Recreational Anglers

Friend or Foe?

Karen Cryan
What is a recreational angler?

- Any man woman or child that catches (or tries to) fish for reasons other than economic gain.
- As of 2008 it was estimated that 38.4 million Americans were recreational anglers. (Allen and Southwick 2008)
- More than 30% of Alaskan residents are salt water anglers! (NOAA 2006)
- 11.5% of the worlds population recreationally fishes (Guerrero, F. 2009.)
**What are they catching?**

- Large and small mouth bass
- Trout and salmon
- Sunfish, bluegill, crappie
- Perch, walleye
- Pike and pickerel
- Sturgeon
- Catfish, bullhead
- Carp
- Striped bass, bluefish, tuatog, black sea bass
- Bream, croaker, drum
- Tuna, marlin, wahoo
- Mahi mahi, jacks
- Fluke, flounder and halibut
- Tarpon, baracuda
- Sharks
How are they catching them?

- Fly fishing
- Casting
- Drifting
- Trolling
- Chumming
- Chunking

- Less commonly
  - Green sticking
  - Bow and arrow
  - Spear fishing
  - Harpooning
  - Fish traps
  - Cast nets
  - Dipnets
Angling associations

- The largest in the US
    - Sponsors “Take me fishing.org”
  - The Recreational Boaters and Fishing Foundation  [http://www.rbff.org](http://www.rbff.org)
- Rhode Island Bass Anglers Association
Conservation efforts

- The Fish America Foundation provides more than $1 million in grants each year for fisheries conservation and research
- Work with local law enforcement agencies to improve stream side buffer zones
- Massive educational efforts put forth to encourage their views toward good stewardship
- Some raise fish for stocking local streams and lakes
Economic Impact in the U.S.

- Over $45 billion in retail sales annually
- $16.4 billion in state and federal taxes
- $600 million in fishing licenses annually
- $720 million in excise taxes on imported gear and fuel
Pollution impact

- “shoreline angling does alter the riparian environment, contributing to pollution and environmental degradation in areas of high angling intensity” (O’Toole et al. 2009)
  - Soil compaction, litter, terrestrial and aquatic macrophyte density, height, and diversity were lower at high angling-activity sites
  - Debris left by fishermen includes: tackle, monofilament line, beverage containers, food wrappers, oil and fuel in the water, human waste
Effects of selection pressure

- Selection for large mature individuals is changing life histories of numerous species. (Holmond and Hammer 2004.)
- Fish that are highly vulnerable to angling selection also have higher metabolic rates, reduced metabolic scope, and increased parental care activity. (Cook et al 2007)
- Reductions in body size, length and age of maturity, genetic diversity (saura et al 2010).
- Cascading effects in the ecosystem as top predators are removed
What does “catch and release” really mean?

- Typically between and 10 and 50% of fish that are “released” die.
- If size limits are raised and it now takes catching 10 fish to get a single keeper, how many fish are killed?

Which is Conservation?

- Catching and keeping your limit of 2 fish and going home?
- Catching and releasing all your fish as you fish all day?
Impacts of stocking

- 3 species of fish (2 trout and 1 bass) listed in the world’s top 100 invasive species were introduced for sport fishing. Rainbow trout can be found in 82 countries. (Cambray 2003)
- Effects on biodiversity, food web dynamics result, with possible consequences for the long-term.
- Creates temporal instability in ecosystems
## Bluefin Tuna

<table>
<thead>
<tr>
<th># of fish caught</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercially</td>
<td>2482 (810.7MT)</td>
<td>3635 (635.2MT)</td>
</tr>
<tr>
<td>Recreationally</td>
<td>10,334 (565.9MT)</td>
<td>4119 (178.5MT)</td>
</tr>
</tbody>
</table>
### 1999 Commercial & Recreational Harvest of Selected Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Commercial</th>
<th>Recreational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluefish</td>
<td>7,404,732</td>
<td>8,612,089</td>
</tr>
<tr>
<td>Striped Bass</td>
<td>6,618,598</td>
<td>13,992,380</td>
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<tr>
<td>Black Sea Bass</td>
<td>3,623,869</td>
<td>2,246,099</td>
</tr>
<tr>
<td>Croaker</td>
<td>26,840,862</td>
<td>7,630,482</td>
</tr>
<tr>
<td>Summer Flounder</td>
<td>10,496,384</td>
<td>8,384,766</td>
</tr>
<tr>
<td>Red Drum</td>
<td>427,461</td>
<td>10,478,113</td>
</tr>
<tr>
<td>Red Snapper</td>
<td>4,127,984</td>
<td>4,652,376</td>
</tr>
<tr>
<td>Dolphin</td>
<td>1,173,367</td>
<td>13,413,073</td>
</tr>
<tr>
<td>Cod</td>
<td>21,444,855</td>
<td>2,599,633</td>
</tr>
<tr>
<td>Yellowfin Tuna</td>
<td>4,855,822</td>
<td>8,463,272</td>
</tr>
<tr>
<td>Scup</td>
<td>3,620,777</td>
<td>1,886,110</td>
</tr>
<tr>
<td>Spotted Sea Trout</td>
<td>825,866</td>
<td>13,549,461</td>
</tr>
<tr>
<td>Weakfish</td>
<td>6,924,588</td>
<td>3,143,427</td>
</tr>
<tr>
<td><strong>Total Poundage</strong></td>
<td><strong>90,634,711</strong></td>
<td><strong>82,358,393</strong></td>
</tr>
</tbody>
</table>

[http://www.fishingnj.org/netusa15.htm](http://www.fishingnj.org/netusa15.htm)
References

References Con’t


- Bluefin tuna data attained through NOAA Department of Sustainable Fisheries. Public notices are filed with the Office of the Federal Register and are received by myself through employment.