SEDAR 2 Data Workshop
Southeast Black Sea Bass and Vermillion Snapper

Commercial Landings Working Group Report

Commercial Landings.doc
Black Sea Bass

Commercial landings of black sea bass are available since 1950. Between 1950 and 1983 data were collected through the NMFS General Canvas, and it is suspected that coverage was incomplete and variable across states and years. The TIP program began in 1984, adding length sampling and more complete dealer coverage. Some states only sample BSB through TIP, others collect additional samples and sample more species (e.g. beyond the TIP targets). Landings for the assessment are those provided by each state, based on its current records under TIP (SC) or state trip ticket (NC,FL) sampling. These landings do not exactly match landings provided on NMFS website. One reason is updates to state databases after finalization with NMFS that are not always reported to NMFS. For example, SC applies a 5% rule, if a change is less than 5% of total landings it is not reported to NMFS after the final version.

Data Issues

1. Separation of management unit at Hatteras.

   Black sea bass North of Cape Hatteras are managed as a separate stock by the MAFMC, those South of Hatteras are managed by the SAFMC with a unit stock from Hatteras to Florida.

   Past assessments allocated NC landings into management units by the primary gear categories, under the assumption that trawl landings occur in the Northern unit and pot landings along with all other gear types occur in the Southern area.

   From 1996-1999, NC's Trip Ticket program included an option for fishermen to report landings as North or South of Cape Hatteras; by 1999 most landings (97%) were reported to area and in 2000 this field became mandatory. Landings by gear and area from 1999-2001 are used to evaluate the prior area allocation assumption for 1972-1998 and to allocate landings to area for 1999-2001. Data show 98% trawl landings are north, 92% pot landings are south. Therefore, the prior assumption is validated and a similar approach is used here. Allocation to management unit remains based on gear, with all trawl and 8% of pot landings assumed harvested in the Northern region.

   Also considered logbooks for N-S allocation. Problem exists with varying permit systems in North Carolina due to overlapping management jurisdictions. Some fishermen have Northeast multispecies permits, some have SA snapper grouper permits, and the South Atlantic logbook only apply to those with SA permits.

2. Mixing of species.

   Sea bass were potentially landed as mixed species under 'seabass unclassified'. Florida and North Carolina have trip ticket reporting programs and trip level sampling

that allows determination of the proportion of black sea bass in the landings that can be applied to period when seabass are landed as unclassified.

North Carolina required mandatory reporting to species beginning with 1994. From 1994-2001, an average of 99.8% of sea bass landed were black sea bass, with about 0.2% other sea basses (rock or kelp). Unclassified sea bass landings for 1972-1993 were multiplied by .998 to adjust for mixed species landings. Landings for 1994-2001 were adjusted by the % of the landings that were actually black sea bass.

Florida required reporting to species through a trip ticket program for 1995-2001. Unclassified seabass landings for 1970-1994 were adjusted by multiplying by the average proportion (98%) of black sea bass observed in 1995-2001 landings reported by species. Landings for 1995-2001 were adjusted by the annual proportion of landings by gear that were black sea bass.

South Carolina landings are reported to species and are generally considered free of bias due to species mixing. There is no monitoring of other sea bass species or sampling beyond the basic TIP requirements available to test this assumption.

Georgia landings data are only available through the NMFS website. No adjustments are made.

3. Years available

NMFS general canvas landings starting with 1950 are available through the NMFS commercial statistics website. The TIP program began in 1984, expanding the dealers and fishermen covered by the survey and adding biological data collection (ie length, effort information). NC and FL conduct sampling beyond the basic TIP standards and require mandatory reporting.

North Carolina supplemented NMFS catch sampling beginning in 1978. TIP sampling of length data was added in 1984. Mandatory reporting began in 1994 with the Trip Ticket Program. Biological sampling is generally conducted through TIP, but is more comprehensive than minimially required (ie, all species in catch are counted, recorded).

South Carolina landings based on general canvass and TIP.

Georgia landings based on general canvass and TIP. Inconsistent coverage due to lack of port samplers in some years.

Florida added trip ticket reporting in 1995.

4. Landings by Gear.

Landings can be categorized by gear since 1970 for FL, and 1972 for NC and SC. Most black sea bass are landed by pots/traps and hook and line. Gear types were condensed into three categories: Pots (pots and traps), Lines (hook and line, electric reels, longlines, trolling), and Other (gill nets, trawls, gigs, spears etc). Pot and line categories represent 95% of the total landings on average for 1972 – 2001 and 99% of the total landings since 1997.

5. Length Distributions

Length data are available since 1984 through the TIP program. An average of 1071 lengths were taken each year over the entire region combined, including 615 for hook and line categories and 327 for pot trap categories. Length frequencies were tabluated annually in

20mm length categories, from 160 to 500 mm. Measurements are based on Total Length, Some landings from SC in some years coded as Fork Length are measured as the center line of the tail and are treated as Total Length measurements without conversion.

