Current & Expected Data Needs
NMFS and External Users

Greater Atlantic Regional
Fisheries Office

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July 1, 2014

Current Data Needs

1. Identified needs broken down into **fundamental elements**
2. Separated individual components
   - Catch separated from area
   - Landings separated from discards
3. Removed association with collection mechanism
   - Landing amount, not *dealer* landings
   - Discard amount, not *observed* discards
4. Identified related data needs
   - Landings/discards by species & area
   - Length & age by area
   - Species interactions by area & gear

Source: [www.jobscience.com](http://www.jobscience.com)
Current Data Needs

- Vessel, dealer, operator, owner
- Species ID (target/caught)
  - **Total catch**
    - Landed amount/species
    - Amount unsold/species
    - Discarded amount/species
- **Fishing location**
  - General (stat area)
  - Precise (tow start/end)
- **Gear used**
  - Type
  - Modifications
  - Number of nets deployed
  - Number of tows/sets
- FMP & exemption/program
- Trip start & end date & time
- Offload date
- Fishing time
  - Average
  - Per tow/set
- Vessel economics
  - Operating costs
  - Price per lb
- Allocation
  - Quota (individual, FMP, sector)
  - DAS
Future Data Needs

- Finer resolution spatial data
- More detailed gear information
- Oceanographic information
  - Bottom temperature
  - Salinity
  - Dissolved oxygen
- Habitat characteristics and depth
- Imagery data (for validating EM)
- Fine-scale data that can be rolled-up to higher levels
- Data about data (data dictionary, glossary, catalog)

Source: www.blog.scribesoft.com
Desired Data Resolution

At what level (resolution) should the data be collected?

- Per set/haul, area fished, gear used, FMP, or trip
- Depends on data element (need) and use
  - Haul-by-haul catch may be needed for by-catch monitoring
  - Trip-level operator is needed for compliance enforcement
- Determines accuracy and precision of data products
  - Haul-by-haul data collection is most accurate and precise
  - FMP-level data collection may be adequate for some uses
- Not relevant for all needs and uses
Desired Collection/Submission Frequency

When *should* data be collected or submitted?

- Per hour, haul, day, trip, offload, week, month, or year
- Affects data collection and submission mechanism (tool)
- Depends on data element (need) and use
  - Haul-by-haul discards needed for by-catch monitoring
  - Yearly permit issuance needed for compliance enforcement
- Impacts burden on industry
- Data may not be available at desired frequency

Source: www.nyceducator.com
**Data Use**

**By-catch and Discard Monitoring**

**Resolution**
- Per haul or set
- Per trip
- Per gear type

**Use Timing**
- Monthly

**Who**
- Vessel name/permit #
- Vessel permits
- Vessel characteristics
- Dealer name/permit #
- Operator name/permit #
- Owner name
- Sector participation
- Moratorium right ID
- Observer status

**What**
- FMP, prog., exemp.
- Target species
- Species
- Landing amt./disp.
- Kept catch unsold
- Discarded amount
- Product type
- Species interaction
- Size

**When**
- Trip start/end date/time
- Fishing time
- Dealer purchase date

**Where**
- Fishing location
- Vessel position
- Depth
- Temperature
- Sailing port
- Landing port

**How**
- Gear type
- Detailed gear
- Number hauls/sets
- Number of gear

**Why**
- DAS allocation
- Quota allocation

**Combined Data Needs**
- Landings by species by area
- Landings by Species by gear
- Discards by species by area
- Discards by species by gear
- Species Interaction by area by gear
- Effort by season
- Sea surface temperature by area

**Data Users**
- NEFSC Pop Dy
- NEFSC PRB
- NEFSC FSB
- GARFO SFD
- GARFO PRD
- States
- Councils & Commission
- NMFS HQ
Data Users
- GARFO APSD
- GARFO SFD
- NOAA OLE
- Councils & Commission
- States

Resolution
- Per haul or set
- Per area fished
- Per gear type
- Per species targeted

Use Timing
- Immediately
- Daily
- Weekly
- Monthly
- Yearly

Data Use
- Quota/Effort Monitoring

Who
- Vessel name/permit #
- Vessel permits issued
- Vessel owner name
- Moratorium right ID
- Allocation ID
- Sector participation
- Dealer name

What
- Landing amount
- Landing disposition
- Kept catch unsold
- Discarded catch
- FMP
- FMP sub-program
- Target species
- Species

When
- Trip start/end date/time
- Dealer purchase date
- DAS used
- Fishing time/tow

Where
- Sailing port
- Landing port
- Fishing location
- Vessel position

How
- Gear type
- Detailed gear
- Number hauls/sets
- Number of gear

Why
- DAS allocation
- Quota allocation
- Quota availability

Combined Data Needs
- Landings by species by area
- Landings by species by gear
- Effort by season
Data Availability

When are data *ACTUALLY* available?

• When do you know it, and when can you submit it?
• Can you provide the data when it is needed?
• Can you provide the data at the resolution needed?
• Integrate data availability with resolution and frequency:
  • Improves accuracy & precision
  • Reduces industry burden
  • Increases reliability of data

Source: www.bulletprooftalent.com