

Science, Service, Stewardship



MRIP Datasets and Analysis Methods

John Foster

MRIP Calibration Workshop

March 27-29, 2012

**NOAA
FISHERIES
SERVICE**



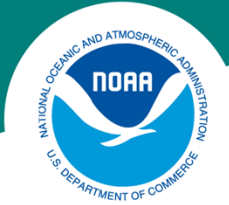
New MRIP Public-use Datasets

- **Simplify data structure**
 - Trip
 - Catch
 - Size
- **Survey analysis software**
 - Stratum and Cluster id's
 - Post-stratified analysis weights



New MRIP Public-use Datasets

- **Trip**
 - 11 equivalent
 - One record per angler-trip
 - Trip characteristics
 - Placeholder records for unmatched FHS effort



New MRIP Public-use Datasets

- **Catch**
 - I2, I3, I9
 - One record for each species recorded per angler-trip
 - One record included for each angler-trip with no catch
 - A, B1, B2, A+B1, A+B1+B2, Sum(Weight), Sum(Length)



New MRIP Public-use Datasets

- **Size**

- Length and wgt
- One record for each measured fish
- Includes records with imputed data (indicators present)
- Max of 5 imputed records for single species, angler-trip
- Records present for trips without catch and trips with only released fish – for variance estimation



New MRIP Public-use Datasets

- **Key analysis fields**
 - strat_id: stratum identifier
 - psu_id: primary sampling unit (site-day)
 - wp_int: sample weight for trip and catch
 - wp_size: sample weight for size
 - id_code: for merging trip, catch, size
 - Domain definition variables



Analysis Methods

- **SAS/STAT 9.22+**
 - proc surveymeans – means, totals, ratios, quantiles
 - proc surveyfreq – frequencies, proportions
 - proc surveyreg
 - proc surveylogistic, proc surveyphreg
- **R, Stata, SUDAAN**



Analysis Methods

- SAS/STAT Survey Procedures
 - Strata strat_id;
 - Cluster psu_id;
 - Weight wp_int {wp_size};
 - Domain my_domain_var1*my_domain_var2;



Analysis Methods

- Defining Domains (Don't Subset Data!)
 - code indicators or class variables from combinations of survey variables

```
my_domain1 =
```

```
year||sub_reg||st||wave||mode_fx||area_x;
```

```
my_domain2 =
```

```
year||sub_reg||st||wave||mode_fx||area_x||cnty;
```



Analysis Methods – Domain Catch Totals

```
libname mrip "c:\my_mrip_data";
```

```
data trip; set mrip.trip_20104; run;
```

```
proc sort data=trip; by strat_id psu_id id_code; run;
```

```
data catch; set mrip.catch_20104; run;
```

```
proc sort data=catch; by strat_id psu_id id_code; run;
```

```
data mycatch;
```

```
merge trip(strat_id psu_id id_code st cnty) catch(in=c);
```

```
by strat_id psu_id id_code;
```

```
if c;
```

```
my_dom_id=0;
```

```
if st=37 and cnty in (15 29 41 53 55 139 143 177 187) then my_dom_id=1;*North NC;
```

```
if st=37 and cnty in (13 19 31 49 95 129 133 137 141 147) then my_dom_id=2;*South NC;
```

```
run;
```

```
proc surveymeans data=mycatch sum cvsum varsum missing;
```

```
strata strat_id;
```

```
cluster psu_id;
```

```
weight wp_int;
```

```
domain my_dom_id*common;
```

```
var tot_cat landing release;
```

```
ods output domain=my_domain_totals;
```

```
run;
```



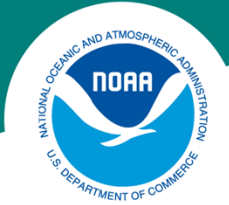
Analysis Methods – Directed Trips

```
libname mrip "c:\my_mrip_data";

data trip; set mrip.trip_20104; run;          data catch; set mrip.catch_20104; if common="RED DRUM";run;
proc sort data=trip; by strat_id psu_id id_code; run;   proc sort data=catch; by strat_id psu_id id_code; run;

data mytrip;
    merge trip(in=t) catch(keep strat_id psu_id id_code common);
    by strat_id psu_id id_code;
    my_dom_id=compress(year||st||wave||mode_fx||area_x||"0");
    if prim1_com="RED DRUM" or prim2_com="RED DRUM" or common="RED DRUM" then
        my_dom_id=compress(year||st||wave||mode_fx||area_x||"1");
    if t;
    trip=1;
run;

proc surveymeans data=mytrip sum cvsum varsum missing;
    strata  strat_id;
    cluster psu_id;
    weight  wp_int;
    domain  my_dom_id;
    var    trip;
    ods output domain=my_domain_totals;
run;
```



Next Steps

- **Release**

- Phase 1 (2004-2011): **April 2012**
- Phase 2 (1998-2003): **February 2013**
- Phase 3 (1990?-1997): **October 2013**

- **Earlier years (1980's)**

- Create Trip, Catch, Size datasets
- Include Post-stratified 'SRS' or Calibrated weights
- Not soon

Science, Service, Stewardship



MRIP Datasets and Analysis Methods

John Foster

MRIP Calibration Workshop

March 27-29, 2012

**NOAA
FISHERIES
SERVICE**