Biological Sampling Prioritization and Target Setting

Prioritization Matrix

- Species prioritized based on a number of factors.
- Top 25% of species are eligible for funding.
- Sampling projects covering multiple species in top 25% are highly recommended.

Prioritization Matrix

- Factors used in prioritization:
  - Council, ASMFC, States, NMFS priorities
  - Is the fishery managed?
  - Significant changes in landings/management in the past year
  - Adequacy of sampling
  - Stock resilience
  - # sampling strata
  - Seasonality of fishery

	Council Priority	ASMFC Priority	State Priority	NMFS Priority	Fishery Managed	Sig. change in landings w/in 24 mo	Sig. change in mgmt w/in 24 mo	Adequacy of level of sampling	Stock Resilience	# sampling strata	Seasonality of fishery	TOTAL
	0=NA	0=NA	0=NA	0=NA	0 = No	1= <25%	0= None	0=Over-	1 = resilient	1= <20	1= >9 mo	
	1=low	1=low	1=low	1=low	1 = Yes	3= 25-75%	1=Minor	sampled,	5 = vulnerable	3= 20-75	3= 1-9 mo	
	5=high	5=high	5=high	5=high		5= >75%	5= Signif	5= none		5= >75	5= <1 mo	
Species												
Albacore *Thunnus alalunga*	0	0	0.9	3.0	1	1	0	2	1	5	1	14.93
American Eel *Anguilla rostrata*	0	5	3.7	0.0	1	1	0	4	5	2	1	22.71
American Lobster *Homarus americanus*	0	5	2.5	3.0	1	1	1	4	3	3	1	24.50
Atlantic Croaker *Micropogonias undulatus*	0	3	2.1	1.0	1	1	0	1	2	3	1	15.07
Atlantic Sharpnose Shark *Rhizoprionodon terraenovae*	0	1	0.9	3.0	1	1	0	3	2	3	3	17.86
Atlantic Surf Clams *Spisula solidissima*	4	0	1.1	4.0	1	1	0	1	1	3	1	17.07
Bay scallop, NC *Argopecten irradians*	0	0	0.3	0.0	1	3	3	4	5	1	1	18.29
Bigeye Tuna *Thunnus obesus*	0	0	1.1	3.0	1	1	0	2	1	3	1	13.14
Black Drum *Pogonias cromis*	0	0	1.3	0.0	1	1	0	2	3	3	1	12.29
Black Grouper *Mycteroperca bonaci*	2	0	0.5	3.0	1	3	1	3	3	3	1	20.50
Black Sea Bass (1) *Centropristis striata*	5	5	3.5	5.0	1	1	5	1	3	5	1	35.50
Blacktip Shark *Carcharhinus limbatus*	0	1	1.2	5.0	1	1	0	2	3	3	3	20.21
Blue Crab *Callinectes sapidus*		0	3.4	0.0	1	1	4	3	3	3	1	19.43
Bluefin Tuna *Thunnus thynnus*	0	0	2.1	5.0	1	3	1	3	3	3	1	22.14
Bluefish *Pomatomus saltatrix*	4	3	2.6	3.0	1	1	0	2	2	3	1	22.64
Blueline Tilefish *Caulolatilus microps*	5	0	1.0	4.0	1	1	4	4	3	3	3	29.00
Cannonball Jellyfish *Stomolophus meleagris*		0	0.4	0.0	0	5	0	4	3	1	5	18.36
Cobia *Rachycentron canadum*	4	0	1.4	3.0	1	1	2	4	3	3	1	23.36
Dolphin *Coryphaena hippurus*	3	0	1.1	3.0	1	1	1	5	1	1	3	20.14
Finetooth Shark *Carcharhinus isodon*	0	1	1.0	5.0	1	3	0	3	5	3	3	25.00
Gag Grouper *Mycteroperca microlepis*	4	0	1.1	4.0	1	3	2	3	4	3	1	26.14
Golden Crab *Chaceon fenneri*	3	0	0.2	3.0	1	1	0	4	4	1	1	18.21

How the factors affect prioritization

- State and NMFS priorities:
  - Average of all Atlantic states
  - Max of NMFS branches (NER, SER, HMS)
- Managed fishery = Higher priority
- Larger changes in landings/management = Higher priority
- Adequate sampling = Lower priority
- Resilient stock = Lower priority
- More sampling strata = Higher priority
- Shorter fishing season = Higher priority
- Add all categories to get total and rank.

Bio Sampling Targets Matrix

- Targets broken down into several strata:
  - State/Region: NC, SC, GA, FLN, FLS
  - Commercial/Recreational
  - Gear
  - Stat Area
  - Calendar Year Quarter

Bio Sampling Targets Matrix

- Targets are submitted by both NMFS and the States
- Based on last full year of landings
  - Matrix completed in Jan. 2013, landings data from 2011
  - States may use some 2012 data as available
- Both matrices completed every other year
  - Targets are carried over for off years

Issues from Sept 2013 Council Meeting

- Many SA species are significantly under/over their target samples
- Targets may not be appropriate for the level of landings in a given year
  - The lag in landings data may be inappropriate for some species
- Targets are set by species, but sampling is designed based on trips
  - Altering sampling to get more of one species may significantly affect sampling for other species

South Atlantic Commercial Biosampling: Targets and Achievements

Results: Targets and resultant percent biosample (lengths) for 2011 and 2012, selected species. Original targets and State revisions both displayed.

COMMON_NAME	TARGET	TARGET_REV	PCNT_2011	PCNT_2011_REV	PCNT_2012	PCNT_2012_REV
BLACK GROUPER	1701	1477	2%	3%	3%	4%
BLACK SEA BASS	8822	12993	30%	20%	36%	25%
BLUELINE TILEFISH	6959	4431	11%	17%	17%	26%
SPINY LOBSTER	3000	3000	182%	182%	313%	313%
GAG	6323	6318	20%	20%	18%	18%
GRAY SNAPPER	3863	3863	9%	9%	21%	21%
GRAY TRIGGERFISH	7551	7551	43%	43%	29%	29%
KING MACKEREL	7228	6151	70%	83%	55%	65%
MUTTON SNAPPER	2040	2040	8%	8%	14%	14%
RED GROUPER	14806	4983	6%	17%	5%	14%
RED SNAPPER	7766	7237	0%	0%	3%	3%
SNOWY GROUPER	4925	5106	14%	13%	20%	19%
VERMILION SNAPPER	9203	8735	80%	84%	68%	71%
WRECKFISH	474	493	53%	51%	34%	32%
YELLOWTAIL SNAPPER	2049	2049	144%	144%	227%	227%

Caveats from Previous Slide

- Understand that this is length sampling only. In some cases there are high proportions of otoliths collected along with lengths, but in general if the same table was produced based on hard part samples, the percentages would be lower for almost everything except lobster and KGM.
- Actual number SAFMC-managed species for which targets were produced was 29. Species shown were selected arbitrarily in an attempt to be representative of both overachievement of sampling targets and extreme underachievement. Full information for all 29 will accompany presentation.
- Targets were set in January 2010 for the years 2011 and 2012; targets are the same for both years. The landings data used to determine the original targets (before State revision) would have been 2008 data.

Red Snapper

- 2011-2012 Target: 7,237 comm lengths
- 2008 comm landings: 44,906 fish
- 2011 comm landings: 156 fish
- 2012 comm landings: 1,532 fish
- Target as % of 2008 landings: 16%
- # samples in 2012: 217 lengths
- 2012 samples as % 2012 landings: 14%