

Performance Standards

1. Vessel selection
2. Pre-trip notification
3. Coverage levels
4. Performance monitoring

Performance Standards (Phone a friend)

1. Vessel selection (Amy Van Atten)
2. Pre-trip notification (Amy Van Atten)
3. Coverage levels (Susan Wigley)
4. Performance monitoring (Amy Van Atten)

Performance Standards (Phone our new friends)

1. Vessel selection
 - ASMP, SM (w/NMFS)
2. Pre-trip notification
 - ASMP, SM
3. Coverage levels
 - SM, policy/risk
4. Performance monitoring
 - ASMP, SM, NMFS

Vessel Selection

- Is a cornerstone for statistically robust data
- “Assignment must be **representative** of fishing activities within each sector and must be able to monitor fishing activity throughout the year.”

Vessel selection: Version 1

- Determine which vessels are operating (by gear type). (Vessel call-in requirement)
- Randomly choose operating vessels to sample on a trip by trip basis.
- (Why random? So everyone has an equal chance of being chosen.)
- E.g., every third vessel that calls in
- E.g., every vessel on a random vessel selection list.

Vessel selection: Version 2

- Better knowledge about your sector fishing plans will enable you to deploy your sea days more effectively.
- The trick is to identify sub-sets of trips that are similar, and then sample randomly within each sub-set.

Vessel Selection: Version 2

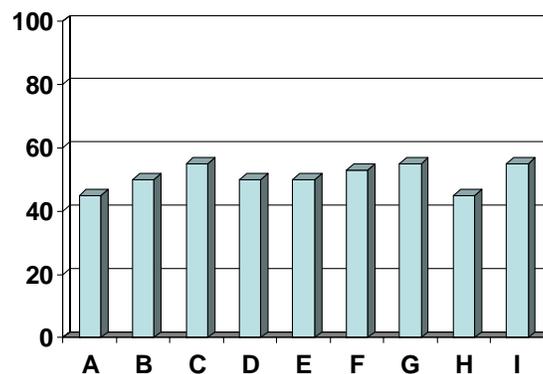
- Proven subsets (“strata”):
 - Gear
 - Season
 - Area
- Allocate sampling proportional to effort in each subset.
- Sample randomly within these subsets

Q 1, A1	Q2, A1	Q3, A1	Q4, A1	Total A1
5%	5%	10%	20%	40%
Q1, A2	Q2, A2	Q3, A2	Q4, A2	Total A2
15%	5%	0%	0%	20%
Total Q1	Total Q2	Total Q3	Total Q4	Total Effort, Gear 1
20%	10%	10%	20%	60%

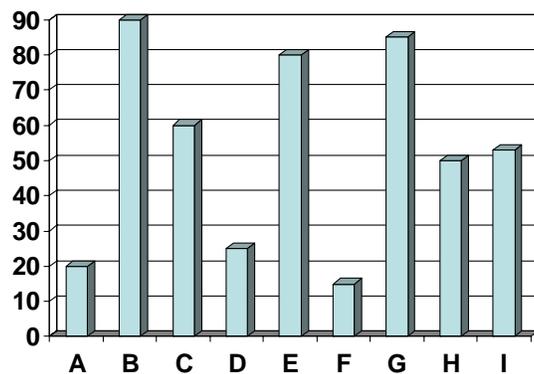
Vessel Selection: Version 2

- The better the sector knows its fishing strategy, the more effective the sampling can be.
- If a group of vessels consistently fishes in the same way, then it takes less sampling to characterize it.