Pot and Line landings were allocated to length based on annual gear specific length samples. The "other" category was allocated based on length distributions for all samples combined. Since 98% of 1984-2001 landings are Pot and Line categories, the bulk of the landings are allocated to length based on gear specific length samples.

Black sea bass

Comm Landings availability

Florida commercial landings (trip ticket data)

- Landings summarized by year and gear with pounds and trips
- Atlantic coast only (Monroe county landings in total if before 1986; landings from Atlantic fishing zones for Monroe county thereafter)
- Unclassified sea bass categories factored for % of black sea bass based on Florida commercial trip ticket data from 1995-2001 reported by species (black, bank, rock)
  - 1995-2001 factored by year and gear
  - 1970-1994 factored by annual average of 1995-2001 data

Trip Interview Program (TIP) data (NC-FL east coast)

- Summary of number of length measurements collected by year and gear
- Length frequencies by year and gear with 20mm length classes
- Fork length measurements primarily from SC and are center line length which equals total length
  - No conversion from FL to TL necessary
  - Mean FL and TL were the same

NMFS log book data

- Evaluation of effort data for CPUE indices
- Discarded data north of Cape Hatteras
- Trap and Hook & Line separately
  - Trap: kept only trips where black sea bass was the max. species landed
  - H&L: max. species; vessels with 95% of landings by year

North Carolina trawl and pot landings percentage by area (North of Hatteras, South of Hatteras).

YEAR	North % Trawl	South % Pot	% Classified
1995	0%	0%	2%
1996	50%	63%	58%
1997	53%	73%	73%
1998	39%	91%	82%
1999	94%	92%	97%
2000	99%	89%	100%
2001	100%	95%	100%
99-01 avg.	99.4%	91.9%	100%

Total South Atlantic Black Sea Bass Landings Proportion by Primary Gear Categories.

Year	TRAP	LINE	OTHER	Trap/Line
1970	4%	75%	21%	79%
1971	3%	60%	36%	64%
1972	86%	8%	6%	94%
1973	89%	7%	4%	96%
1974	90%	7%	3%	97%
1975	86%	12%	3%	97%
1976	77%	17%	6%	94%
1977	73%	19%	8%	92%
1978	47%	42%	11%	89%
1979	80%	18%	3%	97%
1980	86%	11%	2%	98%
1981	84%	14%	3%	97%
1982	80%	17%	3%	97%
1983	73%	26%	1%	99%
1984	64%	35%	2%	98%
1985	66%	31%	3%	97%
1986	72%	27%	1%	99%
1987	67%	26%	6%	94%
1988	63%	33%	4%	96%
1989	63%	35%	3%	97%
1990	68%	29%	3%	97%
1991	65%	34%	1%	99%
1992	66%	32%	2%	98%
1993	66%	29%	6%	94%
1994	65%	33%	2%	98%
1995	69%	29%	2%	98%
1996	73%	26%	2%	98%
1997	68%	31%	1%	99%
1998	60%	39%	1%	99%
1999	66%	33%	1%	99%
2000	77%	22%	1%	99%
2001	80%	19%	1%	99%

Sampling Intensity, TIP program, South Atlantic Black Sea Bass.

Year	Lines	Pots	Other	Total
1984	764	174	14	952
1985	545	340	4	889
1986	699	25	485	1209
1987	633	393	8	1034
1988	485	605	137	1227
1989	358	194	6	558
1990	627	391	88	1106
1991	906	574	28	1508
1992	688	742	4	1434
1993	543	197	326	1066
1994	490	521	352	1363
1995	300	121	181	602
1996	354	109	170	633
1997	533	461	190	1184
1998	818	188	15	1021
1999	877	425	1	1303
2000	524	219	87	830
2001	930	214	213	1357
mean	615	327	128	1071

Vermillion Snapper
Commercial Landings Documentation

Commercial landings data are available through the NMFS general canvas and TIP databases from 1958-2001. Data categories include those reported to species and those reported as snapper unclassified. State maintained records are available since 1972 for North Carolina and South Carolina, and since 1970 for Florida. No state records are available for Georgia.

Length samples are available since 1984 through TIP samples.

Data Issues
1. Mixing of species.

Vermillion snapper landings are variably recorded to species and as unclassified snappers. Reporting to species is more prevalent in recent years, and the proportion of total snapper landings reported as unclassified declines over time. Total vermillion landings are estimated for each state by combining landings reported to species and a portion of the unclassified snapper landings. In general, the proportion of vermillion landings relative to the total snapper landings reported by species is used as a multiplier to estimate the proportion of vermillion landings in the unclassified category. For years in which there are no landings reported by species, the time series average percent vermillion is used to estimate the portion of vermillion snapper in the unclassified category.

