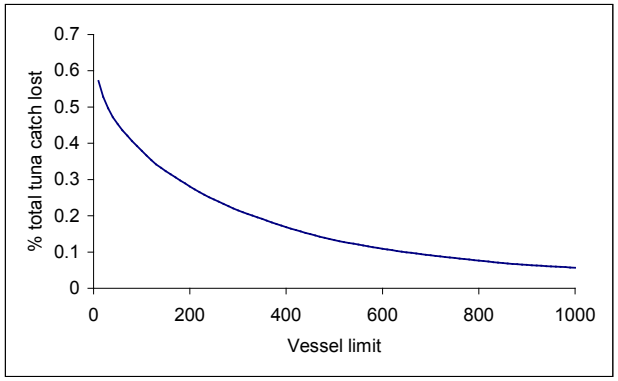
	50% of the BET catch				75% of the BET catch			
	Vessels	**%BET**	**%YFT**	**%SKJ**	**Vessels**	**%BET**	**%YFT**	**%SKJ**
1999	14	51	5	26	31	75	11	49
2000	11	51	5	20	23	76	8	34
2001	15	51	6	32	27	75	10	50
2002	12	50	3	24	24	75	5	45
2003	15	52	4	25	30	76	9	41
2004	15	51	5	24	30	75	10	39
2005	12	53	4	18	25	76	10	32

Vessel limits

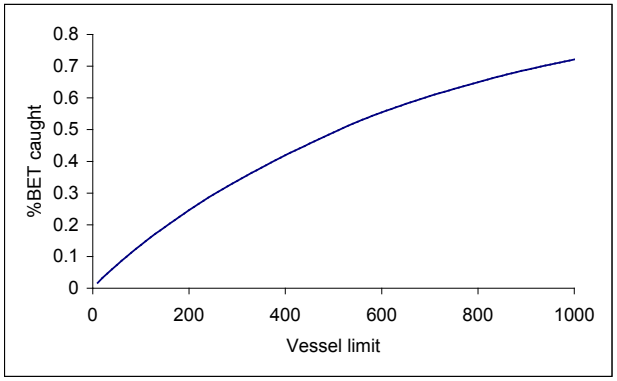
2004

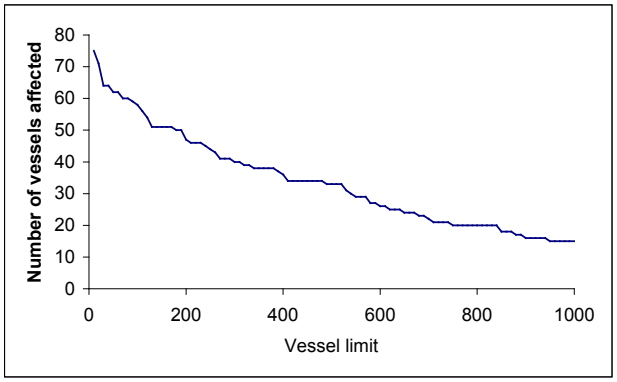


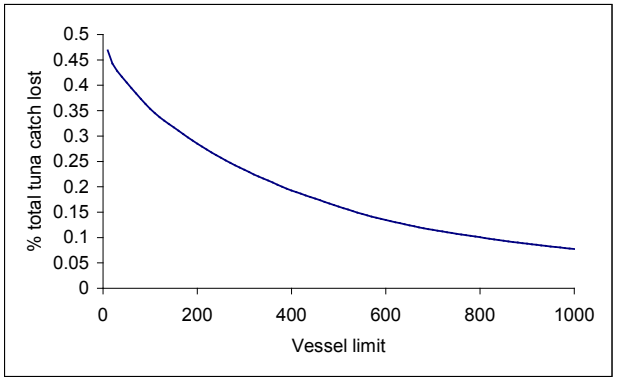




2005







Vessel limits – 50% bigeye reduction

	Limit	Vessels	Lost catch %
1999	350	39	19
2000	889	30	17
2001	474	31	16
2002	459	30	12
2003	416	38	16
2004	454	37	17
2005	520	33	16

Vessel limits – 30% bigeye reduction

	Limit	Vessels	Lost catch %
1999	660	18	10
2000	1520	19	9
2001	790	26	9
2002	780	20	7
2003	730	22	8
2004	820	23	10
2005	930	16	8