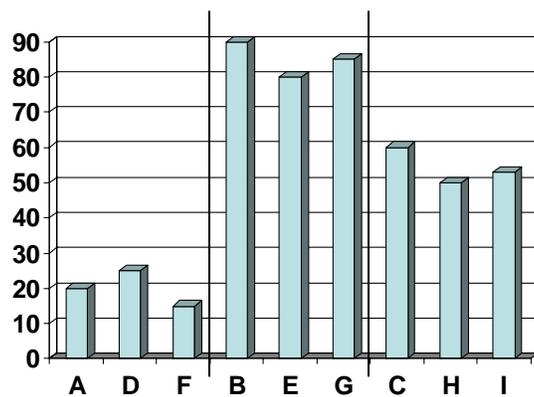
Homogeneous



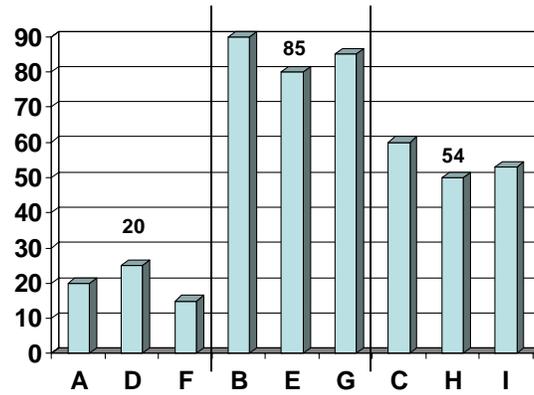
Highly Variable



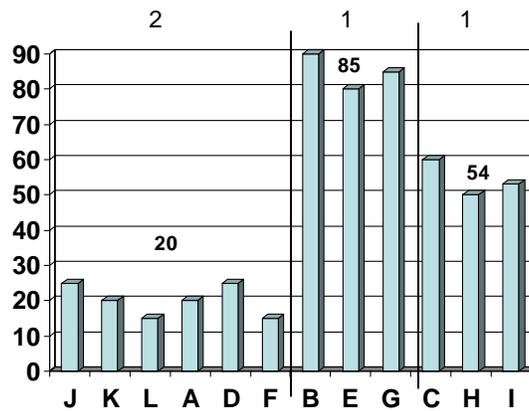
Possible Stratification



Possible Stratification



Proportional Allocation



Vessel selection

- Need to sample representatively
- Safe bet: spread sampling proportional to effort in each gear/quarter/area subset (combination).
- If you know more about how your sector is going to operate, use that information to generate better subsets.

Pre-Trip Notification

- Provider needs time to select; monitor needs time to get to port.
- Experience: 18 hours is needed
- Could be negotiated, but must be mutually agreed between sector and provider.
- Monitor needs enough notice.

Pre-Trip Notification in Ops Plan

- Time (how much advance notice)
- Method (phone, email)
- Information needed (e.g., time and location of departure, etc.)
- Method for tracking
- How vessel performance will be monitored (e.g., calling in early enough) and remedied if necessary

Pre-Trip Notification

- How will waivers be issued? When will trip be exempted?
- How will waivers be requested, assessed, and recorded?

Example 4. Good faith approximation of sea day coverage for sectors (updated for workshop II)

Data from 2009 SBRM prioritization analysis utilizing NEFOP and VTR data from July 2007 to June 2008

- 1) Uses 2009 SBRM sea days needed to achieve a 30%CV, VTR sea days from all vessels, VTR sea days from sector vessels
MA = Mid-Atlantic (corresponding to statistical areas 600 - 639); NE= New England (corresponding to statistical areas in 500 - 562)
- 2) Calculate rescaling ratio (SBRM sea days divided by VTR sea days from all vessels)
- 3) Sum the product of the Sector's VTR sea day multiplied by the rescaling ratio over all SBRM fleets associated with A16 (Equation 4)
- 4) As a check, the non-sector vessels have been included to show that the totals add up.
- 5) Used updated Sector rosters as of June 19, 2009, re-calculated VTR sea days by sector and SBRM fleet

From SBRM sea day prioritization analysis				VTR sea days by sector (a _i) and non-sector and SBRM fleet (f)								
SBRM fleet (f)	SBRM sea days (n)	VTR sea days (N)	Rescaling ratio (n/N)	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7	Non-Sector vessels	Total
MA Longline	108	1,191	0.0906	0	0	0	0	0	0	0	1,191	1,191
NE Longline	456	1,508	0.3024	199	570	106	58	0	0	28	547	1,508
MA Large-mesh Trawl	1,459	11,531	0.1265	0	3,228	0	39	0	28	0	8,236	11,531
NE Large-mesh Trawl	1,233	27,836	0.0443	0	17,387	0	5,208	85	206	547	4,403	27,836
MA Large-mesh Gillnet	139	884	0.1576	0	6	0	0	0	0	0	878	884
NE Large-mesh Gillnet	187	9,324	0.0200	0	5,937	723	499	0	0	697	1,468	9,324
Total Days	3,582	52,274		199	27,128	829	5,804	85	234	1,272	16,723	52,274
If fishing patterns stay the same, Good faith approximation of sector sea days (SD _i)				60	1,471	47	263	4	13	47	1,678	3,582

Note: Along with the other caveats, in some cases, sample size may be untenably small

Sea days → costs (\$)
Trips → analysis of sample size

Translate sea days into trips using mean trip length

7/7

Coverage levels

- SBRM “good faith” estimates are minimum levels.
- Additional coverage may be required to fill holes, to meet minimum SBRM “pilot coverage.”
- Additional coverage may be valuable for compliance or ensuring that discards are estimated more precisely than the general SBRM “good faith” guidelines.

Performance Monitoring

- Front line will involve NEFSC interactions with provider:
 - Is vessel selection executed appropriately?
 - Is data quality high?
 - Are deadlines being met?
 - Are coverage levels being achieved?
- Additional interactions with the sector and provider may be indicated:
 - Is additional coverage needed?
 - Are modifications to the vessel selection plan needed?
 - (Are selected vessels representative?)

Performance Monitoring

Everyone needs quality data (precision, accuracy), and the highest quality data possible for the investment.