State Specific Details

North Carolina. The proportion of snapper unclassified declines steadily, from 100% for 1972-1977, to 48% for 1978-1984, to 20% for 1985-1988 to 1% for 1989-2001. Vermillion snapper represent 62% of the snappers landed to species for 1978-1983, and 93% for 1984-2001. Annual percentages of vermillion in landings reported to species are used to estimate the proportion of vermillion in the unclassified category for 1978-2001. The average (1978-2001) percentage of vermillion is used to estimate the proportion of vermillion in the unclassified category for 1972-1997. Since the proportion of unclassified landings declines over time, the difference between reported vermillion landings and adjusted landings also declines.

South Carolina. South Carolina landings from 1972-2001 are largely reported to species, with only 2% on average reported as unclassified. From 1972-1979 , 35% of the snapper landed to species are vermillion, increasing to 85% for 1980-2001. Annual percentages of vermillion in landings reported to species are used to estimate the proportion of vermillion in unclassified categories.

Georgia. Georgia landings are taken from the NMFS commercial statistics website, based on the vermillion snapper category.

Florida. Florida landings are based on the Atlantic Coast only, including all Monroe county before 1986 and Atlantic zones after 1986. All vermillion snapper landings are recorded to species in the database, so no adjustments of unclassified landings are required.

2. Gear Categories.

Landings by gear are available since 1992 for Florida, 1978 for North Carolina, and 1972 for South Carolina. Between 1992 and 2001 when all 3 states recorded landings by gear, 99% of vermillion snapper were landed by hook and line gears. However, significant trawl landings exist for the 1970's and 1980's, especially in SC. Trawl harvest of vermillion was outlawed in the late 1980's. Therefore, 3 gear categories were established: Hook and Line(including hook and line and electric or bandit reels), Trawls, and all others combined (longlines, gill nets, spears/gigs, traps and pots etc). For NC and SC where landings are adjusted for the unclassified snapper category, adjusted vermillion landings are allocated to gear categories based on the observed annual landings by gear for those landings reported to species and gear.

North Carolina: Landings by gear are available since 1978, with 99.1% taken by hook and line over the period. Landings for 1972-1997 were all allocated to the hook and line category. Adjusted landings are allocated based on proportion by gear for those landings reported to species.

South Carolina. Landings by gear are available since 1972, therefore landings for each year are allocated to the two gear categories based on annual gear proportions. Adjusted landings are allocated based on proportion by gear for those landings reported to species. Had trawl fishery in 70's and 80's.

Georgia. No gear information is available. Landings are allocated into gear categories based on the annual proportion by category for SC, from 1972-2001. GA assumed to have had a trawl fishery in 70's-80's, therfore assume gear categorization more similar to SC than NC

Florida. Gear information is available since 1992, with 95% landed by hook and line. The 1992-2001 average proportions by gear is used to allocate 1970-1991 landings to gear.

3. Length Distributions.

Length sampling is available through the TIP program for 1984-2001. An average of 4,590 lengths are taken annually, 4398 in the hook and line category and 192 in the other category. Lengths are tabulated into 20mm categories, from 140-500 mm , with all over 500 combined. Length samples are combined for the region. Lengths are also developed in 10mm categories, for trawl, hook and line, and other categories. Hook and line includes hook and line and electric or bandit rig categories from TIP. Other lines, such as troll or long line categories, are included in the other category.

Vermilion snapper Commercial Data Overview

Florida commercial landings (trip ticket data)

- Landings summarized by year and gear with pounds and trips
- Atlantic coast only (Monroe county landings in total if before 1986; landings from Atlantic fishing zones for Monroe county thereafter)
- Unclassified or mixed snapper categories not a concern

- Handled at the initial data processing/editing level

Trip Interview Program (TIP) data (NC-FL east coast)

- Summary of number of length measurements collected by year and gear
- Length frequencies by year and gear with 20mm length classes
- Fork length converted to total length

NMFS log book data

- Evaluation of hook & line effort data for CPUE indices
- Discarded data north of Cape Hatteras
- Trips with vermilion as max. species; vessels with 95% of landings by year

Length sampling intensity, Atlantic Coast vermillion snapper, TIP program.

YEAR	HOOK LINE	OTHER	TOTAL
1984	3312	98	3410
1985	4914	0	4914
1986	3821	456	4277
1987	3558	362	3920
1988	2731	410	3141
1989	2665	157	2822
1990	2596	391	2987
1991	4775	631	5406
1992	3095	36	3131
1993	3942	149	4091
1994	3508	245	3753
1995	5870	237	6107
1996	3151	100	3251
1997	3042	43	3085
1998	3346	43	3389
1999	6220	32	6252
2000	9474	65	9539
2001	9152	0	9152
avg	4398	192	4590