

# **Evaluation of Fish Tags as an Attenuated Rights-Based Management Approach for Recreational Fisheries in the US Gulf of Mexico**

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# Gulf of Mexico Recreational Fishery Management

- ◆ Trends in the GOM recreational reef fish fishery showed evidence that current command and control management is inadequate.
- ◆ Progressively more restrictive management measures (bag & size limits, seasonal closures), with little sign that effective harvest control has been achieved.
- ◆ Particular pressures evident for high-value target species such as red snapper and red grouper.
  - e.g., red snapper recreational TAC routinely violated, despite increasingly restrictive management.

# Rights-Based Management for Recreational Fisheries

- ◆ Rights-based management promising, but challenges exist in application to recreational fishing.
  - Integration of (large numbers of) heterogeneous anglers
  - Monitoring, enforcement and voluntary compliance
  - Philosophical concerns with “selling” durable rights to recreational fishing
  - Ensuring opportunity to diverse angler groups
  - Traditions of spontaneous fishing activities

# Harvest Tags as an Attenuated Rights-Based Management Approach

- ◆ Harvest tags assign a right to a specified quantity and type of harvest during a specified time period.
- ◆ Generally time-attenuated, non-renewable, of limited transferability, and may be limited to a specific geographic area.
- ◆ Capitalize on rights-based mechanisms, but rights conferred are weaker (or more attenuated) than those typically conferred in commercial fisheries.
- ◆ Hunting applications common; fisheries applications less common but multiple examples exist.

# Some Examples from Recreational Fisheries

- ◆ Pink snapper in Freycinet Estuary, Western Australia\*
- ◆ Paddlefish in Missouri River, South Dakota\*
- ◆ Salmon and sea trout in Ireland
- ◆ Cod food-fish program in Newfoundland
- ◆ Tarpon in Florida\*
- ◆ Billfish fishery in Maryland and North Carolina
- ◆ Multispecies Sportpac in Oregon
- ◆ Multispecies record card in Washington State.

\* Impose hard harvest caps

# Fish Harvest Tag Programs Reviewed

Program Location	Species	Tag Type (attached vs. catch card)	Allocation Method	Cost of Tags for Adult Residents	Tags Create Limit on Individual/Tot al Catch	Number of Tags / Tags Over- Subscribed (yes/no)	Mandatory Harvest Reporting
Shark Bay, Western Australia	pink snapper	attach	lottery	AUS\$10	yes/yes	1,400 (2006) / yes	no
Missouri River, South Dakota	paddlefish	attach	lottery	US\$5	yes/yes	275 archery, 1,400 snagging (2006) / yes	no
Ireland	salmon and sea trout	attach	with license	free with license	yes/no	Not limited, ~25,000 per yr. / no	yes
Newfoundland	cod	attach	with license	free with license	yes/no	Not limited, ~135,000 per yr. / no	yes
Florida	tarpon	attach	purchase	US\$51.50	no/yes(but not binding)	Cap of 2,500, 300- 400 sold per year / no	yes
North Carolina and Maryland	bluefin tuna, white and blue marlin, sailfish, swordfish	attach (acquired upon landing)	provided at designated landing spots	free	no/no	Not limited, ~2000 – 3000 per year / no	n.a., tag acquired only when used
Washington	salmon, steelhead, halibut, sturgeon, dungeness crab	record on card	purchase in addition to license	first card free with license, US\$10 plus dealer fee for additional cards	yes/no	Not limited, ~650,000 per year / no	yes
Oregon	salmon, steelhead, halibut, sturgeon,	record on card	purchase in addition to license	US\$21.50	yes/no	Not limited, 208,452 (2005) / no	no

# Some Common Features of Harvest Tags for Hunting and Fishing

- ◆ Tags denominated in number of animals or fish and allocated to individuals and/or for-hire operators.
- ◆ Tags must often be obtained before harvest. On-site tags sometimes available but not often.
- ◆ Limited or no transferability, with a few notable exceptions.
- ◆ Multi-mode allocation/distribution mechanisms for scarce tags. Most available at nominal cost.
- ◆ Tags expire at the end of the season.
- ◆ Equity and stakeholder support critical elements.
- ◆ Many existing programs are oriented more at data collection than mortality control or revenue generation

# Management Features of Harvest Tags

## **Hard Harvest Limits**

- Denomination of tags in number of fish allows hard harvest limits to be imposed.
- Would require large number of tags, and perhaps complex administration.
- Number of tags issued should account for potential release mortality.

## **Season Length**

- Can allow for longer seasons compared to non-rights based management, promoting angler satisfaction.

# Management Features of Harvest Tags

## **Rights Allocation**

- Requires establishment of mechanisms for allocation of harvest tags.
- Allocation can be complicated by large numbers of anglers; heterogeneous groups; resident vs. non-resident distinctions.
- Allocation can be controversial for scarce or high-value tags; allocation methods for scarce tags include lotteries (with preference and/or bonus points) and auctions.
- Examples of various successful allocation modes in existing programs.
- May involve money cost, effort, or waiting periods to obtain tags; might require pre-planning to target certain species.

# Management Features of Harvest Tags

## **Monitoring, Enforcement and Compliance**

- Monitoring and enforcement still a challenge, but ameliorated by attributes of harvest tags (ease of observability at check points, etc.)
- Requires mechanisms for monitoring tags and harvest.
- Can increase voluntary compliance and self-policing among anglers.
- Angler education and information materials often required.
- Lessons may be taken from existing programs.

# Management Features of Harvest Tags

## Data Collection

- Tags can provide data on some or all aspects of recreational fishing.
- Wide array of reporting and data gathering mechanisms in current tag programs provides lessons for developing methods for recreational fisheries.
- Reporting compliance varies with incentives provided by program.

## Revenue Generation

- Revenues from the sale or auction of harvest tags can be used to support management, education, data collection, and other efforts.
- Tag revenues must be viewed within the context of the cost of implementing programs.

# Management Features of Harvest Tags

## **Sector Integration**

- Many models for integration of management for private and for-hire groups using harvest tag programs.
- Possibility of rights transfer between recreational and commercial sectors; practical mechanisms for integration are not well developed.

# Conclusions

- ◆ Harvest tags offer a means to allocate scarce recreation fish resources to avoid shortening seasons and restrictive bag limits.
- ◆ They are likely to be more politically acceptable than a true rights based system, particularly for the non-charter sector.
- ◆ Harvest tags also offer a means to improve data collection and to recuperate some fishery management costs